Universidade do Minho
Instituto de Educação

Regina Ferreira Alves

Conhecimentos, atitudes e comportamentos de saúde em estudantes do Ensino Superior: avaliação e monitorização de um programa de intervenção socioeducativa em contexto não-formal

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Doutor José Alberto Gomes Precioso

julho de 2021

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DECLARAÇÃO DE INTEGRIDADE

Declaro ter atuado com integridade na elaboração do presente trabalho académico e confirmo que não recorri à prática de plágio nem a qualquer forma de utilização indevida ou falsificação de informações ou resultados em nenhuma das etapas conducente à sua elaboração.

Mais declaro que conheço e que respeitei o Código de Conduta Ética da Universidade do Minho.

*"*Replace 'I' with 'we' and illness becomes wellness".

Swami Satchidananda,

The Living Gita: The Complete Bhagavad Gita: a Commentary for Modern Readers

RESUMO

Conhecimentos, atitudes e comportamentos de saúde em estudantes do Ensino Superior: avaliação e monitorização de um programa de intervenção socioeducativa em contexto não-formal

As investigações na área da Educação para a Saúde no Ensino Superior têm atingido elevada pertinência, ainda que, em Portugal, sejam pontuais e os programas de Promoção da Saúde no Ensino Superior escassos. Procurando contrariar este cenário, esta investigação teve como objetivos: 1) identificar, caracterizar e analisar os comportamentos de risco para a saúde (consumo de tabaco, álcool, drogas ilícitas e medicamentos não prescritos, prática de atividade física, hábitos alimentares e práticas sexuais de risco) dos/as estudantes universitários/as; 2) determinar o efeito de fatores de natureza intrapessoal, atitudinal e social na adoção de comportamentos de risco; 3) desenvolver, validar e implementar um programa de intervenção socioeducativa de Educação para a Saúde no Ensino Superior baseado na web. Para atingir os dois primeiros objetivos, e seguindo o modelo PRECEDE-PROCEED, realizaram-se estudos transversais com uma amostra estratificada (n = 840) de estudantes de uma universidade pública do Norte de Portugal. Aplicou-se presencialmente um questionário de autorrelato que incluiu o Questionário de Comportamentos, Conhecimentos e Atitudes de Saúde no Ensino Superior (QCCASES), a Escala de Perceção de Bem-estar e Saúde (EPBeS) e questões de natureza sociodemográfica e académica. Devido à emergente pandemia COVID-19 incluiu-se um estudo transversal com uma amostra de conveniência (n = 262) acerca dos conhecimentos, das atitudes e dos comportamentos preventivos face à COVID-19. Os resultados mostraram que 20,1% era fumador/a, 22,2% era consumidor/a de drogas ilícitas e mais de metade dos/as estudantes teve um consumo de risco de álcool (60,1%) e fez uso de alguma forma de automedicação (54,3%), nos últimos 12 meses. Mais de um terço dos/as estudantes inquiridos/as era sedentário (35,7%), 94,2% dos/as estudantes apresentava uma alimentação desequilibrada e 74,9% dos/as estudantes tiveram algum comportamento sexual de risco, nos últimos 12 meses. Os/as estudantes relataram ter sempre, em média, 5,81 (DP = 2,61) comportamentos preventivos face à COVID-19 (máximo de 13). Os estudantes revelaram um baixo nível de conhecimentos em saúde (M = 17,71, DP = 4,59, máximo de 36) e apresentaram pontuações moderadas na escala de atitudes em relação à saúde (M = 2,61, DP = 0,48, máximo de 5). A relação entre o conhecimento acerca da saúde e os comportamentos de risco foi significativamente mediada pelas atitudes face à saúde. As variáveis da influência social mediaram significativamente o efeito da perceção do bem-estar e saúde nos comportamentos de risco para a saúde. Com base neste diagnóstico desenvolveu-se o programa Health *On* You, implementou-se a 37 estudantes universitários/as e avaliou-se com o recurso a questionários de autorrelato. O programa Health *On* You mostrou adequabilidade para as dificuldades enfrentadas pelos/as estudantes universitários/as na adoção de comportamentos positivos para a saúde. Os comportamentos de risco para a saúde são bastante prevalentes entre os/as inquiridos/as, recomendando-se a divulgação e implementação em Instituições do Ensino Superior de intervenções baseadas na Web como o programa Health *On* You.

Palavras-Chave: Comportamentos de saúde; Educação para a Saúde; Ensino Superior; Intervenção baseada na Web.

ABSTRACT

Knowledge, attitudes and health-related behaviors among Higher Education students: assessment and monitoring of a socioeducational intervention program in a non-formal context

The research done in the area of Education for Health in Higher Education has reached a high level of importance; however, in Portugal, it is still scarce, and the programmes designed for the Promotion of Health in Higher Education come in short supply. In an attempt to go against this, this research had as its main objectives: 1) to identify, characterise and analyse the risky behaviours (tobacco consumption, alcohol use, illicit drugs, non-prescribed medication, practice of physical activity, eating habits and risky sexual practices) for the health of university students; 2) to determine the effect of factors of intrapersonal, attitude and social nature in the adoption of risky behaviours; 3) to develop, validate and implement a programme of web-based socioeducational intervention in the content of Education for Health for Higher Education. To achieve the first two objectives, and following the PRECEDE-PROCEED model, transversal studies were carried out with a stratified sample (n = 840) of students belonging to a public university in Northern Portugal. A self-report questionnaire was applied face-to-face, which included a Questionnaire on Health-Related Behaviours, Knowledge and Attitudes in Higher Education (QHeBKAHE), Well-Being and Health Perception Scale (WbHPS) and matters of sociodemographic and academic nature. Due to the emerging COVID-19 pandemic, a transversal study was included with a convenience sample (n = 262) on the knowledge, attitudes and preventive behaviours regarding COVID-19. Results have shown that 20.1% of the subjects were smokers, 22.2% were users of illicit drugs, and more than half of the students registered alcohol consumption (60.1%) and engaged in some form of self-medication (54.3%) in the last 12 months. More than a third of the enquired students led a sedentary lifestyle (35.7%), 94.2% of students displayed an unbalanced diet and 74.9% had engaged in some form of risky sexual behaviour in the previous 12 months. Students reported that they were always having on average 5.81 (SD = 2.61) preventive behaviours regarding COVID-19 (maximum of 13). Students displayed a low level of health-related knowledge (M = 17.71, SD = 4.59, maximum of 36) and showed moderate scores in the scale of attitudes regarding health (M = 2.61, SD = 0.48, maximum of 5). The correlation between knowledge on health and risky behaviours was significantly mediated by the attitudes towards health. The variables of social influence significantly mediate the effect on the perception of well-being and general health in health-related risky behaviours. Based on this diagnostic, the Health *On* You programme was developed, and it has already been applied to 37 university students, analysing results by resorting to self-reporting questionnaires. The Health *On* You programme has proven to be adequate to the difficulties faced by university students in the adoption of positive behaviours for their health. Risky behaviours for one's health are quite prevalent among the subjects enquired, and the spreading and implementation of web-based intervention programmes in Higher Education Institutions like the Health *On* You are recommended and encouraged.

Keywords: Health Behaviors; Health Education; Higher Education; Web-based Intervention.

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ÍNDICE DE SIGLAS

AF	Atividade Física
CDC	Centers for Disease Control and Prevention
EpS	Educação para a Saúde
BES	Bem-estar Subjetivo
DGS	Direção-Geral da Saúde
EPBeS	Escala de Perceção de Bem-estar e Saúde
ES	Ensino Superior
FAT	Fumo Ambiental do Tabaco
IMC	Índice de Massa Muscular
ISTs	Infeções Sexualmente Transmissíveis
KAP	Modelo de Conhecimento, Atitudes, Práticas
MCS	Modelo das Crenças em Saúde
PRECEDE-PROCEED	Predisposing, Reinforcing, Enabling, Constructs in Educational/ecological Diagnosis and Evaluation) (Policy, Regulatorory, Organizational, Constructor in Educational and Environmental Development
QCCASES	Questionário de Comportamentos, Conhecimentos e Atitudes de Saúde no Ensino Superior
SPSS	Statistical Package for the Social Sciences
TCP	Teoria do Comportamento Planeado
TIT	Teoria da Influência Triádica
TSC	Teoria Social Cognitiva
UMinho	Universidade do Minho
VIH	Vírus Imunodeficiência Humana
WHO	World Health Organization

INTRODUÇÃO

A Educação para a Saúde (EpS) é, em Portugal, de caráter obrigatório em todos os estabelecimentos de ensino público, independendo do ciclo de estudos (1.º, 2.º e 3.º ciclo e ensino secundário). No entanto, essa obrigatoriedade não é extensível ao Ensino Superior (ES) apesar de várias razões apontarem para a necessária continuidade dos programas de EpS e Promoção da Saúde (PrS). Na perspetiva de Precioso (2004), esta continuidade permitirá evitar ou prevenir a adoção de comportamentos de risco ou prejudiciais para a saúde dos/as estudantes em início de ciclo académico, investindo na prevenção primária (iniciada na escola).

As investigações na área da EpS/PrS no ES têm atingido elevada pertinência e são cada vez mais recorrentes. A nível nacional as dissertações de mestrado e doutoramento dirigem-se, essencialmente, a estudantes universitários/as de áreas científicas específicas: saúde, educação, psicologia e, em alguns casos, serviço social e centram-se na identificação dos comportamentos saudáveis e de risco para a saúde (J. Almeida, 2014; Araújo, 2015; Brandão, 2010; Calado, 2011; S. Costa, 2008; Gaspar, 2006; R. Lopes, 2004; Morais, 2011; Pacheco, 2008; Pimentel, 2010; Preto, 2002; M. L. Santos, 2011; Sarmento, 2013; A. M. Soares, 2019; Sousa, 2014; Zão, 2012). Tal como na literatura científica nacional, também nos estudos internacionais, os comportamentos de risco com maior incidência nos/as estudantes universitários/as referem-se ao consumo de bebidas alcoólicas, de tabaco e de substâncias psicoativas lícitas ou ilícitas, à ocorrência de relações sexuais desprotegidas e à adoção de um estilo de vida sedentário e a hábitos alimentares desequilibrados (Alves, 2018, 2019b, 2019a, 2020b, 2020a; Alves & Precioso, 2018, 2019). A maioria dos estudos aponta a existência de uma correlação positiva entre os vários comportamentos de risco (Buckner et al., 2010; De Vries et al., 2008; Pais-Ribeiro, 1998) e uma maior prevalência destes em estudantes finalistas quando comparados com os/as do primeiro ano (Crawford et al., 2019; Crosnoe et al., 2017; Davoren et al., 2016; Hustad et al., 2014; Osberg et al., 2011; Scott-Sheldon et al., 2016).

As investigações nesta área recomendam a criação de programas educativos que promovam o aumento de conhecimentos acerca da saúde e, consequentemente, a adoção de estilos de vida saudáveis. Num estudo realizado por Luís Costa (2006), percebe-se a existência de lacunas na formação ministrada pelas conceções antiquadas e ideias contraditórias observadas. No mesmo sentido, Antão e Veiga-Branco (2011) afirmaram a existência de lacunas e imaturidades no nível de conhecimentos acerca da saúde afetivo-sexual. Para Carvalho e Carvalho (2010), as perceções dos/as estudantes

universitários/as acerca da EpS podem estar ligadas a uma visão reducionista dos determinantes de saúde centrada nas unidades de saúde, relacionando-a ao paradigma biomédico.

Tendo por base o referido anteriormente e alinhado com: 1) os Objetivos de Desenvolvimento Sustentável (ODS) 2030, nomeadamente, o 3º ODS – garantir o acesso à saúde de qualidade e o bem-estar de todos/as, em todas as idades e o 4º ODS – garantir o acesso à educação inclusiva, de qualidade e equitativa, e promover oportunidades de aprendizagem ao longo da vida para todos/as; 2) o Healthy People 2030 (U.S. Department of Health and Human Services, 2021), no qual os/as jovens adultos/as, nomeadamente, os/as estudantes universitários/as, constituem um grupo social prioritário; 3) Healthy Campus 2020 (American College Health Association [ACHA], 2018a) que apresenta diretrizes que impelem à implementação de programas de bem-estar e de saúde nas universidades; 4) o Plano Nacional de Saúde (Direção-Geral da Saúde [DGS], 2015) que solicita medidas preventivas dirigidas aos/às jovens adultos/as, o **tema central desta tese** é a identificação dos comportamentos de risco para a saúde dos/as estudantes universitários/as, associá-los a fatores de influência intrapessoal (características sociodemográficas e perceção de bem-estar), atitudinal (conhecimentos e atitudes face à saúde) e social (influência de pares e pessoas significativas), com vista ao desenvolvimento de um programa de EpS no ES.

No primeiro capítulo desta tese, após algumas considerações iniciais para melhor compreensão dos termos utilizados, identificam-se os principais construtos teóricos da problemática de investigação: comportamentos de risco para a saúde, fatores intrapessoais, interpessoais e sociais, o bem-estar e a perceção de saúde e, ainda se exploram as principais teórias de investigação para a saúde, o modelo usado para a construção do programa de EpS e a importância desta tese numa âmbito da sua especialidade.

O capitulo II – Métodos –apresenta os objetivos gerais e os objetivos específicos de cada um dos estudos efetuados e fornece-se informações sobre o desenho do estudo, as amostras dos estudos, os procedimentos de recolha de dados e as análises estatísticas realizadas.

No terceiro capítulo são sucessivamente apresentados os doze artigos resultantes dos estudos realizados no âmbito desta dissertação, redigida na base de compilação de artigos científicos ao abrigo do Despacho IE-PR-02/2019 e autorizada pelo Conselho Científico do Instituto de Educação da Universidade do Minho (UMinho),de acordo com o Despacho IE-335/2020. O estado da publicação (publicado, no prelo, aceite, em revisão ou submetido) encontra-se indicado na primeira página de cada subseção deste capítulo juntamente com um resumo do artigo em língua portuguesa e em rodapé identificam-se outras publicações e comunicações realizadas no âmbito dos objetivos específicos de cada

artigo. Os artigos estão escritos em inglês por terem sido submetidos em revistas internacionais e estão organizados de acordo com as normas específicas da revista científica à qual foram submetidos. No entanto, para efeitos de apresentação e coerência, a sequência dos artigos não segue a data da sua publicação.

O capítulo IV – Considerações Finais – apresenta e discute as principais conclusões desta tese, bem como os seus pontos fortes, limitações e implicações para a prática e pesquisa futuras. As referências bibliográficas apresentam-se no final, em conformidade com as normas da APA (7ª edição).

CAPÍTULO I

ENQUADRAMENTO TEÓRICO

1. CONSIDERAÇÕES INICIAIS

A **saúde** é um direito humano fundamental (World Health Organization [WHO], 2009), definido como um estado dinâmico de bem-estar físico, mental, emocional/afetivo, social e espiritual (outras dimensões, como a sexual ou a ambiental, poderiam ser acrescentadas) que muda constantemente ao longo da vida, e depende de fatores biológicos (constituição genética, género), comportamentais, ambientais e sociais (nível socioeconómico) (Aronson et al., 2007; Pais-Ribeiro, 2007). Se ao termo Saúde somarmos o termo Tecnologia encontrar-se-á o conceito de **eHealth** - electronic health ou **mHealth** - mobile health, no caso dos dispositivos móveis (Oh et al., 2005). Embora, não exista (ainda) uma definição universal, também devido aos avanços contínuos das tecnologias de informação e comunicação, a definição mais consensual refere-se a eSaúde como o uso de tecnologias emergentes de informação e comunicação, especialmente a Internet, para melhorar ou habilitar a saúde e os cuidados de saúde (Eng, 2002). A tecnologia aliada à saúde é entendida como uma ferramenta para expandir, auxiliar, aprimorar ou facilitar as mudanças comportamentais e melhorar a saúde, atribuindo-se conotações positivas a todas as formas de eSaúde (Oh et al., 2005).

O **conhecimento** incorpora todas as informações que uma pessoa possui e acumula ao longo da sua existência, que obtêm através de vivências, observações e experiências, cabendo à pessoa segregar as informações e transformá-las em conhecimento para, no momento oportuno, utilizá-lo convenientemente. O conhecimento é, segundo Justo (2010), o capital da PrS através do qual os indivíduos podem tomar decisões informadas e conscientes acerca da sua saúde.

À imagem do conhecimento, o conceito de **atitude** tem múltiplos significados, formando-se a partir das crenças face a determinado objeto ou situação e influenciando tudo aquilo que a pessoa faz. De acordo com Ajzen e Fishbein (1980), o conceito de atitude "is characterized by an embarrasing degree of ambiguity and confusion" (p. 1), existindo diferentes atitudes, favoráveis ou desfavoráveis, em relação a cada diferente aspeto da nossa vida. No caso específico da EpS, um/a estudante que tenha uma forte crença de que a prática de atividade física melhora a aptidão física, sabe-se que essa crença determinará a atitude do/a estudante (Ajzen & Fishbein, 1980). As atitudes não são alteradas rapidamente, mas são maleáveis, visto que a vivência de uma situação que promova uma sensação positiva, desenvolverá atitudes positivas relativamente àquela situação. Posteriormente, Stroebe e Stroebe (1999) referiram que uma atitude é a tendência para avaliar alguma coisa num determinado sentido, ou seja, com algum degrau de positividade ou negatividade. Esse componente avaliativo é geralmente estudado em relação

aos componentes cognitivos (crenças das pessoas), avaliativos (sentimentos) e comportamentais (ações), sendo a escala de Likert a mais comummente utilizada para medir as atitudes.

Face ao exposto anteriormente, conclui-se que os **comportamentos** não ocorrem num vazio, são produto das dimensões pessoais, ambientais e sociais, que emergem não só do presente, mas também das experiência e vivências do indivíduo (Arrivillaga et al., 2003). No que concerne à área da saúde, existem, na literatura científica, inúmeras definições de comportamentos de saúde. Desde a mais citada, mas também criticada pela sua limitação, na qual o **comportamento de saúde** é visto como uma atividade que o indivíduo adota, com o propósito de prevenir a doença e manter-se saudável (Kasl & Cobb, 1966), até definições mais amplas como a fornecida pela Organização Mundial de Saúde OMS, ou seja, qualquer atividade empreendida por uma pessoa, independentemente do seu estado de saúde, com o propósito de promover, proteger ou manter a sua saúde, quer essa atividade seja objetivamente eficaz ou não para obter o fim pretendido (WHO, 1998).

Os comportamentos de saúde quando negativos são denominados de **comportamentos de risco** (para a saúde) (Ogden, 1999), tratando-se de uma atividade que conduz a um aumento do risco de morbimortalidade, tal como, o consumo de substâncias psicoativas lícitas e ilícitas, o sedentário ou a alimentação rica em gorduras e açúcares. Por oposição, **comportamentos de saúde positivos** ou protetores refere-se aos comportamentos adotados que visam promover a saúde.

Importa aqui deixar um apontamento relativamente aos **estilos de vida saudáveis** e aos comportamentos de saúde. Os comportamentos de saúde e os comportamentos de risco tendem a agregar-se de uma forma complexa, formando perfis, que recebem a denominação de estilos de vida (WHO, 1998). Embora, diversas investigações evidenciem que nem sempre a prática de um determinado comportamento de saúde se relaciona diretamente com a prática de outros, múltiplos estudos confirmam a tendência para os comportamentos de saúde se associarem (Ribeiro, 1998). No entanto, esta tese apesar de analisar os comportamentos de saúde, não foi considerado o conceito de estilo de vida pelo fato deste implicar uma determinada extensão temporal, aspeto que não foi considerado nos diversos estudos realizados.

O **bem-estar subjetivo (BES)** é considerado um conceito complexo que compreende uma dimensão cognitiva e uma afetiva, referindo-se à avaliação que as pessoas fazem da sua própria vida (Diener et al., 2000; Galinha & Ribeiro, 2005). O BES corresponde ao termo técnico utilizado nas pesquisas científicas para a felicidade ou a satisfação com a vida. Embora se tratem de constructos heterogéneos apresentam uma forte associação, em termos teóricos e empíricos (Howell et al., 2007) e formam um único fator (Sheldon & Lyubomirsky, 2006). No entanto, felicidade associa-se

frequentemente a emoções positivas (Lyubomirsky et al., 2005), enquanto a satisfação com a vida se refere a um julgamento cognitivo de avaliação geral da sua própria vida (A. S. Albuquerque & Tróccoli, 2004).

De acordo com a declaração de Ottawa (WHO, 1986), a **promoção da saúde** (PrS) é entendida como um processo que visa capacitar o indivíduo de informações e conhecimentos sobre si com vista a aumentar e melhorar o controlo sobre os determinantes da saúde. Mais recentemente, entende-se que a PrS também se direciona à comunidade em geral, compreendendo ações de promoção e proteção da saúde ao construir ambientes favoráveis à saúde (WHO, 2009). Ou seja, trata-se de uma "combinação planeada de mecanismos educacionais, políticos, ambientais ou organizacionais que apoiam as ações e condições de vida de forma a garantir a saúde dos indivíduos, grupos e comunidades" (Brito, 2014), podendo ser entendida como uma intervenção individual, de acordo com a conceção americana e mais do tipo comunitário e social, privilegiada na Europa e Canadá (Pais-Ribeiro, 2007).

A **EpS** é vista como uma importante contribuição para a PrS, embora não seja sinónimo dela, pode assumir-se com um conjunto de estratégias utilizadas para a PrS. Na verdade, uma fórmula reconhecidamente simplista é usada para captar a essência da relação sinérgica entre política e educação: *Health Promotion = Health Education x Healthy Public Policy* (Tones & Tilford, 2001). A EpS refere-se a um processo de aprendizagem, construído intencional e voluntariamente, de várias formas e ao longo da vida, com o intuito de aumentar os conhecimentos e desenvolver competências que favoreçam a saúde individual, grupal e da comunidade (Green & Kreuter, 2005; WHO, 1998). Por outras palavras, pode ser definida como o "somatório de todas as influências que coletivamente determinam conhecimentos, crenças e comportamentos relacionados com a promoção, manutenção e restabelecimento da saúde nos indivíduos e comunidades" (Brito, 2014).

A literatura científica, neste âmbito, apresenta potencialidades nos programas de EpS **por computador** ou **baseados na web** para estudantes universitários/as (Gross, 2004), demonstrando a eficácia das intervenções comportamentais de eHealth (Broekhuizen et al., 2012; Hutchesson et al., 2015; Oosterveen et al., 2017; Webb et al., 2010). Este programas, na maioria das vezes, incluem-se na **educação não-formal**, visto que, embora sejam atividades educativas organizadas e sistemáticas, são realizadas fora do sistema oficial de ensino e, por isso, não têm um caráter obrigatório (Inter-agency Network for Education in Emergencies, 2010). Os estudos científicos que incluem estratégias de EpS baseados na web e em contexto não-formal são cada vez mais frequentes (Gabarron et al., 2018; Hsu et al., 2018).

2. OS COMPORTAMENTOS DE RISCO PARA A SAÚDE

A idade adulta emergente enquanto nova fase de transição de vida corresponde a uma etapa de aprendizagem e desenvolvimento da personalidade, nos domínios cognitivo, físico, afetivo, sexual, familiar e social (Arnett, 2000). Para alguns/algumas jovens adultos/as, a esta nova fase acresce a transição para o ES, um dos períodos mais ambicionados e simultaneamente mais difíceis que os/as jovens vivenciam (A. M. Soares, 2019). Período no qual os/as jovens deixam a sua residência de origem, existindo um afastamento físico da família e dos/as amigos/as, uma menor supervisão e uma maior autonomização em relação à família; assumem a sua independência e autonomia e mais responsabilidades; estabelecem novas amizades dentro e fora das IES e encontram-se sujeitos/as a uma maior pressão social e académica; e surgem mais oportunidades para explorar valores, crenças e atitudes pessoais (Des Rosiers et al., 2013; Joh et al., 2017; Lefkowitz, 2005; Lefkowitz et al., 2004; Stroud et al., 2015). Esse período de intensa exploração, vulnerabilidade e mudança (Dutt & Manjula, 2017; Shiferaw et al., 2014) pode tornar os/as jovens adultos/as particularmente suscetíveis ao surgimento de dificuldades a nível pessoal, social, académico (Howard et al., 2006) e a envolverem-se em comportamentos de risco para a saúde (G. Bradley & Wildman, 2002), como o início do consumo de substâncias psicoativas (Wagner et al., 2012), que podem persistir ao longo da vida (Cluskey & Grobe, 2009). Isso poderá acontecer quer por uma questão de curiosidade e experimentação (proporcionados pela ausência do controlo parental ou pela afirmação da identidade), quer por estes comportamentos serem normalizados em contexto académico (A. M. Soares, 2019). Como resultado, na literatura científica é possível encontrarem-se inúmeras investigações recentes acerca dos comportamentos de risco para a saúde no ES (prevalência e preditores) e relativas ao bem-estar e qualidade de vida dos/as estudantes universitários/as.

As evidências científicas revelam uma elevada prevalência de comportamentos de risco para a saúde entre estudantes universitários/as (U.S. Department of Health and Human Services, 2020), como o 1) consumo de substâncias psicoativas como o tabaco álcool, ou drogas ilícitas; 2) automedicação; 3) hábitos alimentares desequilibrados; 4) ausência da prática de atividade física; 5) práticas sexuais consideradas de risco, não considerando a saúde uma prioridade tão grande quanto estudar ou trabalhar (El Ansari et al., 2011; Joh et al., 2017).

2.1. Consumo de tabaco no Ensino Superior

O tabagismo continua a ser a principal causa de morbidade e mortalidade evitável em todo o mundo, sendo a sua prevalência considerada epidémica (Centers for Disease Control and Prevention [CDC], 2014; WHO, 2010b). Além disso, a exposição ao fumo ambiental do tabaco (FAT) ou fumo passivo aumenta a morbidade e mortalidade por doenças coronárias, cancro do pulmão, infeções respiratórias e outras doenças.

O início da vida adulta está frequentemente associado ao aumento do tabagismo e ao estabelecimento do seu consumo regular (Husten, 2007; Orlando et al., 2004). Nesse sentido, o ambiente académico pode constituir um contexto favorável ao consumo de tabaco (Reed et al., 2007), bem como à sua iniciação/experimentação (Wetter et al., 2004), pela forma como é socialmente aceite neste contexto (Nolen-Hoeksema, 2004). Vários estudos têm mostrado um aumento no número de fumadores em contexto académico, tanto no número de estudantes que passaram a fumar regularmente, quanto no número de cigarros consumidos diariamente (Guillén et al., 2003). Por exemplo, Tercyak, Rodriguez e Audrain-McGovern (2007) verificaram que 25% dos/as estudantes que relataram nunca ter fumado na escola secundária começaram a fumar um ano mais tarde.

A prevalência de estudantes universitários/as fumadores/as corresponde a cerca de um quatro dos/as estudantes quer a nível nacional (C. Albuquerque & Franco, 2010; Luz et al., 2010; Mendes & Lopes, 2014) quer internacional (Espanha - Castro Cuesta et al., 2014; Guillén et al., 2003; Hernández-González et al., 2018; Grécia - Alexopoulos et al., 2010; Irão - Askarian et al., 2013; Austrália - Clark et al., 2004; Jordânia - Kofahi & Haddad, 2005; Palestina - Musmar, 2012; Líbano - Salameh et al., 2014; Inglaterra - Mallia & Hamilton-West, 2010; Itália - Lucenteforte et al., 2010; República Checa - Schneidrová et al., 2016; Sérvia - Milošević Georgiev et al., 2019; Brasil - Damasceno et al., 2016; Arábia Saudita - Almutairi, 2016; Bélgica - Patel et al., 2016; Chile - Barra et al., 2015; Polónia - Książek et al., 2019; Turquia - Babaoglu, 2017). Apesar desta prevalência, ainda se regista uma proporção considerável de ex-fumadores/as universitários/as (23% - Clark et al., 2004 ; McCann et al., 2005; 10% - Kofahi & Haddad, 2005; 64% - Danjoy León et al., 2010; 28,6% - Saeed et al., 2012; 18,1% - Barmpagianni et al., 2014).

2.2. Consumo de álcool no Ensino Superior

O álcool é das substâncias psicoativas com maior prevalência no ES (Pillon & Corradi-Webster, 2006), visto que diversos estudos nacionais apontam que mais de 80% dos/as estudantes universitários/as consomem bebidas alcoólicas (J. S. Martins et al., 2010; Pimentel et al., 2013; Preto,

2002; Zão, 2012). Também a nível internacional, o consumo de álcool de risco assume uma considerável expressão entre os/as universitários/as (Amare & Getinet, 2019; Lategan et al., 2017; Shields et al., 2016). Por isso, a redução dos padrões de consumo de risco continua a ser um desafio para as IES (Hingson et al., 2017; Patrick & Terry-McElrath, 2017), especialmente quando tanto as investigações mais antigas como as mais recentes mostram uma alta incidência de consumo de bebidas alcoólicas entre estudantes universitários/as (Amare & Getinet, 2019; Hernández-Serrano et al., 2015; Miquel et al., 2015; Sellés et al., 2015), superior em comparação com jovens adultos/as que não frequentam a universidade (Chu et al., 2016) e aumentando com a permanência na universidade (Crawford et al., 2019; Crosnoe et al., 2017; Davoren et al., 2016; Hustad et al., 2014; Osberg et al., 2011; Scott-Sheldon et al., 2016). Embora o estudo realizado por Baer (2002), tenha verificado que muitos/as estudantes afirmaram consumir mais álcool no primeiro ano de faculdade do que em outros períodos da vida académica.

Na mesma linha, nos últimos anos, o *binge drinking* (BD) (descrito como um padrão de consumo excessivo de álcool durante um curto período de tempo (cerca de 2 horas), normalmente definido como o consumo de cinco ou mais bebidas (quatro ou mais para as mulheres), pelo menos uma vez nas últimas duas semanas ou no último mês e que origina uma concentração de álcool no sangue superior ou igual a 0,08% gramas) (Center for Behavioral Health Statistics and Quality, 2018; National Institute on Alcohol Abuse and Alcoholism, 2015) tornou-se uma característica de comportamento do/a estudante universitário/a (Archie et al., 2012; Bartoli et al., 2014; Brutovská et al., 2014; D'Alessio et al., 2006; I. E. da P. Feijão et al., 2012; Ham & Hope, 2003; Maggs et al., 2011; Morawska & Oei, 2005; Sanchez et al., 2013; Soler-Vila et al., 2014; Stickley et al., 2013; Wemm et al., 2013).

No seio do ambiente académico é visível o consumo de álcool sob a forma de beber socialmente (Nolen-Hoeksema, 2004), podendo ser um indicador de que o consumo de álcool nesta população ocorre num contexto ambiental que o favorece (Reed et al., 2007). Por outras palavras, o consumo de bebidas alcoólicas não só é aceitável, mas também tolerado e até promovido no meio académico (Pimentel et al., 2013), tornando-se parte importante da experiência universitária (Arnett, 2000) e das festas académicas.

O consumo de bebidas alcoólicas representa um problema entre os/as estudantes universitários/as, estando muitas vezes associado a problemas de saúde (Guérin et al., 2013; Perkins, 2002; WHO, 2018), mas também a problemas académicos (baixo comprometimento/desempenho académico), problemas psicossociais e jurídicos (baixos níveis de concentração; agressões sexuais; overdose; perda de memória; deficits cognitivos persistentes; suicídio persistente; práticas sexuais de

risco, danos à propriedade; condução sob o efeito de álcool; lesões; violência; acidentes de rodoviários) (Bamberger et al., 2018; Bolden, 2019; Florimbio et al., 2018; George et al., 2019; Hall et al., 2016; Hermens & Lagopoulos, 2018; Isralowitz et al., 2017; Lefkowitz et al., 2016; Martin et al., 2018; Maurage et al., 2012; Meda et al., 2017; Merrill et al., 2014; Muehlenhard et al., 2016; Patte et al., 2017). Pelas consequências apresentadas, o ideal será a promoção da abstinência do consumo de álcool, no entanto e embora não se promova o consumo de álcool, a maioria dos estudos nesta área focalizam-se na promoção de um consumo de álcool responsável e moderado.

2.3. Consumo de drogas ilícitas no Ensino Superior

Em Portugal, a cannabis é a substância mais consumida tanto pela população em geral como pelos/as mais jovens (Serviço de Intervenção nos Comportamentos Aditivos e nas Dependências, 2018), nomeadamente os/as estudantes universitários/as e o seu consumo encontra-se associado ao consumo de outras drogas ilícitas (Fergusson et al., 2002). A população universitária, em comparação com a população da mesma faixa etária, apresenta um maior consumo de substâncias psicoativas ilícitas (Arias-De la Torre et al., 2019; Balsa et al., 2017; T. H. Bennett & Holloway, 2015), tendo aumentado constantemente na última década (Arria et al., 2017), especialmente entre raparigas (Colell et al., 2013). Os estudos científicos mostram que, pelo menos, 1 em cada 5 estudantes universitários/as consomem drogas ilícitas mensalmente (Dennhardt & Murphy, 2013) e que, embora cerca de um terço dos/as estudantes já tivessem consumido marijuana antes do ingresso no ES, 9% a 25% inicia o consumo após esse ingresso (Moyle & Coomber, 2019; Pinchevsky et al., 2012; Stewart & Moreno, 2013; Suerken et al., 2014).

O consumo de substâncias psicoativas não afeta apenas a saúde física e psicológica dos/as universitários/as (Allen et al., 2017; Arria et al., 2017; Blavos et al., 2017; Dennhardt & Murphy, 2013), mas tem um impacto social negativo, nomeadamente ao nível do desempenho académico (Arria et al., 2015; Suerken et al., 2016), estando o consumo de marijuana associado ao abandono académico (Arria et al., 2017; Blavos et al., 2017).

O consumo de drogas ilícitas encontra-se relacionado com o consumo de álcool entre estudantes universitários/as (Buckner et al., 2010), sendo que quanto maiores as quantidades de álcool consumidas, maiores as probabilidade de consumir várias drogas ilícitas (cannabis, estimulantes, cocaína) (O'Grady et al., 2008).

2.4. Práticas de automedicação no Ensino Superior

A automedicação é o ato pelo qual uma pessoa, por conta própria ou por recomendação de terceiros, opta por administrar medicamentos a si mesma a fim de prevenir, tratar ou curar uma condição cuja identidade e gravidade geralmente são desconhecidas (WHO, 2000).

A automedicação é recomendada pela Organização Mundial da Saúde (OMS) para tratar sintomas autorreconhecidos, ou para tratar doenças ou sintomas crónicos ou recorrentes, usando medicamentos prescritos por médicos/as (WHO, 2000). Porém, ao mesmo tempo, aponta a necessidade de informar a população sobre o uso adequado de medicamentos de venda livre, adotando uma abordagem mais educativa na educação em saúde (WHO, 2000).

Há uma tendência crescente ao uso indiscriminado de medicamentos, tornando essa prática um problema de saúde pública (Kasulkar & Gupta, 2015). Vários estudos nacionais (Mendes & Lopes, 2014; Ribeiro et al., 2010) e internacionais (Abay & Amelo, 2010; Adhikary et al., 2014; Al Shawi et al., 2018; Corrêa da Silva et al., 2012; Donkor et al., 2012; El-Ezz & Ez-Elarab, 2011; Flaiti et al., 2014; Galato et al., 2012; Garofalo et al., 2015; Gyawali, 2015; Helal & Abou-ElWafa, 2017; Idris et al., 2016; Klemenc-Ketis et al., 2010; Kumar et al., 2013; López-Cabra et al., 2016; Lukovic et al., 2014; Mustafa & Rohra, 2017; Sawalha, 2008; Silva Chávez, 2019; Skliros et al., 2010; Tuyishimire et al., 2019; R. Xu et al., 2019) acerca das práticas de automedicação concentraram-se em estudantes universitários/as, identificando um aumento e uma alta prevalência da automedicação.

2.5. Hábitos alimentares (desequilibrados) no Ensino Superior

A alimentação desequilibrada é um dos fatores de risco para a saúde, estando o consumo excessivo de gordura saturada associado ao aumento do colesterol e ao aumento do risco de doenças cardiovasculares (WHO, 2017).

Os hábitos alimentares dos/as universitários/as são os mais desequilibrados em comparação com todas as outras faixas etárias, principalmente, por se tornarem independentes com o ingresso no ES, por ser a primeira vez que fazem as suas próprias escolhas alimentares (Papadaki et al., 2007; Small et al., 2013), mas também porque as novas responsabilidades académicas e a conciliação de horários determinam que a composição e confeção das refeições assumam novos contornos.

Os estudos científicos relatam práticas alimentares pouco saudáveis entre estudantes universitários/as, como alto consumo de *fast food* e alimentos ricos em gordura e açúcar (Al-Nakeeb et al., 2015; Cooke & Papadaki, 2014; El Ansari et al., 2011; Moreno-Gómez et al., 2012; Papadaki et al., 2007; Tanton et al., 2015; Thorpe et al., 2014) e o baixo consumo de frutas e vegetais (Al-Nakeeb et al.,

2015; Al-Otaibi, 2014; Alsunni & Badar, 2015; Cooke & Papadaki, 2014; El Ansari et al., 2011; Evans et al., 2015; Ibrahim et al., 2014; Moreno-Gómez et al., 2012; Peltzer & Pengpid, 2014; Small et al., 2013; Tanton et al., 2015; Tomasone et al., 2015; Watters et al., 2007). Apesar disso, deixamos a indicação de que os estudos mais recentes estão direcionados para uma abordagem mais consciente dos hábitos alimentares, considerando os alimentos orgânicos, o comércio justo e o meio ambiente e os animais (Savelli et al., 2021).

2.6. Práticas de atividade física no Ensino Superior

A OMS identificou a inatividade física como o quarto principal fator de risco para a mortalidade global (WHO, 2010a) e outros/as autores/as como o maior problema de saúde pública do século XXI (Trost et al., 2014). As investigações científicas demonstram que a prática regular de atividade física[1] regular contribui para a saúde física (Füzéki et al., 2017; Lear et al., 2017; Pandey et al., 2017), como a diminuição da mortalidade e de doenças crónicas e cardiovasculares (Ekelund et al., 2016; Lear et al., 2017) e a associação a uma melhor perceção de saúde (Shirom et al., 2008). Da mesma forma que contribui para o bem-estar psicológico e emocional (Álvarez Rivera et al., 2015; Joseph et al., 2014; Wu et al., 2015). Por exemplo, Wu e colaboradores (2015) verificaram que a prática diária de atividade físico contribuía para a diminuição da depressão, da ansiedade e de problemas de sono.

O nível de atividade física diminui da infância para a adolescência, bem como da adolescência para a idade adulta. Os/as estudantes universitários/as, independentemente do país, apresentam uma prevalência de inatividade bastante elevada (Arias-Palencia et al., 2015; Haase et al., 2004; Keating et al., 2005; Moreno-Arrebola et al., 2018; Pengpid et al., 2015) e superior à das restantes faixas etárias (Guthold et al., 2018). Tal como já referido, os hábitos de saúde adquiridos neste período tendem a permanecer para ao longo de toda a vida adulta, incluindo aqueles relativos à atividade física (Curry et al., 2015; Nicholas P Hays, 2013; Rodriguez Rodriguez et al., 2016).

2.7. Comportamentos sexuais de risco no Ensino Superior

Os dados internacionais mais recentes estimam que os/as jovens com idades entre os 15 e os 24 anos sejam responsáveis por metade de todas as novas Infeções Sexualmente Transmissíveis (ISTs) (CDC, 2017) e que quase 33% pelas das novas infeções por HIV (Joint United Nations Programme on HIV/AIDS, 2018). Em Portugal, cerca de 10% de todas as novas infeções, em 2017, ocorreram em jovens

[1] Embora exercício físico e atividade física possam, muitas vezes, ser utilizados como sinónimos, a atividade física refere-se a qualquer movimento corporal que implique gasto energético, enquanto exercício físico, sendo um tipo de atividade física, refere-se a atividades planeadas e das quais se esperam uma melhoria da condição física e mental (Caspersen et al., 1985). No âmbito desta tese foram analisadas as práticas de atividade física.

entre 20 e 24 anos, sendo a transmissão sexual a maneira mais comum de contrair a doença (DGS & Instituto Nacional de Saúde Doutor Ricardo Jorge, 2019). Neste sentido, a melhor forma de diminuir substancialmente a prevalência das ISTs continua a ser a redução dos comportamentos sexuais de risco (GebresIlasie et al., 2017; X. Yang et al., 2019).

De acordo com as investigações científicas, incluindo as mais recentes, e, embora se considere que os/as estudantes do ES estejam plenamente conscientes dos riscos e mecanismos de prevenção das ISTs, os comportamentos sexuais de risco são altamente prevalentes (Abiodun et al., 2014; Díaz-Cárdenas et al., 2014; Merki-Feld et al., 2018; Oppong Asante, 2013; Sherab et al., 2019; Shiferaw et al., 2014; X. Yang et al., 2019). Estes comportamentos englobam ter relações sexuais em idade precoce, ter múltiplos/as parceiros/as sexuais, ter relações sexuais sob a influência de álcool ou drogas e as relações sexuais desprotegidas pelo não uso de preservativo.

As relações sexuais precoces aparecem na literatura científica associadas a uma maior tendência a ter múltiplos/as parceiros/as sexuais e maiores probabilidades de adquirir ISTs, incluindo o HIV (Ma et al., 2009), principalmente quando se tratam de relações sexuais casuais e com estranhos (Bersamin et al., 2012). Neste contexto importa enunciar o modelo de sexualidade espontânea (Calafat & Monserrat, 2008) associado aos/às jovens que procuram o prazer imediato através de relações sexuais sem vínculos emocionais.

As relações sexuais com múltiplos/as parceiros/as apresentam uma elevada prevalência nos/as estudantes do ES, tal como as relações sexuais após a ingestão de álcool (Agardh et al., 2011), tendo-se também verificado que um terço dos/as estudantes tem a sua primeira relação sexual após o consumo de drogas (Calado, 2011). Estas substâncias psicoativas podem promover a desinibição, a diminuição da perceção de risco, o relaxamento, a euforia (Bellis & Hughes, 2004), aspetos essenciais para discernir o custo-benefício das práticas sexuais seguras e inseguras (Zão, 2012)

Apesar das evidências científicas indicarem que o uso consistente de preservativo reduz em 80% o risco de infeção por HIV (Weller & Davis-Beaty, 2002), as relações sexuais desprotegidas continuam a estar no topo dos comportamentos sexuais de risco (Castro, 2016; Dolphin et al., 2018; Fairfortune et al., 2020; Folasayo et al., 2017; Golbasi & Kelleci, 2011; Hoffman et al., 2017; Kebede et al., 2018; Magalhães, 2016; Makgale & Plattner, 2017; Mavhandu-Mudzusi & Asgedom, 2016; Pastor & Rojas-Murcia, 2019; Perera & Abeysena, 2018; M. J. Santos et al., 2016; SaraçoĞlu et al., 2014; Shapiro et al., 1999; H. Xu et al., 2019).

2.8. A pandemia COVID-19 e os comportamentos preventivos no Ensino Superior

A doença coronavírus 2019 (COVID-19) foi declarada como uma pandemia pela OMS em 11 de março de 2020 devido ao seu alto índice de infecciosidade, que causou milhares de mortes em todo o mundo e está em contínua expansão (WHO, 2020). A via de transmissão do COVID-19 é feita diretamente entre humanos por meio de gotículas e secreções respiratórias, e indiretamente pelo contato com superfícies contaminadas, podendo também ser transmitida por indivíduos assintomáticos. À semelhança de outros países, as principais medidas de proteção individual adotadas e recomendadas em Portugal foram a utilização de máscara em locais públicos fechados e transportes públicos; lavagem das mãos (com sabonete); e manutenção de distância física (DGS, 2020), tendo sido amplamente divulgada entre a população.

Para controlar a pandemia, quase todos os países implementaram medidas públicas, que incluíram restrições sociais, como o fecho de fronteiras, o isolamento físico, o encerramento de escolas e universidades, entre outras medidas. A UMinho foi a primeira universidade portuguesa a registar um caso de COVID-19 na comunidade universitária e, neste sentido, a primeira universidade a encerrar a 7 de março de 2020 (Universidade do Minho, 2020).

Considerando o âmbito desta tese e as suposições de que uma comunidade académica informada sobre as formas de transmissão do vírus e como pode ocorrer a exposição, sobre os sintomas e o uso de equipamentos de proteção individual, está mais sujeita a desenvolver atitudes positivas em relação às medidas preventivas, que, na maioria das vezes, são um preditor da adesão a comportamentos preventivos de saúde, diminuindo a propagação do vírus, considerou-se a realização de um estudo acerca dos conhecimentos, atitudes e comportamentos preventivos em relação à COVID-19 (Estudo 8).

3. BEM-ESTAR E PERCEÇÃO DE SAÚDE NO ENSINO SUPERIOR

O BES, em termos gerais, é uma avaliação, tanto cognitiva quanto afetiva, da própria existência, um julgamento de como se sente ou do seu grau de satisfação com a vida. O conceito de BES enquanto conceito complexo não possui uma definição consensual (Diener et al., 1999), no entanto, a maioria dos/as investigadores/as concorda que o estudo do BES deve abranger as dimensões cognitiva e afetiva (A. S. Albuquerque & Tróccoli, 2004; Diener et al., 2000; Galinha & Ribeiro, 2005).

A dimensão cognitiva do BES reflete-se no julgamento cognitivo da satisfação com a vida, enquanto a dimensão afetiva apresenta-se como o estado emocional, podendo estar relacionada a emoções agradáveis (emoções positivas) e desagradáveis (emoções negativas), em termos específicos

e, em termos gerais, com a felicidade (A. S. Albuquerque & Tróccoli, 2004; Galinha & Ribeiro, 2005; Mariano Rojas & Maikol Elizondo-Lara, 2012).

A **satisfação com a vida** é um constructo que se refere ao contentamento que uma pessoa sente ao pensar na sua vida como um todo (Bardagi & Hutz, 2010). Refere-se às avaliações subjetivas ou julgamentos que o indivíduo faz em relação às suas experiências, caso tenham proporcionado (in)satisfação com a vida. Portanto, o indivíduo compara as circunstâncias da vida com um conjunto de padrões autoimpostos e em que medida a sua qualidade de vida corresponde a esses padrões. Assim, de acordo com Pavot e Diener (2009) e Diener, Inglehart e Tay (2013), a satisfação com a vida é um julgamento cognitivo assente em critérios pessoais. Em termos práticos, os indivíduos com alto bem-estar devem ter um alto grau de satisfação com a vida e emoções positivas e baixos níveis de emoções negativas.

Como já mencionado, outros indicadores importantes para medir o BES referem-se ao conceito de **felicidade subjetiva**. Ou seja, as perceções individuais de felicidade ou efeitos positivos (Lyubomirsky & Lepper, 1999; Trinh & Khanh, 2019). A qualidade de vida definida como a perceção de um indivíduo sobre a sua posição na vida, no contexto da sua cultura e dos sistemas de valores em que vive, e em relação aos seus objetivos, expectativas, padrões e preocupações (THE WHOQOL GROUP, 1995). Nessa perspetiva, as definições de qualidade de vida, satisfação com a vida, BES e felicidade sugerem uma sobreposição concetual (Camfield & Skevington, 2008), e estão intimamente relacionadas (Medvedev & Landhuis, 2018).

A satisfação com a vida e a felicidade são aspetos extremamente importantes na vida dos/as estudantes universitários/as, embora difíceis de alcançar (Diener et al., 2000), têm impacto nas suas atitudes e comportamentos (Khramtsova et al., 2007). O estudo do bem-estar deve ser considerado ao longo do percurso académico, isto porque as evidências científicas mostraram que as barreiras ao bem-estar, como ansiedade, stresse e depressão, aumentam com a permanência no ES (Beiter et al., 2015; H. Elias et al., 2011; Fawzy & Hamed, 2017), sendo que um/a em cada cinco estudantes universitários/as relataram ter uma doença mental ativa (ACHA, 2018b). Para além disso, atendendo à componente cognitiva do bem-estar, os estudos científicos comprovam que a satisfação com a vida está negativamente relacionada com alguns comportamentos de saúde, como fumar, beber e o sedentarismo entre estudantes universitários/as em diferentes culturas (Grant et al., 2009; Pengpid & Peltzer, 2019). Da mesma forma que, face à componente afetiva, se identificou uma série de relações significativas entre felicidade e determinados comportamentos de saúde, como os hábitos alimentares, nomeadamente não saltar o pequeno-almoço e consumir frutas e vegetais diariamente, a prática regular de atividade física,

a ausência de maus hábitos como não fumar, consumir álcool ou drogas ilícitas e os riscos sexuais (E. Cook & Chater, 2010; Grant et al., 2009; Kye & Park, 2014; Monahan et al., 2012; Murphy et al., 2018; Peltzer et al., 2017; Peltzer & Pengpid, 2013; Pengpid & Peltzer, 2019; Piqueras et al., 2011; Shahab & West, 2012). Ou seja, os resultados destes estudos revelaram que a felicidade tem múltiplos benefícios, estando associada e precedendo inúmeros comportamentos de saúde. Dito de outra maneira, indivíduos felizes têm menos probabilidade de se envolver numa variedade de comportamentos prejudiciais e não saudáveis, tais como os mencionados anteriormente.

4. AS UNIVERSIDADES ENQUANTO *ESPAÇOS* PROMOTORES DE SAÚDE

Um dos aspetos que demonstra a **pertinência desta investigação** prende-se com o facto dos/as jovens adultos/as poderem ser mais propensos a intervenções e mudanças de comportamento enquanto imersos num ambiente de aprendizagem como o académico (Plotnikoff et al., 2015; Visser & Hirsch, 2014). Depreende-se que os seus hábitos ainda não foram totalmente formados e estabelecidos, havendo um grande potencial durante esse período para corrigir comportamentos não saudáveis (Kim et al., 2020), visto que é mais difícil extinguir um comportamento de risco, do que iniciar novos comportamentos saudáveis (Holland et al., 2006). Para além disso, os comportamentos prejudiciais à saúde adquiridos no ES tendem a manter-se ao longo da vida e a exercer um impacto considerável a longo prazo na saúde e no bem-estar destes/as jovens, reforçando a particular importância das investigações nesta área (Arias-Palencia et al., 2015; Ellis, 2013; Seo et al., 2018).

Neste contexto, os/as estudantes universitários/as devem ser encarados/as como agentes de desenvolvimento emergentes, assente na crença dos/as mesmos/as serem detentores/as de conhecimentos devido ao seu percurso académico e, consequentemente com poder de influenciar a saúde de uma população, quer através das suas escolhas individuais, quer através de hipotéticas profissões com responsabilidades na construção de futuras políticas de saúde ou nas tomadas de decisão sobre as mesmas (Allensworth et al., 2017; Dooris & Doherty, 2010; Stewart-Brown et al., 2000). Estes/as jovens adultos/as são, neste contexto, incumbidos de abrir à sociedade um leque de alternativas preventivas, tendo por base a transmissão de conhecimentos e atitudes protetoras face a potenciais comportamentos de risco (Alves et al., 2021), sendo agentes de mudança, responsáveis pela promoção de estilos de vida saudáveis (Melani et al., 2000). Esta visão permite a valorização mais dos atores do que das políticas de desenvolvimento (Nóvoa et al., 1992).

As ações de PrS no ES são cada vez mais urgentes, pois, se por um lado, o número de jovens adultos/as neste contexto vem aumentando ao longo dos anos, tanto a nível internacional como nacional [2]. Por outro lado, as IES dispõem de uma infraestrutura (tecnologias, instalações, profissionais especializados) capazes de constituir *espaços* promotores da saúde, um cenário privilegiado para fomentar mudanças nos comportamentos de saúde individuais e do coletivo universitário (Meda Lara et al., 2008). De acordo com Silva e Brito (2014), as "universidades podem incrementar o conhecimento e o compromisso com a saúde de um amplo número de pessoas formadas num enorme conjunto de disciplinas e capacitadas para promover a saúde" (p. 18).

As Instituições de Ensino Superior (IES) desempenham um papel importante no desenvolvimento profissional dos/as jovens, mas atualmente a sua missão não se limita à aprendizagem dos conteúdos das áreas específicas dos cursos. Trata-se nelas de sobretudo promover o desenvolvimento integral dos/as estudantes, adotando uma atitude educativa global. Neste domínio institucional, destaca-se o conceito de **Universidades Promotoras de Saúde** entendido como uma IES que promove uma cultura organizacional orientada para valores e princípios associados à PrS, dando prioridade à construção de ambientes físicos, psíquicos e sociais que favoreçam a saúde e o bem-estar de todos os membros da comunidade académica (Silva & Brito, 2014).

5. TEORIA EXPLICATIVA DA INVESTIGAÇÃO EM EDUCAÇÃO PARA A SAÚDE

Os comportamentos de saúde são influenciados por uma série de fatores relacionados ao indivíduo (conhecimento pré-existente, atitudes e crenças), o ambiente social (normas culturais, a influência dos pares, a influência da família) e fatores cognitivos (a autoconceito e autoeficácia) (Pais-Ribeiro, 2007). Estes fatores desempenharam, ao longo do tempo, um papel central nos diversos modelos teóricos em torno das investigações em saúde, de modo a encontrar explicações para a adoção de comportamentos protetores e a prevenção de comportamentos de risco. Embora se reconheça os esforços para melhorar as teorias em torno dos comportamentos de saúde, estes parecem guiados mais por um misto de hipóteses e micro-teorias do que por uma macro-teoria unificada, integrada e abrangente (Glanz et al., 2008). Face a esta premissa, o desenho e a conceção desta tese guiaram-se pela **Teoria da Influência Triádica** (TIT) (Flay & Petraitis, 1994) que numa abordagem ecológica integra várias teorias de micronível que focalizam individualmente diferentes fluxos de influência (intrapessoal, atitudinal e social)

[2] Na UE-27, em 2018, havia 17,5 milhões de estudantes no ES (Eurostat, 2018), sendo que em Portugal, em 2020, se registaram 396909 jovens inscritos/as em IES (FFMS & PORDATA, 2020).

e níveis de causalidade. Tais como: o modelo racional (transmissão de conhecimento/informação), o Modelo das Crenças em Saúde (MCS) (influenciando atitudes, crenças e motivações), a teoria social cognitiva (abordando as influências sociais), a Teoria do Comportamento Planeado (TCP) (que engloba as atitudes em relação a um comportamento, a perceção de pressão normativa para se envolver nesse comportamento, e a perceção de autoeficácia relacionada à saúde).

→ o **Modelo racional ou informativo**, também conhecido como "modelo de conhecimento, atitudes, práticas" (*Model of knowledge, attitude and practices – KAP; Model of knowledge, attitude and behavior - KAB*) ou modelo médico, é baseado na premissa de que aumentar o conhecimento de uma pessoa irá provocar uma mudança de comportamento, ou seja, pressupõe que proporcionar informação por si só pode influenciar os comportamentos negativos para a saúde, corrigindo-os (WHO, 2012). Este modelo apresenta uma relação progressiva entre conhecimento, atitudes e comportamento da seguinte forma: o conhecimento modifica as atitudes e a mudança destas permite à pessoa ter intenções e comportamentos de acordo com elas (Thompson, 1978). De acordo com esta teoria de mudança de comportamento em saúde, os indivíduos podem obter conhecimentos e competências por meio da aprendizagem e, então, desenvolver gradualmente crenças e atitudes saudáveis que são reforçadas por meio da adoção de comportamentos saudáveis (Bettinghaus, 1986; Fishbein & Ajzen, 1975). No entanto, tais modelos teóricos nem sempre são confirmados. A literatura mostra que, muitas vezes, as pessoas que se envolvem em comportamentos de risco estão cientes do risco e não conseguem mudar o seu comportamento (P. A. Cook & Bellis, 2001). Por exemplo, os comportamentos de risco (por exemplo, fumar, beber álcool e usar drogas) não são raros, mesmo em grupos populacionais bem informados, como médicos e estudantes de medicina (P. A. Cook & Bellis, 2001). Mesmo assim, embora o conhecimento nem sempre leve a uma determinada ação, nenhuma ação é realizada sem motivação, e a motivação é baseada em alguma experiência, informação ou compreensão prévia (Kilander, 2001). Portanto, o conhecimento é essencial para desenvolver atitudes em relação a comportamentos distintos e auxiliar os indivíduos na tomada de decisões e ações voltadas para comportamentos saudáveis (Mas et al., 1997). Por outras palavras, o conhecimento e as atitudes afetam indiretamente o estado de saúde dos indivíduos, promovendo a mudança de comportamento (Jeruszka-Bielak et al., 2018; Pickard et al., 2018).

→ o **Modelo das Crenças em Saúde** (MCS) (*Health Belief Model - HBM*) originalmente desenvolvido por Rosenstock (1966) e, posteriormente reformulado por Janz e Becker (1984), por enfatizar o papel das crenças na formação de atitudes relacionadas à saúde e aos comportamentos de saúde. Este modelo assenta em seis determinantes do comportamento: a suscetibilidade, a gravidade,

os benefícios e as barreiras percebidas, a motivação para o comportamento e a disposição para agir (Armitage & Conner, 1999). De acordo com este modelo, o indivíduo adota determinado comportamento na medida em que se sente ameaçado (suscetibilidade e gravidade), perceciona a existência de benefícios e barreiras e se sente motivado e disposto a adotar um determinado comportamento.

→ a **Teoria Social Cognitiva** (TSC) (*Social Cognitive Theory - SCT*) de Bandura (1986), anteriormente designada por teoria da aprendizagem social, por destacar a influência social (relacionamento, observação, imitação e reforço social) na adoção de comportamentos de saúde. A teoria social cognitiva prevê que os comportamentos se manifestam quando a pessoa sente que tem controlo sobre o resultado, identifica poucas barreiras externas e confia na sua capacidade para realizar a ação (Armitage & Conner, 1999).

→ a **Teoria do Comportamento Planeado** (*Theory of Planned Behaviour - TPB*) de Ajzen (1991) resulta da modificação da Teoria da Ação Racional (*Theory of Reasoned Action - TRA*) por argumentar que os comportamentos relacionados com a saúde são determinados por intenções ou decisões conscientes. Poder-se-á afirmar, então, que o indivíduo não age de forma espontânea, mas sim racional e consciente, existindo uma intenção imediatamente anterior a um determinado comportamento. Esta teoria conclui que as atitudes, as normas subjetivas e a perceção do controlo do comportamento, predizem as intenções comportamentais, as quais antecedem a concretização dos comportamentos.

A utilização da TIT nesta tese não teve como objetivo testar a teoria, mas explorar as diferentes variáveis identificadas pelos seus autores como preditores dos comportamentos de risco para a saúde dos/as estudantes universitários/as.

5.1. Fluxo de influência intrapessoal (biologia e personalidade)

Este tipo de influência representa características biológicas e de personalidade dos/as estudantes que prejudicam sua capacidade de adotar comportamentos de saúde positivos. No âmbito desta tese, considerou-se a perceção de bem-estar e saúde e as características sociodemográfica dos/as estudantes. Por exemplo, a variável sexo, visto que na grande maioria dos estudos analisados a prevalência de consumo de tabaco é superior nos estudantes do sexo masculino em comparação ao sexo feminino (Askarian et al., 2013; Barra et al., 2015; Danjoy León et al., 2010; Granja et al., 2020; Karadoğan & Önal, 2018; Luz et al., 2010; Musmar, 2012; Öncel et al., 2011; Pinilla-Vásquez & Angarita-Fonseca, 2012; Rodrigues et al., 2010; Sarioglu et al., 2016). A variável sexo é considerada na literatura científica com dos fatores associados à automedicação, revelando que as estudantes apresentam uma maior

prevalência em comparação com os estudantes (Cabrita et al., 2001; Carrasco-Garrido et al., 2014; Garofalo et al., 2015; Helal & Abou-ElWafa, 2017; James et al., 2006; Moreira et al., 2012)

5.3. Fluxo de influência atitudinal (ambiental)

A influência atitudinal de acordo com a teoria TIT representam as atitudes em relação a um comportamento específico, formadas a partir dos conhecimentos acerca da saúde dos/as estudantes universitários/as.

Na literatura científica, diversas investigações têm abordado a relação entre conhecimentos, atitudes e comportamentos de saúde. Especificamente, em termos de conhecimento sobre o uso do tabaco, vários estudos têm mostrado que os/as fumadores/as têm um baixo nível de conhecimento (Hsieh et al., 1996), sugerindo que aumentar o conhecimento sobre os efeitos do tabagismo diminuiria as taxas de tabagismo durante o percurso académico (Pinilla-Vásquez & Angarita-Fonseca, 2012). Por conseguinte, os/as estudantes que deixaram de fumar revelavam um maior nível de conhecimentos (Clark et al., 2004; Kofahi & Haddad, 2005). E, em relação às atitudes face ao tabaco, verificou-se que a maioria dos/as estudantes apresentava atitudes favoráveis ao tabagismo (Clark et al., 2004), embora os/as não-fumadores/as tenham demonstrado pontuações mais altas em atitudes positivas do que fumadores/as e ex-fumadores/as (Clark et al., 2004; Musmar, 2012).

Na mesma linha, as investigações científicas com estudantes universitários/as mostraram que as expectativas sobre o consumo de álcool de risco, comumente vistas como um componente das atitudes (Chawla et al., 2007), foram um preditor significativo não apenas do consumo de álcool, mas também de problemas relacionados ao álcool (LaBrie et al., 2014; Wicki et al., 2010). Assim, as expectativas positivas (por exemplo, melhoria da performance sexual) tendiam a aumentar o consumo de bebidas alcoólicas e as expectativas negativas (como défice cognitivo induzido) a diminuir o seu consumo. De igual modo, a alta prevalência de automedicação entre os/as universitários/as pode estar relacionada: à perceção de que possuem conhecimentos suficientes e adequados; à perceção errônea de que uma doença com sintomas não graves não produz consequências graves em caso de automedicação (Mehta & Sharma, 2015); à crença de que a automedicação proporciona um rápido alívio da dor e da doença (Tuyishimire et al., 2019) e à existência de experiências positivas com determinados medicamentos, influenciando o hábito da sua ingestão e o aconselhamento a familiares e amigos (A. Soares, 2002).

Outro fator considerado preditor de consumo de risco refere-se ao conhecimento sobre o consumo de álcool (Black et al., 2004; Engs, 1978). Os investigadores Black e colaboradores (2004) e Engs (1978) sugerem que os conhecimentos acerca dos malefícios do consumo de bebidas alcoólicas poderia ajudar

os/as estudantes a fazerem escolhas responsáveis e a tornarem-se consumidores/as de álcool responsáveis, caso o decidam consumir (Engs, 1978). Além disso, a literatura científica demonstra a eficácia das intervenções destinadas a reduzir o consumo de risco entre universitários/as, principalmente aquelas com enfoque em abordagens que visam fornecer informações sobre os riscos, transmitir conhecimentos relacionados com os perigos do álcool e desenvolver competências para evitar o seu consumo (Werch et al., 2008). A normalização do consumo de drogas em contexto académico pode ser explicada por alguns mitos, como o consumo de marijuana ser inofensivo e não viciante ou prejudicial para a saúde (Kilmer et al., 2006; Lewis & Clemens, 2008). Nesse sentido, os/as estudantes com uma perceção de risco elevada tendem a apresentar níveis de consumo mais baixos (Harris Abadi et al., 2011).

Vários estudos sugerem que o conhecimento é um fator importante para explicar as variações na escolha de alimentos (Al-Otaibi, 2014; Alves, 2019a; Cooke & Papadaki, 2014; El-Sabban & Badr, 2011; Hyska et al., 2014; Makiabadi et al., 2019; Yahia et al., 2016), tendo-se verificado que o aumento do conhecimento nutricional tem sido associado a melhores hábitos alimentares e menores taxas de obesidade (Ha & Caine-Bish, 2009, 2011; Makiabadi et al., 2019). Além disso, as atitudes são fatores determinantes na escolha de uma alimentação saudável, sendo recomendável que a educação alimentar também tenha como foco a mudança de atitudes e expectativas (Al-Otaibi, 2014).

Os comportamentos sexuais de risco podem ser atribuídos a um baixo nível de conhecimento sobre sexualidade ou às atitudes negativas face às ISTs ou ao uso do preservativo. Embora o fator cognitivo possa fornecer uma base de ação (Abiodun et al., 2014; Oppong Asante, 2013), não será suficiente, ou seja, um nível superior de conhecimentos não pode necessariamente garantir um comportamento sexual responsável e seguro. Assim, mais do que os conhecimentos, as atitudes estão entre os constructos teóricos que mais predizem os comportamentos sexuais (Fernández Rouco et al., 2018; Salam et al., 2016), funcionado como facilitadores de mudanças no comportamento sexual. Ou seja, uma atitude positiva face aos métodos contracetivos influenciará positivamente o uso do preservativo com o intuito de proteger de ISTs (Reis et al., 2009; Reis & Matos, 2007a, 2007b)

5.2. Fluxo de influência social (interpessoal)

A influência social refere-se ao contexto social ou microambiente que contribui para crenças normativas, representadas nesta tese pela influência de pares e de outras pessoas significativas.

A influência dos pares (Borsari & Carey, 2001; Litt et al., 2012) e a relativa falta de supervisão de adultos em ambientes universitários contribui para a "tempestade perfeita" podendo aumentar o risco

de consumo de álcool pelos/as estudantes universitários/as. Num estudo realizado por Staff e colegas (2010), os/as jovens que não viviam com os pais apresentavam um consumo de substâncias psicoativas ilícitas superior aos/às que continuavam a viver em casa dos pais. Para além disso, importa acrescentar que as perceções normativas podem desempenhar um papel na perpetuação desses comportamentos, ou seja, as perceções face à frequência de consumo dos pares e à aprovação do consumo pelos pares (Blavos et al., 2017; Buckner, 2013; Coomber et al., 2016; Dennhardt & Murphy, 2013; Edwards et al., 2019; Harris Abadi et al., 2011; McCabe et al., 2014; Meisel & Goodie, 2015; Moyle & Coomber, 2019; Napper et al., 2015; Pinchevsky et al., 2012).

6. INTERVENÇÃO EM EDUCAÇÃO PARA A SAÚDE

O modelo PRECEDE-PROCEED (*Predisposing, Reinforcing and Enabling Constructs in Educational/Ecological Diagnosis and Evaluation and Policy, Regulatory and Organizational Constructs in Educational and Environmental Development*) (Green & Kreuter, 2005) refere-se a uma abordagem ecológica para o planeamento de programas de EpS. Este modelo amplamente utilizado (inter)nacionalmente em intervenções de EpS com estudantes universitários/as (Ashton et al., 2017; Kattelmann et al., 2014; M. Whatnall et al., 2019), desenvolve-se em 8 fases: as primeiras 4 fases (PRECEDE) servem para planear o programa e avaliar as necessidades dos/as envolvidos/as, enquanto a componente PROCEED (4 fases) envolve a implementação e avaliação do processo, dos seus resultados e do impacto.

A utilização deste modelo, de acordo com Pedroso e Brito (2014), permite orientar os/as investigadores/as a "pensar logicamente sobre o ponto final desejado e trabalhar *para trás* para atingir esse objetivo, envolvendo o grupo-alvo nesse processo" (p. 16), baseando-se em evidências científicas assentes na análise de diagnóstico realizada na fase PRECEDE.

6.1. Programas baseados na Web dirigidos a estudantes do Ensino Superior

Nesta seção apresentam-se os programas baseados na web que serviram de inspiração para a criação do programa de EpS apresentado no Estudo 12. Os exemplos na literatura científica de estudos com programas de EpS baseados na web são vários, demonstrando eficácia, viabilidade e aceitabilidade por parte dos/as estudantes universitários/as (Bailey et al., 2012; Lau et al., 2011; Portnoy et al., 2008; Shahab & McEwen, 2009; Webb et al., 2010; Whittaker et al., 2009). A internet é, neste sentido, um canal promissor para desenvolver este tipo de programas, fornecendo métodos abrangentes e

relativamente baratos (Bingham et al., 2011; Evers, 2006; Kattelmann et al., 2014; Tahaney & Palfai, 2017), com eficácia na mudança de comportamentos (G. G. Bennett & Glasgow, 2009; Brouwer et al., 2011; Cugelman et al., 2011; Kohl et al., 2013; Webb et al., 2010) e possibilitando a manutenção e atualização das intervenções (Atkinson & Gold, 2002; Cugelman et al., 2011; Griffiths et al., 2006; Neuhauser & Kreps, 2003).

No âmbito da prevenção do tabagismo em contexto académico, destacam-se: o *Programa RealU*, uma intervenção on-line de dois semestres com fumadores/as universitários/as com vista ao aumento das taxas de abstinência autorreferidas de 30 dias (An et al., 2008); o *Tweet2Quit*, uma intervenção com duas abordagens: 1) usa o Twitter, configurando pequenos grupos de autoajuda, privados e virtuais, de fumadores motivados a parar de fumar e 2) envia mensagens automáticas diárias levantando questões relevantes para o tratamento escritas por especialistas para os/as fumadores/as discutirem (Pechmann et al., 2017) e um programa baseado na web a partir do sistema *Questions Sharing and Interactive Assignments – QSIA* (Essa-Hadad et al., 2015) no qual se partilharam material de EpS personalizados (como textos e vídeos).

Relativamente à prevenção do consumo e abuso de álcool no ES desenvolvidos com recurso a plataformas digitais, identificaram-se: o *M-PASS* (Barretto et al., 2011; Bingham et al., 2011), uma intervenção motivacional breve, baseada na teoria, consistindo em quatro sessões ministradas através da Internet para prevenir e reduzir o consumo de risco entre estudantes universitários/as primeiristas; o *Multi-Media Assessment of Student Health - Project MMASH* (Dimeff & McNeely, 2000) dirigido a estudantes consumidores/as de álcool, pretendendo motivá-los/as a reduzir o seu consumo em vez de atingir uma meta específica ou a abstinência; o *AlcoholEdu* (Paschall et al., 2011) relativo a um curso online de 2 a 3 horas que inclui 5 módulos e é dirigido a todos/as os/as estudantes primeiristas; o *THRIVE - Online Alcohol Intervention* (Hallet et al., 2009; Kypri, 2009), uma intervenção de 10 minutos de avaliação motivacional baseado na Web e um feedback personalizado; o *MyStudentBody.com: Alcohol* - (Chiauzzi et al., 2005) relativo a um website interativo, que oferece uma intervenção breve e personalizada para ajudar os/as estudantes universitários/as que apresentam um consumo excessivo a reduzir esse consumo; *Alcohol Skills Training Program* (Kivlahan et al., 1990), um programa de competências incluiu o conhecimento acerca do cálculo da estimativa do nível de álcool no sangue, a definição de limites e habilidades de prevenção de recaídas.

A educação baseada na web tem sido amplamente utilizada para introduzir programas preventivos face ao consumo de drogas ilícitas, nos últimos anos, especialmente entre estudantes universitários/as (Jalilian et al., 2015; Marsch et al., 2014; B. A. Moore et al., 2011), mostrando que o uso da internet

poderia ser uma solução eficiente para conduzir intervenções educacionais (Escoffery et al., 2005). O programa desenvolvido por Jalilian e colegas (2015) visou diminuir as crenças positivas que encorajavam o uso de drogas entre estudantes universitários de medicina, disponibilizando conteúdos educativos (booklet acerca das consequências das drogas, videoclique educativo de 3 minutos, slides acerca das crenças erróneas) no website da universidade.

O *Cannabis eCHECKUP TO GO (e-TOKE)* (San Diego State University Research Foundation, 2009) é uma intervenção breve (uma sessão com cerca de 20 minutos) disponibilizada online. Esta intervenção fornece um feedback individualizado acerca das normas de uso percebidas, do dinheiro gasto com o consumo destas substâncias, as consequências do seu consumo e ainda fornece estratégias para reduzir o consumo. A sua eficácia foi demonstrada por vários investigadores (Doumas et al., 2011; Elliott & Carey, 2012).

As intervenções em que se pretende promover comportamentos alimentares saudáveis têm um efeito mais efetivo do que as intervenções cujo objetivo é diminuir comportamentos alimentares pouco saudáveis (por exemplo, diminuir a ingestão de gorduras saturadas ou o consumo de *snacks*) (Adriaanse et al., 2011). Ou seja, as intervenções deverão centrar-se em iniciar novos comportamentos saudáveis do que em extinguir comportamentos de risco (Holland et al., 2006). O *Eating Advice To Students (EATS)* (M. Whatnall et al., 2019) é uma intervenção nutricional baseada na web e dirigida a estudantes universitários/as, apresentando uma solução inovadora para muitas das dificuldades enfrentadas pelos/as jovens adultos/as para melhorar os seus hábitos alimentares. Para além disso, destacam-se um *Web- Based Nutritional Health Education Module* (El-Refaay et al., 2017), descrito por especialistas e estudantes universitários como abrangente e focado em estratégias que incentivam os/as estudantes na adoção de uma alimentação saudável e uma *Web-Based Nutrition Education Intervention* (Poddar et al., 2010) projetada para mudar a ingestão de laticínios em estudantes universitários/as.

No âmbito da prática de atividade física destacam-se: o *Active Transition* (Kwan et al., 2013) que se refere a um website alojado na blackboard do portal universitário protegido por usuário e password, de forma a ser um fórum informativo projetado para 6 semanas, nas quais se apresentam apresentando tópicos semanais sobre crenças comportamentais, normativas e de controlo da atividade física, bem como o estabelecimento de metas, planeamento de ações, prevenção de recaídas e manutenção comportamental; o *Internet-based Physical Activity Program - i-PAP* (Okazaki et al., 2014) é um sistema de aprendizagem interativo na web e apresenta várias funções, incluindo a definição de metas, programação, automonitorização, treino de força e alongamentos, um questionário baseado na Web e cálculos de gasto de energia de atividade física; e uma intervenção na web de 8 semanas que com base

no modelo HAPA (Health Action Process Approach) (Schwarzer, 2008) previu a mudanças nas práticas de atividade física e ingestão de frutas e vegetais (Duan et al., 2017).

Em termos de programas de prevenção dos comportamentos sexuais de risco, as intervenções interativas baseadas na web têm-se mostrado estratégias potencialmente interessantes para a promoção da saúde sexual e da prevenção de ISTs ou gravidez indesejada. Neste âmbito destacam-se: o *F.O.R.E.Play* (E. W. Moore et al., 2012) desenvolvido com o recurso a três estratégias que visam fornecer aos/às estudantes informações ou meios para as obter acerca da prevenção da transmissão e prevalência do HIV e das ISTs e o *Electronic-KIOSK Intervention for Safer Sex - e-KISS* (Shafii et al., 2019) que incluiu um feedback personalizado sobre a saúde sexual com um avatar de médico e módulos de vídeo educativos que defendem a saúde sexual.

7. A IMPORTÂNCIA DA (AUTO)SUPERVISÃO PEDAGÓGICA

A construção do conhecimento científico, ao ser um processo racional, sistemático e intencional, envolve o cumprimento de determinadas etapas para que se possa desenvolver, através do qual o/a investigador/a procura encontrar respostas para os problemas propostos, contribuindo para a evolução do conhecimento científico e humano em todas as áreas da ciência. No entanto, note-se que não se tratam de etapas sequenciais, mas etapas que implicam um constante retorno e reajuste do processo. Ou seja, apesar da "passagem" à fase seguinte implicar que a etapa anterior tenha sido pensada e realizada, isso não quer dizer que a primeira esteja fechada e deva ser totalmente abandonada. Portanto, devemos ter uma visão integrada da investigação científica e, é nesse sentido que o processo de investigação científica deve ser acompanhado por um processo de reflexão metodológica (M. I. Lopes, 2004).

A reflexão na construção do processo metodológico requer a observação de todos os ângulos do processo de investigação, a descoberta de novos pontos de vista, de novas perspetivas e (inter)relações. Defende-se, assim considerado, a inquietação das práticas, no registo e na indagação da (in)certeza, que o/a investigador/a encontra espaços de partilha consigo mesmo, ultrapassando questões éticas e potencializando os seus anseios em oportunidades de crescimento. A reflexão acerca do processo metodológico deverá assentar numa postura ativa para que "de um modo realista e criativo encontrar a melhor forma possível de atuar em cada momento" (Alarcão & Tavares, 2007, p. 113).

Apelando às potencialidades da supervisão e com a convicção da importância da instauração desta componente reflexiva na construção do conhecimento científico, o desenvolvimento desta tese de

doutoramento foi acompanhado pela escrita de narrativas reflexivas, que seguiram o método dos quatro níveis de análise - descrição, interpretação, confronto e reconstrução - propostos por Smyth (1998) e descritos em profundidade em Alves (2019c) [3]. Este método requer uma atitude proactiva na idealização de alternativas e equacionamento de possibilidades, conduzindo a uma atitude cíclica face ao planeamento, monitorização e avaliação das suas próprias opções metodológicas. Perrenoud (Perrenoud, 2002) lembra-nos que, ainda que não seja suficiente, a prática reflexiva é uma "condição necessária para enfrentar a complexidade" (p. 57), muito embora ela possa ser experienciada de forma solitária (Schon, 1996), mas não isolada, por contar com o diálogo com um/a supervisor/a (leia-se, orientador/a científico/a), que ajude o/a investigador/a a manter a objetividade.

No contexto atual das sociedades em rede caraterizadas pela utilização de plataformas educacionais ou de interfaces online, as práticas de supervisão pedagógicas precisam ser transpostas para os ambientes virtuais de aprendizagem e modalidades de educação online (Cano & García, 2013). Desta forma, a supervisão pedagógica online ou eSupervisão refere-se a uma metodologia de acompanhamento de uma atividade virtual através de processos de regulação, monitorização, mediação, coordenação, liderança e avaliação, permitindo desenvolver, estimular e possibilitar o crescimento das capacidades reflexivas de todos/as os/as envolvidos/as (Valente & Barros, 2019) e fomentando práticas pedagógicas ativas e construtivistas que sustentem um conhecimento partilhado e uma aprendizagem colaborativa (Henriques et al., 2017). De acordo com Rosendale (2009), a supervisão online "implica a recolha de múltiplos e variados dados ao longo do tempo que possibilitem a criação de um plano de melhoria pedagógica" (p. 9), dando maior relevância à aquisição de competências dos/as formandos/as.

Com base no pressuposto de que a Supervisão Pedagógica pode ser entendida como uma ação de monitorização sistemática da prática pedagógica (Vieira, 1993), ao ser multifacetada, faseada, continuada e cíclica (Alarcão & Tavares, 2007) e decorrendo sobretudo através de procedimentos de reflexão e de experimentação (Vieira, 1993), observou-se que o modelo PRECEDE-PROCEED incorpora os ciclos da supervisão: observação, orientação e avaliação.

De acordo com Trindade (2007), a observação refere-se ao "processo de recolha de informação, através do qual podemos aprender sobre o nosso comportamento e o dos outros; realiza-se de acordo com normas pré-definidas e definições operacionais, na tentativa de obter resultados objetivos, isto é,

[3] No âmbito desta contextualização realizaram-se duas publicações e uma comunicação: **1)** Alves, R. (2019). A (auto)reflexão no processo metodológico da investigação científica em dissertações. In Manuel Vara Pires, Cristina Mesquita, Rui Pedro Lopes, Elisabete Silva, Raquel Patrício (Eds.). *IV Encontro Internacional de Formação na Docência (INCTE): livro de resumos* (p. 178). Bragança: Instituto Politécnico de Bragança. ISBN: 978-972-745-260-6 URL: http://hdl.handle.net/10198/19058; **2)** Alves, R. (2019). A (auto)reflexão no processo metodológico da investigação científica em dissertações. In Pires, Manuel Vara; Mesquita, Cristina; Lopes, Rui Pedro, Silva, Elisabete Mendes; Santos, Graça; Patrício, Maria Raquel; Castanheira, Manuel Luís Pinto (2019). *IV Encontro Internacional de Formação na Docência (INCTE): livro de atas* (p. 975-981). Bragança: Instituto Politécnico. ISBN 978-972-745-259-0. DOI: 10.34620/incte.2019; **3)** no IV Encontro Internacional de Formação na Docência (INCTE 2019). Bragança, Portugal. 3 e 4 de maio de 2019 (intitulada A (auto)reflexão no processo metodológico da investigação científica em dissertações).

que não variem de observador para observador" (p. 30). A orientação foca-se no desenvolvimento profissional e pessoal de todos/as os/as envolvidos/as, "atuando ao nível da preparação técnico-científica própria da profissão e da difusão das inovações que nela ocorrem" (p. 81). Por último, a avaliação, uma componente incontornável, sendo o objeto da avaliação as práticas pedagógicas.

CAPÍTULO II

MÉTODOS

1. OBJETIVOS DA INVESTIGAÇÃO E DA INTERVENÇÃO

Este estudo pretendeu, por um lado, identificar, caracterizar e analisar os comportamentos de risco para a saúde dos/as estudantes universitários/as, associando-os a fatores de influência intrapessoal (perceção de bem-estar e características sociodemográficas), atitudinal (conhecimentos e atitudes face à saúde) e social (influência de pares e pessoas significativas). E, por outro lado, desenvolver, validar e implementar um programa de intervenção socioeducativa de EpS/PrS no ES em contexto não-formal.

Os objetivos específicos e os estudos empíricos desenvolvidos para responder a cada um deles são apresentados no quadro 1.

Quadro 1

Objetivos gerais e específicos, justificação teórica e estudos empíricos da tese

Objetivo Geral: Identificar, caracterizar e analisar os comportamentos de risco para a saúde dos/as estudantes universitários/as, associando-os a fatores de influência intrapessoal (perceção de bem-estar e características sociodemográficas), atitudinal (conhecimentos e atitudes face à saúde) e social (influência de pares e pessoas significativas).	
Objetivos Específicos	**Estudos Empíricos**
Avaliar a prevalência de tabagismo ativo e exposição ao fumo passivo (SHS) entre universitários do norte de Portugal e analisar a relação entre o conhecimento sobre o uso do tabaco e as atitudes em relação ao tabagismo	Estudo 1: Comportamento tabágico e exposição ao fumo passivo entre estudantes universitários no norte de Portugal: Relações com o conhecimento acerca do uso de tabaco e as atitudes em relação ao tabagismo *Referência bibliográfica:* Alves, R.; Precioso &, J.; Becoña, E. (in press). Smoking behavior and secondhand smoke exposure among university students in northern Portugal: Relations with knowledge on tobacco use and attitudes toward smoking. *Pulmonology*. DOI: 10.1016/j.pulmoe.2020.03.004
Avaliar a prevalência de comportamentos de consumo de álcool em universitários e sua associação com o conhecimento sobre o consumo de álcool e as atitudes gerais em relação ao uso de álcool.	Estudo 2: Conhecimento e atitudes relacionadas ao consumo de álcool enquanto preditores do consumo de bebidas alcoólicas entre estudantes universitários portugueses *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (2021). Alcohol-related knowledge and attitudes as predictors of drinking behaviours among Portuguese university students. *Alcoholism and Drug Addiction*, *34*(1): 33-50. DOI: 10.5114/ain.2021.107709
Descrever a prevalência do consumo de drogas ilícitas entre estudantes universitários e analisar os fatores preditivos e os padrões de consumo de drogas ilícitas entre estudantes universitários em Portugal.	Estudo 3: Uso de drogas ilícitas entre estudantes universitários: a importância do conhecimento sobre drogas, de viver em casa dos pais e a influência dos colegas *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (in press). Illicit Drug Use among College Students: The Importance of Knowledge about Drugs, Live at Home and Peer Influence. *Journal of Psychoactive Drugs*, DOI: 10.1080/02791072.2020.1865592
Descrever os conhecimentos, atitudes e práticas de automedicação em universitários e analisar os fatores preditivos para o envolvimento nesse comportamento.	Estudo 4: Conhecimentos, atitudes e prática da automedicação entre estudantes universitários em Portugal: um estudo transversal *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (2021). Knowledge, attitudes and practice of self-medication among university students in Portugal: A cross-sectional study. *Nordic Studies on Alcohol and Drugs*, *38*(19): 50-65. DOI: 10.1177/1455072520965017
Avaliar o conhecimento, a atitude e a prática sobre alimentação saudável entre universitários portugueses.	Estudo 5: Conhecimentos, atitudes e hábitos alimentares saudáveis entre estudantes universitários em Portugal *Referência bibliográfica:* Alves, R. &, Precioso, J. (2020). Knowledge, Attitude and Practice on Healthy Diet among University Students in Portugal. *International Journal of Nutritional Sciences 5*(2): 94-101. DOI: 10.30476/IJNS.2020.85851.1063
Analisar a relação entre o conhecimento sobre as recomendações sobre a prática de atividade física, as barreiras percebidas e a	Estudo 6: Atividade física de estudantes universitários portugueses e sua relação com o conhecimento e barreiras percebidas *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (2020). Physical activity among Portuguese university students and its relation to knowledge and perceived barriers. *Sportis Sci J*, *7*(1), 25-42. DOI: 10.17979/sportis.2021.7.1.6924

prática de atividade física por estudantes do ES.	
Avaliar os conhecimentos, as atitudes e os comportamentos sexuais de risco entre estudantes universitários de uma Universidade do Norte de Portugal.	Estudo 7: Prevalência de comportamentos sexuais de risco e sua relação com o conhecimento e as atitudes acerca dos comportamentos sexuais de estudantes universitários *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (submetido). Prevalence of risky sexual behaviors and their relationship with the knowledge and attitudes of university students.
Avaliar conhecimentos, atitudes e comportamentos acerca do COVID-19 entre estudantes portugueses do ES.	Estudo 8: Conhecimentos, atitudes e comportamentos preventivos em relação ao COVID-19: um estudo com estudantes do ES em Portugal *Referência bibliográfica:* Alves, R., Samorinha, C. &, Precioso, J. (2020). Knowledge, attitudes and preventive behaviors toward COVID-19: a study among higher education students in Portugal. *Journal of Health Research*. DOI: 10.1108/JHR-07-2020-0254
Construir e validar um inquérito por questionário de medição dos conhecimentos, atitudes e comportamentos de saúde dos/as estudantes do ES.	Estudo 9: Relação entre conhecimentos e atitudes relacionadas com a saúde e comportamentos de risco para a saúde em estudantes universitários portugueses *Referência bibliográfica:* Alves, R. (em revisão). The Relationship between health-related knowledge and attitudes, and health risk behaviors among Portuguese university students.
Objetivo Geral: Avaliar a perceção de bem-estar e saúde de estudantes universitários e a sua relação enquanto preditor dos comportamentos de risco para a saúde	
Avaliar a perceção de bem-estar e saúde de estudantes universitários, explorando as propriedades psicométricas da Escala de Perceção de Bem-estar e Saúde (EPBeS) e analisando a influência de variáveis sociodemográficas.	Estudo 10: Bem-estar e perceção de saúde de estudantes universitários em Portugal: a influência do apoio parental e da relação amorosa *Referência bibliográfica:* Alves, R., Precioso, J. &, Becoña, E. (2020). Well-being and health perception of university students in Portugal: the influence of parental support and love relationship. *Health Psychology Report 8*(2): 145-154. DOI: 10.5114/hpr.2020.94723
Examinar o papel mediador da influência social (pares consumidores, viver com a família e parceiro romântico) na relação entre o bem-estar e os comportamentos de risco para a saúde.	Estudo 11: A associação entre bem-estar e comportamentos de risco à saúde em estudantes universitários: o papel mediador da influência social *Referência bibliográfica:* Alves, R. (em revisão). The association between well-being and health-risk behaviors in university students: the mediating role of social influence.
Objetivo Geral: Desenvolver, validar e implementar uma intervenção socioeducativa de EpS/PrS em contexto não-formal dirigida aos/às estudantes universitários/as do grupo experimental	
Descrever o desenvolvimento de uma intervenção, baseada na teoria e fornecida na Web para promover comportamentos de saúde positivos no ES.	Estudo 12: Health on You Program: Desenvolvimento e implementação de Intervenção de Educação para a Saúde baseada na Web para estudantes universitários *Referência bibliográfica:* Alves, R. (submetido). Health on You Program: Development and implementation of Web-Based Health Education Intervention for university students.

2. ROTEIRO METODOLÓGICO

O programa "Health *On* You" foi elaborado de acordo com as etapas de desenvolvimento de uma intervenção em saúde do modelo PRECEDE-PROCEED (Green & Kreuter, 2005). O quadro 2 apresenta uma visão geral do modelo PRECEDE-PROCEED e a identificação dos componentes desenvolvidos em cada fase, descritas no estudo 12.

Quadro 2

Visão geral do desenvolvimento e avaliação do Programa "Health On You", por fase do modelo PRECEDE-PROCEED

	Fase do Modelo	Componentes
PRECEDE	Fase 1 - Diagnóstico Social	Análise documental
	Fase 2 - Diagnóstico Epidemiológico, Comportamental e Ambiental Fase 3 - Diagnóstico Educacional e Ecológico	- Revisão da literatura sobre comportamento de saúde de jovens adultos/as; - Estudos transversais dos comportamentos de risco para a saúde e conhecimentos e atitudes de saúde de estudantes do ES; - Revisão da literatura de intervenções baseadas na web com estudantes universitários/as. Lançamento do Mural Educativo Health *On* You - http://www.nonio.uminho.pt/healthonyou/
	Fase 4 – Diagnóstico Administrativo e de Políticas e Alinhamento da Intervenção	Desenvolvimento do programa Health *On* You Teste piloto e refinamento
PROCEED	Fase 5 - Implementação Fase 6 - Avaliação do processo Fase 7 - Avaliação de impacto Fase 8 - Avaliação dos resultados	Implementação do programa Health *On* You; Avaliação do processo, do impacto e dos resultados da intervenção.

A análise documental está sempre presente numa investigação, pois "permite alargar o seu quadro teórico, situar comparativamente a sua problemática, conhecer resultados interessantes, tomar consciência da originalidade do seu ponto de vista" (Saint-Georges, 1997, p. 15). Neste sentido, procurou-se que todos os artigos que constituem esta tese incorporrassem as investigações científicas mais recentes.

3. POPULAÇÃO E AMOSTRAS

Estudos 1 a 7 e 9 a 11

A população-alvo dos estudos realizados no âmbito desta tese é constituída por estudantes de uma Universidade do Norte de Portugal matriculados/as no ano letivo de 2018/2019 e a frequentar 1º e o 3º ano das licenciaturas e mestrados integrados (à exceção do estudo 8 e 12). Para o efeito, aplicaram-se alguns critérios para a seleção da população-alvo e, posterior constituição de uma amostra estratificada em função do ano de frequência e da área científica, que garantisse uma representatividade proporcional da população-alvo. Assim, excluíram-se as turmas relativas a cursos da área da Saúde, as dos mestrados ou pós-graduação, os cursos que não possuíam turmas no 1º e 3º ano e as turmas a funcionar em regime pós-laboral.

No ano letivo de 2018/2019 encontravam-se matriculados no 1º e 3º ano dos cursos considerados para o processo amostral 5447 estudantes universitários/as, distribuídos por 47 cursos e 4 áreas científicas de estudo (tal como definidas pela Fundação para a Ciência e Tecnologia): Ciências da Engenharia; Ciências Exatas e da Natureza; Ciências Judiciais e Económicas; Ciências Sociais e Humanas. Tendo em conta o número de estudantes em cada área científica, obteve-se por seleção aleatória simples 16 cursos, correspondentes a 32 turmas do 1º e 3º ano.

Considerando o software de análise G*Power 3.1.9.2 (Faul et al., 2007), o tamanho mínimo da amostra necessária para este estudo foi de 592 alunos (margem de erro = 5%, nível de confiança = 99% e distribuição das respostas = 50%).

No total foram distribuídos 873 questionários, número que reflete o total de estudantes que estiveram presentes em sala de aula e aceitaram participar do estudo. No entanto, 33 questionários foram considerados inválidos devido a respostas omissas ou respostas incongruentes que poderiam colocar em causa a validade da informação recolhida. A taxa de resposta foi de 96,2% (IC 95%: 94,8 – 97,6).

A amostra é composta por 464 estudantes do primeiro ano (55,2%) e 376 estudantes do 3º ano (44,8%). A idade média é de 20,78 anos (DP = 4,221), variando de 18 a 54 anos, sendo que apenas 3% dos/as estudantes têm 30 anos ou mais. Essas duas variáveis (ano de estudo e idade) são positiva e significativamente correlacionadas (r_{sp} = 0.707, p < 0.001).

No que diz respeito à área científica, 302 estudantes (36,0%) frequentavam cursos da área das ciências da engenharia, 270 estudantes (32,1%) das ciências sociais e humanas, 136 estudantes (16,2%) das ciências exatas e da natureza e 132 estudantes (15,7%) nas ciências judiciais e económicas. Como

a amostra foi estratificada de acordo com a área científica e o ano de estudo, foram encontradas diferenças na distribuição da proporção dessas variáveis (χ^2 (3) = 13.684, p = 0.003), com mais estudantes no 3º ano e na área das ciências da engenharia.

A maioria dos/as estudantes inquiridos/as pertence ao sexo feminino (55,4%, n = 465) e estavam menos representadas nos cursos de ciências da engenharia do que os estudantes do sexo masculino (χ^2 (3) = 151.709, p = 0.000). A amostra inclui principalmente estudantes que não mantinham uma relação amorosa (58,3%, n = 486) e que não mudaram de residência aquando do ingresso no ES (64,9%, n = 537).

Em relação à situação profissional, a maioria dos/as inquiridos/as era estudante a tempo inteiro (88.8%, n = 739). No entanto, houve uma prevalência maior de trabalhadores-estudantes nas áreas das ciências judiciais e económicas e das ciências sociais e humanas (χ^2 (3) = 16.729, p = 0.001), em estudantes mais velhos/as (χ^2 (1) = 31.863, p = 0.000), que se encontravam numa relação amorosa (χ^2 (2) = 16.552, p = 0.000) e que não mudaram de residência (χ^2 (1) = 12.084, p = 0.001).

A maioria dos/as estudantes apresentava um Índice de Massa Muscular (IMC) correspondente ao peso normal (73,1%, n = 599), identificando-se uma maior prevalência de estudantes com excesso de peso pertencentes ao sexo masculino (χ^2 (2) = 39.605, p = 0.000).

Estudo 8

No estudo 8, todos os/as estudantes matriculados/as no ano letivo 2019/2020 na UMinho, em qualquer um dos níveis de ensino (licenciatura, mestrado ou doutoramento) constituíram a população-alvo. Dos 19.632 alunos matriculados, um total de 262 estudantes participaram neste estudo (taxa de resposta: 0.013%).

A maioria dos/as estudantes inquiridos/as pertence ao sexo feminino (n = 206, 78,4%) e é estudante a tempo inteiro (n = 195, 76,8%). No que concerne ao percurso académico, 158 estudantes frequentavam a licenciatura (60,3%), 94 estudantes estavam em mestrado (35,9%) e 10 inquiridos/as eram estudantes de doutoramento (3.8%). A área científica com maior representativa na amostra foi as Ciências Sociais e Humanas (n = 124, 47,5%), seguindo-se os/as estudantes da área das Ciências da Engenharia (n = 57, 21,8%) e das Ciências Económicas e Judiciais (n = 57, 21,8%).

Estudo 12

Todos/as os/as estudantes matriculados/as na universidade no ano letivo 2020/2021 foram convidados/as a participar no programa através do email institucional e de redes de contato informais, como as redes sociais.

A amostra de estudantes que concluíram o programa (n = 37) foi quase na totalidade constituída por estudantes do sexo feminino (n = 36, 97,3%) com idades compreendidas entre os 21 e os 23 anos. A totalidade dos/as participantes era estudante a tempo inteiro e encontrava-se a frequentar o 1º ano do mestrado num curso da área das Ciências Sociais e Humanas. Os/as participantes eram predominantemente solteiros/as e sem relação amorosa (n = 23, 62,2%) e todos/as encontravam-se a viver em casa dos/as pais/mães ou familiares.

4. INSTRUMENTOS DE RECOLHA DE DADOS

Estudos 1 a 7 e 9 a 11

Atualmente, existem vários instrumentos científicos para monitorar a prevalência dos comportamentos de saúde no ES, como o *Questionário de Atitudes e Comportamentos de Saúde – QACS* de Pais-Ribeiro (2004), o *Questionário de Estilos de Vida no Ensino Superior - QEVES* (S. Costa, 2008), o *Questionário de Comportamentos de Risco em Estudantes Universitários – QCREU* (M. L. Santos, 2011) e o *Questionário Estilo de Vida FANTASTICO* (Loureiro, 2012; A. M. M. Silva et al., 2011), assim como para analisar o BES no ES (por exemplo, *Satisfaction With Life Scale - SWLS* (Diener et al., 1985); *Subjective Well-Being Scale – SWBS* (A. S. Albuquerque & Tróccoli, 2004); *Overall Life Satisfaction* - OLS (Hutz, 2014); *Personal Wellbeing Index - PWI* (Cummins et al., 2003); *Brief Multidimensional Students' Life Satisfaction Scale - BMSLSS* (Huebner et al., 2006); *Oxford Happiness Questionnaire - OHQ* (Hills & Argyle, 2002); *Subjective Happiness Scale - SHS* (Lyubomirsky & Lepper, 1999)). No entanto, nenhum dos questionários disponibilizados na literatura científica atendia plenamente aos objetivos da investigação, pelo que se procedeu ao desenvolvimento dos instrumentos utilizados nos estudos desta tese (à exceção do estudo 8 e 12) em três etapas: construção da escala (1ª etapa); validade de conteúdo (2ª etapa); validade psicométrica (3ª etapa), de acordo com os procedimentos definidos por Bowling (1998) e Oppenheim (1992), bem como no Guia para desenvolver investigações KAP, da OMS (WHO, 2008).

Para a construção da escala (1ª etapa) foram realizadas várias revisões sistemáticas da literatura (Alves, 2018, 2019b, 2019a, 2020b, 2020a; Alves & Precioso, 2018, 2019) em função dos

comportamentos de saúde considerados na presente tese, com o objetivo de identificar as questões e itens comumente utilizados para avaliar conhecimentos, atitudes e comportamentos de saúde no ES. A partir dessa revisão, foi elaborada uma matriz analítica para cada uma das dimensões a serem analisadas e cada um dos comportamentos, sendo eliminados os itens com as mesmas semelhanças semânticas e, de seguida optando-se por aqueles com maior expressão nos estudos analisados e mais relevantes do ponto de vista das teorias analisadas. O mesmo procedimento foi seguido para a categoria do BES.

O questionário inicia-se com questões acerca dos comportamentos de saúde, de modo a que as atitudes e a reflexão acerca dos conhecimentos não condicionassem as respostas aos comportamentos (Christensen et al., 2015). Para além disso, optou-se por circunscrever de forma clara o tempo de cada questão (Keszei et al., 2010), ou seja, não se utilizaram termos como "recentemente", optando-se por questões temporais específicas: nos últimos 7 dias, nos últimos 30 dias, nos últimos 12 meses. No mesmo sentido, quando as opções de resposta se referiam à frequência, optou-se por colocar o "Nunca" juntamente com o "Quase Nunca", tal como o "Sempre" com o "Quase Sempre", por exemplo.

Na dimensão das atitudes optou-se pela utilização de uma escala de tipo Likert, commummente projetadas para medir atitudes ou opiniões (Bowling, 1998) e medindo o nível de concordância/discordância através de uma escola de cinco respostas pré-codificadas com o ponto neutro. Embora exista alguma controvérsia acerca da inclusão de um ponto neutro (Oppenheim, 1992), optou-se por o incluir visto que a maioria dos instrumentos acerca das atitudes analisados utilizaram um escala de tipo Likert de 5 pontos. Embora se tenham evitado duplos sentidos e os itens tenham sido formulados de forma clara, curta e direta, incluíram-se itens invertidos de modo a minimizar o risco de viés de resposta, ou seja, diminuir a tendência de os/as estudantes concordarem com uma afirmação ou responderem da mesma maneira a todos itens.

As questões acerca dos conhecimentos podem ser consideradas embaraçosas se os/as inquiridos/as desconhecerem as respostas. Por isso, a inclusão da opção "Não Sei", para além de diminuir a adivinhação, visa também reduzir os sentimentos embaraçosos, mostrando que é aceitável não ter esse conhecimento.

Todas as seções do questionário encontram-se na mesma ordem. Assim, se na seção dos comportamentos as primeiras questões se referem ao consumo de álcool, as primeiras questões da escala dos conhecimentos e das atitudes também se referem à categoria do álcool.

Para a validade de conteúdo (2ª fase) foram convidados 10 investigadores/as doutorados/as de várias universidades portuguesas com trabalhos reconhecidos na área da EpS no ES, tendo sido

consideradas as sugestões, principalmente semânticas, recebidas de 5 investigadores/as. Da mesma forma, o instrumento foi aplicado a 12 estudantes universitários/as, utilizando o método ""thinking aloud" (L. S. Almeida & Freire, 2008; Bowling, 1998) para identificar itens que pudessem ser confusos, excluir itens menos relevantes ou redundantes e verificar se opções de resposta codificadas eram suficientes. Para obter maior objetividade, foi utilizada como critério de avaliação da clareza de cada item a seguinte escala: 1 - confuso; 2 - pouco claro; 3 - claro. Após terem sido realizadas todas as alterações decorrentes do teste pré-piloto, a versão preliminar do questionário foi pré-testada com um novo grupo de estudantes (32 estudantes), não incluídos na amostra final. Estes/as estudantes foram corretamente informados/as acerca do objetivo do pré-teste e foram considerados os pontos de análise sugeridos por Bowling (1998): redação das questões; entendimento (significado); instruções de resposta; opções nas respostas pré-codificadas; motivação para responder; emoções sentidas durante o preenchimento; layout do questionário (formato folheto). Os/as estudantes da validação de conteúdo e do pré-teste encontravam-se a frequentar o 2º ano, de modo a não causar problemas na seleção aleatória das turmas.

O **Questionário de Comportamentos, Conhecimentos e Atitudes de Saúde no Ensino Superior (QCCASES)** utilizado nestes estudos encontra-se em anexo (Apêndice I) e explicitado em cada um dos estudos.

Questionário dos comportamentos de saúde

Esta seção encontra-se dividida em 7 categorias: Consumo de álcool, consumo de tabaco, hábitos alimentares, prática de atividade física, comportamentos sexuais, consumo de drogas ilícitas e medicamentos.

A categoria do consumo de álcool inclui 6 questões: idade da primeira experiência de consumo; AUDIT-C (frequência de consumo de álcool no ano anterior, quantidade de bebida num dia típico e *binge drinking*); embriaguez; consumo de pares.

O consumo de tabaco foi medido através da questão "Atualmente, fuma?", incluindo-se uma questão aberta para acerca do número de cigarros fumados e duas questões acerca da idade do início de consumo e das tentativas de cessação (apenas para os/as estudantes fumadores/as). Os/as estudantes foram ainda questionados acerca do consumo de tabaco pelos pares e face à exposição ao fumo passivo.

Os hábitos alimentares saudáveis foram avaliados pela ingestão de frutas, vegetais, alimentos com açúcar adicionado e comidas rápidas (*fast food*) nos últimos 7 dias. Adicionalmente, incluíram-se duas questões acerca de saltar refeições, nos últimos 7 dias: pequeno-almoço e almoço e/ou jantar.

Na avaliação da prática de atividade física utilizou-se o *Godin Leisure-Time Exercise Questionnaire* (Godin & Shephard, 1997).

Os comportamentos sexuais de risco foram medidos de acordo com o estudo realizado por Reis e colegas (2013): ter tido relações sexuais; idade da primeira relação sexual; número de parceiros/as sexuais nos últimos 12 meses; uso de preservativo durante as relações sexuais nos últimos 12 meses e ter relações sexuais após de beber álcool ou consumir drogas nos últimos 12 meses.

O consumo de drogas ilícitas incluiu três questões acerca do consumo de Cannabis, Cocaína e Alucinogénios ("Nos últimos 12 meses, quantas vezes você consumiu ...?") e a prevalência da automedicação através da questão "Nos últimos 12 meses, quantas vezes consumiu: Antidepressivos / Sedativos / Calmantes / Tranquilizantes (sem prescrição médica); Analgésicos / Anti-inflamatórios (sem prescrição médica); Vitaminas / Suplementos Alimentares (sem prescrição médica)".

Escala de conhecimentos acerca dos comportamentos de saúde

Esta escala é composta por 36 itens: 6 itens, relativos às categorias tabaco, álcool, alimentação, atividade física e sexualidade, e 3 itens para cada uma das categorias drogas ilícitas e automedicação. As opções de resposta desta escala foram: Verdadeiro, Falso, Não Sei.

Escala de atitudes face aos comportamentos de saúde

Esta escala consiste em 30 itens avaliados numa escala de Likert de 5 pontos (1 – discordo totalmente, 5 – concordo totalmente) que incluem atitudes face aos comportamentos de saúde das 7 categorias listadas.

Escala de Perceção de Bem-estar e Saúde (EPBeS) / Well-being and Health Perception Scale (WbHPS)

Esta escala é composta por 5 itens relacionados com as dimensões: Satisfação com a vida; Satisfação consigo próprio/a; Felicidade sentida; Saúde Percebida e Satisfação com a forma física.

A satisfação com a vida, consigo próprio/a e com a forma física foram avaliadas através das questões: "Considerando todos os aspetos da sua vida, qual é o seu grau de satisfação com a vida em geral?"; "Considerando todos os aspetos da sua vida, qual é o seu grau de satisfação consigo próprio/a?" e "Comparando com as pessoas da sua idade, qual é o seu grau de satisfação com a sua atual forma física?". As respostas variaram de 1 = muito insatisfeito a 5 = muito satisfeito.

Para a felicidade sentida colocou-se a seguinte questão: "Considerando todos os aspetos da sua vida, qual o grau de felicidade que sente?". As respostas variaram entre 1 (Muito infeliz) a 5 (Muito feliz). Enquanto que para a saúde percebida se utilizou a seguinte questão: "Comparando com as pessoas da

sua idade, como avalia a sua saúde em geral?", com as seguintes opções de resposta: 1 = Péssima; 2 = má; 3 = razoável; 4 = boa; 5 = excelente.

Questões Sociodemográficas

Mantendo o anonimato do instrumento de investigação, tornou-se pertinente levantar alguns dados sociodemográficos dos/as estudantes, por serem considerados preditores dos comportamentos de risco para a saúde. Assim, os dados de caracterização sociodemográfica incluíram: o sexo; a idade; o estado civil; a habitação atual; o peso e a altura (para o cálculo do IMC) e a situação profissional. O ano de frequência e a área científica do curso frequentado foram registados pela investigadora no momento de recolha de dados.

Estudo 8

Após definição das dimensões principais a inserir no questionário, tendo por base os modelos de PrS e a sua robustez empírica na predição e promoção de comportamentos preventivos noutras áreas da saúde (Fishbein & Ajzen, 1975; Janz & Becker, 1984), o instrumento utilizado no estudo 8 foi desenvolvido com recurso a uma revisão da literatura, incluindo os seguintes aspetos: a) estudos que avaliassem conhecimentos, atitudes e/ou comportamentos relativos a COVID-19 e outras doenças transmissíveis em estudantes do ES (Alzoubi et al., 2020; Asaad et al., 2019); e b) informação sobre a COVID-19, sintomas, transmissão e diretrizes para a sua prevenção emitidas por Autoridades de Saúde (DGS, 2020; WHO, 2020). Os itens comummente utilizados para cada uma das dimensões (conhecimentos, atitudes e comportamentos) foram agrupados e, seguidamente, eliminados aqueles que eram redundantes. Duas investigadoras nas áreas das ciências da saúde e ciências da educação reviram uma versão preliminar do instrumento, validando o seu conteúdo. Realizou-se um estudo piloto com uma amostra de 12 estudantes para testar a sua compreensão e dificuldade. Todos os itens se mantiveram sem alterações.

A par das questões relativas à caracterização sociodemográficas (sexo, situação profissional, nível de ensino e área científica), o questionário é composto por mais 50 questões, divididas por 3 dimensões:

Conhecimentos acerca da COVID

Esta escala é composta por 14 itens relativos aos sintomas da COVID-19, ao uso de equipamentos de proteção individual, à lavagem de mãos e desinfeção e à exposição ao vírus. Foi medida através de uma escala de resposta: Verdadeiro, Falso e Não sei.

Atitudes acerca da COVID-19

Nesta escala foram apresentados 22 itens (uso de equipamentos de proteção individual; lavagem das mãos; desinfeção; exposição a COVID-19; confiança; perceção do risco; receio; restrições em espaços públicos; alarmismo; recursos; necessidade de programas educativos) medidos através de uma escala de Likert de 5 pontos (de 1 – Discordo Totalmente a 5 – Concordo Totalmente), correspondendo o score mais elevado a atitudes mais positivas face aos comportamentos preventivos. Alguns itens da escala tiveram de ser invertidos para uma leitura correta da escala.

Comportamentos face à COVID-19

Esta escala referente ao número de comportamentos protetores integra 15 itens (uso de equipamentos de proteção individual; distanciamento físico; lavagem das mãos; desinfeção e exposição à COVID-19), embora a análise dos dados se reporte a 12 comportamentos por termos agrupado os dois itens que dizem respeito ao uso de máscara (máscara cirúrgica e máscara comunitária). Cada item foi respondido através de uma escala de Likert de 5 pontos (1 – Nunca a 5 – Sempre).

Estudo 12

O estudo correspondente ao desenvolvimento e implementação do programa de intervenção incluiu três momentos de avaliação: Diagnóstico (relativo as condições prévias); Monitorização (correspondente à avaliação durante o processo) e Resultados (referente ao impacto geral).

Diagnóstico *- Questionário para a Identificação de Expectativas (QIE)*

De forma a que os/as potenciais interessados/as se pudesse inscrever no **Programa "Health *On* You"**, foi criado um questionário composto por três questões abertas, o que permitiu avaliar as motivações, expetativas e obstáculos previstos (Apêndice II). Para além disso, nesta fase os/as estudantes foram convidados/as a responder ao **QCCASES** de modo a futuramente se avaliar o impacto da intervenção nos conhecimentos, atitudes e comportamentos de saúde.

Monitorização *- Escala de Avaliação dos Módulos (EAM)*

Esta escala adaptada de Jardim e Pereira (2006) foi aplicado no final de cada módulo, permitindo que os/as estudantes expressassem as suas opiniões através de 23 itens divididos em 5 categorias (Apreciação global deste módulo; Objetivos; Conteúdos; Atividades; Desenvolvimento) e avaliados com recurso a uma escala de Likert de 5 pontos ("Mau", "Fraco", "Razoável", "Bom" e "Muito bom"). Para

além disso, incluíram-se questões de caráter sociodemográfico com o intuito de compreender a adaptação de cada módulo de acordo com as caraterísticas de cada estudante (Apêndice III).

Resultados *- Escala de Avaliação da Implementação de Programas (EAIP)*

Esta escala foi adaptada de Jardim e Pereira (2006) com o objetivo de recolher a opinião dos/as estudantes envolvidos/as acerca da apreciação do programa, revelando-se útil para avaliar o grau de eficácia e de qualidade do programa. Da sua adaptação selecionaram-se 28 itens distribuídos por 5 categorias, à imagem do EAM, e avaliados com a mesma escala de Likert (em que 1 = "Mau"; 2 = "Fraco"; 3 = "Razoável"; 4 = "Bom"; 5 = "Muito bom") (Apêndice IV). Para além disso, nesta fase de avaliação final, solicitou-se que os/as estudantes respondessem novamente ao **QCCASES**, no sentido de analisar as diferenças antes e após a intervenção.

5. PROCEDIMENTOS DE RECOLHA DE DADOS

Os estudos que compõem esta tese foram aprovados pela Comissão de Ética para a Investigação em Ciências Sociais e Humanas do Conselho de Ética da UMinho, sob o protocolo CEICSH 009/2019 e todos os procedimentos éticos referidos por Christensen, Johnson e Turner (2015) foram cumpridos.

Estudos 1 a 7 e 9 a 11

Os/as estudantes responderam ao questionário em contexto de sala de aula (depois de terminada a aula e antes de saírem da sala ou no início da aula conforme autorização do/a docente da disciplina), durante o mês de maio de 2019 (antes das festas académicas). Após a seleção estratificada da amostra, optou-se por um processo não aleatório de seleção das aulas onde iriam ser aplicados os questionários, tendo-se selecionados as aulas teóricas onde não existiam divisão por turnos e, por norma, estariam presentes a maior parte dos/as estudantes daquela turma. De seguida, foi solicitado pessoalmente aos/às docentes das aulas selecionadas autorização para aplicar os questionários no início ou final das suas aulas, sendo que quando se registou um parecer positivo se procedeu à recolha de dados. Por sua vez, nas aulas em que os/as docentes declinaram o pedido de autorização foi selecionada uma nova aula e contactado/a outro/a docente. Os/as estudantes que naquela aula não estiveram presentes ou aqueles/as que não frequentam aquela Unidade Curricular não responderam ao questionário.

A recolha de dados foi realizada na totalidade pela investigadora que, antes de distribuir os questionários em papel acompanhados pelo termo de consentimento informado, apresentou os objetivos da investigação, assegurou a confidencialidade e o anonimato das respostas, garantiu o carácter

voluntário da participação e clarificou o direito de recusar a participação ou de desistir a qualquer momento. O consentimento informado dos/as estudantes foi dado ao assinalarem um (x) o termo de consentimento informado e também ao aceitarem participar, visto que não foi considerado essencial a assinatura do/a estudante (Pais-Ribeiro, 2002). O processo de preenchimento demorou cerca de 15 minutos.

Estudo 8

O questionário foi formatado nos formulários da *Google*, incluindo um termo de consentimento informado e disponibilizado entre 7 e 17 de maio de 2020. Todos/as os/as estudantes matriculados/as no ano letivo 2019/2020 na UMinho, em qualquer um dos níveis de ensino (licenciatura, mestrado ou doutoramento) foram elegíveis e convidados a participar do estudo. O convite foi enviado por e-mail para os e-mails institucionais utilizados pelos/as estudantes. Na UMinho, todos/as os/as estudantes inscritos/as têm acesso aos seus e-mails institucionais, pelo que todos/as receberam um convite. Nesses e-mails, foram explicitadas informações sobre os objetivos do estudo, bem como a garantia ética de confidencialidade e anonimato dos dados recolhidos conforme consentimento informado. A participação foi totalmente gratuita e voluntária.

Estudo 12

O QIE foi preenchido no momento de acesso ao programa, antes do início do primeiro módulo, enquanto a EAM e EAIP foram preenchidas no final de cada módulo e final do programa, respetivamente. O processo de preenchimento destas escalas demoraria cerca de 5 minutos.

6. ANÁLISES ESTATÍSTICAS DOS DADOS

Os dados obtidos foram inseridos, organizados, transformados e analisados com o recurso ao IBM Statistical Package for the Social Sciences (SPSS), Statistics para Windows (versões 25.0 e 26.0), AMOS para Windows, versão 26.0 e PROCESS (versão 3.5, 2018) (IBM Corp., Armonk, NY, USA) e o JASP (versão 0.14.1) realizada com sintaxe *Lavaan*.

Numa primeira fase, procedeu-se à análise descritiva para as diferentes variáveis do questionário, através da análise das frequências, médias e desvio-padrão. De seguida, em função dos objetivos específicos de cada artigo foram utilizadas análises estatitísticas diferenciadas, considerando um nível de significância de 0.05.

A análise univariada da variância (ANOVA), juntamente com o GT2 de Hochberg e o Bonferroni, e o *teste t student* foram utilizados para a exploração das diferenças das variáveis de dependentes contínuas em função de variáveis categóricas (por exemplo, as variáveis sociodemográficas). Por seu lado, o teste de Qui-quadrado foi utilizado para avaliar as associações entre dois grupos de variáveis categóricas. As correlações entre os resultados do estudo foram calculadas pela correlação de Pearson e Spearman, conforme adequação das variáveis.

A regressão logística binomial, ordinal e multinomial e os modelos lineares generalizados, estimados por Betas (β) e os respetivos intervalos de confiança de 95%, foram usados para as análises dos fatores preditores das variáveis dependentes em cada estudo.

A confiabilidade foi analisada por meio do cálculo dos coeficientes de correlação item-total e alfa de Cronbach (α) para as escalas do questionário. Para analisar as características psicométricas das escalas, procedeu-se a uma análise fatorial exploratória (AFE), utilizando a análise de componentes principais com rotação varimax e a análises fatoriais confirmatórias (CFA) por meio do modelo MIMIC utilizando Modelagem de Equações Estruturais (SEM) para avaliar quanto ou em que grau cada uma das variáveis foi representada em cada uma das variáveis principais (Hancock, 2001). O ajuste geral do modelo foi avaliado com base nos valores ou pontuações emergentes da estatística de qualidade de ajuste do qui-quadrado (χ^2), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), the Goodeness of Fit Index (GIF) and the Standardized Root Mean Square Residual (SRMR) (Marôco, 2014). Recorreu-se ao Akaike Information Criterion (AIC) de modo a comparar os modelos e a selecionar o mais ajustado. A análise de mediação foi conduzida de acordo com o método de bootstrapping de Hayes (2018) com 5000 amostras, usando a designação do "modelo 4"

As questões abertas do QIE foram sujeitas a uma análise de conteúdo, de forma a criar categorias explicativas para cada uma das questões colocadas.

CAPÍTULO III

APRESENTAÇÃO DOS ESTUDOS

1. ESTUDO 1: COMPORTAMENTO TABÁGICO E EXPOSIÇÃO AO FUMO PASSIVO ENTRE ESTUDANTES UNIVERSITÁRIOS/AS NO NORTE DE PORTUGAL: RELAÇÕES COM O CONHECIMENTO ACERCA DO USO DE TABACO E AS ATITUDES EM RELAÇÃO AO TABAGISMO [4]

Referência bibliográfica:

Alves, R.; Precioso &, J.; Becoña, E. (*in press*). Smoking behavior and secondhand smoke exposure among university students in northern Portugal: Relations with knowledge on tobacco use and attitudes toward smoking. *Pulmonology*. DOI: 10.1016/j.pulmoe.2020.03.004

País: Portugal; Science Citation Index Expanded (SCIE): JIF = 3.575, JCI = 0.73; SJR = Q2.

Resumo

Enquadramento: O tabagismo continua a ser a principal causa de morbidade e mortalidade evitável em todo o mundo, sendo a sua prevalência considerada epidémica. Além disso, a exposição ao FAT aumenta a morbidade e mortalidade por doenças coronárias, cancro do pulmão, infeções respiratórias e outras doenças. Embora as políticas inter(nacionais) de prevenção do tabagismo, como a proibição de fumar em locais públicos fechados, o aumento dos impostos sobre os produtos tabágicos e a educação social sobre os efeitos nocivos do tabagismo, o reconhecimento das graves consequências do tabagismo para a saúde tem sido um processo lento.

Objetivos: Avaliar a prevalência de tabagismo ativo e exposição ao fumo passivo entre universitários/as do Norte de Portugal e analisar a relação entre o conhecimento sobre o uso do tabaco e as atitudes em relação ao tabagismo.

Métodos: Trata-se de um estudo transversal com uma amostra representativa de estudantes universitários/as (n = 840) de uma universidade portuguesa. Um questionário de autorrelato validado foi aplicado a uma amostra aleatória estratificada proporcional durante o ano letivo de 2018/2019.

[4] No âmbito deste artigo realizaram-se duas publicações e duas comunicações: **1)** Alves, R. &, Precioso, J. (2018). Conhecimentos, atitudes e hábitos tabágicos no ensino superior: o processo de construção de uma escala de medida. In Tamara Ramiro-Sánchez; Mª Teresa Ramiro Sánchez; Mª Paz Bermúdez Sánchez (coords.). *Libro de Actas del 6th International Congress of Educational Sciences and Development.* (p. 322). Granada: AEPC. ISBN 978-84-09-02091-1 e **2)** Alves, R. &, Precioso, J. (2019). Smoking behavior and secondhand smoke exposure in higher education. In Marina Almeida-Silva, Maria Belo, Irene Morais, Joana Morais, Liliana Natividade, Pedro Pena, Márcia Pimenta, Mariana Simão (eds.). *"New" challenges for the future - Abstract proceedings of International Congress on Environmnetal Health 2019*. (p.73-74). Lisboa: Escola Superior de Tecnologia da Saúde de Lisboa. ISBN 978-989-8077-28-8, **3)** no 6th International Congress of Educational Sciences and Development. Setúbal, Portugal. 21 a 23 de junho de 2018 (intitulada "Conhecimentos, atitudes e hábitos tabágicos no ensino superior: o processo de construção de uma escala de medida" e **4)** no 4th edition of the International Congress on Environmental Health, ICEH 2019. Escola Superior de Tecnologia da Saúde de Lisboa – Instituto Politécnico de Lisboa, Lisboa, Portugal. 25 a 27 de setembro 2019 (intitulada "Smoking behavior and secondhand smoke exposure in higher education").

Avaliaram-se as associações entre tabagismo, FAT, pares fumadores/as, conhecimento e atitudes em relação ao tabagismo e variáveis sociodemográficas.

Resultados: Os resultados mostraram que 20,1% dos/as estudantes era fumador atual (7,3% fumadores/as ocasionais, 2,9% fumadores/as regulares e 9,9% fumadores/as diários). A maioria dos/as fumadores/as atuais começou a fumar antes dos 17 anos (61,4%) e relatou nunca ter tentado parar de fumar (59,7%). Apenas 34,4% dos/as estudantes relataram (quase) não ter estado em locais fechados com fumadores/as nos últimos 7 dias. A exposição ao FAT e ter amigos/as fumadores/as contribuem para a prevalência do uso de tabaco. De maneira geral, os/as estudantes apresentaram atitudes favoráveis ao tabagismo, principalmente aqueles/as que são fumadores/as, têm amigos/as fumadores/as e estão mais expostos ao FAT. O nível de conhecimento sobre tabaco foi moderado, com maior número de respostas corretas por parte dos/as ex-fumadores/as.

Conclusões: Esses resultados sugerem uma necessidade urgente de programas socioeducativos de aconselhamento para a cessação do tabagismo. Além disso, também é fortemente recomendado que, ao longo da formação acadêmica, os/as estudantes desenvolvam competências pessoais e sociais para lidar com a epidemia do tabaco.

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ORIGINAL ARTICLE

Smoking behavior and secondhand smoke exposure among university students in northern Portugal: Relations with knowledge on tobacco use and attitudes toward smoking

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KEYWORDS
Tobacco;
Secondhand Smoke;
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Abstract
Objectives: To assess the prevalence of active smoking and secondhand smoke (SHS) exposure among college students in the north of Portugal, and analyze the relationship between knowledge about tobacco use and attitudes toward smoking.
Materials and methods: This a cross-sectional study with a representative sample of college students ($n=840$) in one university in Portugal. A validated self-reported questionnaire was administered to a proportional stratified random sample during the academic year of 2018/2019. We evaluated associations between smoking status, SHS exposure, smokers peers, knowledge and attitudes toward smoking and sociodemographic variables.
Results: The results showed that 20.1% of the students surveyed were current smokers (7.3% occasional smokers, 2.9% regular smokers and 9.9% daily smokers). Most current smokers started smoking before the age of 17 (61.4%) and reported never having tried to quit smoking (59.7%). Only 34.4% of students reported (almost) not having been in enclosed spaces with smokers in the past 7 days. Exposure to SHS and having smoker friends contributes to the prevalence of tobacco use. In general, students showed favorable attitudes toward smoking, especially those who are smokers, have smoking friends and are more exposed to SHS. The level of knowledge about tobacco was moderate, with a higher number of correct responses by former smokers.

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Conclusions: These results suggests an urgent need for socio-educational programs for counseling on smoking cessation. In addition, is also strongly recommended that, throughout academic training, students develop personal and social skills for dealing with the tobacco epidemic.
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Introduction

Tobacco use remains a serious public health problem as it is a major cause of preventable diseases and death,[1,2] or in other words, the most avoidable cause of death.[3] Furthermore, secondhand smoke (SHS) exposure increases morbidity and mortality from coronary heart disease, lung cancer, respiratory infections, and other illnesses. Despite (inter)national tobacco prevention policies, such as a ban on smoking in public places, increased taxes on tobacco products and social education about the harmful effects of smoking, the recognition of the severe health consequences of smoking has been a slow process.[4] While these types of policy interventions are only indirectly aimed at young adults, they demonstrate the positive effects of smoking bans in public spaces, being associated with reduced smoking progression, reduced consolidation of experimentation with regular smoking and increased smoking cessation among young adults.[5] This is particularly relevant in areas where alcohol is served, given the strong association between tobacco and alcohol consumption in this age group.[6]

Starting smoking early increases the risk of regular smoking, and early adulthood is often associated with increased cigarette smoking and the establishment of regular smoking habits.[7] The academic environment may constitute a context that favors tobacco use,[8] as well as initiation/experimentation[9] through the way it is socially accepted in this context (Nolen-Hoeksema, 2004). Several studies have shown an increase in the number of smokers on academic courses, both in the number of students who began to smoke regularly and in the number of cigarettes smoked daily.[10] For example, Tercyak, Rodriguez and Audrain-McGovern (2007)[11] found that 25% of those who reported never having smoked in high school started smoking a year later.

Given the impact at various levels of tobacco use and the initiation and increase of smoking among young adults, it is important to understand how knowledge and attitudes toward tobacco use relate to smoking behavior, as this understanding will enable the development of health education programs in higher education from a preventive and educational perspective. In scientific literature, several investigations have addressed the relationship between knowledge, attitudes and smoking habits in higher education.[12–14] These studies take into account the fact that university students are in the process of being educated and that in future, they will be agents of change, responsible for promoting healthy lifestyles.[15]

The purpose of this study was to assess the prevalence of active smoking and secondhand smoke exposure among college students in the north of Portugal and analyze the relationship between knowledge about tobacco use and attitudes toward smoking.

Materials and methods

Population and sample

For the 2018/2019 academic year, 5447 students were registered in the 1st and 3rd year of integrated bachelors and masters degrees, with a higher prevalence of girls attending this university. Excluded from the sample were courses related to health sciences, undergraduate or postgraduate masters who did not have classes in the 1st or 3rd year. We excluded courses in the area of health sciences because we considered that the health knowledge of these students could skew the results of the study.

The minimum sample size needed for this study was 592 students (margin of error = 5%, confidence level = 99%, and response distribution = 50%). For this purpose, a stratified probabilistic sampling of university students was performed according to the academic year and the scientific area of study. The different undergraduate and master's degrees were divided into scientific areas (as defined by the Foundation for Science and Technology): Social and Human Sciences, Judicial and Economic Sciences, Exact and Nature Sciences and Engineering Sciences.

In this cross-sectional study with a representative sample of college students ($n = 840$) in one university in Portugal, data were collected using a validated self-reported questionnaire without biochemical confirmation.

The sample consists of 464 incoming students (55.2%) and 376 final year students (44.8%). The scientific area of studies included, 302 (36.0%) students from the engineering sciences, 270 (32.1%) students from the social and human sciences, 136 (16.2%) students from the exact and natural sciences and 132 (15.7%) students in the area of law and economic sciences. Most of the students surveyed were female (55.4%, $n = 465$), not in an affective relationship (58.3%, $n = 486$), displaced from their usual residence (64.9%, $n = 537$), full-time student (88.8%, $n = 739$) and with a BMI corresponding to a normal weight (73.1%, $n = 599$). The average age of the sample was 20.78 years (SD = 4.221), with a range of 18–54 years, only 3% of students were 30 or older.

Instruments

Currently, there are several scientific instruments to monitor the prevalence of smoking among young adults, as the Youth Risk Behavior Surveillance System (YRBSS),[16]

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the Behavioral Risk Factor Surveillance System (BRFSS),[17] the National Survey on Drug Use and Health[18] and the National Youth Tobacco Survey.[19] Nevertheless, the data to be collected by using any of these surveys did not fully meet the objectives of the intended investigation. Therefore, the development of the instruments present in this investigation was carried out in three stages: scale construction (1st stage); content validity (2nd stage); psychometric validity (3rd stage), according to the procedures defined by Bowling (1998).[20]

For the construction of the scale (1st stage) was carried out a systematic review of the literature[14] in order to identify the questions and items commonly used to assess knowledge, attitudes and smoking habits in higher education. Based on this review, an analytical matrix was created for each of the dimensions to be analyzed, and those with the same semantic similarities were eliminated.

For the content validity (2nd stage) we invited 10 PhD researchers from several Portuguese universities with recognized work in the area of Health Education in Higher Education and the feedback from 5 of the invited investigators and all proposed semantic changes were considered. Similarly, the instrument was applied to 12 university students, using the method ''thinking aloud''[20,21] to identify items that might be confusing, excluding less relevant or redundant items, and verify that pre-coded response options were sufficient. In order to obtain greater objectivity, the following scale was used as the criterion of clarity evaluation for each item: 1 - confused; 2 - unclear; 3 - clear. After suggested redrafting, the preliminary version of the questionnaire survey was presented to a sample of 32 students, not included in the final sample.

The questionnaire included sociodemographic variables (sex, age, scientific area of study, academic year, weight and height (to calculate BMI), have a affective relationship, professional situation e current residence) and specific questions related:

- Smoking status (''Do you currently smoke?'' Possible answers: I currently smoke daily (at least 1 cigarette per day); I currently smoke regularly (at least one cigarette a week, but not every day); I currently smoke occasionally (less than one cigarette per week); I don't smoke now, but I used to smoke daily (at least 1 cigarette a day); I don't smoke now, but I used to smoke occasionally (at least 1 cigarette per week); I never smoked. And for current smokers: ''How many cigarettes do you smoke per week? Or per day?''); first experience of smoking (''How old were you when you started smoking?''); cessation attempts (''Have you ever tried to quit smoking?'')
- Smoker peers (''How many of your friends smoke regularly?'';
- Secondhand smoke (SHS) exposure (''Throughout the week, how long are you in enclosed spaces with smokers?'');
- Tobacco use knowledge (TUK): 6-item scale with answer options - True, False, Don't Know (1. ''Smokers are more likely to get lung cancer than non-smokers''; 2. ''Smokers feel tired more easily than non-smokers''; 3. ''The heart of a smoker works harder because carbon monoxide stops the blood from carrying oxygen''; 4. ''The nicotine present in cigarettes lowers blood pressure''; 5. ''The nicotine present in cigarettes is a nervous system stimulant''; 6. ''Smokers are more likely to develop osteoporosis than non-smokers'');
- Attitudes toward smoking use (AtS): 3-items scale on a 5-point likert scale (1 – strongly disagree, 5 – fully agree) (1. ''Smoking helps one relax and reduces stress''; 2. ''Smoking helps one to think''; 3. ''Smoking helps control body weight'').

Procedure and statistical analysis

All the students who attended the selected courses were personally invited to participate. At the end of each randomly selected class, the objectives of this study were presented and after informed consent, students filled out the paper-pencil questionnaire, in the classroom context. The response rate was 96.2% (95% CI 94.8–97.6), 33 questionnaires were excluded as not answered or incorrectly filled out. So we invited 873 university students to participate in this study.

All ethical research procedures with humans referred to by Christensen et al. (2015)[22] were fulfilled and the study was approved by the University Ethics Committee.

Data were analyzed using the IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, USA). For statistical analysis, we analyzed frequencies and contingency tables, performed Pearson's correlation, Chi-square test, independent *t*-test, and one-way variance (ANOVA) and Hochberg's GT2 multiple comparison procedures. A p value < 0.05 was considered as significant.

Multinomial regression model was developed including only variables with a significant bivariate association with smoking status. The nominal indicator of 'non smoker' was assigned as the reference category and all covariates were entered into the model simultaneously. Variables found not to contribute to the prediction of the dependent variable were excluded from the final model. A significance level of 0.05 was considered.

Tobacco use patterns were analyzed according to the classification: No-smoker (who never smoked – ''I never smoked''); Former smoker (who have smoked weekly – ''I don't smoke now, but I used to smoke occasionally (at least 1 cigarette per week)'' and daily – ''I don't smoke, but I used to smoke daily (at least 1 cigarette a day)'') and Current smoker (occasional smokers – ''I currently smoke occasionally (less than one cigarette per week)'', regular smokers – ''I currently smoke regularly (at least one cigarette a week, but not every day)'' and daily smokers – ''I currently smoke daily (at least 1 cigarette per day)'').

To the scale about knowledge the number of correct responses was added to give an overall knowledge score, and means calculated. This means that the higher the scale value, the higher the level of knowledge.

The attitude scale was subjected to Cronbach's alpha analysis in order to analyze its reliability,[20] and a good reliability index was obtained ($\alpha = .770$). In addition, inter-item correlations ranging from .674 to .387. Reading the results of this scale shows, the higher the average of the scale, the more negative the attitudes of university students toward tobacco consumption.

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Table 1 Frequencies and Chi Square test for sociodemographic variables and smoking-related characteristics. Bold: statistical significance

		Smoking status						Chi Square test	
		No-smoker		Former smoker		Current smoker		χ^2	p
		f	%	f	%	f	%		
SHS exposure	Never or almost never	233	40.7	24	26.1	29	17.3	86.536	**.000**
	Few times	210	36.7	27	29.3	51	30.4		
	Sometimes	102	17.8	24	26.1	49	29.2		
	Most of the time	17	3.0	11	12.0	24	14.3		
	Almost Always or Always	10	1.7	5	6.5	15	8.9		
Smoker peers	None or almost none	107	18.8	8	8.5	11	6.7	114.594	**.000**
	Few	215	37.7	26	27.7	29	17.6		
	Some	211	37.0	34	36.2	70	42.4		
	Most	34	6.0	20	21.3	44	26.7		
	Almost all or all	3	0.5	6	6.4	11	6.7		
Year of frequency	1st year	329	39.2	58	6.9	77	9.2	8.260	**.016**
	3rd year	249	29.6	36	4.3	91	10.8		
Scientific area	Engineering sciences	217	25.8	28	3.3	57	6.8	20.103	**.003**
	Exact and natural sciences	95	11.3	13	1.5	28	3.3		
	Judicial and economic sciences	70	8.3	22	2.6	40	4.8		
	Social and human sciences	196	23.3	31	3.7	43	5.1		
Sex	Male	252	30.0	38	4.5	85	10.1	3.340	.188
	Female	326	38.8	56	6.7	83	9.9		
Age	<20	266	31.7	35	4.2	54	6.4	11.370	**.003**
	>=20	312	37.1	59	7.0	114	13.6		
Affective relationship	Yes	212	25.5	58	7.0	77	9.2	23.206	**.000**
	No	362	43.5	35	4.2	89	10.7		
Current residence	Displaced	182	22.0	31	3.7	78	9.4	12.942	**.002**
	Not displaced	389	47.0	60	7.2	88	10.6		
Professional situation	Full time student	527	63.3	73	8.8	139	16.7	23.984	**.000**
	Worker/Student	44	5.3	21	2.5	28	3.4		
BMI	Low weight	43	5.3	7	0.9	8	1.0	3.122	.538
	Normal weight	412	50.3	68	8.3	119	14.5		
	Overweight	107	13.1	16	2.0	39	4.8		

Results

The results showed that 68.8% of the students surveyed were non-smokers, 11.2% were former smokers and 20.1% were current smokers (7.3% occasional smokers, 2.9% regular smokers and 9.9% daily smokers). Regular and daily smokers consume on average 8.43 (SD = 6.462) cigarettes per week and 8.33 (SD = 4.870) cigarettes per day, respectively. Most current smokers started smoking aged under 17 (61.4%) and reported never having tried to quit smoking (59.7%). Only 34.4% of students reported (almost) never having been in enclosed spaces with smokers in the previous 7 days.

Tobacco use is positively correlated with smoker peers (r_{sp} = .329, p < 0.01) and with SHS exposure (r_{sp} = .295, p < 0.01), so, smokers tend to have more friends who smoke (χ^2(8) = 114,594, p = .000) and are more exposed to SHS than former smokers and non-smokers (χ^2(8) = 86,536, p = .000) (Table 1).

Smoking was significantly associated with sociodemographic characteristics such as which academic year, scientific area, age, being in an affective relationship, current residence, and professional situation. This means that there is a higher prevalence of smoking in: graduating students compared to the year first students (χ^2(2) = 8.260, p = .016); students of the economics and law compared to the other scientific areas (χ^2(6) = 20.103, p = .003); older students compared to the younger ones (χ^2(2) = 11.370, p = .003); students who are in a relationship compared to those who are not (χ^2(2) = 23,206, p = .000); students who moved away from home at the time of entering higher education compared to non-displaced students(χ^2(2) = 12,942, p = .002); student-workers compared to full-time students (χ^2(2) = 23,984, p = .000) (Table 1). Note that no statistically significant differences were found in tobacco use according to sex or BMI of respondents.

In general, students showed favorable attitudes toward smoking, because the mean score 2.01 (SD = .924) showed that most respondents disagreed or strongly disagreed with the items of AtS. But, there were significant differences based on smoking status, smoker peers, SHS exposure, scientific area, sex and current residence, as shown in Table 2. Not surprisingly, smokers had more negative attitudes than

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Table 2 Mean, one-way ANOVA and t-test for smoking characteristics, sociodemographic variables and attitudes toward smoking (AtS).

		AtS	ANOVA		Hochberg		
		Mean (SD)	*Z*	*p*			
Smoking status	Non-smoker	1.77 (.826)	85.886	**.000**	1.7653		
	Former smoker	2.21 (.795)				2.2138	
	Current smoker	2.72 (.918)					2.7186
Smoker peers	None or Almost none	1.70 (.768)	15.581	**.000**	1.6960		
	Few	1.90 (.866)			1.9019		
	Some	2.02 (.910)			2.0183		
	Most	2.50 (1.037)				2.4965	
	Almost All or All	2.77 (.925)				2.7667	
SHS exposure	Never or almost never	1.85 (.843)	7.298	**.000**	1.8470		
	Few times	1.98 (.942)			1.9801		
	Sometimes	2.11 (.937)			2.1085	2.1085	
	Most of the time	2.41 (.965)				2.4067	
	Almost Always or Always	2.48 (.973)				2.4839	
Scientific area	Engineering Sciences	2.15 (.903)	6.791	**.000**		2.1488	
	Exact and Natural Sciences	2.04 (.976)			2.0373	2.0373	
	Law and Economic Sciences	2.06 (.924)			2.0615	2.0615	
	Social and Human Sciences	1.81 (.891)			1.8075		
BMI	Low weight	1.91 (.956)	2.465	.086			
	Normal weight	1.98 (.880)					
	Overweight	2.15 (1.048)					
			t-student				
			t	*p*			
Acadmic year	1st year	1.96 (.907)	−1.677	.094			
	3rd year	2.07 (.942)					
Sex	Male	2.17 (.987)	4.478	**.000**			
	Female	1.88 (.849)					
Age	<20	1.94 (.886)	−1.908	.057			
	>=20	2.06 (.949)					
In relationship	Yes	2.02 (.961)	.233	.818			
	No	2.00 (.902)					
Current residence	Displaced	2.11 (.935)	2.516	**.012**			
	Not displaced	1.94 (.908)					
Professional situation	Full time student	2.00 (.919)	−.749	.454			
	Worker/Student	2.08 (.952)					
Total		2.01 (.924)					

those who had never smoked or stopped smoking ($F(2, 824) = 85.886$, $p = .000$). And students who report that most or almost all friends are smokers and are mostly or almost always exposed to SHS exhibit more negative attitudes than students with no, few or some smoker friends ($F(4, 811) = 15.581$, $p = .000$) and are never or rarely exposed to SHS ($F(4, 814) = 7.298$, $p = .000$), respectively.

Engineering sciences respondents showed more negative attitudes, while those in social and human sciences showed the most favorable attitudes ($F(3, 823) = 6.791$, $p = .000$). Girl respondents and students who lived at home had more favorable attitudes than boy respondents ($t(825) = 4.478$, $p = .000$) and students who had moved away from home ($t(813) = 2.516$, $p = .012$), respectively.

There were no significant differences by year of frequency, age, being in a relationship, IBM and professional situation.

Table 3 shows respondents' knowledge of tobacco use. The mean score was 3.11 ± 1.26 (out of 6) correct answers. There were no significant differences in knowledge scores because of smoker peers, SHS exposure, year of frequency, scientific area, age, being in a relationship, current residence or IBM. However, one-way ANOVA showed significant differences between TUK and smoking status. Respondents who had ceased smoking had a significantly higher mean knowledge score than those who still smoked and those who had never smoked ($F(2, 829) = 3.559$, $p = .029$). Furthermore, *t*-test showed significant differences between TUK and sex of respondents and current residence. That is means girls and displaced students had a lower level of knowledge than boys ($t(830) = 2.336$, $p = .020$) and students living at home ($t(822) = -2.334$, $p = .020$), respectively.

For the final model, we kept the variables that had a statistically significant effect on the logit probability of the

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Table 3 Mean, one-way ANOVA and *t*-test for smoking characteristics, sociodemographic variables and tobacco use knowledge (TUK).

		TUK				
		Mean (SD)	ANOVA		Hochberg	
			Z	*p*		
Smoking status	No-smoker	3.04 (1.303)	3.559	**.029**	3.0384	
	Current smoker	3.20 (1.143)			3.2000	3.2000
	Former smoker	3.38 (1.219)				3.3830
Smoker peers	None or almost none	3.02 (1.362)	1.644	.161		
	Few	3.01 (1.263)				
	Some	3.16 (1.222)				
	Most	3.36 (1.268)				
	Almost all or all	3.15 (.875)				
SHS exposure	Never or almost never	3.04 (1.317)	1.356	.248		
	Seldom	3.18 (1.279)				
	Sometimes	3.00 (1.259)				
	Most of the time	3.31 (.899)				
	Almost always or always	3.35 (1.226)				
Scientific area	Engineering sciences	3.13 (1.224)	.309	.819		
	Exact and natural sciences	3.14 (1.141)				
	Law and economic sciences	3.15 (1.330)				
	Social and human sciences	3.05 (1.333)				
BMI	Low weight	2.93 (1.041)	.706	.494		
	Normal weight	3.14 (1.272)				
	Overweight	3.12 (1.282)				
			t-student			
			t	*p*		
Academic year	1st year	3.15 (1.273)	.982	.326		
	3rd year	3.06 (1.250)				
Sex	Male	3.22 (1.292)	2.336	**.020**		
	Female	3.02 (1.233)				
Age	<20	3.10 (1.213)	−.182	.855		
	>=20	3.12 (1.299)				
In relationship	Yes	3.17 (1.271)	1.165	.244		
	No	3.07 (1.245)				
Current residence	Away from home	3.14 (1.204)	.302	.763		
	Living at home	3.11 (1.280)				
Professional situation	Full time student	3.07 (1.258)	−2.334	**.020**		
	Worker/Student	3.40 (1.278)				
Total		3.11 (1.263)				

smoking status: AtS ($G^2(2) = 101.993$, $p = .000$); Smoker peers ($G^2(8) = 20.492$, $p = .009$); SHS exposure ($G^2(8) = 21.693$, $p = .006$); In relationship ($G^2(2) = 16.247$, $p = .000$); Professional situation ($G^2(2) = 14.410$, $p = .001$). The adjusted model was statistically significant ($G^2(22) = 257.946$, $p = .000$) and correctly predicted the status smoking 72.5% of the time (93.9% for non smokers).

Table 4 summarizes the results of the multinomial logistic regression for smoking status. The model made it possible to predict that: students who were less exposed to SHS were less likely to be smokers compared to non-smokers; students who had fewer smoking friends were less likely to be smokers and ex-smokers compared to non-smokers; being in a relationship compared to not being in a relationship increases the chances of being a former smoker in relation to a non-smoker; being a full-time student compared to student workers reduces the chances of being a former smoker by 67.7% and of being a smoker by 58.4%; students scoring higher on AtS were more likely to be a former smoker or current smoker than non-smoker.

Discussion

This study examined current smoking status, smoking history, cessation attempts and knowledge of tobacco use and attitudes toward smoking among students at one university in Portugal. Our data showed that 1 in 5 uni-

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Table 4 Adjusted odds ratios (OR) and 95% confidence intervals (CI) from multinomial logistic regression model predicting former smoker and current smoker.

		Smoking Status			
		Former smoker[a]		Current smoker[a]	
		OR	(95% CI)	OR	(95% CI)
SHS exposure	Never or almost never	.324	(.087–1.210	.223*	(.069–.720)
	Seldom	.371	(.104–1.324)	.289*	(.094–.888)
	Sometimes	.537	(.149–1–928)	.488	(.158–1.504)
	Most of the time Almost Always or Always	1.304	(.310–5.486)	1.147	(.322–4.085)
Smoker peers	None or Almost none	.116*	(.020–.655)	.152*	(.029–.785)
	Few	.125*	(.025–.617)	.118**	(.025–.551)
	Some	.143*	(.030–.688)	.221*	(.049–.995)
	Most	.262	(.052–1.329)	.413	(.089–1.929)
	Almost All or All				
In relationship	Yes	2.707***	(1.653–4.435)	1.388	(.908–2.122)
	No				
Professional situation	Full time student	.323***	(.171–.608)	.416**	(.225–.768)
	Worker/Student				
AtS		1.829***	(1.391–2.405)	3.096***	(2.430–3945)

OR: odds ratio; 95% CI: 95% confidence interval.
[a] Reference category: no-smoker.
* $p < .050$.
** $p < .010$.
*** $p < .001$.

versity students are smokers but that the prevalence of smoking in this university was lower than identified in other national[23–26] and international studies (Spain[10,27,28]; Greece[29]; Iran[30]; Australia[31]; Jordan[32]; Palestine[33]; Liban[34]; United Kingdom[35]; Italy[36]; Czech Republic[37]; Serbia[38]; Brazil[39]; Saudi Arabian[40]; Belgium[41]; Chile[42]; Poland[43]; Turkey[44]). Similarly, we found a high proportion of students who were former smokers (11.2%), considering that they are young adults and despite the fact that most current smokers (61.4%) started smoking before entering higher education.[10,45] This could be explained because before leaving home, there had been an aspect of parental control which was lost when entering higher education.[46] The prevalence of smoking increased with permanence in higher education, which corroborates scientific literature.[3,32,33,47,48] Consequently, older students included more smokers than younger students (13.6% versus 6.4%) and there were also statistically significant differences depending on the number of cigarettes consumed per day or per week. That is, older smokers smoke, on average, 12.10 (±7.340) cigarettes per week or 8.84 (±4.969) cigarettes per day, while younger smokers smoke, on average, 5.09 (±3.048) cigarettes per week or 5.09 (±2.468) cigarettes per day ($t = -2.909$, $p = .009$ and $t = -2.445$, $p = 0.17$, respectively).

A national study[49] showed that 37.2% of young people aged between 15 and 34 years old had used tobacco in the previous 30 days, meaning this prevalence was higher than verified in this study.

Unlike other national[24,26] and international studies[30,33,42,47,48,50–53] in which male students smoked more than female students, our study did not find any differences in smoking between the sex of respondents. This is consistent with a study conducted in 2004 at the same university.[54]

Most smokers reported never having attempted to quit smoking (59.7%), a very high percentage compared to other studies.[10] This indicates, efforts should be made to understand why students are reluctant to quit smoking.

The prevalence of SHS in closed public spaces is high, due to the fact that more than half of the students (65.6%) had been exposed to SHS in the previous week. Despite prohibitive smoking policies in enclosed public places, college students had a high level of exposure to SHS.[48,55,56] Furthermore, we found that smokers are more exposed to SHS than non-smokers.[57]

Most respondents (52.2%) reported that at least some of their friends were smokers, consistent with the literature, not forgetting that having smoking friends seems to influence tobacco use among university students.[30,38,40,45,50,51,53,58–60]

Regarding attitudes toward tobacco, we found that most students showed favorable attitudes toward smoking[31] but, as in other studies,[31,33] non-smokers demonstrated higher scores on positive attitudes than smokers and former smokers. The influence of smoking friends, exposure to SHS and being enrolled in engineering science courses seems to reduce positive attitudes toward tobacco use.

In terms of knowledge about tobacco use, several studies have shown that smokers have low levels of knowledge,[61] suggesting that increasing knowledge about the effects of smoking would decrease smoking rates during academic

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courses.[47] In our study, there was a moderate level of knowledge about tobacco,[30,33,48] higher in students who had already quit smoking.[31,32]

Unlike other research findings, where girls were better informed than boys[31,32,62] or where there were no differences,[30] we found that boys were better informed than girls.[33]

It is also important to highlight the sociodemographic variable ''current residence'', because students who had left their familial home smoked more, knew less about the harmful consequences of smoking and showed more negative attitudes compared to students who had not changed their residence after entering higher education.

Finally, the limitation of this study should be noted. Restricting the study to a single university limits generalizability to the total population of university students in Portugal.

No data were collected concerning the smoking habits of parents/households and, although scientific studies state that children of smoking parents have a greater tendency to be smokers, this type of question did not fit within the scope of our study. One final limitation should be considered. Since the data were collected in 2018–2019, the use of e-cigarettes or ''heat-not-burn'' tobacco products are at least worth mentioning, especially looking at young people.

Conclusions

This study suggests an urgent need for higher education institutions to implement socio-educational programs to discourage tobacco use among university students. In addition, it is also highly recommended that during academic training students develop personal and social skills to deal with the tobacco epidemic.

Conflicts of interest

The authors have no conflicts of interest to declare.

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2. ESTUDO 2: CONHECIMENTO E ATITUDES RELACIONADAS AO CONSUMO DE ÁLCOOL ENQUANTO PREDITORES DO CONSUMO DE BEBIDAS ALCOÓLICAS ENTRE ESTUDANTES UNIVERSITÁRIOS/AS PORTUGUESES/AS [5]

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Resumo

Enquadramento: A redução dos padrões de consumo de álcool de risco continua sendo um grande problema de saúde pública e desafio no contexto académico, especialmente quando as investigações científicas revelaram uma alta incidência de consumo de risco entre universitários/as.

Objetivos: Avaliar a prevalência de comportamentos de consumo de álcool em universitários/as e sua associação com o conhecimento sobre o consumo de álcool e as atitudes gerais em relação ao uso de álcool.

Métodos: Foi realizado um estudo transversal numa amostra de estudantes universitários/as portugueses/as (*n* = 840), estratificada por ano de frequência e área científica de estudo. Foi aplicado um questionário previamente validado, em maio de 2019, para mensurar o consumo de álcool com o AUDIT-C, conhecimentos relacionados ao álcool e atitudes em relação ao consumo de álcool.

Resultados: Verificou-se que a maioria dos/as participantes apresenta consumo de risco (48,1%) sem diferenças entre estudantes do sexo feminino e masculino. O nível de atitudes em relação ao consumo de álcool foi moderado, enquanto o nível de conhecimento sobre as consequências dos comportamentos relacionados ao álcool foi baixo. Constatou-se que quanto maior a prevalência de consumo de risco em estudantes, melhor o conhecimento sobre as consequências do consumo e maior o nível de atitudes negativas. As variáveis "Residência atual", "Amigos/as que bebem", "Conhecimentos sobre álcool" e

[5] No âmbito deste artigo realizaram-se duas publicações e duas comunicações: **1)** Alves, Regina; José Precioso. (2020). Relação entre literacia sobre álcool e o consumo de risco na universidade. *Psicologia Saúde & Doenças* 21 (Suplemento): 20 e **2)** Alves, Regina; José Precioso. (2019). Conhecimentos, atitudes e consumo de álcool no ensino superior: o processo de construção de uma escala de medida. In Sónia Vladimira Correia, Maria Manuel Ricardo e Rosa Serradas Duarte (Eds.). *III Enjie – Encontro Nacional de Jovens Investigadores em Educação. Desigualdades sociais e educativas: que lugar na investigação?.* (p. 747). Lisboa: Edições Universitárias Lusófonas. ISBN 978-989-757-109-1 e **3)** no 13º Congresso Nacional de Psicologia da Saúde, Faculdade de Ciências da Saúde – Universidade da Beira Interior, Covilhã, Portugal. 31 de janeiro a 1 de fevereiro de 2020 (intitulada "Relação entre literacia sobre álcool e o consumo de risco na universidade ") e **4)** no 3º ENJIE: III Encontro Nacional de Jovens Investigadores em Educação, Lisboa, Portugal. 25 e 26 de janeiro de 2019 (intitulada "Conhecimentos, atitudes e consumo de álcool no ensino superior: o processo de construção de uma escala de medida").

"Atitudes em relação ao álcool" têm efeito estatisticamente significativo na probabilidade de desenvolver um padrão de risco de uso de álcool entre os/as universitários/as.

Conclusões: Este estudo fornece informações importantes para pesquisas futuras, bem como para o desenvolvimento de programas educacionais voltados para grupos de pares, mostrando que as universidades precisam adotar medidas de educação em saúde quando os/as estudantes ingressam no ES, principalmente aqueles/as que mudaram de residência.

ORIGINAL ARTICLE / ARTYKUŁ ORYGINALNY

ALCOHOL-RELATED KNOWLEDGE AND ATTITUDES AS PREDICTORS OF DRINKING BEHAVIOURS AMONG PORTUGUESE UNIVERSITY STUDENTS

WIEDZA NA TEMAT ALKOHOLU I POSTAWY WOBEC ALKOHOLU JAKO PREDYKTORY ZACHOWAŃ ZWIĄZANYCH Z PICIEM WŚRÓD PORTUGALSKICH STUDENTÓW

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Abstract

Introduction: The reduction of the patterns of risky drinking remains a major public health problem and challenge in academic contexts, especially when scientific investigations reveal a high incidence of risky drinking among university students. The main aim of this study was to assess the prevalence of drinking behaviours of university students and their association with knowledge about alcohol consumption and general attitudes towards alcohol use.

Material and methods: A cross-sectional study was conducted in a sample of Portuguese university students (n = 840), stratified by year of ac-

Streszczenie

Wprowadzenie: Ograniczanie ryzykownego picia alkoholu jest ważnym problemem z punktu widzenia zdrowia publicznego i stanowi wyzwanie dla środowiska akademickiego, zwłaszcza że badania naukowe pokazują częste występowanie ryzykownego picia wśród studentów. Głównym celem badań była ocena rozpowszechnienia wśród studentów zachowań związanych z piciem alkoholu i zależności tych zachowań od wiedzy na temat konsumpcji alkoholu i postaw wobec picia.

Materiał i metody: W maju 2019 r. przeprowadzono badanie przekrojowe na próbie portugalskich studentów (n = 840), podzielonych według roku i

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Authors' contribution/Wkład pracy autorów: **Study design/Koncepcja badania:** R.F. Alves; **Data collection/Zebranie danych:** R.F. Alves; **Statistical analysis/Analiza statystyczna:** R.F. Alves; **Data interpretation/Interpretacja danych:** R.F. Alves, J. Precioso, E. Becoña; **Acceptance of final manuscript version/Akceptacja ostatecznej wersji pracy:** R.F. Alves, J. Precioso, E. Becoña; **Literature search/Przygotowanie literatury:** R.F. Alves; **Funds collection/Pozyskanie środków (finansowania):** R.F. Alves.

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ademic attendance and scientific area of study. A previously validated self-reported questionnaire was applied, in May 2019, to measure the consumption of alcohol with AUDIT-C, alcohol-related knowledge and attitudes towards risky drinking.

Results: We found that the majority of participants present a risky drinking (48.1%) without differences between female and male students. The level of attitudes towards alcohol consumption was moderate, while the level of knowledge about the consequences of alcohol-related behaviours was low. It was found that the higher the prevalence of risky drinking in students, the better the knowledge about the consequences of consumption and the higher the level of negative attitudes.

Discussion: The variables "current residence", "drinking peers", "alcohol-related knowledge" and "attitudes about alcohol" have a statistically significant effect on the probability of developing a risky pattern of alcohol use among university students.

Conclusions: This study provides important information for future research, as well as for the development of educational programmes aimed at peer groups, showing that universities need to adopt health education measures especially for displaced students when students enter into higher education.

Keywords: Binge drinking, Drunkenness, Attitudes, Alcohol-related knowledge, Drinking peers.

naukowego obszaru studiów. W celu zmierzenia spożycia alkoholu za pomocą AUDIT-C oraz wiedzy dotyczącej alkoholu i postaw wobec ryzykownego picia posłużono się ankietą przeznaczoną do samodzielnego wypełniania.

Wyniki: Większość uczestników badania piła w sposób ryzykowny (48,1%), nie stwierdzono różnic między studentkami i studentami. Poziom postaw wobec spożywania alkoholu był umiarkowany, natomiast poziom wiedzy o konsekwencjach zachowań związanych z alkoholem – niski. Stwierdzono, że im większe rozpowszechnienie ryzykownego stylu picia wśród studentów, tym lepsza wiedza o konsekwencjach konsumpcji i wyższy poziom negatywnych postaw.

Omówienie: Takie zmienne jak: „obecne miejsce zamieszkania", „pijący rówieśnicy", „wiedza na temat alkoholu" oraz „postawy wobec alkoholu", mają statystycznie istotny wpływ na prawdopodobieństwo powstania ryzykownego wzoru picia alkoholu wśród studentów.

Wnioski: Badanie dostarczyło informacji ważnych dla przyszłych badań, a także dla opracowania programów edukacyjnych skierowanych do grup rówieśniczych. Pokazało, że władze wyższych uczelni powinny objąć edukacją zdrowotną studentów rozpoczynających studia, zwłaszcza tych spoza ośrodka akademickiego.

Słowa kluczowe: okazjonalne nadmierne picie, upijanie się, postawy, wiedza na temat alkoholu, pijący rówieśnicy.

■ Introduction

The reduction of risky drinking patterns remains a significant public health problem and a challenge in academic contexts [1, 2], especially when scientific investigations show a high incidence of alcohol use among university students [3-6], which increases with entry into higher education [7-10]. It remains that way throughout the academic course [9-12] and has a higher prevalence compared to young people of the same age group [13]. In the same vein, in recent years, binge drinking (BD) (described as heavy alcohol use over a short period, e.g. within two hours) and typically defined as four or five standard drinks in a row by women or men, respectively [14-16] has become a characteristic university student behaviour [17-21].

In general, the consumption of alcoholic beverages is not only acceptable, but also tolerated and even promoted in the academic context becoming an important part of the college experience [22]. Although risky drinking in higher education is associated with health problems (mortality and morbidity) [23] and academic problems (such as low academic commitment/low academic performance), psychosocial and legal problems (such as low levels of concentration, skipping classes, lower grades, sexual assaults, overdose, memory loss, persistent cognitive deficits, persistent suicide, unsafe sexual activity, damage to property, driving under the influence of alcohol, impaired academic achievement, injuries, violence, car accidents) [24-37].

Excessive risky drinking, and the exponential consumption after entering higher education, can be explained by identity exploration, a characteristic of emerging adulthood [22]. However, there are numerous aetiological hypotheses for risky drinking in higher education, namely the biological that argue there is a genetic vulnerability or predisposition to excessive alcohol consumption as well as other psychological and sociocultural hypotheses.

Peer influence [38, 39] and the relative lack of adult supervision in university settings contributes to the "perfect storm" that can increase the risk of college students drinking. In the same vein, scientific research on university students has shown that the expectations about risky drinking, commonly seen as a component of attitudes [40], were a significant predictor of involvement not only in alcohol use but also in alcohol-related problems [41, 42]. Thus, positive expectations (for example, increased sexual prowess) tended to increase the consumption of alcoholic beverages and negative expectations (such as cognitive impairment) to decrease their use. Another factor considered to be a predictor of risky drinking refers to knowledge about alcohol consumption [43, 44], suggesting that further research should be carried out in the area of knowledge, attitudes and alcohol-related behaviours among university students, in order to help students make responsible choices in relation to alcohol and become responsible drinkers if/when they do choose to drink [43]. Also, scientific evaluations indicate the efficacy of interventions aimed at reducing risky drinking among university students focus on several approaches, mainly those that aim to provide information about the risks, to transmit knowledge related to the dangers of alcohol and to develop skills to avoid its consumption [45]. In this sense, a clear understanding of the Knowledge-Attitude-Practice (KAP) model is recommendable in the creation of educational programmes directed towards the general health area. This model suggests that individuals are able to intentionally change their behaviour so long as they are provided with the appropriate information, although it is not specified which behaviour may eventually change; it indicates that humans are rational beings who decide upon a particular course of action based on the information they possess [46]. Although this theory may be limited from a certain perspective, in the sense that intentional behavioural change may occur even in the absence of appropriate information, the KAP model has been widely used in research conducted on health-related behaviours.

Given the above, the main aim of this study was to assess the prevalence of drinking behaviours of university students and their association with degree of knowledge about alcohol and general attitudes towards risky drinking.

This research was approved by our Investigation Center and Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019, prior to data collection.

■ Material and methods

Population and sample

A cross-sectional study was conducted in a representative sample of 840 university students (n = 840) attending the 1st and 3rd year of study in one university in Portugal in the 2018/2019 academic year. Students were selected according a stratified probabilistic sampling for their representation of scientific areas of study and for the year of academic attendance. We have separated the various undergraduate and master's degrees in accordance with their specific field of scientific study (respecting the definition agreed upon by the Foundation for Science and Technology): Human and social sciences, Law and economic sciences, Exact and natural sciences and Engineering sciences. Therefore 36.0% of students were studying engineering sciences and the majority attend the 1st year of study (55.2%).

The sample consisted of 88.8% full-time students, 55.4% females; mean age was 20.78 ± 4.221 years, ranging from 18 to 54. The majority of respondents did not have a love relationship (58.3%), had changed their residence when they entered university (64.9%) and were of normal weight according the BMI (73.1%).

Measures

The questionnaire was developed through a review of literature. This review identified numerous instruments to monitor the drinking behaviours among college students, such as the Rutgers Alcohol Problems Inventory (RAPI) [47]; the Young Adult Alcohol Problems Screening Test (YAAPST) [48]; CAGE questionnaire [49, 50];

the Rapid Alcohol Problems Screen (RAPS4) [51]; the CRAFFT screening test [52]; the Fast Alcohol Screening Test (FAST) [53]; the RUFT-Cut [54]; the Daily Drinking Questionnaire (DDQ) [55]. However, the instrument most frequent used with higher education students is the Alcohol Use Disorders Identification Test (AUDIT), which presents good levels of internal consistency and reliability [7]. Another good alternative is the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C), a short version of the AUDIT [56, 57] validated to assess hazardous drinking [58] and which has also been applied among college students [54, 59].

The items commonly used to analyse alcohol-related knowledge and attitudes were grouped and pilot-tested with 5 national scientific researchers and a group of 12 university students in order to assess the appropriateness and understanding of questions. After few modifications, the final version of the questionnaire was presented to 32 students for a second pre-test.

The questionnaire includes:

- Sociodemographic questions (sex, age, scientific area of study, year of study, weight and height, professional situation and current residence) and have a love relationship (Yes – Currently not married, currently in a relationship and Married/in a relationship; No – Not married, and currently not in a relationship or Divorced/Separated/Widow).
- Alcohol consumption: First drinking experience ("How old were you when you drank alcohol for the first time?"); AUDIT-C (frequency of drinking alcohol in the previous year, drinking quantity in a typical day and heavy episodic drinking, i.e. binge drinking – BD); Drunkenness[1] ("In the past 12 months, how often have you ever got drunk?", with the possible answer options of 'never', 'once a month or less', '2-4 times a month', '2-3 times a week', '4 or more times a week'); Drinking peers ("How many of your friends engage in drinking alcoholic beverages regularly?"). The AUDIT-C presents a 5-point scale coded from 0 to 4 (range 0-12), with higher values on the scale represents higher levels of risky drinking. We did not treat risky drinking as a continuous variable as did other studies [60] because the AUDIT-C score differs depending on the sex of the respondents. Thus, above 4 points (greater than or equal to 5) in boys, or above 3 points (greater than or equal to 4) in girls, is classified as being risky drinking [58, 61].
- Alcohol-related knowledge scale composed of 6 items: "Distilled alcoholic beverages (such as whisky, gin tonic, vodka, etc.) usually contain about 15-20% of alcohol per volume"; "Drinking milk before ingesting an alcoholic beverage delays the absorption of alcohol by the organism"; "An alcoholic beverage mixed with a soda accelerates the effect of the former in the organism when compared to a having a simple alcoholic beverage on its own"; "Eating while drinking has no effect on the absorption of alcohol by the body"; "Alcohol is entirely absorbed by the digestive tube: around 30% in the stomach and 65% in the duodenum"; "Drinking coffee or taking a cold shower may be an effective way of remaining sober". Three answer options: 1 – true, 2 – false and 3 – I don't know ($\alpha = 0.509$). The number of correct answers was added to provide an overall score of knowledge (range of 0 to 6). This means that the higher the scale value, the greater the level of knowledge.
- Attitudes towards the consumption of illicit drugs: there were 5 options ("Young students feel more extroverted and sociable when they consume alcoholic beverages"; "Young students feel more sexually active when they drink alcohol"; "A party is more fun when there is consumption of alcoholic beverages"; "The consumption of alcohol contributes to relieving stress and get one's mind off of deep concerns"; "It is easier to express feelings when one drinks alcoholic beverages"), measured using a 5-point Likert scale (1 – strongly disagree and 5 – strongly agree). This scale varies between 5 and 25, and it should be noted that the higher scores reflect more negative attitudes towards alcohol consumption. The internal consistency of attitudinal scale has a Cronbach's α of 0.762 (inter-item correlations ranged from 0.553 to 0.181) (range 5-25).

Procedure and statistical analysis

Students were recruited by asking them directly to take part, in a classroom context. So, after informed consent, the data was collected with

[1] Drunkenness refers to difficulty with walking and speaking, to vomiting and not remembering what happened.

Table I. Descriptive statistics of drinking patterns

Variables	*n*	%
First drinking experience		
Never*	49	5.8
12 years old or less	60	7.2
13-14 years old	165	19.7
15-16 years old	402	47.9
17 years old or more	163	19.4
Frequency of alcohol drinking		
Never*	74	9.4
Once a month or less	299	37.9
2-4 times a month	284	36.0
2-3 times a week	114	14.5
4 or more times a week	17	2.2
Drinking quantity (standard drinks)		
1 or 2 drinks	253	35.6
3 or 4 drinks	190	26.7
5 or 6 drinks	107	15.0
7 to 9 drinks	39	5.5
10 or more drinks	122	17.2
Heavy episodic drinking		
Never	256	36.2
Once a month or less	261	36.9
2-4 times a month	142	20.1
2-3 times a week	37	5.2
4 or more times a week	12	1.7
Drunkenness		
Never	343	48.2
Once a month or less	289	40.6
2-4 times a month	67	9.4
2-3 times a week	7	1.0
4 or more times a week	5	0.7
Drinking peers		
None or almost none	51	6.1
Few	156	18.8
Some	248	29.8
Most	262	31.5
Almost all or all	114	13.7
Alcohol consumption		
Never (in life)	49	5.8
Never (in the last 12 months)	74	8.8
Consumers (in the last 12 months)	714	85.0
No answer	3	0.4
AUDIT-C*		
Low risky drinking	364	51.9
High risky drinking	337	48.1

**Students who answered 'Never' have not been included in the AUDIT-C analysis*

an anonymous paper-pencil questionnaire. In total 873 questionnaires were given out, and that number reflects the total number of students who were present in the classroom and have accepted to take part in the study. Nonetheless, 33 questionnaires were excluded from the final result because they were either poorly filled out or answered or were incomplete. The response rate was 96.2% (95% CI: 94.8-97.6).

All analyses were performed using the IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, USA) with a significance level of 0.05. We computed descriptive statistics and we were examing associations using c^2 tests and Pearson's correlation and differences towards means using *t*-test and one-way ANOVA. Binomial logistic regression models were used to determine the predictive variables (alcohol-related knowledge and attitudes towards alcohol consumption) of the risky drinking. The regression analysis were controlled for sociodemographic variables with a significant bivariate association.

■ Results

Drinking behaviours

When asked about the age of the first alcoholic drink intake, we found that 5.8% ($n = 49$) of the students admitted that they had never had alcoholic drinks, so these were excluded from the remaining analyses. In addition, this question allowed us to conclude that most students had tried alcoholic beverages before entering higher education (total of 74.8% < 17 years old). The age at which alcoholic beverages are consumed for the first time differs depending on the sex of the respondents; that is, men start drinking alcoholic beverages earlier than women (χ^2 (4) = 19.735, $p < 0.001$).

Table I shows that the AUDIT-C pooled results, considering the differences between risky drinking in men and women, indicated that a large part of university students present a problemat-

Table II. Relationship between sociodemographic variables and AUDIT-C

Variables	*n* (%)	AUDIT-C		
		Low risky drinking	High risky drinking	*p*
		%	%	
Drunkenness				
No	343 (48.2)	79.9	20.1	0.000
Yes	368 (51.8)	25.6	74.4	
Drinking peers				
None or almost none	51 (6.1)	80.5	19.5	0.000
Few	156 (18.8)	78.8	21.2	
Some	248 (29.8)	58.9	41.1	
Most	262 (31.5)	40.3	59.7	
Almost all or all	114 (13.7)	19.2	80.8	
Year of study				
1st year	464 (55.2)	54.6	45.4	0.109
3rd year	376 (44.8)	48.6	51.4	
Scientific area				
Engineering sciences	302 (36.0)	52.1	47.9	0.318
Exact and natural sciences	136 (16.2)	46.6	53.4	
Law and economic sciences	132 (15.7)	48.7	51.3	
Human and social sciences	270 (32.1)	56.4	43.6	
Sex				
Male	375 (44.6)	53.2	46.8	0.520
Female	465 (55.4)	50.8	49.2	
Age				
< 20	355 (42.3)	57.2	42.8	0.018
≥ 20	485 (57.7)	48.2	51.8	
Love relationship				
Yes	347 (41.7)	43.7	56.3	0.511
No	486 (58.3)	41.2	58.8	
Current residence				
Displaced	291 (35.1)	38.7	61.3	0.000
Not displaced	537 (64.9)	59.9	40.1	
Professional situation				
Full time student	739 (88.8)	52.0	48.0	0.883
Worker/Student	93 (11.2)	51.2	48.8	
BMI				
Low weight	58 (7.1)	41.3	58.7	0.197
Normal weight	599 (73.1)	51.5	48.9	
Overweight	162 (19.8)	56.3	43.8	

ic level of risky drinking (n = 337, 48.1%). Most respondents had experienced at least one episode of drunkenness in the previous year (n = 368, 51.8%) and have friends who consume alcoholic beverages (n = 780, 93.8%).

In overall terms, 85.0% of university students who took part in this research have manifested that they had alcoholic beverages in the last 12 months, with a total of 49 (5.8%) and 74 (8.8%) answering that they have never had al-

Table III. Relationship between sociodemographic variables, AUDIT-C and attitudes towards drinking

Variables	Attitudes towards drinking	
	Mean (SD)	*p*
Drinking peers		
None or almost none	12.88 (4.484)	0.000
Few	14.20 (4.688)	
Some	15.88 (3.660)	
Most	16.53 (3.940)	
Almost all or all	17.05 (3.784)	
Scientific area		
Engineering sciences	16.68 (4.011)	0.000
Exact and natural sciences	15.26 (3.812)	
Law and economic sciences	15.95 (3.932)	
Human and social sciences	14.74 (4.464)	
BMI		
Low weight	15.83 (4.031)	0.513
Normal weight	15.68 (4.193)	
Overweight	16.11 (4.192)	
AUDIT-C		
Low risky drinking	15.00 (4.008)	0.000
High risky drinking	17.53 (3.564)	
Drunkenness		
No	14.60 (4.080)	0.000
Yes	17.70 (3.228)	
Abstainers in life		
No	15.91 (4.100)	0.000
Yes	12.47 (4.421)	
Abstainers in last 12 months		
No	16.19 (4.007)	0.000
Yes	13.35 (4.139)	
Year of study		
1st year	15.46 (4.077)	0.045
3rd year	16.04 (4.216)	
Sex		
Male	16.90 (3.934)	0.000
Female	14.75 (4.155)	
Age		
< 20	15.50 (4.030)	0.181
≥ 20	15.88 (4.305)	
Love relationship		
Yes	15.58 (4.154)	0.359
No	15.85 (4.227)	
Current residence		
Displaced	16.42 (3.876)	0.000
Not displaced	15.33 (4.316)	
Professional situation		
Full time student	15.73 (4.194)	0.758
Worker/Student	15.58 (4.285)	
Total	15.71 (4.193)	

Table III. Cont.

cohol in their lives and in the last 12 months respectively.

Young adults who are at risk of alcohol consumption tend to experience episodes of drunkenness in the previous year (χ^2 (2) = 205.290, $p < 0.001$) and to have more alcohol-drinking friends (χ^2 (4) = 106.510, $p < 0.001$) (Table II).

Risky drinking was significantly associated with age and current residence. Older students and displaced students presented a higher prevalence of risky drinking when compared to the younger (χ^2 (1) = 5.560, $p < 0.05$) and to students who did not change residence (χ^2 (1) = 28.837, $p < 0.001$) (Table II).

Attitudes towards drinking

The scores of attitudes towards drinking is 15.71 (SD = 4.193), which means the attitudes are moderate. Analyses showed significant differences in terms of risky drinking, drinking peers, drunkenness, scientific area, sex and current residence (Table III). Students who report that most or almost all their friends are drinkers manifest more negative attitudes than students who do not and who have a few or only some drinking friends (F (4, 813) = 17.547, $p < 0.001$). Moreover, students who present high risky drinking patterns and who got drunk show more negative attitudes than those who present a low risky drinking (t (688) = −8.753, $p < 0.001$) and who have not got drunk (t (698) = −11.190, $p < 0.001$).

Table III also presents significant statistical differences among the attitudes towards alcohol consumption and the students who have never had alcoholic beverages throughout their lives (t (824) = 5.561, $p < 0.001$) and in the last 12 months

Table IV. Relationship between alcohol-related characteristics, sociodemographic variables and knowledge about alcohol

Variables	Knowledge about alcohol	
	Mean (SD)	*p*
Drinking peers		
None or almost none	2.08 (1.104)	0.001
Few	1.75 (1.097)	
Some	2.16 (1.123)	
Most	2.16 (1.194)	
Almost all or all	2.28 (1.098)	
Scientific area		
Engineering sciences	2.17 (1.162)	0.145
Exact and natural sciences	2.20 (1.068)	
Law and economic sciences	2.02 (1.169)	
Human and social sciences	1.99 (1.145)	
BMI		
Low weight	1.96 (0.944)	0.633
Normal weight	2.12 (1.158)	
Overweight	2.09 (1.148)	
AUDIT-C		
Low risky drinking	2.01 (1.112)	0.000
High risky drinking	2.41 (1.089)	
Drunkenness		
No	1.96 (1.144)	0.000
Yes	2.43 (1.049)	
Abstainers in life		
No	2.14 (1.300)	0.000
Yes	1.31 (1.114)	
Abstainers in last 12 months		
No	2.20 (1.120)	0.000
Yes	1.54 (1.036)	
Year of Study		
1st year	2.00 (1.131)	0.009
3rd year	2.21 (1.153)	
Sex		
Male	2.15 (1.174)	0.165
Female	2.05 (1.120)	
Age		
< 20	1.93 (1.106)	0.001
≥ 20	2.21 (1.160)	
Love relationship		
Yes	2.16(1.156)	0.515
No	2.07(1.138)	
Current residence		
Displaced	2.27 (1.121)	0.001
Not displaced	2.00 (1.145)	
Professional situation		
Full time student	2.10 (1.132)	0.957
Worker/Student	2.09 (1.251)	
Total	2.10 (1.145)	

(t (775) = 5.785, $p < 0.001$). In other words, students who drank alcoholic beverages in the last 12 months have displayed more negative attitudes towards alcohol consumption when compared to those who pointed out they have never had alcohol in their lives or in the last 12 months.

Engineering Sciences students expressed less favourable attitudes, whereas those in the area of Human and Social Sciences displayed the most favourable ones (F (3, 823) = 11.047, $p < 0.001$). Students in the first year of study, female respondents and students who did not change residence showed more favourable attitudes than students in the third year (t (825) = –2.009, $p < 0.05$), male (t (825) = 7.581, $p < 0.001$) and displaced students (t (813) = 3.571, $p < 0.001$).

Knowledge about alcohol

The mean score of alcohol-related knowledge was 2.10 ± 1.15 (out of 6) correct answers, revealing a low level of knowledge on the consequences of risky drinking (Table IV).

The current study showed that students who have friends that drink had better knowledge about alcohol and its impact than those who had less friends that drink (F (4, 815) = 4.859, $p < 0.01$). It also revealed significant differences between knowledge about the negative effects of alcohol and risky drinking, drunkenness, year of study, age and current residence. Surprisingly, students who have a higher risky drinking and get drunk are those who have a higher average of correct answers compared to young adults who are at a lower risky drinking patterns (t (689) = –4.787, $p < 0.001$) and who did not get drunk in the last year (t (699) = –5,609, $p < 0.001$).

Table V. Logistic regression on "risky drinking" according age, current residence, drinking peers, alcohol-related knowledge and attitudes towards alcohol

Variables	B	S.E.	χ^2_{Wald}	df	*p*	Exp(B)	95% CI for EXP(B)
Age	0.026	0.021	1.566	1	0.211	1.027	[0.985; 1.070]
Current residence_Displaced	0.663	0.188	12.392	1	0.000	1.941	[1.342; 2.807]
Current residence_Not displaced	1					1	
Drinking peers			64.336	4	0.000		
Drinking peers_None or almost none	1					1	
Drinking peers_Few	–0.042	0.503	0.007	1	0.933	0.959	[0.358; 2.569]
Drinking peers_Some	–0.732	0.462	2.511	1	0.113	0.481	[0.194; 1.189]
Drinking peers_Most	–1.468	0.462	10.101	1	0.001	0.230	[0.093; 0.570]
Drinking peers_Almost all or all	–2.559	0.519	24.350	1	0.000	0.077	[0.028; 0.214]
Alcohol-related knowledge	0.213	0.083	6.550	1	0.010	1.238	[1.051; 1.457]
Attitudes towards drinking	0.147	0.025	33.753	1	0.000	1.159	[1.102; 1.218]
Constant	–2.287	0.685	11.144	1	0.001	0.102	

Knowledge about alcohol was better in students who were consumers of alcoholic beverages when compared to life-long abstainers (t (826) = 4.957, $p < 0.001$) and abstainers in the last 12 months (t (776) = 4.883, $p < 0.001$), with these differences amounting to a certain statistical relevance and significance.

The two variables (year of study and age) are positively and significantly correlated ($r_{sp} = 0.707$, $p < 0.001$) and both present differences regarding knowledge on alcohol and its consequences. This means that students in the third year of study and older students had a better knowledge about alcohol than students in first year (t (827) = –2.611, $p < 0.01$) and younger ones (t (827) = –3.493, $p < 0.001$). Lastly, displaced students presented more alcohol-related knowledge than non-displaced (t (815) = 3.254, $p < 0.001$).

Predicting risky drinking

The dimensions of knowledge, attitudes and behaviour are correlated. This means that improving knowledge about alcohol increases the level of negative attitudes towards alcohol ($r = 0.211$, $p < 0.001$) and also increases the probability of risky drinking ($r = 0.179$, $p < 0.001$). In the same way, the increase in negative attitudes towards alcohol consumption increases the chances of risky drinking among university students ($r = 0.317$, $p < 0.001$).

Logistic regression revealed that the variables "current residence" ($b_{CUR:RESI} = 0.663$; χ^2_{Wald} (1) = 12.392; $p = 0.000$; OR = 1.941); "drinking peers" (χ^2_{Wald} (4) = 64.336; $p = 0.000$); "alcohol-related knowledge" ($b_{KNOWLEDGE} = 0.213$; χ^2_{Wald} (1) = 6.550; $p = 0.010$; OR = 1.238) and "attitudes towards alcohol" ($b_{ATTITUDES} = 0.147$; χ^2_{Wald} (1) = 33.753; $p = 0.000$; OR = 1.159) had a statistically significant effect on the probability of developing risky drinking patterns and behaviours according to the adjusted Logit model (G^2 (8) = 180.222, $p < 0.001$; χ^2_{Wald} (8) = 10.290; $p = 0.245$; $R^2_{CS} = 0.240$; $R^2_N = 0.320$).

Table V summarises the results of the binomial logistic regression for risky drinking. The probability of consuming alcohol in excess increases exponentially with the level of knowledge and attitudes towards alcohol consumption. For the same level of knowledge and attitudes, the probability of not having changed residence when entering higher education is always less than the probability of a displaced student displaying high risky drinking. In addition, the less alcohol-drinking friends' students have, the less likely they are to engage in high risky drinking. The percentage of correct classifications is 70.4%, which is higher than the proportional percentage of correct classifications by chance (50.1%).

■ Discussion

The current research highlights the high prevalence of risky drinking among university students. The risky drinking is a phenomenon that assumes

considerable expression among university students, as demonstrated in national [61-63] and international studies [6, 64, 65]. According to the review conducted by Davoren *et al.* [7], in the studies that used the AUDIT, the proportion of students who reported risky drinking behaviours ranged from 62.8% in 2003 to 84% in 2014. The national research developed by Balsa *et al.* [61] using AUDIT has also shown that 10.7% of young students aged between 15 and 34 revealed an excessive alcohol use and 40.8% of those who were questioned in the context of this research demonstrated a low level of consumption. The results in our study are close to the prevalence verified by DeMartini and Carey [66], that is, 52% of the university students met the criteria for the risky drinking status. However, it is essential to note that in developing countries, the prevalence of risky drinking is lower than in western countries [6, 67].

The age at which alcohol consumption begins, regardless of the sex of the students, is older than the one permitted by law and is connected with entering higher education [61]. However, entry into higher education as a factor increases exposure to alcohol and its recurrent use [68]. Studies in this area have shown that the younger age of alcohol use initiation, the higher the likelihood of developing excessive drinking patterns [69, 70].

Some studies show that despite the initial increase in alcohol consumption with the frequency of higher education, there is a visible gradual reduction in its consumption to a more moderate level [55]. However, the present study showed that older students consume alcoholic beverages more than younger although this difference has not been verified concerning the year of study as a factor.

The study by Byrd [71] revealed and indicated that being married decreased the likelihood of drinking alcohol, while having a job increased that likelihood. In the present study, there were no differences detectable in terms of the relationship between alcohol consumption and being in a love relationship of some kind and in an active professional situation.

Scientific research shows that men are more likely to drink and drink more than women [20, 61, 63, 71-73]; this prediction reaches up to 2.55 times higher [6]. In other studies, this difference is decreasing [7, 74] and the present study does not find differences in risky drinking between male and female students [65].

Among countless social and developmental factors, emerging adults, namely university students, are sensitive to their peers' drinking behaviours [75-79], with this being considered the most robust psychosocial predictor [80]. In this sense, it was found that the alcohol consumption of peers seems to be related to the alcohol consumption of students. This means that students who interact with more friends who drink tend to consume more alcohol and engage in risky drinking than those who interact with less friends who drink [39, 71, 72, 80, 81].

Another factor that seems to contribute to the increase in risky drinking in higher education students is the place of residence. This study revealed that students who lived at home with their parents consumed less alcohol than expected [42, 65, 72, 73, 81]. Parental supervision in this case seems to play an essential role in the prevention and monitoring of risky behaviours related to alcohol consumption, with a lower rate of excessive alcohol consumption and drunkenness episodes in students who did not change their residence at the time of entry into higher education.

Regarding the level of knowledge on alcohol, there was a low level of knowledge among the students surveyed with many misunderstandings concerning the effects of alcohol on the body [43, 44]. These results seem to indicate that the efforts made in and by health education, namely information on the effects of alcohol, had been quite unsuccessful. Even worse, it was found that the level of knowledge about alcoholism is higher in students classified as excessive consumers. This indicates that better knowledge about alcohol contributes little or nothing to the reduction of risky drinking (quite in fact, it has been proven otherwise). In addition, sociodemographic characteristics seem to affect the level of knowledge about alcohol [43, 44]. For example, age and current residence remained significant factors that influenced knowledge. Research has consistently documented that knowledge about alcohol is more favourable for those who are older [43, 44] and for students who changed their residence after entering higher education.

Literature has been inconsistent regarding the associations between alcohol-related attitudes and drinking behaviours. Some studies have found positive associations [82] and others negative associations [42]. The results obtained in this study

showed that attitudes were differentially associated with problematic alcohol related behaviours. Thus, students who maintained negative attitudes towards the consumption of alcoholic beverages tended to consume more. These attitudes may be related to the reasons why students consume alcohol, either because of the expectation that alcohol aids sexual performance [29, 30, 83, 84], in escaping stress [85], in increasing fun [86, 87] and in the search for social and physical pleasure [88].

The limitations of this study should be noted. The first refers to the study design, because since it is a cross-sectoral study, conclusions cannot be generalised for all university students. In addition, the data was collected using the self-report technique, which may limit the causal interpretability of the results. Also regarding the type of questionnaire, a recall of the last 12 months was used, and consumption behaviours may be subject to memory errors, hindering the ability of this method to produce totally or satisfactorily accurate results. Another limitation of scientific studies in the scope of this theme refers to the existence of several instruments to categorise the levels of alcohol consumption. This affects the possibility to compare and contrast when reviewing research which has already been carried out in the field. It should also be noted that a very high percentage of students was qualified for the risk group. As a result, it would be worth repeating the analysis for the narrower group at risk of addiction in the future as indicated by the full AUDIT test.

Before planning a socio-educational programme to reduce risky drinking in students in higher education, research should be carried out to determine the level of knowledge about alcohol. Therefore, in terms of further research, this study provides important insights for future research, as well as for the development of educational programmes.

It should be noted that it is vital that quantitative research is complemented with qualitative studies, in this case to understand and explain the attitudes towards drinking behaviours.

■ Conclusions

Dangerous alcohol consumption remains the most prevalent public health problem encountered by university students. Despite increasing efforts, consumption levels among students have continued to rise, being the main concern of those trying to improve the health and well-being of university students.

Universities are privileged spaces for the development of intervention programmes aimed at reducing the prevalence of excessive alcohol consumption among students. The low level of knowledge about the potential danger of alcohol-related behaviours and the favourable attitudes towards alcohol use demonstrate that universities need to take measures to raise the students' awareness about this issue from the moment they enter into higher education. Therefore the development of health education courses are an example of how universities could raise awareness and increase the knowledge about how great and destructive the dangers of alcohol use may be for the students' personal and academic lives, providing essential information to help students make informed and responsible decisions, enabling them to confidently say "no" to unhealthy behaviours. This study has demonstrated that a high level of knowledge is associated with the risk of problematic drinking; however, the development of preventive programmes directed towards university students based on the KAP (knowledge-attitude-practice) model must take into account the biopsychosocial contexts in which risky drinking occurs or tends to occur. This is particularly important since the knowledge about alcohol may have been acquired before entering higher education given the absence of difference between younger and older students. In the same logic or pattern, universities must provide students with the necessary tools to enable them to develop adequate sociopersonal skills, create opportunities to engage in extra-curricular activities like volunteering and it is also important that these programmes are targeted at peer groups.

Conflict of interest/Konflikt interesów

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Ethics/Etyka

The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

The work described in this article has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) on medical research involving human subjects, Uniform Requirements for manuscripts submitted to biomedical journals and the ethical principles defined in the Farmington Consensus of 1997.

Autorzy uzyskali pisemną, świadomą zgodę pacjentów i pozostałych uczestników badań. Dokumentacja jest w posiadaniu autora uprawnionego do korespondencji.

Treści przedstawione w pracy są zgodne z zasadami Deklaracji Helsińskiej odnoszącymi się do badań z udziałem ludzi, ujednoliconymi wymaganiami dla czasopism biomedycznych oraz z zasadami etycznymi określonymi w Porozumieniu z Farmington w 1997 roku.

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3. ESTUDO 3: USO DE DROGAS ILÍCITAS ENTRE ESTUDANTES UNIVERSITÁRIOS/AS: A IMPORTÂNCIA DO CONHECIMENTO SOBRE DROGAS, DE VIVER EM CASA DE FAMILIARES E A INFLUÊNCIA DOS COLEGAS [6]

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Resumo

Enquadramento: O problema do consumo de substâncias psicoativas ilícitas por estudantes do ES não é emergente, pois é nessa faixa etária que continua a ocorrer a maior prevalência de consumo dessas substâncias.

Objetivos: Descrever a prevalência do consumo de drogas ilícitas entre estudantes universitários/as e analisar os fatores preditivos e os padrões de consumo de drogas ilícitas entre estudantes universitários/as em Portugal.

Métodos: Foi utilizado um desenho transversal e um método de amostragem aleatória estratificada (n = 840). Foi utilizado um questionário autoaplicável validado, composto por características sociodemográficas, informações sobre os padrões de consumo de drogas ilícitas e conhecimentos e atitudes em relação ao uso de drogas ilícitas.

Resultados: A prevalência de consumo de drogas ilícitas foi de 22,2%, enquanto no geral os/as estudantes apresentaram baixo nível de conhecimento e pontuação moderada no que se refere às atitudes em relação ao uso de drogas. Ser do sexo masculino, ter mudado de residência após ingressar no ES, ter amigos/as que usam drogas ilícitas e possuir conhecimentos sobre drogas aumentaram a probabilidade de consumir drogas ilícitas.

Conclusões: Os resultados do estudo podem ajudar a desenvolver estratégias para reduzir o uso de drogas ilícitas no ambiente académico, dando atenção especial à influência de colegas e estudantes que mudaram de residência após ingressarem no ES.

[6] No âmbito deste artigo realizou-se uma comunicação: **1)** no 7º Congresso Internacional de Saúde: contextos e problemáticas emergentes. Instituto de Educação da Universidade do Minho, Braga, Portugal. 7 a 9 de outubro de 2020 (intitulada "Conhecimentos, Atitudes e Consumo de Drogas Ilícitas pelos/as estudantes do Ensino Superior") e será realizada uma comunicação **2)** no XVI Congresso Galego-Português de Psicopedagogia Instituto de Educação da Universidade do Minho, Braga, Portugal. 1 a 3 de setembro de 2021 (intitulada "A influência dos pares no consumo de Substâncias Psicoativas entre estudantes universitários").

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Illicit Drug Use among College Students: The Importance of Knowledge about Drugs, Live at Home and Peer Influence

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ABSTRACT

The problem of consumption of illicit psychoactive substances by students in higher education is not new, since it is in this age group that the highest prevalence of consumption of these substances continues to occur. This study aimed to describe the prevalence of illicit drug use among university students and to analyze the predictive factors and patterns of illicit drug use among university students in Portugal. A cross-sectional design and a stratified random sampling method were used (n = 840). A validated self-administered questionnaire was used, consisting of socio-demographic characteristics, information about the patterns of illicit drugs consumption, and knowledge and attitudes toward illicit drugs use. The prevalence of illicit drugs consumption was 22.2%, while overall students had a low level of knowledge and moderate scores when it came to the attitudes toward drug use. Being male, having changed residence after entering higher education, having friends who use illicit drugs and possessing knowledge on drugs increased the likelihood of consuming illicit drugs. The results of the study could help develop strategies to reduce use of illicit drugs in academic settings, giving special attention to the influence of peers and students who changed their residence after entering higher education.

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Introduction

Higher education students constitute a risk group with regard to the consumption of psychoactive substances (Allen et al. 2017; Helmer et al. 2014), including illicit drugs. The university population, in comparison with the population of the same age group who aren't engaged in university activities, displays a higher consumption of psychoactive substances (Arias-De la Torre et al. 2019; Balsa, Vital, and Urbano 2017; Bennett and Holloway 2015) and the figures have increased over the past decade (Arria et al. 2017), especially among women (Colell, Sánchez-Niubò, and Domingo-Salvany 2013).

Several research studies on the consumption of psychoactive substances in higher education are reported, showing that one in five university students use drugs monthly (Dennhardt and Murphy 2013), and that 9% to 25% initiate cannabis consumption after admission (Moyle and Coomber 2019; Pinchevsky et al. 2012; Stewart and Moreno 2013; Suerken et al. 2014).

Universities should provide students with cognitive and professional development, however, the academic environment seems to also provide the foundations for the beginning and maintenance of consumption of psychoactive substances (Moyle and Coomber 2019; Pinchevsky et al. 2012; Suerken et al. 2014; Zeferino et al. 2015). Psychoactive substance is considered to be any chemical substance that alters the functioning of the central nervous system and influences behavior, awareness, perception and/or mood (World Health Organization 2004), and continued consumption can result in abuse, addiction and dependence (Kenne et al. 2017).

The consumption of psychoactive substances does not only affect physical and psychological health (Allen et al. 2017; Arria et al. 2017; Blavos et al. 2017), but also has a negative impact in terms of academic performance (Arria et al. 2015; Suerken et al. 2016). International scientific evidence shows that there is a strong link between cannabis use and academic dropout and abandonment (Arria et al. 2017; Blavos et al. 2017).

The academic period, which occurs simultaneously with emerging adulthood (Arnett 2000), corresponds to greater autonomy for many young adults, but also to a period of greater vulnerability, frequently conducive to the beginning of the consumption of these substances (Moyle and Coomber 2019; Wagner et al. 2012).

Explanations for the consumption of illicit drugs in the academic context may be understood using the ecologic model, previously used in the study of adolescents

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(Shek 2007; Shek et al. 2020) and university students (Ajayi and Somefun 2020; Allen et al. 2017). The ecologic model recognizes individual behaviors as being dependant on the dynamic relationships between several factors (intrapersonal, interpersonal, organizational, community, public policies) (Bronfenbrenner and Morris 1998; Sallis, Owen, and Fisher 2008). Therefore, the probability of a student using illicit drugs results from a combination of inter-related influences, not just focused on individual characteristics, but including socio-cultural factors and physical environments.

Investigations in this area seeking have shown that the search for new sensations and experiences constitutes one of the main motivations for drug consumption (Dennhardt and Murphy 2013; Hosseini, Dehghani, and Vaziri 2018; Suerken et al. 2014), but there are several others such as emotionally driven motivations, the influence of peers, or just curiosity (de Campos and Soares 2004; Vilela, Ventura, and Silva 2010). Wagner et al. (2012) added other reasons, such as low self-esteem, easy access to drugs, lack of perspective on life or lack of parental control or monitoring. In addition, the perceptions that substance use is normative for university students may play a role. That is, the perceptions regarding the frequency of consumption by peers and the approval of consumption by peers (Blavos et al. 2017; Buckner 2013; Coomber, Moyle, and South 2016; Dennhardt and Murphy 2013; Edwards, Witkiewitz, and Vowles 2019; Kollath-Cattano, Hatteberg, and Kooper 2020; Mccabe et al. 2014; Meisel and Goodie 2015; Moyle and Coomber 2019; Napper et al. 2015; Pinchevsky et al. 2012). In other words, one is expected to engage in this behavior in order to maintain a sort of social obligation and avoid outcasting.

One of the reasons offered for the consumption of psychoactive substances is connected to the relief of psychological stress that comes with academic responsibilities (Arora et al. 2016; Bennett and Holloway 2017). University students may believe that using substances will allow them to obtain a level of physical and mental relaxation that is essential for a better academic performance (Aresi, Moore, and Marta 2016; Dázio, Zago, and Fava 2016).

The normalization of drug use in an academic context can be explained by some myths, such as the use of cannabis being harmless and non-addictive (Blavos et al. 2017; Kilmer et al. 2006; Lewis and Clemens 2008), based on superficial knowledge and on deep-rooted intuitive knowledge (Delia Rojo, Villela Bueno, and da Silva 2008). Several studies took on the importance of knowledge about the dangers of drugs as a protective factor against the consumption of psychoactive substances (Delia Rojo, Villela Bueno, and da Silva 2008), presenting inconsistent results. If, on one hand, students revealed good levels of knowledge about illicit drugs, these were not associated with lower rates of drug consumption. On the other hand, younger students display a superior level of knowledge when compared to older students, suggesting that the academic context is prone for the perpetuation of some myths about the use of drugs.

Although there are some scientific investigations about the consumption of drugs within the context of higher education, there are still some gaps to be filled when it comes to the understanding of social norms about the behaviors related to drug usage which the present study sought to clarify. Usually, the impact of remaining in higher education, the level of knowledge about drugs, the impact of ceasing to live in their homes and the influence of peers are factors to be considered. Moreover, we are unaware of any nation-wide study, based on the ecologic model, to evaluate the different levels of influence in this type of consumption. Further, a significant increase in the consumption of drugs in higher education, and among students in general, display higher levels of drug use when compared to the non-student population. Consequently, it is important to monitor the risk behaviors for the health of university students, with the aim of developing programs for the promotion of healthy behaviors.

In the present study, we focused on the consumption of illicit drugs, with all psychoactive substances whose production, commercialization and consumption are prohibited by law, while these acts are, presently, considered a crime. We describe the prevalence of illicit drug use among university students, associated with knowledge and attitudes toward the issue. Additionally, our goal was to analyze the predictive factors of illicit drug use in higher education.

Methods

Participants and procedure

This cross-sectional study was carried out during the academic year 2018/2019 with university students from a Portuguese public university. Participants were selected from a total population of 5447 students by stratified sampling based on the year of study (1st and 3rd year) and the scientific area of study. The estimated sample size was 592 students (margin of error = 5%, confidence level = 99% and distribution of responses = 50%).

Data collection was performed in the classroom using a self-report questionnaire in a pen-paper format. In

total, 873 questionnaires were distributed, with 840 students participating in the study: 96.2% response rate (95% CI 94.8–97.6).

This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, and all participants completed informed consent procedures.

Instruments

The questionnaire was developed from a review of the literature in national and international scientific databases in order to identify the scales and items most commonly used to measure knowledge, attitudes and consumption of illicit drugs. Subsequently, the most common items were grouped into the different dimensions under analysis, the redundant items were eliminated and content validation was carried out with 5 doctoral researchers and 12 university students. Before data collection, a pilot test was carried out with 32 university students excluded from the final sample.

The final version of the questionnaire consisted of 19 questions: 9 sociodemographic items (sex, age, scientific area, year of study, weight and height, relationship status, professional status and live at home) and 10 questions divided into three sections discussed below.

The Knowledge about illicit drugs section included three items ("Regular consumption of cannabis is as dangerous to health as regular heroin use"; "Only drugs considered illegal produce toxicity and dependence"; "One of the main effects of cocaine on the brain is paranoid psychosis") with three answer options (1 – True, 2 – False and 3 – I don't know) (α =.491, inter-item correlations ranging from .230 to .280). The number of correct answers comprised an overall knowledge score, so that the higher the scale value, the greater the level of knowledge.

The Attitudes toward the consumption of illicit drugs section included: three items ("Young people try drugs out of curiosity"; "Young people try drugs for emotional problems"; "Young people try drugs under the influence of friends"), measured using a 5-point Likert scale (1 – Strongly Disagree and 5 – Strongly Agree). This scale varies between 3 and 15, and the higher the value attributed to the sum of the items, the more the students agree with the reasons presented for the consumption of drugs (α = .765, inter-item correlations ranging from .492 to .574).

The Consumption of illicit drugs section included three questions about the consumption of Cannabis, Cocaine, and Hallucinogens ("In the past 12 months, how many times have you consumed … ?") and a question about peer consumption ("How many of your friends consume illegal psychoactive substances (cannabis, cocaine, hallucinogens, …) regularly?"). The consumption of illicit drugs was converted into a single binary item with a value of 1 for the consumption of some psychoactive substance in the last year and 0 otherwise.

Statistical analysis

Data analysis was performed using the statistical software IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, USA). The reliability for the scales of the questionnaire was analyzed through Cronbach's alpha (α). The results present the descriptive analysis for all variables of the questionnaire, through absolute (n) and relative (%) frequencies, mean (M) and standard deviations (SD), while Spearman's correlation, the Chi-Square test, independent t-tests and the ANOVA were used for inferential analysis. The binomial logistic regression model by the Enter method was used to examine the predictors or predictive factors for illicit drug use. For the calculation of this model, all independent variables were used, except for the age of the participants, because this variable is highly correlated with the year of study variable ($r_{SP} = .707$, $p < .001$). Betas (β) and the respective 95% confidence intervals (95% CI) are presented. Statistical significance was defined as $p < .05$.

Results

Most participants were female (55.4%, $n = 465$), non-working students (88.8%, $n = 739$), lived in the family home (64.9%, $n = 537$), had a normal BMI (73.1%, $n = 599$) and didn't have a loving relationship at the time (58.3%, $n = 486$). The average age among students was 20.78 years ($SD = 4.221$), with a range between 18 and 54 years, with only 3% being older than 30 years old.

The sample was distributed in the areas of engineering sciences ($n = 302$, 36.0%), human and social sciences ($n = 270$, 32.1%), exact and natural sciences ($n = 136$, 16.2%) and law and economic sciences ($n = 132$, 15.7%). The population was composed of 55.2% ($n = 464$) freshmen, in their first year of university, and 44.8% ($n = 376$) in the third year.

Regarding the consumption of illicit drugs in the last year, 21.9% ($n = 175$), 1.5% ($n = 12$) and 1.9% ($n = 15$) of students used cannabis, cocaine and hallucinogens, respectively. In total, 77.8% ($n = 619$) did not use any type of illicit drugs in the last year, with 20.1% ($n = 160$) of the participants consuming only one type of drug, 1.5% ($n = 12$) consuming two types of drugs and 0.6% ($n = 5$) using the three types of drugs in the

last year. Most of the students surveyed reported having friends who were regular users of some type of illicit drugs (n = 435, 52.3%).

Table 1 shows the demographic characteristics of participants stratified by those who were and those who weren't using illicit drugs. The students who showed a higher prevalence of consumption of illicit drugs were those who had friends who used this type of substances ($\chi^2(1) = 123.011$, $p < .001$), those who attended the 3rd year ($\chi^2(1) = 7.164$, $p < .01$) and, consequently, older students (>20 years old) ($\chi^2(1) = 10.430$, $p < .01$), male students ($\chi^2(1) = 32.288$, $p < .001$) and those who changed their residence after entering higher education ($\chi^2(1) = 12.154$, $p < .001$).

Table 2 shows knowledge of students regarding drugs in light of their sociodemographic characteristics. The scale of knowledge about drugs showed, on average, 1.63 (SD = .957) correct answers, in a total of 3 possible answers. In the same vein, 14.1% of students answered correctly to no answer. The level of knowledge about drugs was higher among students who used illicit drugs (M = 2.12, SD = .80), who had friends who were consumers (M = 1.83, SD = .93) and who attended the 1st year (M = 1.72, SD = .92) ($t(827) = -6.458$, $p < .001$, $t(793) = -8.122$, $p < .001$, $t(836) = 3.145$, $p < .01$, respectively).

Table 3 shows the differences in the average attitudes toward drugs, verifying that students with friends who use drugs (M = 10.79, SD = .2.44) and attending the 3rd year (M = 10.78, SD = 2.39) were those who displayed the lowest score in terms of level of attitudes, meaning that these groups are less likely to agree with the reasons presented for the consumption of illegal drugs when compared to students who have no friends

Table 2. Mean, standard deviation and independence tests (ANOVA and t-student) for sociodemographic characteristics according to the level of knowledge about drugs.

		Drugs-related knowledge (range 0 –3)	
		M(SD)	t/F
Illicit drugs consumers	Yes	2.12(.80)	−8.122***
	No	1.49(.95)	
Consumers peers	Yes	1.83(.93)	−6.458***
	No	1.41(.93)	
Year of study	1st year	1.72(.92)	3.145**
	3rd year	1.52(.99)	
Scientific area	Engineering sciences	1.60(.99)	2.340
	Exact and natural sciences	1.70(.91)	
	Law and economic sciences	1.80(.93)	
	Human and social sciences	1.55(.96)	
Sex	Male	1.70(.1.00)	1.810
	Female	1.58(.92)	
Age	< 20	1.65(.93)	.431
	≥ 20	1.62(.98)	
Love relationship	Yes	1.62(1.00)	−.596
	No	1.66(.93)	
Live at home	No	1.69(.94)	1.299
	Yes	1.60(.96)	
Professional situation	Full time student	1.63(.96)	−.003
	Worker/Student	1.63(.93)	
BMI	Low weight	1.84(.87)	1.726
	Normal weight	1.63(.97)	
	Overweight	1.57(.94)	
	Total	1.63(.96)	

** p <.01; *** p <.001.

Table 1. Prevalence and chi-square test of illicit drug use according to sociodemographic characteristics.

		Illicit Drugs Use		Chi Square test
		Yes	No	
		n(%)	n(%)	χ^2
Consumers peers	Yes	18(10.3)	355(57.7)	123.011***
	No	157(89.7)	260(42.3)	
Year of study	1st year	82(46.3)	357(57.7)	7.164**
	3rd year	95(53.7)	262(42.3)	
Scientific area	Engineering sciences	78(44.1)	211(34.1)	7.108
	Exact and natural sciences	26(14.7)	110(17.8)	
	Law and economic sciences	26(14.7)	86(13.9)	
	Human and social sciences	47(26.6)	212(34.2)	
Sex	Male	113(31.5)	246(68.5)	32.288***
	Female	64(14.6)	373(85.4)	
Age	<20	56(31.6)	280(45.2)	10.430***
	≥20	121(68.4)	339(54.8)	
Love relationship	Yes	73(41.5)	271(44.2)	.415
	No	103(58.5)	342(55.8)	
Live at home	No	80(46.2)	195(31.9)	12.154***
	Yes	93(53.8)	416(68.1)	
Professional situation	Full time student	150(85.7)	550(89.6)	2.030
	Worker/Student	25(14.3)	64(10.4)	
BMI	Low weight	14(8.1)	42(6.9)	.271
	Normal weight	125(72.3)	444(73.4)	
	Overweight	34(19.7)	119(19.7)	
	Total	177(22.2)	619(77.8)	

** p <.01; *** p <.001.

Table 3. Mean, standard deviation and independence tests (ANOVA and t-student) for sociodemographic characteristics and illicit drugs consumption as a function of attitudes toward drugs.

		Attitudes toward drugs (range 3 –15)	
		M(SD)	t/F
Illicit drugs consumers	Yes	11.09(2.28)	−.772
	No	10.93(2.35)	
Consumers peers	Yes	10.79(2.44)	−2.123*
	No	11.13(2.22)	
Year of study	1st year	11.12(2.28)	2.064*
	3rd year	10.78(2.39)	
Scientific area	Engineering sciences	10.86(2.28)	1.025
	Exact and natural sciences	10.81(2.10)	
	Law and economic sciences	11.21(2.50)	
	Human and social sciences	11.06(2.43)	
Sex	Male	10.88(2.31)	−.925
	Female	11.04(2.35)	
Age	< 20	11.11(2.26)	1.519
	≥ 20	10.86(2.38)	
Love relationship	Yes	11.07(2.22)	1.060
	No	10.90(2.42)	
Live at home	No	10.91(2.32)	−.579
	Yes	11.01(2.33)	
Professional situation	Full time student	10.93(2.32)	−1.391
	Worker/Student	11.28(2.29)	
BMI	Low weight	10.83(1.30)	.879
	Normal weight	10.93(2.28)	
	Overweight	11.18(2.29)	
	Total	10.97(2.34)	

* $p < .05$.

who engage in drug-using behaviors and who are simultaneously in the 1st year of study ($t(817) = -2.123, p < .05$, $t(826) = 2.064, p < .05$, respectively).

Regarding the factors associated with illicit drugs consumption, consumer peers ($\chi^2_{Wald}(1) = 59.942, p < .001$), knowledge about drugs ($\chi^2_{Wald}(1) = 30.311, p < .001$), sex ($\chi^2_{Wald}(1) = 13.716, p < .001$), residence ($\chi^2_{Wald}(1) = 10.021, p < .001$) and year of study ($\chi^2_{Wald}(1) = 5.564, p < .001$) had a statistically significant associations with the likelihood of consuming illicit drugs, according to the adjusted model ($G^2(13) = 195.135, p < .001$; $\chi^2_{Wald}(8) = 3.845, p < .871$; $R^2_{CS} = .231$; $R^2_N = .356$) (Table 4). This means that the increase in the level of knowledge, having friends who are regular users of illegal drugs, being male, having changed residence after entering higher education and attending the 3rd year all constitute factors (sometimes combined) which increase the chances of belonging to the group of students who use illicit drugs. The percentage of correct classification is 80.6%, correctly classifying 35.8% and 93.1% of individuals who use illegal drugs and who do not use illegal drugs, respectively. The adjusted model showed a good discriminating capacity (AUC = .835, $p < .001$).

Discussion

The results showed a high consumption of illicit drugs among higher education students in the last year, with cannabis being the most consumed drug. These results are consistent with previous studies on the use of illicit drugs in Higher education, which demonstrated that cannabis use in the last 12 months among university students was around 20–30% (Chaves and Khenti 2019; Dennhardt and Murphy 2013; Holloway and Bennett 2018; Kollath-Cattano, Hatteberg, and Kooper 2020; Redonnet et al. 2012), reaching 40% in the young Spanish population (Arias-De la Torre et al. 2019).

Male students were more likely to use substances, compared to female students, corroborating other research (Ajayi and Somefun 2020; Colell, Sánchez-Niubò, and Domingo-Salvany 2013; Edwards, Witkiewitz, and Vowles 2019; Helmer et al. 2014; Holloway and Bennett

Table 4. Adjusted probability ratios (OR) and 95 confidence intervals (CI) of the binomial logistic regression model to predict illicit drug use.

					95% C.I.for EXP(B)	
Independent Variables	χ^2 Wald	df	p	Exp(B)	Lower	Upper
PeersConsumersDrugs – Yes	59.942	1	.000	8.413	4.907	14.426
Attitudes toward drugs	.095	1	.758	.985	.896	1.084
Drugs-related knowledge	30.311	1	.000	1.958	1.541	2.487
Sex (Male)	13.716	1	.000	2.438	1.521	3.908
Love relationship (Yes)	1.220	1	.269	.791	.521	1.200
Live at home (No)	10.021	1	.002	1.972	1.295	3.003
BMI	2.018	2	.365		[a]	
BMI (Normal weight)	1.923	1	.166	1.864	.773	4.493
BMI (Overweight)	.207	1	.649	1.131	.666	1.921
Professional situation (Full time student)	3.631	1	.057	.545	.291	1.018
Year of study (3rd year)	5.564	1	.018	1.659	1.089	2.527
Scientific area	1.194	3	.754		[a]	
Scientific area (Exact and natural sciences)	.326	1	.568	1.174	.678	2.032
Scientific area (Law and economic sciences)	.003	1	.959	.983	.522	1.853
Scientific area (Human and social sciences)	.862	1	.353	1.366	.707	2.636
Constant	32.927	1	.000	.012		

[a] Reference category.
OR: odds ratio; 95 CI: 95 confidence interval.

2018; Mccabe et al. 2014; Mohammadpoorasl et al. 2014). However, the prevalence of registered use was high in both genders, emphasizing that, although unhealthy lifestyles can have a tendency to be traditionally associated with men, there is a trend toward an increase in the consumption of illicit drugs among women (Colell, Sánchez-Niubò, and Domingo-Salvany 2013; Kollath-Cattano, Hatteberg, and Kooper 2020).

Drug use was higher in students attending the 3rd year, that is, in older students, indicating that the academic context allows experimentation and perpetuation of the consumption of illicit drugs (Allen et al. 2017; Holloway and Bennett 2018; Moyle and Coomber 2019; Pinchevsky et al. 2012; Stewart and Moreno 2013; Suerken et al. 2014), although consumption tends to decrease after studies are completed (Allen et al. 2017). This aspect is combined with the fact that many young adults change their residence after entering higher education, associated with the physical and psychological distance from parents (Moyle and Coomber 2019). In our study, as in others (Ajayi and Somefun 2020; Arias-De la Torre et al. 2019; Bennett and Holloway 2015; Hosseini, Dehghani, and Vaziri 2018; Massah et al. 2016; Mohammadpoorasl et al. 2014; Napper et al. 2015; Peltzer and Pengpid 2016; Pinchevsky et al. 2012), students who changed residence after entering Higher education and do not live in their parents' homes were more likely to consume illicit drugs than those who continued to live with their parents. As stated by Ajayi and Somefun (2020), family support is a protective factor against the consumption of illicit drugs and must be considered in the development of prevention programs in an academic context. Strategies that enable parents to recognize and exercise their role in preventing their children's drug use must be supported (Pinchevsky et al. 2012), since the degree of autonomy and responsibility conferred by entering the Superior School does not necessarily constitute a departure from risky behavior.

Another predictive factor for drug use refers to the influence of peers or social norms (Blavos et al. 2017; Buckner 2013; Kilmer et al. 2006; Kollath-Cattano, Hatteberg, and Kooper 2020; Neighbors, Geisner, and Lee 2008; Pinchevsky et al. 2012; Zeferino et al. 2015). These studies, as well as the results presented, showed that having friends who use illicit drugs increases the chances of also consuming, suggesting that socially close networks have an impact on the reported use of illicit psychoactive substances (Blavos et al. 2017; Buckner 2013; Edwards, Witkiewitz, and Vowles 2019; Helmer et al. 2014; Napper et al. 2015). In this regard, peer pressure can be a reason for drug use, facilitating the integration of young people when they have attitudes and behaviors similar to those of other young people.

Although the present study did not associate the consumption of illicit psychoactive substances with the professional situation, employment can be a protective factor against drug use, so that individuals who study can only have a lower risk of starting drug use (Legleye et al. 2008). However the financial vulnerability of students who work at the same time, or professional stress, can be the trigger to the consumption of illicit drugs (Arias-De la Torre et al. 2019).

Regarding knowledge, about half of the correct answers were recorded, which corresponds to a low level of knowledge about illicit drugs, leading to similar conclusions and results obtained by a number of other international studies (Delia Rojo, Villela Bueno, and da Silva 2008; Del Navia-Bueno et al. 2011; Olano and Wright 2019), but with a clear difference when compared to other ones (Chaves and Khenti 2019; Souza et al. 2018). The level of knowledge was considered an important predictor of the logistic regression model, showing that the increase in knowledge contributes to the increase in the chances of consuming illicit drugs (Chaves and Khenti 2019). This result can be considered inconsistent, as studies are known that have a negative correlation between knowledge and drug use (Olano and Wright 2019; Souza et al. 2018) and others do not display any relevant or significant differences (Williams and Brands 2019).

The knowledge about the consequences of using illicit drugs may not by itself prevent its usage, therefore, it is important to question if the fact of possessing knowledge about drugs is positively correlated with the usage of the drugs itself, which is something that may come about as a result of the interest manifested by drug users in seeking more information on the topic, acquiring a better and deeper knowledge of the consequences involved.

The level of higher knowledge in 1st year students compared to 3rd year students demonstrates that this type of knowledge is not necessarily acquired in an academic context, but through life experiences, school prevention strategies (Souza et al. 2018) and/or other individual or family/social context-shaped peculiarities or also as a result of the impact of social communication, and that university experiences probably allow the consolidation of some myths regarding the harmful effects of illicit drug use.

In view of the above, it is necessary to identify the existing gaps and incorporate health education content in academic curricula that focus on changing attitudes toward health risk behaviors (Alves, Precioso, and Becoña 2020; Blavos et al. 2017; Souza et al. 2018), including awareness campaigns or spreading and distributing massive information about the negative effects of drugs.

This study shows the need to problematize the contexts/circumstances related to the effects and consequences of consumption, to develop interactive programs led by peers that integrate drug resistance skills offered by peers, which strengthen the social skills of assertiveness and self-efficacy (Edwards, Witkiewitz, and Vowles 2019; Mbuthia et al. 2017; Pinchevsky et al. 2012). But laws are also needed to reduce the accessibility to drugs in an academic context, a responsibility of the legal system and the governing bodies (Allen et al. 2017; Coomber, Moyle, and South 2016; Mbuthia et al. 2017), and an aspect which, if addressed, may reduce the percentage/frequency of usage of illicit drugs.

The scale of attitudes showed that university students showed moderate scores one attitudes toward the consumption of illicit drugs. Other studies have assessed perceptions of illicit psychoactive substances (Buckner 2013; Helmer et al. 2014; Sanders, Stogner, and Miller 2013), showing that higher education students tend to approve drug use by peers or consume by peer influence. Although some studies confirm the relationship between attitudes and consumption of illicit drugs (Stone et al. 2012), in this study this variable was not associated with consumption of illicit drugs.

The results of this study support the relevance of the ecologic model in the understanding of the influence of individual factors, of peers and family members in the consumption of illicit drugs. However, important factors were not included, such as governmental policies and the application of the law. In this sense, the present study based itself on the ecologic model in order to understand the predictive factors of the illicit drug consumption in higher education.

Limitations should be considered when interpreting the results of this study. First, this cross-sectional study includes only one Portuguese university, so the results cannot be generalized to other Portuguese universities, or to universities in other countries. Secondly, although the participants were guaranteed anonymity and confidentiality, as the data were collected using a self-report questionnaire, there may be some bias in terms of under-reporting the consumption of psychoactive substances. In addition, as data collection took place in the classroom, and considering that drug users are less likely to attend classes (Arria et al. 2015), there may be an under-reporting of the real rate and dynamics of illicit drug use.

The consumption of illicit drugs among university students is high, with males and students displaced from their homes of origin more likely to consume this type of psychoactive substances. Portuguese university students have a low level of knowledge about illicit drugs and have shown moderate scores when it comes to the attitudes toward drug use. The ecologic model has given us a broad structure in order to understand the influence of predictive factors for the consumption of drugs. In accordance with this model, health-related behaviors are more prone to change when several levels of influence are taken into account. This study provides important information for the design and implementation of socio-educational intervention programs, highlighting the importance of providing accurate information about the health risks related to each type of drugs, the practical implications of the influence of peers on the consumption of psychoactive substances, and the importance of creating a space for healthy sharing and coexistence among students without relying on drug use.

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Authors' contributions

RA conceived this study, collected the data, designed, carried out statistical analysis and wrote the final version. JP e EB contributed to the interpretation of data for the work and revised the manuscript critically. All authors contributed substantially to the interpretation of data, critical discussion and revision of the manuscript, and approved the final version.

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4. ESTUDO 4: CONHECIMENTOS, ATITUDES E PRÁTICA DA AUTOMEDICAÇÃO ENTRE ESTUDANTES UNIVERSITÁRIOS/AS EM PORTUGAL: UM ESTUDO TRANSVERSAL [7]

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Resumo

Enquadramento: A automedicação é o ato pelo qual uma pessoa, por conta própria ou recomendação de terceiros, escolhe e administra medicamentos para prevenir, tratar ou curar uma doença cuja identidade e gravidade geralmente são desconhecidas. A OMS vem deixando clara a existência de um local válido para a automedicação nas sociedades desenvolvidas, porém, alerta para a necessidade de informar a população sobre o uso adequado de medicamentos de venda livre, enquanto um aspeto mais educativo para a educação em saúde.

Objetivos: Descrever os conhecimentos, atitudes e práticas de automedicação dos/as universitários/as e analisar os fatores preditivos para o envolvimento nesse comportamento.

Métodos: Trata-se de um estudo transversal envolvendo estudantes (n = 840) de uma universidade portuguesa, selecionados por amostragem estratificada e proporcional. Os dados foram recolhidos com o recurso a um questionário de autorrelato que, além de questões sociodemográficas, continha uma escala de conhecimentos sobre a automedicação (α = 0.488), uma escala acerca das atitudes em relação à automedicação (α = 0.708) e questões sobre os padrões de práticas de automedicação (α = 0.445). As diferenças entre os resultados e os dados sociodemográficos foram analisadas por meio de testes t independentes e ANOVA. Um modelo linear generalizado foi calculado para determinar as variáveis preditivas da automedicação.

Resultados: Mais da metade dos/as inquiridos/as (54,3%, n = 434) fez uso de alguma forma de automedicação no ano anterior. Os/as estudantes revelaram conhecimentos insuficientes sobre a

[7] No âmbito deste artigo realizaram-se uma publicação e uma comunicação: **1)** Alves, R. &, Precioso, J. (2019). Knowledge, attitude and practice of self-medication among college students. In Marina Almeida-Silva, Maria Belo, Irene Morais, Joana Morais, Liliana Natividade, Pedro Pena, Márcia Pimenta, Mariana Simão (eds.). *"New" challenges for the future - Abstract proceedings of International Congress on Environmental Health 2019*. (p.73-74). Lisboa: Escola Superior de Tecnologia da Saúde de Lisboa. ISBN 978-989-8077-28-8 e **2)** no 4th edition of the International Congress on Environmental Health, ICEH 2019. Escola Superior de Tecnologia da Saúde de Lisboa – Instituto Politécnico de Lisboa, Lisboa, Portugal. 25 a 27 de setembro 2019 (intitulada "Knowledge, attitude and practice of self-medication among college students").

referida prática, respondendo corretamente a 1,60 (DP =0,936) questões num total de 3, e atitudes favoráveis à automedicação (*M* = 2,17, DP = 0,950, variação 1–5). Frequentar um curso da área das ciências da engenharia (β = 0.718, IC 95%: 1.373–3.069, p <0.001), ser do sexo feminino (β = 0.866, IC 95%: 1.700–3.327, p <0.001) e ter atitudes negativas em relação à automedicação (β = 0.367, IC 95%: 1.227-1.698, p <0.001) prevêm a adoção dessas práticas.

Conclusões: A automedicação é uma prática comum entre os/as universitários/as, o nível de conhecimento da automedicação é baixo e o baixo score do nível de atitudes revelou que os/as estudantes tendem a ter um posicionamento correto em relação à automedicação. Portanto, torna-se evidente a recomendação de desenvolver campanhas ou programas educacionais, a fim de informar sobre os efeitos adversos do uso de medicamentos não prescritos.

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Knowledge, attitudes and practice of self-medication among university students in Portugal: A cross-sectional study

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Abstract

Aims: To describe the knowledge, attitudes and practices of self-medication in college students and to analyse the predicting factors for the engagement in that behaviour. **Design:** This is a cross-sectional study involving students ($n = 840$) from a Portuguese university, selected through stratified and proportional sampling. Data were collected using a self-administered questionnaire containing, in addition to sociodemographic issues, a scale measuring knowledge about self-medication ($\alpha = .488$), a scale measuring attitudes towards self-medication ($\alpha = .708$) and questions about the patterns of self-medication practices ($\alpha = .445$). Differences between outcomes and sociodemographics were analysed through independent *t*-tests and ANOVA. A generalised linear model was calculated to determine the predictive variables of self-medication. **Results:** Over half of the respondents (54.3%, $n = 434$) had used some form of self-medication during the preceding year. Students revealed poor knowledge about the referred practice, correctly answering 1.60 ($SD = 0.936$) questions in a total of 3, and favourable attitudes towards self-medication ($M = 2.17$, $SD = 0.950$, range 1–5). Attending engineering sciences ($\beta = .718$, 95% CI:

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1.373–3.069, $p < .001$), being female ($\beta = .866$, 95% CI: 1.700–3.327, $p < .001$) and having negative attitudes towards self-medication ($\beta = .367$, 95% CI: 1.227–1.698, $p < .001$) predict the adoption of those practices. **Conclusions:** Self-medication is a common practice among university students, the level of self-medication knowledge is low and the low score of the level of attitudes revealed that students tended to have a correct positioning towards self-medication. Therefore, the recommendation to develop campaigns or educational programmes becomes obvious, in order to inform about the adverse effects of the use of non-prescribed medicine.

Keywords
knowledge, rational use of medicine, self-medication, university students

Self-medication is the act by which a person, on their own account or as a result of recommendation from a third party, chooses to administer medicine to themselves in order to prevent, treat or cure a condition whose identity and severity is generally unknown (WHO, 2000a). Self-medication may include using leftover drugs from treatment courses prescribed previously, or drugs obtained from relatives or friends (Ocan et al., 2015), along with "non-prescription" or "over-the-counter" medicine. In some countries, such as Portugal, non-prescription medication is not only available in pharmacies, but also in supermarkets and other outlets (Martins et al., 2016).

Self-medication is recommended by the World Health Organization (WHO) to treat self-recognised disorders or symptoms, or to treat chronic or recurring diseases or symptoms, using drugs prescribed by doctors (WHO, 2000a), making it explicitly clear that there is indeed a valid place for self-medication in developed societies. However, it simultaneously points out the need to inform the population about the appropriate use of over-the-counter medications, adopting a more educational approach to health education (WHO, 2000a). This is because the health consequences of this practice are numerous, depending on the type of medication and the varying sensitivity of each individual to them. For example, some of the repercussions for one's health stemming from this practice include increased resistance to certain types of medication, decreased efficacy of treatments due to inappropriate use, delay of the proper diagnosis, severe medication side effects, toxicity, dangerous drug interactions, drug dependency, hypersensitivity to certain drugs, resistance withdrawal symptoms, and countless other health problems, such as drug overdose or extreme dependence (Bennadi, 2014; Hughes et al., 2001; WHO, 2000b). Nonetheless, the WHO has, however, indicated that responsible self-medication does present the advantage of preventing and treating those diseases which do not require prior medical consultation and has the potential to provide a cheaper alternative for treating common disease (WHO, 2000a).

There is an increasing tendency to use medications indiscriminately, making this practice a public health problem (Kasulkar & Gupta, 2015) in the developing countries just as much as in the already developed nations. Globally, with the exception of some North American and Northern European countries (Morgan et al., 2011), self-medication is a generalised common practice. Although the prevalence of self-medication may vary from country to country, several factors have shown a very consistent association with this practice (Carrasco-Garrido et al., 2014; Martins et al., 2002). Studies show that the main reasons for the practice of self-medication are the following: suffering from a mild illness, having previous experience in treating similar illnesses, economic conditions, unavailability of healthcare

professionals and generalised excessive accessibility and availability of over-the-counter medications (Hughes et al., 2001), with young age and high educational level being frequent contributing factors for the likelihood of engaging in self-medication (Martins et al., 2002).

Several national (Mendes & Lopes, 2014; Ribeiro et al., 2010) and international (Abay & Amelo, 2010; Adhikary et al., 2014; Al Flaiti et al., 2014; Alshawi et al., 2018; Corrêa da Silva et al., 2012; Donkor et al., 2012; El-Ezz & Ez-Elarab, 2011; Galato et al., 2012; Garofalo et al., 2015; González-Castillo et al., 2019; Gyawali, 2015; Helal & Abou-Elwafa, 2017; Idris et al., 2016; Klemenc-Ketis et al., 2010; Kumar et al., 2013; López-Cabra et al., 2016; Lukovic et al., 2014; Mustafa & Rohra, 2017; Sawalha, 2008; Skliros et al., 2010; Tuyishimire et al., 2019; Xu et al., 2019) studies from various countries on self-medication practices have focused on college students, identifying an increase and a high prevalence in this particular group (Al Flaiti et al., 2014). This may be related to many factors such as sociodemographic settings, lifestyle, accessibility and availability of medication, increased knowledge, advertisement and high level of education (Martins et al., 2002).

In this study, our main aim was to describe the knowledge, attitudes and practices of self-medication among college students and to analyse the predictive factors for the engagement in that behaviour.

Materials and methods

Population and sample

For the 2018/2019 academic year, 5447 students were registered in the first and third years of integrated bachelor's and master's degrees. Excluded from the sample were courses related to health sciences, undergraduate or postgraduate masters and those that did not have classes in the first or third year. Students belonging to the area of health sciences have been excluded from this research because we felt that their knowledge about health in general had the potential to generate some degree of bias in the results of the scales used in the present study, since scientific studies indicate that students in the health area display a higher level of knowledge when compared to those belonging to other areas of study (Xu et al., 2019).

In order to carry out this study, the absolute minimum number of students we required was 592 (margin of error = 5 %, confidence level = 99 %, and response distribution = 50%). With the aim of achieving our objective, we carried out a stratified probabilistic sampling of students in the university setting based on the specific academic year they were attending and the specific scientific area of study as well. We chose to divide the several undergraduate and master's degrees in accordance with a criterion of scientific areas attended (complying with the definition provided and issued by the Foundation for Science and Technology): social and human sciences, judicial and economic sciences, exact and nature sciences and engineering sciences.

This cross-sectional research consisting of results obtained from questioning students in the college context ($n = 840$) attending one university in Portugal has provided us with information gathered by resorting to a validated self-reported questionnaire without biochemical confirmation. The subjects who were part of the study were made up of 464 incoming students (55.2%) and 376 finalist students (44.8%). Regarding the scientific category of studies, 302 students (36.0%) belonged to the area of engineering sciences, 270 (32.1%) to the social and human sciences, 136 (16.2%) to the exact and nature sciences and 132 (15.7%) to the area of judicial and economic sciences. The majority of subjects was female (55.4%, $n = 465$), at that point not involved in a loving relationship (58.3%, $n = 486$), displaced from their usual residence (64.9%, $n = 537$), full-time students (88.8%, $n = 739$) and had a body mass index (BMI) corresponding to what is unanimously scientifically considered to be normal weight (73.1%, $n = 599$). The average age of the

students who took part in this study was 20.78 years ($SD = 4.221$), with a minimum of 18 years old and a maximum of 54 years.

Instrument

Currently, several scientific instruments exist to analyse the prevalence of self-medicating practices among young adults, such as the Youth Risk Behavior Surveillance System (YRBSS) (CDC, 2017b), the National Survey on the Use of Psychoactive Substances in the General Population (Balsa et al., 2017), the European School Survey Project on Alcohol and Other Drugs (ESPAD) (Hibell et al., 2012), the Behavioral Risk Factor Surveillance System (BRFSS) (CDC, 2017a) and the National Survey on Drug Use and Health (SAMHSA, 2017). However, none of the information gathered using the approach taken by any of these surveys entirely met the expectations and intentions behind the decision to carry out the present research. As a result of that, we developed the instruments used and referred to in this research in three different, separate stages – scale construction (first stage); content validity (second stage); and psychometric validity (third stage) – in accordance and compliance with the undertakings defined by Oppenheim (1992) and Bowling (1998).

In order to build the scale (first stage) we undertook a review of the existing literature on this topic, so that we understood which specific questions and items were commonly used in order to evaluate the level of knowledge, attitudes and practices of self-medication among students in the university academic context. We have generated an analytical matrix based on the review mentioned directed towards the different and varying dimensions we meant to analyse, and also towards identifying those with the same semantic similarities, which were excluded from the study.

For the purpose of completing content validity (second stage), 10 PhD researchers from several Portuguese universities known for the quality of their previous existing work in the area of health education and higher education have been invited to take part in a specific portion of this study. We have considered and went as far as including in the analysis data we gathered from five of the mentioned invited researchers in our final report, while all suggested semantic adaptations were also taken into account. In a similar fashion, the instrument was introduced to 12 university students, using the "thinking aloud" method (Bowling, 1998; Keszei et al., 2010) in order to identify items that might have been confusing, exclude less relevant or redundant ones, and finally to verify that pre-coded response options were sufficient. With the aim of attaining a broader and deeper level of objectivity, we have settled on the following scale as the measure of clarity for each item: 1 = confused, 2 = unclear, 3 = clear. After we received recommendations that pointed out the need to redraft, the preliminary version of the questionnaire survey was presented to a sample of 32 students who were subsequently excluded from the final sample.

The questionnaire included sociodemographic variables (sex, age, scientific area of study, academic year, weight and height (to calculate BMI), loving relationship, professional situation and current residence) and specific questions to measure the following variables:

- Prevalence of self-medication – "In the last 12 months, how many times have you consumed any of the following psychoactive substances as listed (without prescription): antidepressants/sedatives/soothing/tranquilisers; analgesics/anti-inflammatory medication; vitamins/food supplements". Possible answers: never; 1–2 times; 3–5 times; 6–9 times; 10 or more times, with 1 point being assigned to each behaviour that was practiced at least once. Self-medication patterns were analysed according to the classification: Yes (having self-medicated at least once in the last 12 months) and No (having not self-medicated in the last 12 months). The scale's confidence index (Cronbach's alpha) was .445.

- Self-medication knowledge – three-item scale ("Excessive use of paracetamol causes liver toxicity"; "Changing the schedules for taking medication does not pose any danger"; "Food supplements can be taken without medical prescription because they do not cause any negative effects on the organism"). Answer options: true, false, don't know. One point was assigned to each correct answer, while providing an incorrect answer or responding "I don't know" resulted in 0 points. The sum of all items was calculated, hence higher scores correspond to a higher level of knowledge. Cronbach's alpha in the sample was .488.
- Attitudes towards self-medication – two items on a five-point Likert scale (1 = strongly disagree, 5 = fully agree) ("It is acceptable to use non-prescription drugs for a short time", and "It is acceptable to use previously prescribed medications to treat the same symptoms"). The results obtained in this scale show the following dynamics: the higher the average of the scale, the more negative the attitudes of university students toward self-medication were, ranging from 1 to 5. Cronbach's alpha for the scale calculated with the sample of this study was acceptable ($\alpha = .708$).

Procedure and statistical analysis

The application of the instrument was carried out in the classroom context and in paper-and-pencil format for all students in the sample, after acquiring informed consent. A total number of 873 questionnaires was administered to subjects, and that number reflects the total number of students who were simultaneously present in the classroom and had accepted to take part in the study. We excluded 33 questionnaires from our final examination and results, given the fact that they were poorly filled in or given back unanswered (or answered in incomplete terms). The rate of response was 96.2% (95% CI 94.8–97.6). All ethical research procedures with humans referred to by Christensen et al. (2015) were fulfilled and the study was approved by the university ethics committee.

Data were analysed using IBM Statistical Package for the Social Sciences (SPSS), version 26.0 (Armonk, NY, USA). Descriptive analyses were performed for the demographic variables and practice questions. In order to analyse the psychometric characteristics of the scales, we have studied their reliability resorting to Cronbach's alpha calculation (α). Regarding the topic of knowledge about self-medication and attitudes towards self-medication, the mean scores were calculated and then compared among different subgroups of respondents, using appropriate statistical tests. An independent samples *t*-test was used for dichotomous variables and analysis of variance (ANOVA) for others, with Bonferroni used for multiple comparison procedures. We calculated the connections and interactions between the results of the study resorting to Pearson's correlation. Finally, we calculated a generalised linear model with the purpose of defining and identifying the predictive variables and factors involved in the likelihood of engaging in self-medication practices. In order to calculate this this model, we have used the sociodemographic variables which presented and showed statistically significant differences when it came to the specific matter of self-medicating practices. Betas (β) and the respective 95% confidence intervals (95% CI) are presented. A *p*-value of .05 or less was considered statistically significant, with the exception of multiple comparisons between groups, for which the Bonferroni correction was applied.

Results

The findings showed that self-medication was a common practice among university students, since over half of the respondents (54.3%, n = 434) had used some form of self-medication during the preceding year. Analgesics/anti-inflammatories (40.8%, n = 326) were commonly used for self-medication, followed by vitamins/food supplements (26.4%, n = 211)

Table 1. Self-medication-related characteristics.

			f	%
Self-medication		No	365	45.7
		Yes	434	54.3
Last 12 months	Antidepressants/sedatives/soothing/tranquilisers (without prescription)	Never	690	86.1
		1–2 times	62	7.7
		3–5 times	19	2.4
		6–9 times	8	1.0
		10 or more times	22	2.7
	Analgesics/anti-inflammatory medication (without prescription)	Never	474	59.3
		1–2 times	139	17.4
		3–5 times	94	11.8
		6–9 times	47	5.9
		10 or more times	46	5.8
	Vitamins/food supplements (without prescription)	Never	588	73.6
		1–2 times	95	11.9
		3–5 times	41	5.1
		6–9 times	19	2.4
		10 or more times	56	7.0

and antidepressants/sedatives/soothing/tranquilisers (13.9%, $n = 111$) (Table 1).

The results indicate that self-medication was more common among female students (62.0%, $n = 269$, χ^2 (1) = 18.348, $p = .000$) compared to male students (38.0%, $n = 131$) (Table 2). We found that girls use more analgesics/anti-inflammatory medication (47.7%, $n = 210$) and antidepressants/sedatives/soothing/tranquilisers (19.0%, $n = 84$) than boys (32.2%, $n = 116$ (χ^2 (1) = 19.715, $p = .000$) and 7.5%, $n = 84$ (χ^2 (1) = 22.140, $p = .000$), respectively). Vitamins/food supplement consumption was higher in engineering science students compared to the other science areas (χ^2 (3) = 13.652, $p = .003$).

The level of knowledge about self-medication was 1.60 ± 0.936 (out of 3). In Table 3, it is observable that students in the natural and exact sciences and in the judicial and economic sciences have a higher level of knowledge about self-medication compared to students in the engineering sciences ($F(3, 833) = 5.812$, $p = .001$), and also that females had a higher level of knowledge than male students ($t(835) = -3.699$, $p = .000$).

The level or type of attitudes towards self-medication is 2.17 ± 0.950, a minimum of 1 and a maximum of 5, with the highest value corresponding to more negative attitudes. It means that students showed favourable attitudes towards self-medication, because the majority of respondents disagreed or strongly disagreed with the items ("It is acceptable to use non-prescription drugs for a short time" – 65.1% and "It is acceptable to use previously prescribed medications to treat the same symptoms" – 60.0%).

As shown in Table 4, there were significant differences based on practices of self-medication. Students who had self-medicated in the past year are those who exhibit more favourable attitudes toward self-medication practices ($t(788) = -4.739$, $p = .000$). This was also due to the type of medication used without supervision, i.e., regardless of the type of medication taken in the last 12 months, attitudes are always more favourable to analgesics/anti-inflammatory medication ($t(789) = -3.830$, $p = .000$), antidepressants/sedatives/soothing/tranquilisers ($t(790) = -3.175$, $p = .002$) and vitamins/food supplements ($t(788) = -3.469$, $p = .001$).

There was no statistically significant correlation between the level of knowledge and the level of attitudes ($r = -.064$, $p > .05$).

Table 2. Frequencies and chi-square test for sociodemographic variables and self-medication and type of self-medication practices.

		General self-medication (Yes) *n* (%)	χ^2	Self-medication of analgesics/ anti-inflammatories (Yes) *n* (%)	χ^2	Self-medication of antidepressants/ sedatives/ soothing/ tranquilisers (Yes) *n* (%)	χ^2	Self-medication of vitamins/food supplements *n* (%)	χ^2
Year of Frequency	First year	243 (55.4)	0.421	185 (42.1)	0.780	68 (15.5)	0.915	110 (25.1)	2.085
	Third year	191 (53.1)		141 (39.1)		43 (11.9)		101 (28.1)	
Scientific area	Engineering sciences	163 (56.6)	2.725	116 (40.3)	1.301	29 (10.0)	9.353*	98 (34.0)	**13.652***
	Exact and natural sciences	77 (56.6)		58 (42.6)		27 (19.9)		29 (21.3)	
	Judicial and economic sciences	63 (55.3)		41 (44.3)		13 (11.3)		27 (23.7)	
	Social and human sciences	131 (50.2)		101 (38.7)		42 (16.1)		57 (21.8)	
Sex	Male	165 (46.0)	**18.348****	116 (32.2)	**19.715****	27 (7.5)	**22.140****	92 (25.6)	0.205
	Female	269 (61.1)		210 (47.7)		84 (19.0)		119 (27.0)	
Age	< 20 years	181 (53.9)	0.047	139 (41.4)	0.092	46 (13.6)	0.021	76 (22.6)	4.283*
	≥ 20 years	253 (54.6)		187 (40.3)		65 (14.0)		135 (29.2)	
Loving relationship	Yes	186 (53.6)	0.190	142 (41.2)	0.020	40 (11.5)	2.795	95 (27.4)	0.254
	No	246 (55.2)		182 (40.7)		70 (15.7)		115 (25.8)	
Current residence	Displaced	157 (56.5)	0.758	112 (40.3)	0.059	46 (16.5)	2.969	71 (25.5)	0.129
	Not displaced	271 (53.2)		210 (41.2)		62 (12.1)		136 (26.7)	
Professional situation	Full-time student	381 (54.2)	0.024	286 (40.6)	0.140	96 (13.6)	0.296	179 (25.5)	3.559
	Worker / student	49 (55.1)		38 (42.7)		14 (15.7)		31 (34.8)	
BMI	Low weight	34 (60.7)	1.055	24 (42.9)	3.748	15 (26.8)	8.750*	15 (26.8)	0.093
	Normal weight	306 (53.7)		222 (38.9)		78 (13.6)		151 (26.5)	
	Overweight	85 (55.2)		73 (40.8)		17 (11.0)		39 (26.3)	

Note. Bold indicates statistically significant difference after applying the Bonferroni correction. BMI = body mass index.
*$p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Mean, one-way ANOVA and *t*-test for sociodemographic variables and knowledge about self-medication.

		Knowledge about self-medication		
			ANOVA	
		Mean (*SD*)	*Z*	*p*
Scientific area	Engineering sciences	1.43 (0.940)	5.812	**.001**
	Exact and natural sciences	1.72 (0.849)		
	Judicial and economic sciences	1.77 (0.970)		
	Social and human sciences	1.64 (0.933)		
BMI	Low weight	1.74 (0.849)	1.873	.154
	Normal weight	1.63 (0.930)		
	Overweight	1.50 (0.970)		
			t-student	
			t	*p*
Self-medication	Yes	1.66 (0.896)	–2.279	.023
	No	1.51 (0.966)		
Self-medication of analgesics/ anti-inflammatory medication	Yes	1.70 (0.901)	–2.589	.010
	No	1.52 (0.946)		
Self-medication of antidepressants/sedatives/ soothing/tranquilisers	Yes	1.77 (0.839)	–2.223	.027
	No	1.56 (0.944)		
Self-medication of vitamins/food supplements	Yes	1.61 (0.935)	0.868	.386
	No	1.55 (0.923)		
Year of frequency	First year	1.66 (0.922)	2.117	.035
	Third year	1.52 (0.950)		
Sex	Male	1.47 (0.955)	–3.699	**.000**
	Female	1.70 (0.908)		
Age	< 20 years	1.63 (0.920)	0.875	.382
	≥ 20 years	1.57 (0.948)		
Loving relationship	Yes	1.59 (0.954)	–0.367	.714
	No	1.61 (0.915)		
Current residence	Displaced	1.66 (0.888)	1.371	.171
	Not displaced	1.57 (0.956)		
Professional situation	Full-time student	1.59 (0.927)	–1.279	.201
	Worker/student	1.72 (0.993)		
Total		1.60 (0.936)		

Note. Bold indicates statistically significant difference after applying the Bonferroni correction. BMI = body mass index.

Results from the generalised linear model indicated that the scientific area of study, sex of students and the attitudes towards self-medication had a statistically significant effect in the measure of self-medication practices. Thus, attending engineering sciences ($\beta = .718$, 95% CI: 1.373–3.069, $p < .001$), being female ($\beta = .866$, 95% CI: 1.700–3.327, $p < .001$) and having negative attitudes towards self-medication ($\beta = .367$, 95% CI: 1.227–1.698, $p < .001$) predict the adoption of those practices (Table 5).

Discussion

In our study, more than half of college students reported self-medication practices in the last 12 months. This corroborates the findings of a study conducted in 2014 in Portugal, where it

Table 4. Mean, one-way ANOVA and *t*-test for sociodemographic variables and attitudes towards self-medication.

		Attitudes towards self-medication Mean (*SD*)	ANOVA	
			Z	*p*
Scientific area	Engineering sciences	2.25 (0.923)	1.378	.248
	Exact and natural sciences	2.10 (0.919)		
	Judicial and economic sciences	2.16 (1.048)		
	Social and human sciences	2.11 (0.945)		
BMI	Low weight	2.23 (0.834)	0.363	.696
	Normal weight	2.16 (0.925)		
	Overweight	2.22 (1.046)		
			t-student	
			t	*p*
Self-medication	Yes	2.31 (0.919)	–4.739	**.000**
	No	1.99 (0.952)		
Self-medication of analgesics/ anti-inflammatory medication	Yes	2.32 (0.913)	–3.830	**.000**
	No	2.06 (0.956)		
Self-medication of antidepressants/sedatives/ soothing/tranquilisers	Yes	2.44 (0.887)	–3.175	**.002**
	No	2.13 (0.950)		
Self-medication of vitamins/food supplements	Yes	2.36 (0.937)	–3.469	**.001**
	No	2.10 (0.942)		
Year of frequency	First year	2.11 (0.929)	–1.785	.075
	Third year	2.23 (0.973)		
Sex	Male	2.18 (0.967)	0.424	.672
	Female	2.15 (0.937)		
Age	< 20 years	2.11 (0.910)	–1.433	.152
	≥ 20 years	2.21 (0.977)		
Loving relationship	Yes	2.18 (0.974)	0.426	.671
	No	2.15 (0.933)		
Current residence	Displaced	2.17 (0.983)	0.252	.801
	Not displaced	2.15 (0.920)		
Professional situation	Full-time student	2.18 (0.947)	1.101	.271
	Worker/student	2.07 (0.949)		
Total		2.17 (0.950)		

Note. Bold indicates statistically significant difference after applying the Bonferroni correction. BMI = body mass index.

was found that 58.7% of incoming students self-medicated (Mendes & Lopes, 2014).

The prevalence of consumption of medicines without prescription in higher education varies by geographical area, so in previous studies in the Middle East region it was shown that university students engaged more frequently in self-medicating behaviour than the subjects analysed in our study (Palestine – 98%, Sawalha, 2008; Kuwait – 70.4%, Mitra et al., 2019; New Delhi – 85.4%, Adhikary et al., 2014; Saudi Arabia – 73%, Alshawi et al., 2018 and 65.58%, Mustafa & Rohra, 2017; India – 84.0%, Kumar et al., 2013; Nepal – 83.3%, Karmacharya et al., 2018 and 81.9%, Gyawali, 2015). In this region studies were conducted in some countries which also identified a similar prevalence of this behaviour when compared to Portuguese university students (Egypt – 55%, El-Ezz & Ez-Elarab, 2011; Bangladesh – 54.5%, Idris et al., 2016; Kingdom of

Table 5. Generalised linear model predicting self-medication.

	β	*SE*	χ^2 Wald	*df*	*p*	Exp (β)	95% CI	
Intercept	–.848	.2720	9.721	1	.002	0.428	0.251	0.730
Scientific area								
Engineering sciences	.718	.2048	12.298	1	**.000**	2.051	1.373	3.064
Exact and natural sciences	.401	.2284	3.088	1	.079	1.494	0.955	2.337
Judicial and economic sciences	.346	.2433	2.019	1	.155	1.413	0.877	2.276
Social and human sciences	0	–	–	–	–	1	–	–
Sex								
Male	0					1		
Female	.866	.1713	25.593	1	**.000**	2.379	1.700	3.327
Knowledge about self-medication	.158	.0835	3.600	1	.058	1.172	0.995	1.380
Attitudes towards self-medication	.367	.0830	19.533	1	.000	1.443	1.227	1.698

Notes. 95% CI = 95% confidence intervals; AIC = 904.432; χ^2 (6) = 54.359, $p < .001$. Bold indicates statistically significant difference from reference group after applying the Bonferroni correction.

Bahrain – 44.8%, James et al., 2006). African university students were those with the lowest self-medication rate, according to the study by Abay and Amelo (2010) in Ethiopia, compared to students from Middle Eastern and European countries (Italy –69.2%, Garofalo et al., 2015; Greece – 44.6%, Skliros et al., 2010; Serbia – 79.9%, Lukovic et al., 2014). These statistical data show that the economic situation of a country may influence self-medicating practices among university students, according, for example, to the research conducted by Xu and colleagues (2019). In this sense, according to Bennadi (2014), correct practices of self-medication may constitute an important replacement for formal health systems, providing an opportunity for access to immediate healthcare.

Analgesics have been reported as the group of medicines most commonly used by college students, in a similar fashion to other studies (Bennadi, 2014; Hughes et al., 2001; James et al., 2006; Karmacharya et al., 2018; López-Cabra et al., 2016; Lukovic et al., 2014; Mehta & Sharma, 2015), followed by vitamins (González-Castillo et al., 2019; Lukovic et al., 2014; Mir, 2015), while tranquilisers were rarely used (Mir, 2015).

The high prevalence of self-medication among university students may be related to: the perception that they possess enough and adequate knowledge; the wrongful perception that an illness with non-severe symptoms does not produce serious consequences in case of self-medication (Mehta & Sharma, 2015); the belief that self-medicating provides quick relief from pain and disease (Tuyishimire et al., 2019).

Sex and age of respondents are among the variables that are often associated with self-medication (Carrasco-Garrido et al., 2014). By analysing our results, we conclude that self-medication was significantly higher among females when compared to males, which is consistent with what was reported in the literature (Garofalo et al., 2015; Helal & Abou-Elwafa, 2017; James et al., 2006). Nevertheless, contrary to what was identified in several studies, we found that increased university performance seems to have a significant positive impact on self-medicating behaviours (Alshawi et al., 2018; Garofalo et al., 2015; Helal & Abou-Elwafa, 2017; James et al., 2006; Kasulkar & Gupta, 2015; Klemenc-Ketis et al., 2010), and we did not find any significant differences in prevalence of self-medicating behaviour among incoming and finalist students. These results were similar to those obtained in the study conducted by Shankar and colleagues (2016).

Regarding knowledge about self-medication, there was a low level of knowledge,

corroborating the findings of other international studies with university students (Gyawali, 2015; James et al., 2006; Mitra et al., 2019), in particular medical courses (Shankar et al., 2016). However, after reviewing the existing literature on this subject, other studies have been identified in which university students displayed a good level of knowledge about self-medication (Karmacharya et al., 2018; Mehta & Sharma, 2015). As expected (Adhikary et al., 2014; Corrêa da Silva et al., 2012; Galato et al., 2012; Mustafa & Rohra, 2017), the level of knowledge about self-medicating is directly connected with practices of self-medication, or, in other words, the students who reported having engaged in self-medicating practices in the last 12 months were the ones who presented a higher level of knowledge on the topic. This means that the more students know about self-medication, including its potential consequences, the more likely they are to engage it in, perhaps due to a wrongful perception that there are more benefits than hazards directly related to this practice. However, this association was nullified in our study after we applied the generalised linear model, which results in the conclusion that level of knowledge about self-medication is not necessarily a predictive factor of a greater likelihood of engaging in self-medicating practices.

Girls had a higher knowledge score than boys and students in the first year had more knowledge than students in the third year. In the study by Mitra and collaborators (2019), females were also shown to possess a higher knowledge score, that dictates to some degree of perfection the knowledge level, than males. However, students belonging to higher academic year groups scored higher knowledge levels than those of lower academic year groups. Other studies do indeed find a correlation between the year of study and the level of knowledge about self-medication, which we interpret as indicating that knowledge increases with the level of education (Gyawali, 2015; Shankar et al., 2016). This emphasises the importance of improving the undergraduate curriculum by providing adequate access to content that deals specifically, in depth and scientifically with health knowledge to college students, making it available to them in a generalised manner, as accessible as possible, because self-medication was adequate in only 14.2% of cases (James et al., 2006).

In accordance with other studies (James et al., 2006; Mehta & Sharma, 2015), the attitude towards self-medication was positive, meaning students thought that it was not good to self-medicate. Many students have correctly understood that it is inadvisable to use non-prescription medicines for a short time and use previously prescribed medications to treat the same symptoms. According to the generalised linear model, attitudes regarding the use of medication without prescription are one the factors that contribute to the process of self-medicating. Therefore, students who favoured self-medication saying or implying that it was acceptable show a higher prevalence of the practice of self-medication in the previous year. As we previously pointed out, corroborating scientific literature, being female increases the likelihood of self-medicating by 2.37 times when compared to men. This finding may be justified, in the present study, by the fact that women possess a higher level of knowledge about self-medication than men, but it can also be, at least in part, attributed to social and cultural factors, such as the cautious and vigilant nature of women (Mitra et al., 2019), or biological ones, for example, in the case of menstrual pain (Donkor et al., 2012; Mogil, 2012).

We are unaware of any scientific study that covers the differences between self-medication and the scientific area of study, with the exception of students in the health area vs. those in other areas. Nonetheless, our study has shown that being a student in the area of engineering sciences increases the likelihood of engaging in self-medicating practices, when compared to students belonging to social and human sciences. This predictive factor for self-medication may be related to the fact that university courses in the area of engineering sciences are quite demanding in academic terms, which would explain why future engineers were those

that consumed more vitamins/food supplements in the last year.

This study, and any usage of it, must take into account the limitations which can affect the interpretation of findings and, as a consequence, having an impact on its final conclusions. Restricting the study to a single university limits generalisability to the total population of university students in Portugal. In addition, recall bias may be a major disadvantage as students were asked to provide information on self-medication during the previous year, and so, the results subject to analysis were found to be highly dependent on the students' recollection ability and their honesty and truthfulness, which means that the results may not reflect in a perfect manner how students behave. The present study has not taken into consideration the specific periods of time in which students self-medicated (for example, when studying and preparing for exams). In this sense, future studies should consider the importance of deepening the understanding of the reasons behind self-medication behaviours and practices in the academic context. Another further limitation that must be considered is that the study has not made any distinction between the use of OTC medication in self-medicating practices and previously prescribed medicine, and we suspect that this might have been confusing for the questioned students. One final limitation should be considered. The absence of information from courses belonging to the area of health sciences, although a methodological choice, does not mean we have at all dismissed the importance of analysing the knowledge, attitudes and prevalence of self-medication practices in this group in future research, since the meta-analysis study carried out by Xu and colleagues (2019) has shown a significantly higher prevalence of self-medication with antibiotics among medical students when compared to non-medical students.

Conclusions

This cross-sectional study shows that self-medication practices were very common among university students in Portugal. Knowledge about self-medication has been shown to be poor and the level of attitude towards self-medication found to be positive. Self-medication in the research sample is connected with female students, those who belong in the scientific area of engineering sciences and those with a highly negative level of attitudes towards self-medication.

Given these results, there is a great probability of occurrence of irresponsible and inadequate use of self-medication among university students due to the low knowledge they revealed. Therefore, the recommendation to increase knowledge about the adverse effects of OTC medications and to increase awareness about the importance of educational programmes in this field becomes an obvious one, but it cannot be the only way. Multiple actions of intervention need to be adopted in order to solve that problem, including not only changes in knowledge levels and personal attitudes or behaviours, but also changes made to the level and type of support given to national policies and laws.

Right to privacy and informed consent

The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Confidentiality of data

The authors declare that the procedures followed were in accordance with the regulations established by the Commission for Clinical and Ethical Research and in accordance with the Helsinki Declaration of the World Medical Association. This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

Author contributions

Regina Alves conceived this study, collected the data, designed, carried out statistical analysis and wrote the final version. José Precioso and Elisardo Becoña revised the manuscript critically and contributed to the interpretation of data for the work. All

authors contributed substantially to the interpretation of data, critical discussion and revision of the manuscript, and approved the final version.

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5. ESTUDO 5: CONHECIMENTOS, ATITUDES E HÁBITOS ALIMENTARES SAUDÁVEIS ENTRE ESTUDANTES UNIVERSITÁRIOS/AS EM PORTUGAL [8]

Referência bibliográfica:

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Resumo

Enquadramento: Investigações científicas revelaram que os hábitos alimentares dos/as estudantes do ES ainda são inadequados devido, principalmente, ao elevado do consumo de *fast food* e alimentos ricos em gorduras e açúcar e o baixo consumo de frutas e vegetais.

Objetivos: Este estudo teve como objetivo avaliar o conhecimento, a atitude e a prática sobre alimentação saudável entre universitários/as portugueses/as.

Métodos: Foi realizado um estudo transversal com 840 universitários/as, por meio de questionário autorreferido, previamente validado. O questionário, além das questões sociodemográficas, incluía uma escala de conhecimentos, atitudes e comportamentos alimentares saudáveis.

Resultados: Os/as universitários/as apresentaram baixo conhecimento sobre alimentação saudável, atitude alimentar saudável moderada e hábitos alimentares não saudáveis nos últimos 7 dias. Em relação ao conhecimento sobre alimentação saudável, as estudantes e estudantes da área das ciências naturais obtiveram a maior pontuação. Considerando a prática alimentar saudável, os/as estudantes mais velhos/as e os/as estudantes que mudaram de residência no momento do ingresso no ES obtiveram a menor pontuação. Houve uma correlação estatisticamente significativa e positiva entre conhecimento e prática, conhecimento e atitude e, por fim, entre atitude e prática.

[8] No âmbito deste artigo realizaram-se um capítulo de livro, duas publicações e duas comunicações: **1)** Alves, R. (2020). Avaliação dos conhecimentos, das atitudes e dos hábitos alimentares dos estudantes universitários. In João Serrano; João Petrica; Marcio Kerkoski; Beatriz Pereira (eds.). *Atividade física, lazer e saúde - perspetivas e desafios de investigação.* (p. 235-243). Castelo Branco, Portugal: Instituto Politécnico de Castelo Branco (IPCB). ISBN: 978-989-8196-99-6; **2)** Alves, R. &, Precioso, J. (2020). A influência dos conhecimentos sobre nutrição nos hábitos alimentares dos universitários. *Psicologia Saúde & Doenças* 21 (Suplemento): 19; **3)** Alves, R. (2019). Nutritional knowledge and eating attitudes and habits in higher education. *Journal of Human Sport and Exercise* 14 (4 proc): 1258-1261. DOI: 10.14198/jhse.2019.14.Proc4.82; **4)** no 13° Congresso Nacional de Psicologia da Saúde. Faculdade de Ciências da Saúde – Universidade da Beira Interior, Covilhã, Portugal. 31 de janeiro a 1 de fevereiro de 2020 (intitulada "A influência dos conhecimentos sobre nutrição nos hábitos alimentares dos universitários"); e **5)** no XV Seminário Internacional de Educação Física, Lazer e Saúde (SIEFLAS) / IV BUDO Congress. Escola Superior de Educação do Instituto Politécnico de Castelo Branco, Castelo Branco, Portugal. 17 a 19 de junho de 2019 (intitulada "Nutritional knowledge and eating attitudes and habits in higher education").

Conclusão: Essas descobertas podem ajudar educadores/as de saúde e agentes políticos/as a promover e desenvolver atitudes e práticas alimentares saudáveis. Intervenções dirigidas a estudantes universitários/as parecem ser necessárias para aumentar o conhecimento sobre comportamentos alimentares saudáveis em relação a três tópicos principais: planeamento e preparação de refeições saudáveis, recomendações nutricionais e rótulos de alimentos.

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ORIGINAL ARTICLE

Knowledge, Attitude and Practice on Healthy Diet among University Students in Portugal

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ABSTRACT

Background: Scientific investigations revealed that dietary habits of students attending higher education are still inadequate and below the recommended consumption of fruits and vegetables with higher consumption of foods rich in fats, salt and sugar. This study aimed to evaluate the knowledge, attitude and practice on healthy diet among Portuguese university students.

Methods: A cross-sectional study was conducted among 840 university students, using a self-reported questionnaire, previously validated. The questionnaire, in addition to the sociodemographic questions, included a scale of healthy dietary knowledge, attitude and behavior.

Results: The university students were shown to have low healthy dietary knowledge, moderate healthy dietary attitude and unhealthy dietary habits during the last 7 days. Regarding healthy dietary knowledge, the female students and respondents of natural sciences had the highest score. Considering healthy dietary practice, the older students and the students who changed residence at the time of entrance to higher education had the lowest score. There was a statistically significant and positive correlation between knowledge and practice, knowledge and attitude and finally between attitude and practice.

Conclusion: These findings might help health educators and policy makers to promote and to develop healthy dietary attitudes and practices. Interventions targeting university students seem to be necessary to increase the knowledge on healthy dietary behaviours regarding three main topics of planning and preparing healthy meals, nutritional recommendations and food labels.

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Introduction

Healthy dietary habits are simple and low risk methods to promote and improve well-being and life expectancy (1). Excessive consumption of saturated fats was shown to be associated with an increase in cholesterol level and risk of cardiovascular disease (2). Therefore, an increase in consumption of fruits and vegetables, whole grains and seeds and a decrease in the consumption of foods rich in saturated fat, sugar and salt are recommended to maintain a balance between calorie intake and energy expenditure, in order to prevent excessive weight gain (2).

Healthy dietary habits among university students'

were reported to be poor because they are going to experience independence after entry to a higher education level and and to make food by themselves (3, 4). So the habits acquired during the academic path would tend to be continued throughout the life (4-6). Several studies reported unhealthy diets among university students including high consumption of fast food and foods high in fat and sugar (4, 6-11) and low consumption of fruits and vegetables (3, 6, 12-18).

It seems that the most recent studies were directed towards a more conscious approach to dieting habits, considering organic foods (19). Dietary habits involve behavioral predisposition in relation to intra- and inter-personal factors (17), which include nutritional knowledge and attitude towards the consumption of certain types of foods. In this sense, the relationship between dietary behavior, attitude and nutritional knowledge could provide information on the best ways to achieve healthy lifestyle standards (20).

However, the association between nutritional knowledge and healthy food choices is not as clear as it may seem, revealing weak correlations to reach the conclusion that increasing knowledge about healthy diets would lead to better dietary habits (20). However, some methodological flaws denote to studies that seek association between nutritional knowledge and dietary habits that revealed a weak association between these two variables. The biggest flaw was found in the scales used to measure nutritional knowledge, many of which are developed for specific studies and do not undergo the necessary psychometric assessments to certify the validity and reliability (21).

More recently through the use of accurate assessment techniques, several studies suggested that knowledge is an important factor in explaining variations in food choice (8, 12, 22-26), verifying that the increase in nutritional knowledge was associated with better diet habits and lower rate of obesity (25, 27, 28).

In addition, attitude is an determining factor to choose healthy diets, and it is recommended that education on food choice should focus on changing the attitude and expectations (12). Therefore, this study aimed to determine the knowledge, attitude and practice on healthy diet among Portuguese university students.

Materials and Methods

In a cross-sectional study, data from 840 university students of one university in Portugal were collected using a validated self-reported questionnaire. A stratified sampling method was used according to the year of study (1st or 3rd years) and the scientific area. The different undergraduate and master degrees were enrolled and divided into various scientific areas (as defined by the Foundation for Science and Technology) including human and social, law and economic, exact and natural and engineering sciences.

Currently, there are several scientific instruments to monitor the dietary behaviors among young adults. Therefore, the development of the instruments presented in this investigation was carried out in three stages of scale construction (1st stage), content validity (2nd stage), and psychometric validity (3rd stage) according to the procedures defined before (29). For the scale construction (1st stage), a systematic review of the literature was undertaken to identify the questions and items commonly used to assess knowledge, attitudes and food habits among students of higher education (22).

Based on this review, an analytical matrix was created for each of the dimensions to be analysed, and those with the same semantic similarities were eliminated. For the content validity (2nd stage), 10 PhD students from several Portuguese universities were included while their work was in the area of Health Education. The feedback was received from 5 of them as well as all the proposed semantic changes. Similarly, the instrument was applied to 12 university students, using the method of "thinking aloud" to identify items that might be confusing, to help exclusion of less relevant or redundant items, and to verify sufficient pre-coded response options (29). After the suggested redrafting, the preliminary version of the questionnaire survey was presented to a sample of 32 students, not included in the final sampling.

Healthy dietary habits were assessed using four food groups during the past 7 days including vegetables, fruits, sweet products and fast food. The frequency of consumption of the four food groups was evaluated by the following response categories of never; one to three times a week; four to six times a week; one or two times a day and three or more times a day. Additionally, we asked students about the number of times they skipped breakfast or lunch and/or dinner in the last 7 days.

Healthy dietary attitudes were measured using a 5 point scale by how much students agreed or disagreed with 5 statements, with responses ranging from strongly agree to strongly disagree. For healthy dietary knowledge, we used a 6-item scale with options for the answer including true, false, and don't know. Sociodemographic data were sex, age, scientific area of study, academic year, weight and height (to calculate BMI), being in a love relationship, professional situation and

current residence. For all students in the sample, the instrument was applied in classroom context and paper-and-pencil format, after giving informed consent. All ethical research procedures on humans were approved by the university ethics committee.

Data were analysed using the IBM SPSS Statistics for Windows (version 26.0, IBM Corp., Armonk, NY, USA). Descriptive analyses of frequency distributions and contingency tables were provided to characterise the baseline for the sample's healthy dietary knowledge, attitude and habits. In addition, independent t-test, and one-way variance (ANOVA) were conducted to explore differences between groups according to sociodemographic variables. The significance level was considered at 0.05.

For the analyses of healthy dietary behaviors, the categories were grouped and we considered unhealthy dietary practices by skipping breakfast; skipping lunch or/and dinner; insufficient fruit consumption (two or less times per day); insufficient consumption of vegetables (two or less times per day); higher consumption of sweet products (four or more times per week) and higher fast food consumption (four or more times per week). Then the number of healthy dietary behaviors, ranging from 0 to 6 healthy dietary practices was recorded.

For the knowledge scale, the number of correct responses was recorded to present an overall knowledge score to determine the mean too. So the higher the scale value, the higher the level of knowledge was. The healthy dietary attitude was subject to Cronbach's alpha analysis and its reliability (29), and one item was excluded to reach a better reliability (α=0.671). In addition, inter-item correlations were determined ranging from 0.484 to 0.219. To read the results of this scale, the higher the average of the scale, the more would be the positive attitudes towards healthy dietary.

Results

Among the enrolled subjects, 464 students were in the first year of study (55.2%) and 376 students in their last year of study (44.8%). Regarding the scientific area, 302 (36.0%) students were from engineering sciences, 270 (32.1%) students from human and social sciences, 136 (16.2%) students from exact and natural sciences and 132 (15.7%) students in the area of law and economic sciences. Most students were female (55.4%, n=465), were not in a love relationship (58.3%, n=486), changed their residence area (64.9%, n=537), were full-time students (88.8%, n=739) and had a body mass index (BMI) corresponding to a normal weight (73.1%, n=599). The average age of the participants was 20.78 years (SD=4.221), ranging from 18 to 54 years, and only 3% of the students were 30 years or older.

Table 1: The sociodemographic variables and healthy dietary practices reported among university students

		Healthy dietary practices	ANOVA	
		Mean±SD	Z	p
Scientific area	Engineering sciences	2.94±1.065	1.535	0.204
	Exact and natural sciences	2.91±1.183		
	Law and economic sciences	2.70±1.110		
	Human and social sciences	2.81±1.205		
BMI	Low weight	2.80±1.052	1.379	0.252
	Normal weight	2.89±1.164		
	Over-weight	2.72±1.049		
			t-student	
			t	p
Year of study	1st year	2.86±1.091	0.020	0.984
	3rd year	2.86±1.1961		
Sex	Male	2.78±1.098	-1.734	0.083
	Female	2.92±1.167		
Age	<20	2.97±1.075	2.377	0.018
	≥20	2.78±1.178		
Love relationship	Yes	2.81±1.150	-1.074	0.283
	No	2.89±1.123		
Current residence	Displaced	2.62±1.115	-4.590	0.001
	Not displaced	3.00±1.127		
Professional situation	Full time student	2.86±1.144	.411	0.681
	Worker/Student	2.81±1.134		
Total		2.86±1.139		

BMI: Body Mass Index; Z: test results in the ANOVA table; t: test results in the independent samples test table; p: significance level

The minority of students reported vegetable intake (6%, n=50), as well as fruits (10.10%, n=85) that was below the recommendations (three or more times a day). The majority of university students (56.20%, n=472) reported a regular breakfast during the week and 75.60% (n=636) of students did not skip lunch and/or dinner. Furthermore, 7.4% (n=62) and 55.5% (n=465) of students presented a high consumption of fast food and sweet products during the last week (four or more times a week), respectively.

The university students reported 2.86±1.139 healthy dietary practices, according to their age [t(825)=2.377, P=0.018] and residence [t(814)=-4.590, P=0.000]. Thus, younger students who did not change their residence were the ones who declared the most healthy dietary practices, compared with older and students who changed their residence at the time of entering the higher education level, respectively (Table 1).

The healthy dietary knowledge was at a low level with 2.58±1.313 correct answers, in a total of 6 possible correct responses. Table 2 shows statistically significant differences between healthy dietary knowledge and the scientific area [F(3,824)=4.223, P=0.006], indicating that students in the exact and natural sciences field demonstrated more healthy dietary knowledge compared to students of the law and economic sciences field. Furthermore, t-test showed significant differences between healthy dietary knowledge and the sex of respondents that means male students had a lower level of healthy dietary knowledge in comparison to the female students [t(826)=-2.3028, P=0.043].

The scale for healthy dietary attitudes was 13.54±3.492 ranging from 4 to 20, with the highest value corresponding to positive attitudes towards a healthy diet. Through the bivariate analysis shown in Table 3, there were no significant differences between healthy dietary attitudes and sociodemographic variables.

The results showed that there was a positive and significant relationship between knowledge and practice, knowledge and attitude and attitude with practice. The value between knowledge and practice was 0.071 (P<0.05), between knowledge and attitude was 0.091 (P<0.001), and between attitude and practice was at the highest level of 0.207 (P<0.001).

Discussion

This study assessed healthy dietary practices, knowledge and attitudes towards among students at one of the universities in Portugal. Our data showed that university students had inadequate healthy dietary habits, similarly identified in USA (26), Spain

Table 2: The sociodemographic variables and healthy dietary knowledge among university students

		Healthy dietary knowledge		
		Mean±SD	ANOVA	
			Z	p
Scientific area	Engineering sciences	2.51±1.301	4.223	0.006
	Exact and natural sciences	2.93±1.367		
	Law and economic sciences	2.42±1.267		
	Human and social sciences	2.55±1.297		
BMI	Low weight	2.59±1.229	0.007	0.99
	Normal weight	2.57±1.313		
	Overweight	2.57±1.350		
			t-student	
			t	p
Year of study	1st year	2.55±1.302	-0.629	0.530
	3rd year	2.61±1.328		
Sex	Male	2.47±1.321	-2.028	0.043
	Female	2.66±1.302		
Age	<20	2.51±1.325	-1.312	0.19
	≥20	2.63±1.303		
Love relationship	Yes	2.58±1.266	-0.191	0.85
	No	2.59±1.342		
Current residence	Displaced	2.56±1.361	-0.469	0.639
	Not displaced	2.61±1.276		
Professional situation	Full time student	2.57±1.332	-0.740	0.459
	Working student	2.67±1.130		
Total		2.58±1.313		

BMI: Body Mass Index; Z: test results in the ANOVA table; t: test results in the independent samples test table; p: significance level

Table 3: The sociodemographic variables and healthy dietary attitudes demonstrated among university students

Healthy dietary attitudes		ANOVA		
		Mean±SD	Z	p
Scientific area	Engineering sciences	13.32±3.413	1.847	0.137
	Exact and natural sciences	13.16±3.440		
	Law and economic sciences	13.84±3.203		
	Human and social sciences	13.83±3.718		
BMI	Low weight	13.48±3.430	0.024	0.976
	Normal weight	13.52±3.502		
	Overweight	13.58±3.478		
		13.53±3.488	t-student	
			t	p
Year of Study	1st year	13.69±3.447	1.357	0.175
	3rd year	13.36±3.543		
Sex	Male	13.51±3.316	-0.223	0.824
	Female	13.56±3.633		
Age	<20	13.56±3.329	-167	0.868
	≤20	13.52±3.610		
Love relationship	Yes	13.35±3.697	-1.175	0.240
	No	13.64±3.343		
Current residence	Displaced	13.52±3.375	-0.205	0.838
	Not displaced	13.57±3.516		
Professional situation	Full time student	13.53±3.468	0.028	0.977
	Worker/Student	13.52±3.704		
Total		13.54±3.492		

BMI: Body Mass Index; Z: test results in the ANOVA table; t: test results in the independent samples test table; p: significance level

(10), Italy (31), Germany (32), and UK (33) which was due to inadequate fruit and vegetable intake (11, 33) and consumption of fast foods (4, 6-11).

Contrary to a number of studies (6, 10, 26, 31, 32, 34) in which female students tended to have healthier dietary habits compared to male students, this study did not find any difference between male and female gender among university students in terms of healthy dietary practices (11, 35). Staying in higher education level tended to worsen student's lifestyle, particularly in regard to healthy dietary habits. Although in the present study, we did not verify the existence of any differences regarding the year of study, but we found that the younger students had healthier dietary habits in comparison to the older students.

It is also important to highlight the sociodemographic variable of "current residence", because students who had left their family home reported a higher level of unhealthy dietary practices compared to students who did not change their residence after entering the higher educational level (4, 6, 11, 18, 36). In terms of knowledge about healthy dietary habits, several researchers showed that university students had a lower level of knowledge on healthy dietary habits (24).

In our study, there was also a low level of healthy dietary knowledge, being higher among students in the area of the exact and natural sciences. In the same line and contrary to other researches (23, 37), we found that girls had more knowledge than boys on healthy dietary habits (26, 38). We found moderate healthy dietary attitudes without any statistical differences concerning sociodemographic variables. An interesting finding of our study was to be in agreement with other studies (32, 39, 40) reporting the lack of time to prepare healthy meals due to academic commitments as the main barrier to reach healthy dietary habits. The correlation observed between on healthy dietary behaviors, knowledge and attitudes were of great interest, suggesting that intervention programs may address a range of on healthy dietary behaviors in addition to programs directed to nutritional intake.

The limitations of our study should be noted. First, weight and height were based on self-reporting. Self-reported height and weight were not as accurate as physical anthropometric measurements. The same for the other questions, that is, the data were collected through a self-report questionnaire and, therefore, a recall error was possible. In addition, dietary behavior during the past seven days may not be representative of a typical healthy dietary behavior. Restricting our study was generalizing our findings in a single university to all university students in Portugal. University degree in the area of health sciences was excluded from the sample

due to biases that could have been caused based on knowledge (24). Despite this methodological option, the dietary behavior of the students of this scientific area should be analysed, as they may practice as health professionals in future.

Conclusion

The results of our study identified the need for multifaceted programs to educate and motivate students to make healthy food choices, breaking down barriers about the difficulties of having a healthy diet. These intervention programs can be targeted at university students who have less consumption of fruits and vegetables, difficulties in time management and planning healthy meals, and those who changed residence at the time of entering a higher education level. The high prevalence of unhealthy dietary behaviors denoted to the need for interventions that promote patterns of healthy dietary behaviors among university students. University authorities must have strategies to overcome the lack of time barrier, such as offering time management courses.

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Conflict of Interest

None declared.

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6. ESTUDO 6: ACTIVIDADE FÍSICA DE ESTUDANTES UNIVERSITÁRIOS/AS PORTUGUESES/AS E SUA RELAÇÃO COM O CONHECIMENTO E BARREIRAS PERCEBIDAS [9]

Referência bibliográfica:

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Resumo

Enquadramento: Os/as estudantes universitários/as, independentemente do país, apresentam prevalência muito elevada de sedentarismo e os hábitos de saúde adquiridos nesse período tendem a se manter ao longo da vida, inclusive os relacionados à prática de exercícios físicos.

Objetivos: O objetivo deste estudo foi analisar a relação entre o conhecimento sobre as recomendações sobre a prática de atividade física, as barreiras percebidas e a prática de atividade física por estudantes do ES.

Métodos: Este estudo transversal utilizou um questionário autorreferido com uma amostra estratificada de estudantes universitários/as (n = 840) de uma universidade portuguesa. Um modelo de regressão logística ordinal foi calculado para determinar as variáveis preditivas para a prática de AF.

Resultados: Os resultados mostraram que 35,7% dos/as estudantes inquiridos/as era sedentário, o nível de conhecimento sobre AF era baixo, respondendo corretamente a 2,79 (DP = 0,090) questões num total de 6, e a falta de tempo foi a barreira percebida mais evidente. O modelo construído previu que ter mais barreiras para AF (β = -.750, p = .000) e ser do sexo feminino diminuiu a probabilidade de praticar AF (β = .578, p = .000).

Conclusão: O aumento dos níveis de AF dos/as estudantes universitários/as é uma necessidade social e, neste contexto, as IES devem assumir um papel fundamental na PrS do/a estudante, implementando

[9] No âmbito deste artigo realizaram-se um capítulo de livro, duas publicações e uma comunicação: **1)** Alves, R. (2020). Instrumentos de avaliação de conhecimentos, atitudes e prática de exercício físico no Ensino Superior: uma revisão sistemática. In João Serrano; João Petrica; Marcio Kerkoski; Beatriz Pereira (eds). *Atividade física, lazer e saúde - perspetivas e desafios de investigação.* (p. 142-150). Castelo Branco, Portugal: Instituto Politécnico de Castelo Branco (IPCB). ISBN: 978-989-8196-99-6; **2)** Alves, R. (2019). Prática de atividade física no ensino superior: relação com os conhecimentos e as atitudes. *Journal of Sport Pedagogy & Research* 5 (2): 8; **3)** Alves, R. (2019). Physical exercise in higher education: Knowledge, attitudes and practices. *Journal of Human Sport and Exercise* 14 (4 proc): 1254-1257. DOI: 10.14198/jhse.2019.14.Proc4.82; **4)** no XV Seminário Internacional de Educação Física, Lazer e Saúde (SIEFLAS) / IV BUDO Congress. Escola Superior de Educação do Instituto Politécnico de Castelo Branco, Castelo Branco, Portugal. 17 a 19 de junho de 2019 (intitulada "Physical exercise in higher education: Knowledge, attitudes and practices").

ações que reduzam a inatividade dos/as seus/suas estudantes, desenvolvendo a transmissão de informações sobre os benefícios para a saúde. relacionadas à prática de AF.

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Physical activity among Portuguese university students and its relation to knowledge and perceived barriers

La actividad física entre los universitarios portugueses y su relación con el conocimiento y las barreras percibidas

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Conflicts of interest

The authors declare that there is no conflict of interest.

Ethical consideration approval code

This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

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Abstract

University students, regardless of the country, have a very high prevalence of physical inactivity and health habits acquired during this period tend to remain throughout life, including those related to physical exercise. The purpose of this study was to analyse the relationship between knowledge about the recommendations on the practice of physical activity (PA), the perceived barriers towards PA and the practice of PA by higher education students. This cross-sectional study used a self-reported questionnaire with a stratified sample of university students (n = 840) from a university in Portugal. An ordinal logistic regression model was calculated to determine the predictive variables to the practice of PA. The results showed that 35.7% of the students surveyed were sedentary, the level of knowledge about PA was low, correctly answering 2.79 (SD = .090) questions in a total of 6, and lack of time was the most evident perceived barrier. The constructed model predicted that having more barriers to PA (β = -.750, p = .000) and being female decreased the likelihood of practising PA (β = .578, p = .000). The increase of PA levels of university students is a social necessity and, in this context, higher education institutions should undertake a key role in promoting student health, by implementing actions to reduce their students' inactivity, developing the transmission of information about the health benefits related to the practice of PA.

Key Words

Physical exercise; knowledge; perceived barriers; recommendations; university students.

Resumen

Los estudiantes universitarios, independientemente del país, tienen una prevalencia muy alta de inactividad física y los hábitos de salud adquiridos durante este período tienden a permanecer a lo largo de la vida, incluidos los relacionados con el ejercicio físico. El propósito de este estudio fue analizar la relación entre el conocimiento sobre las recomendaciones sobre la práctica de AF, las barreras percibidas hacia AF y la práctica de AF por estudiantes de educación superior. Este estudio transversal utilizó un cuestionario auto informado con una muestra estratificada de estudiantes universitarios (n = 840) de una universidad de Portugal. Se calculó un modelo de regresión logística ordinal para determinar las variables predictivas para la práctica de AF. Los resultados mostraron que el 35,7% de los estudiantes encuestados eran sedentarios, el nivel de conocimiento sobre AF era bajo, respondiendo correctamente 2,79 (DE = .090) preguntas en un total de 6, y la falta de tiempo era la barrera percibida más evidente. El modelo construido predijo que tener más barreras a la AF (β = -.750, p = .000) y ser mujer disminuyó la probabilidad de practicar AF (β = .578, p = .000). El aumento de los niveles de AF de los estudiantes universitarios es una necesidad social y, en este contexto, las instituciones de educación superior deben asumir un papel clave en la promoción de la salud de los estudiantes, mediante la implementación de acciones para reducir la inactividad de sus estudiantes, desarrollando la transmisión de información sobre los beneficios para la salud. relacionados con la práctica de la AF.

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Palabras clave

Ejercicio físico; conocimientos; barreras percibidas; recomendaciones; estudiantes universitarios.

Introduction

The World Health Organization identified physical inactivity as the fourth major risk factor for global mortality (WHO, 2010) and other authors as the greatest public health problem of the 21st Century (Trost, Blair, & Khan, 2014). In contrast, the practice of physical activity (PA) is considered a positive health measure.

Scientific research has shown that the regular practice of PA contributes to physical health (Füzéki, Engeroff, & Banzer, 2017; Lear et al., 2017; Pandey et al., 2017), as well as to the reduction of mortality and cardiovascular and chronic diseases (Ekelund et al., 2016; Lear et al., 2017). In the same way, it contributes to psychological and emotional well-being (Álvarez Rivera, Cuevas Ferrera, Lara Pot, & González Hernández, 2015; Joseph, Royse, Benitez, & Pekmezi, 2014; Wu, Tao, Zhang, Zhang, & Tao, 2015). For example, Wu et al. (2015) found that the daily practice of PA contributed to the reduction of depression, anxiety and sleep problems.

In recent years, several public health guidelines for the PA of the adult population were published, differing in the amount, intensity and frequency of PA (Haskell et al., 2007). The most recent recommends at least 150 minutes of moderate PA per week or 75 minutes of vigorous PA per week, allowing the combination of these two intensities and in episodes of at least 10 minutes (WHO, 2010).

Despite the widespread recommendations and health benefits, in most developed countries there is a high proportion of adults who do not meet these recommendations for PA and show a low level of PA (Guthold, Stevens, Riley, & Bull, 2018), particularly in Portugal (Batista et al., 2012). The level of PA decreases from childhood to adolescence, as well as from adolescence to adulthood. University students, regardless of the country, have a very high prevalence of physical inactivity that is bigger (Arias-Palencia et al., 2015; Haase, Steptoe, Sallis, & Wardle, 2004; Keating, Guan, Piñero, & Bridges, 2005; Moreno-Arrebola, Fernández-Revelles, Linares-Manrique, & Espejo-Garcés, 2018; Pengpid et al., 2015) than

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that of others age groups (Guthold et al., 2018). This evidence becomes relevant when stating that the transition to adulthood, matching it with starting higher education, is a critical and the most vulnerable life period. Health habits acquired during this period tend to remain throughout life, including those related to physical exercise (Curry, Jenkins, & Weatherford, 2015; Filla, Hays, Gonzales, & Hakkak, 2013; Rodriguez Rodriguez, Santibañez Miranda, Montupin Rozas, Chávez Ramírez, & Solis Urra, 2016).

Several factors contribute to the decrease or absence of PA, which is why it is interesting to assess how predisposing factors include knowledge and attitudes towards PA (Ennis, 2010; Keating et al., 2009; WHO, 2012).

Given the above, this article aims to analyse the relationship between knowledge on the recommendations for the practice of PA, the perceived barriers towards PA and the practice of PA by students in higher education.

Material & methods

Population and sample

For the 2018/2019 academic year, 5447 students were registered in the 1st and 3rd year of integrated bachelors and masters degrees. Courses related to health sciences, undergraduate or postgraduate masters and those that did not have classes in the 1st or 3rd years were excluded from the sample. The minimum sample size needed for this study was 592 students (margin of error = 5%, confidence level = 99%, and response distribution = 50%). For this purpose, stratified probabilistic sampling of university students was performed according to the year of study and the scientific area. The different undergraduate and master's degrees were divided into scientific areas (as defined by the Foundation for Science and Technology): Human and Social Sciences, Law and Economic Sciences, Exact and Natural Sciences and Engineering Sciences.

In this cross-sectional study with a representative sample of university students (n = 840) in one university in Portugal, data were collected using a validated self-reported questionnaire without biochemical confirmation. The sample consists of 464 students in their first year of study (55.2%) and 376 students in their last year of study (44.8%). In what relates the scientific area, 302 (36.0%) students from Engineering Sciences, 270 (32.1%) students

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from Human and Social Sciences, 136 (16.2%) students from Exact and Natural Sciences and 132 (15.7%) students in the area of Law and Economic Sciences. Most of the students surveyed were female (55.4%, $n = 465$), did not in a love relationship (58.3%, $n = 486$), were displaced from their usual residence (64.9%, $n = 537$), were full-time students (88.8%, $n = 739$) and had a BMI corresponding to a normal weight (73.1%, $n = 599$). The average age of the sample was 20.78 ($SD = 4.221$), ranging from 18 to 54, and only 3% of the students are 30 years old or older.

Instruments

Currently, there are several scientific instruments to monitor the prevalence of PA among young adults. Therefore, the development of the instruments present in this investigation was carried out in three stages: scale construction (1st stage); content validity (2nd stage); psychometric validity (3rd stage), according to the procedures defined by Bowling (1998).

For the scale construction (1st stage), a systematic review of the literature was made to identify the questions and items commonly used to assess knowledge, attitudes and practices of PA in higher education (Alves, 2019). Based on this review, an analytical matrix was created for each of the dimensions to be analysed, and those with the same semantic similarities were eliminated.

For the content validity (2nd stage) 10 PhD researchers from several Portuguese universities with recognised work in the area of Health Education in Higher Education were invited, and the feedback received from 5 of them was considered as well as all the proposed semantic changes. Similarly, the instrument was applied to 12 university students, using the method "thinking aloud" (Bowling, 1998; Keszei, Novak, & Streiner, 2010) to identify items that might be confusing, to exclude less relevant or redundant items, and to verify that pre-coded response options were sufficient. After the suggested redrafting, the preliminary version of the questionnaire survey was presented to a sample of 32 students, not included in the final sample.

The questionnaire included sociodemographic variables (sex, age, scientific area of study, academic year, weight and height (to calculate BMI), being in a love relationship,

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professional situation e current residence) and specific questions to measure the following variables:

- Prevalence of PA: the Godin Leisure-Time Exercise Questionnaire (Godin & Shephard, 1997) was used and one question about sedentary lifestyle ("On a normal day, how many hours do you spend seated?");

- PA knowledge: a 6-item scale with options for the answer - True, False, Don't Know (e.g., "The practice of an intense physical activity is necessary to achieve health benefits.")

- Perceived barriers towards PA: a 5-item scale on a 5-point Likert scale (1 – I strongly disagree, 5 – I totally agree) concerning lack of energy, lack of motivation, lack of resources, lack of support and lack of time.

Procedure and Statistical analysis

The application of the instrument was carried out in classroom context and paper-and-pencil format for all students in the sample, after giving informed consent. All ethical research procedures with humans were fulfilled, and the Ethics Committee for Research in Social and Human Sciences, of the University of Minho Ethics Council, under the protocol CEICSH 009/2019 approved the research.

Data were analysed using the IBM SPSS Statistics for Windows, version 26.0 (IBM Corp., Armonk, NY, USA). For statistical analysis, frequencies and contingency tables were analysed, Pearson's correlation was carried out, Chi-square test, independent t-test, and one-way variance (ANOVA) and Hochberg's GT2 multiple comparison procedures. Ordinal logistic regression model with logit's function was developed, only including variables with a significant bivariate association with PA, PA knowledge and perceived barriers. The nominal indicator of 'sedentary' was assigned as the reference category, and all covariates were entered into the model simultaneously. Variables that were found not to contribute to the prediction of the dependent variable were excluded from the final model. A significance level of 0.05 was considered.

Activity counts were converted to metabolic equivalents (METS) by multiplying episodes of vigorous activity by 9, moderate activity by 6, and mild activity by 3. Total activity scores were calculated by adding the MET calculations for each PA intensity level

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and were classified in three types: Insufficiently Active/Sedentary; Moderately Active and Active.

For the knowledge scale, the number of correct responses was added to give an overall knowledge score, and the mean was calculated. This means that the higher the scale value, the higher the level of knowledge. The perceived barriers scale was subject to Cronbach's alpha analysis to analyse its reliability (Bowling, 1998), and a good reliability index was obtained (α = .742). In addition, inter-item correlations ranging from .644 to .269. To read the results of this scale, the higher the average of the scale, the more will the barriers be towards PA.

Results

The results show that 35.7% (n = 298) of the students surveyed are sedentary, 17.5% (n = 146) moderately active and 46.8% were classified as active. It was also found that, on average, on a typical day, university students spend 7.44 ± 2,656 hours seated. There were no differences between the practice of PA and the number of hours that the students declared to spend seated (F (2, 798) = 1.617, p = .199).

Table 1 shows that among all the sociodemographic variables analysed the practice of physical exercise was only associated with the sex of the respondents (χ^2 (2) = 22.554, p = .000). This indicates that female students are more sedentary and less active compared to male students.

Table nº 1 – Frequencies and Chi Square test for sociodemographic variables and weekly leisure-time activity

		Weekly leisure-time Activity						Chi Square test	
		Sedentary		Moderately Active		Active			
		n	%	*n*	%	*n*	%	χ^2	*p*
Year of study	1st year	156	52.3	82	56.2	221	56.7	1.364	.506
	3rd year	142	47.7	64	43.8	169	43.3		
Scientific area	Engineering Sciences	93	31.2	50	34.2	159	40.8	7.572	.271
	Exact and Natural Sciences	49	16.4	23	15.8	62	15.9		
	Law and Economic Sciences	51	17.1	24	16.4	56	14.4		
	Human and Social Sciences	105	35.2	49	33.6	113	29.0		
Sex	Male	106	35.6	60	41.1	208	53.3	22.554	**.000**
	Female	192	64.4	86	58.9	182	46.7		
Age	< 20	111	37.2	63	43.2	176	45.1	4.409	.110

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	>= 20	187	62.8	83	56.8	214	54.9		
Love relationship	Yes	126	42.4	56	38.6	163	42.3	.694	.707
	No	171	57.6	89	61.4	222	57.7		
Current residence	Displaced	110	37.5	45	31.3	133	34.5	1.756	.416
	Not displaced	183	62.5	99	68.8	252	65.5		
Professional situation	Full time student	261	88.2	130	90.3	344	88.9	.433	.805
	Worker / Student	35	11.8	14	9.7	43	11.1		
BMI	Low weight	22	7.6	14	9.9	21	5.5	5.175	.270
	Normal weight	212	73.1	95	66.9	289	75.7		
	Overweight	56	19.3	33	23.2	72	18.8		

Regarding the sedentary behaviour declared by the students, it was found that, on average, university students spend 7.44 ± 2.656 hours seated, according to their professional situation (t (795) = 3.693, p = .000) and scientific area (F (3, 799) = 12.380, p = .000). Thus, full-time and engineering students were the ones who declare to spend daily the most hours seated, compared with working students and students of other scientific areas, respectively.

The level of knowledge about PA was low, presenting, on average, 2.79 ± 0.090 correct answers, in a total of 6 possible correct answers. Table 2 shows statistically significant differences between knowledge about PA and the scientific area (F (3,827) = 3.060, p = .028), indicating that students in the Exact and Natural Sciences area have more knowledge compared to students of the Human and Social Sciences area.

Table nº 2 – Mean, one-way ANOVA and t-test for sociodemographic variables and PA knowledge

		PA Knowledge		
		Mean (*SD*)	ANOVA	
			Z	*p*
Scientific area	Engineering Sciences	2.77 (.950)	3.060	**.028**
	Exact and Natural Sciences	2.91 (.740)		
	Law and Economic Sciences	2.78 (.868)		
	Human and Social Sciences	2.63 (.907)		
BMI	Low weight	2.78 (.773)	.040	.961
	Normal weight	2.75 (.901)		
	Overweight	2.74 (.872)		
Weekly leisure-time activity	Insufficiently Active/Sedentary	2.69 (.950)	1.814	.164
	Moderately Active	2.86 (.777)		
	Active	2.75 (.892)		
			t-student	
			t	*p*
Year of study	1st year	2.72 (.871)	-.947	.344
	3rd year	2.78 (.925)		

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Sex	Male Female	2.73 (.940) 2.75 (.859)	-.357	.721
Age	< 20 >= 20	2.75 (.856) 2.74 (.924)	.101	.919
Love relationship	Yes No	2.73 (.839) 2.77 (.922)	-517	.605
Current residence	Displaced Not displaced	2.76 (.901) 2.74 (.888)	.442	.659
Professional situation	Full time student Worker / Student	2.75 (.908) 2.74 (.739)	.093	.926

The scale of perceived barriers to the practice of PA obtained an average of 2.26 ± 0.037, in a range between 1 and 5, with the highest value corresponding to more barriers. The perceived barriers were ordered as follows, depending on the degree of agreement: lack of time (M = 2.78, SD = 1.353); lack of motivation (M = 2.45, SD = 1.230); lack of resources (M = 2.17, SD = 1.226); lack of energy (M = 2.06, SD = 1.092); lack of support (M = 1.86, SD = 1.041).

Through the bivariate analysis, shown in table 3, there were statistically significant differences between perceived barriers and the scientific area (F (3,827) = 2.863, p = .036), BMI (F (2,807) = 3.318, p = .037), the practice of physical exercise (F (2,822) = 48.811, p = .000), sex (t (829) = -3.069, p = .002) and current residence (t (817) = 2.358, p = .019). Thus, it is possible to conclude that students of the Engineering Sciences area revealed fewer barriers to the practice of PA compared to students of the of Exact and Natural Sciences area; inactive students were those who revealed more barriers compared to students who practice PA (moderately and actively), with moderately active students showing more barriers compared to active students; female students and full-time students presented a higher score in the perceived barriers scale compared to male students and working students, respectively. Regarding BMI, Hochberg's GT2 was not significant.

Table nº 3 – Mean, one-way ANOVA and t-test for sociodemographic variables and perceived barriers towards PA

		Perceived barriers		
		Mean (SD)	ANOVA Z	*p*
Scientific area	Engineering Sciences Exact and Natural Sciences	2.18 (.816) 2.43 (.858)	2.863	**.036**

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	Law and Economic Sciences	2.31 (.850)		
	Human and Social Sciences	2.25 (.835)		
BMI	Low weight	2.41 (.750)	3.318	**.037**
	Normal weight	2.21 (.829)		
	Overweight	2.37 (.879)		
Weekly leisure-time activity	Insufficiently Active/Sedentary	2.60 (.760)	48.811	**.000**
	Moderately Active	2.28 (.853)		
	Active	1.99 (.796)		
			t-student	
			t	*p*
Year of Study	1st year	2.27 (.825)	.132	.895
	3rd year	2.26 (.853)		
Sex	Male	2.16 (.820)	-3.069	**.002**
	Female	2.34 (.843)		
Age	< 20	2.27 (.805)	.184	.854
	>= 20	2.26 (.861)		
Love relationship	Yes	2.24 (.832)	-.754	.451
	No	2.28 (.842)		
Current residence	Displaced	2.35 (.805)	2.358	**.019**
	Not displaced	2.21 (.845)		
Professional situation	Full time student	2.28 (.845)	1.434	.152
	Worker / Student	2.14 (.788)		

There were no associations between the level of knowledge about the practice of PA and the perceived barriers ($\rho = .023$, $p = .516$).

Table 4 presents the results of the ordinal logistic regression model for PA. The model is statistically significant (G^2 (2) = 107.057, p = .000). According to the model, as the perceived barriers increase, the probability of practising physical exercise decreases ($\beta_{\text{Perceived barriers}} = -.750$, $p = .000$). Regarding sex, there is a higher probability of practising PA in male students, compared to female students ($\beta_{\text{Male}} = .578$, $p = .000$).

Table 4 – Adjusted odds ratios (OR) and 95% confidence intervals (CI) from ordinal logistic regression model predicting sedentary and moderately active

		β	Error	χ^2 Wald	df	*p*	95% CI	
Limit	Sedentary/Insufficient Active	-2.083	.225	85.522	1	.000	-2.525	-1.642
	Moderately Active	-1.278	.218	34.511	1	.000	-1.705	-.852
Localition	Perceived barriers	-.750	.086	75.573	1	.000	-.919	-.581
	Male	.578	.138	17.560	1	.000	.308	.848
	[DP1=2]	0[a]	.	.	0	.	.	.

OR: odds ratio; 95% CI: 95% confidence interval

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Discussions

The practice of PA by university students was low, considering that 35.7% of respondents were sedentary or insufficiently active. In comparison with a study carried out worldwide, the results of this study show that there is a higher prevalence of inactivity than that seen in European countries in the general population (23.5%) (Guthold et al., 2018). However, when considering the university population, the percentage of inactive students corroborates with other international studies in which physical inactivity varied between 23% and 39% in western countries (Haase et al., 2004) and between 21.9% and 80.6% in non-European countries (Pengpid et al., 2015). Despite the variations recorded, it should be noted that, on average, the prevalence of physical inactivity among university students is lower in European countries compared to other non-European countries.

Scientific research in this area has identified some variations regarding the relationship between PA and the sex of university students. In this study, there was a lower prevalence of PA in female students compared to male students (Rodriguez Rodriguez et al., 2016; Romaguera et al., 2011; Wu et al., 2015). However, other studies have reported that women tend to exercise more than men (Gnanendran, Pyne, Fallon, & Fricker, 2011; Morgan & Elizondo, 2016) or that there were no differences considering the sex variable (Arias-Palencia et al., 2015).

Social representations tend to relate BMI to the practice of PA (Vadeboncoeur, Townsend, & Foster, 2015); however, there is no evidence to prove it, as verified in the present study as well as in other studies (Steptoe et al., 1997).

A possible explanation for the low prevalence of PA could refer to the number of hours that students spend seated (Arias-Palencia et al., 2015); however, in this study, there was no relation between the number of hours that students spend seated daily and the practice of PA. The number of hours that students spend seated per day (about 7 hours), coincides with that shown in other studies (Farinola & Bazán, 2011).

Regarding the knowledge variable, students revealed a low level of knowledge about PA (Abula, Gröpel, Chen, & Beckmann, 2018; Keating et al., 2009; Martins et al., 2019), although the theory of planned behaviour (Ajzen, 1991) shows that knowledge has an impact

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on attitudes and that, in turn, it influences intentions in relation to behaviour. And, specifically, knowledge about PA and its health benefits direct people to the practice of PA (Haslem, 2014), as has been empirically verified in international research (Abula et al., 2018). In the present study, the level of knowledge of the students is not correlated with the barriers to the practice of PA; neither was it included in the prediction model of the practice of PA. As in the studies carried out by Keating and collaborators (2009) and Haslem (2014), no significant correlation was found between knowledge about PA and the practice of PA. However, improving and developing PA knowledge could be the first step towards establishing healthy behaviours in PA (Keating et al., 2009).

The perceived barriers were related to the practice of PA. Thus, the students who had a higher score of perceived barriers were those who presented themselves as being less active.

Lack of time is perceived as the main barrier for the practice of PA, both in the present study and in previous studies (Castañeda, Zagalaz, Arufe, & Campos-Mesa, 2018; Deliens, Clarys, Van Hecke, De Bourdeaudhuij, & Deforche, 2013; Martínez-Lemos, Puig-Ribera, & García-García, 2014; Ramírez-Vélez, Triana-Reina, Carrillo, & Ramos-Sepúlveda, 2016; Samara, Nistrup, Al-Rammah, & Aro, 2015). In this sense, the investment in time management training seems to make sense. Moreover, it is considered that betting on intrinsic motivation can be a good way to improve adherence to PA (Chacón Cuberos et al., 2017). This is because the lack of motivation was also a prominent barrier (King, Vidourek, English, & Merianos, 2014).

Lack of energy is also often mentioned as a barrier to the practice of PA (Ramírez-Vélez et al., 2016; Samara et al., 2015), and it was also considered by the students surveyed. Given this item, the students found that lack of energy could constitute a barrier to the practice of PA, preceded as already mentioned by lack of time and lack of motivation.

The support of parents and friends is considered as essential to encourage students to practice PA (King et al., 2014). The present study showed that students perceive that they have the support of family and friends to practice PA. Therefore, this was not considered a barrier for the students surveyed, although other studies reveal lack of social support (Martínez-Lemos et al., 2014).

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University students, in comparison with the population of the same age group, have more access to resources such as gyms or sports complexes (Miller, Noland, Rayens, & Staten, 2008). However, they do not take advantage of these resources to increase the practice of PA (Keating et al., 2005). For this reason, it makes perfect sense that the item 'lack of resources' has not been evidenced by the respondents.

Conclusions

The increase in PA levels of university students is a social necessity, and interventions in this area should focus on female students and develop strategies to break the most frequent barriers.

Time management training, intracurricular PA integration or the creation of accredited programs can be analysed in future interventions. In universities in which PA has been incorporated into curricular study plans, statistically significant improvements have been shown in the level of PA practice and, consequently, an impact on students' health (Warren & Odenheimer Brin, 2017).

Higher education institutions should undertake a key role in promoting student health, by implementing actions to reduce their students' inactivity, developing the transmission of information about the health benefits related to the practice of PA, so that university students have the opportunity to make informed decisions about PA, develop more positive attitudes towards PA and choose a more active lifestyle.

Some limitations should be considered. Firstly, this study included only one university, so constraints should be considered in generalising the results to the entire university population in Portugal. Secondly, it should be noted that the results presented are based on data collected by self-report, so it may be distorted regarding the difficulty in distinguishing the different levels of activity or underestimating or overestimating the PA done. Thirdly, it should not be forgotten that the barriers to the practice of PA may not correspond to all the barriers considered by students and that they can be excuses and not exactly barriers. Finally, considering that social desirability is always present in this type of research methodology. However, the application of a questionnaire in paper-pencil format and in the classroom can

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contribute to the reduction of this type of bias. **Conflicts of interest:** The author declare no conflict of interest.

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7. ESTUDO 7: PREVALÊNCIA DE COMPORTAMENTOS SEXUAIS DE RISCO E SUA RELAÇÃO COM O CONHECIMENTO E AS ATITUDES ACERCA DOS COMPORTAMENTOS SEXUAIS DE ESTUDANTES UNIVERSITÁRIOS/AS [10]

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Resumo

Enquadramento: Os comportamentos sexuais de risco nos/as estudantes universitários/as apresentam uma elevada prevalência. O início da atividade sexual em idade precoce, os/as múltiplos/as parceiros/as sexuais, o consumo de álcool antes da prática de relações sexuais e o uso inconsistente de preservativo são algumas das características comuns dos comportamentos sexuais de risco em estudantes do ES.

Objetivo: Avaliar os conhecimentos, as atitudes e os comportamentos sexuais de risco entre estudantes universitários/as de uma Universidade do Norte de Portugal.

Métodos: Para tal, utilizamos uma abordagem transversal, aplicando um inquérito por questionário previamente validado, a uma amostra, estratificada proporcional, constituída por 840 estudantes universitários/as. O inquérito por questionário encontrava-se dividido em três partes: conhecimentos acerca das ISTs, atitudes face às ISTs e face ao uso de preservativo e comportamentos sexuais de risco.

Resultados: Os resultados evidenciaram que a maioria dos/as estudantes universitários/as era sexualmente ativa e que o comportamento sexual de risco com maior prevalência refere-se ao uso inconsistente do preservativo. O nível de conhecimentos acerca das ISTs e as atitudes face a essas infeções e ao uso de preservativo foram moderadas. Não se verificou nenhuma correlação entre os conhecimentos e as atitudes, no entanto, as atitudes face ao uso do preservativo predizem os comportamentos sexuais de risco dos/as estudantes universitários/as.

[10] No âmbito deste artigo realizaram-se dois posters e uma comunicação: **1)** no II International Seminar - Past, present and future of sexuality research, Faculdade de Psicologia e Ciências da Educação, Universidade do Porto, Porto, Portugal. 20 de setembro de 2019 (intitulado "Sexual risk behaviors in higher education: the influence of sociodemographic variables"); **2)** no I International Seminar - Past, present and future of sexuality research. Faculdade de Psicologia e Ciências da Educação, Universidade do Porto, Porto, Portugal. 21 de setembro de 2018 (intitulado "Knowledge, attitudes and sexual behaviors in Higher Education: the process of constructing a measurement scale"; **3)** no 2ª International Congress of Health and Well-Being Intervention (ICHWBI 2021). Instituto Piaget, Viseu, Portugal, 28 e 29 de maio de 2021 (intitulada "Sexual knowledge and attitudes and sexual risk behaviors among college students"). A comunicação no ICHWBI 2021 recebeu o prémio das 8 melhores comunicações submetidas ao Congresso, de acordo com a avaliação final da revisão por pares e, neste âmbito, os/as autores/as foram convidados a escrever o texto completo para o Journal of Egitania Sciencia.

Conclusão: Este estudo mostrou que entender os fatores que influenciam os comportamentos sexuais de risco em estudantes do ES contribui para o desenvolvimento de programas de educação em sexualidade.

Prevalence of risky sexual behaviors and their relationship with the knowledge and attitudes of university students

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Ethical disclosures

Protection of human and animal subjects.

The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data.

The authors declare that the procedures followed were in accordance with the regulations established by the Commission for Clinical and Ethical Research and in accordance with the Helsinki Declaration of the World Medical Association.

This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

Right to privacy and informed consent.

The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

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Authors' contributions

Regina Alves conceived this study, collected the data, designed, carried out statistical analysis and wrote the final version. José Precioso e Elisardo Becoña revised the manuscript critically and contributed to the interpretation of data for the work. All authors contributed substantially to the interpretation of data, critical discussion and revision of the manuscript, and approved the final version.

Abstract

This study aimed to evaluate knowledge, attitudes and risky sexual behaviors among university students attending a University in Northern Portugal. For that purpose, we have used a transversal approach, applying a previously validated questionnaire, to a proportionately stratified sample, constituted by 840 university students. The analysis through questionnaire was divided between three different parts: knowledge about sexually transmissible diseases, attitudes towards sexually transmissible infections and the use of condom and risky sexual behaviors.

Results have shown that the majority of university students were sexually active and that risky sexual behavior with higher prevalence refers to the inconsistent use of the condom. The level of knowledge about sexually transmissible infections and the attitudes towards those infections and the use of condom were moderate. Any correlation between knowledge and attitudes was observed, however, the attitudes towards the use of condom accurately predict the risky sexual behaviors engaged upon by university students.

This study has shown that understanding the factors that influence risky sexual behaviors in the context of higher education contributes for the development of educational programs about sexuality.

Keywords: risky sexual behavior, sexually transmissible diseases, use of condom, perception of risk, multiple sexual partners, higher education.

1. Introduction

The stage of one's life that corresponds to the academic path represents an era of quick changes in the psycho-social development of young people. In this stage, youngsters typically experiment reinforced sensations and emotions which are reinforced by the concept of invulnerability granted by youth (Dutt & Manjula, 2017; Shiferaw et al., 2014), which, when put and acting together along with the concentration of peers and with the absence of paternal supervision (Des Rosiers et al., 2013), exposes young adults to behaviors which constitute a danger and a risk for their health, inlcuding sexual ones.

The most recent international data estimates that young people with age ranges between 15 and 24 years are responsible for half of the new sexually transmissible diseases (CDC, 2017b) and account for almost or nearly/around 33% of new HIV infections (UNAIDS, 2018). In Portugal, about 10% of all new infections, in 2017, occurred among young people of ages between 20 and 24, with sexual transmission being the most common way of contracting the disease (DGS & INSA, 2019). In this sense, the best way to substantially diminish the prevalence of Sexually Transmissible Illnesses (ISTs) continues to be the reduction of risky sexual behaviors (Gebresllasie et al., 2017; Yang et al., 2019), which is why it is important to fully comprehend or achieve a higher and better understanding of the predictive factors for this type of behavior(s).

In acordance with the findings stemming and arising from scientific investigations, including the most recent ones, and, although it is considered that students attending higher education are fully aware of the risks and preventive mechanisms of/for ITSs, the risky sexual behaviors are highly prevalent (Abiodun et al., 2014; Díaz-Cárdenas et al., 2014; Merki-Feld et al., 2018; Oppong Asante, 2013; Sherab et al., 2019; Shiferaw et al., 2014; Yang et al., 2019). These behaviors encompass initiating sexual activity at an early age, having multiple sexual partners, having sexual relations under the influence of alcohol or drugs and unprotected sex due to failure to use the condom.

Early sexual relations appear in the available scientific literature associated to a higher tendency to having multiple sexual partners and thus higher probabilities of contracting STIs, including HIV (Ma et al., 2009). Sexual relations with multiple partners display a high prevalence among students belonging to higher education, especially when combined with sexual relations carried out after the ingestion of alcohol (Agardh et al., 2011). Although the scientific evidence indicate that the consistent use of condom reduces up to 80% the risk of HIV infection (Weller & Davis-Beaty, 2002), unprotected sexual relations continue to be at the top in the list of risky sexual behaviors (Castro, 2016; Dolphin et al., 2018; Fairfortune et al., 2020; Folasayo et al., 2017; Golbasi & Kelleci, 2011; Hoffman et al., 2017; Kebede et al., 2018; Magalhães et al., 2016; Makgale & Plattner, 2017; Mavhandu-Mudzusi & Asgedom, 2016; Pastor & Rojas-Murcia, 2019; Perera & Abeysena, 2018; Santos et al., 2016; SaraçoĞlu et al., 2014; Shapiro et al., 1999; Xu et al., 2019).

Risky sexual behaviors may be attributed to various factors, among which a low level of knowledge about sexuality in general or negative attitudes towards STIs, or the use of condom. Although the cognitive factor may provide a basis for action (Abiodun et al., 2014; Oppong Asante, 2013), it will not by itself be enough, which means, a higher level of knowledge cannot necessarily guarantee a responsible and safe sexual behavior. Therefore, along with knowledge, attitudes are among the theoretical constructs that more accuratelly predict sexual behaviors (Fernández Rouco et al., 2018; Salam et al., 2016), functioning as facilitators for changes in sexual behavior.

Scientific research has shown that, in many societes, university students do not possess enough knolwedge about sexuality, namely ways of transmitting or preventing STIs (Chen et al., 2016; Dutt & Manjula, 2017; Elias et al., 2017; Evcili & Golbasi, 2017; Fernández Rouco et al., 2018; Mukherjee et al., 2019; Olubola, 2014; Oppong Asante, 2013; Soleymani et al., 2015).

This study aimed to analyze the knowledge about STIs, the attitudes towards STIs and those towards the use of condom and risky sexual behaviors among university students attending a University in Northern Portugal. Moreover, we intended to identify all possible existing correlations depending on the socio-demographic variables.

2. Methods

2.1. Population and sample

In the 2018/2019 academic year, 5447 students were enrolled in the 1st and 3rd year of higher education and integrated master's degree. Based on the data of the population, a stratified probabilistic sampling was carried out among univertsity students, in accordance with the year of study and the scientific area of study.

This is a cross-sectional observational study with a representative sample of university students (n = 840) of a univeristy in Portugal. The sample is composed of 464 students attending the 1st year (55,2%) and 302 students (36,0%) are enrolled in enrgineering courses. The majority of enquired students was female (55.4%), was not currently in a romantic affair (58.3%), had changed their residence after entering Higher Education (64.9%), was a full-time student (88.8%) and had an BMI corresponding to the normal weight (73.1%). The average age of the sample is 20.78 (DP = 4.221), varying between 18 and 54, with only 3% of students being 30 years-old or older.

2.2. Instruments

Nowadays there are multiple scientific instruments duely validated in order to efficiently monitor the prevalence of risky sexual behaviors in university students, such as the National Youth Risk Behavior Survey (CDC, 2017a). Similarly, we can also find in the scientific literature various scales developed to analyze the knowledge and attitudes about sexuality present in the

Handbook of sexuality-related measures (Davis et al., 1998). Therefore, in order to satisfy the purposes of the present study, we developed a questionnaire, in accordance with the procedures defined by Bowling (1998): building on the scale (1st stage); validation of content (2nd stage); psychometric validation (3rd stage).

A preliminary version of the instrument was reviewed by five researchers in the fields of health and science education and 12 university students to validate its content. A pre-test was then performed with a sample of 32 students to test for comprehension and difficulty, which was not included in the final sample.

In the questionnaire we included socio-demographic variables (sex, age, scientific area, academic year, weight and height (to calculate the BMI), romantic status, professional situation and current residence) and specific questions related to:

- Risky sexual behaviors: Having sexual relations; Age of the 1st sexual relation; Number of sexual partners in the last 12 months; Use of condom in the last 12 months; Having sexual relations after the ingestion of alcohol in the last 12 months;

- Knowledge about the STIs: scake of 6 items with the following answering options – True, False, I Don't Know.

- Attitudes related to the knowledge about risky sexual behaviors: scale composed by 5 items (Perception of STIs - 3 items and Perception regarding use of condom – 2 items) in a Likert scale of 5 points (1 – I totally disagree, 5 – I totally agree).

2.3. Procedures and statistical analysis

All students belonging to the courses selected for the stratitied sampling were personally invited to take part in the study. At the end of a class, randomly selected, belonging to the respective courses, the objectives of the study were presented and after informed consent the students filled a questionnaire in paper format, in the context of the classroom. The answer rate was of 96.2% (95% CI 94.8-97.6), 33 questionnaires were excluded because they hadn't been answerered or were incorrectly filled. This way, a total of 873 university students were invited.

This study was approved by the Ethics Committee for Research in Social and Human Sciences, of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

The data was analyzed by means of statistical software, namely IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, USA). The results show the analysis of the frequencies and the contingency tables, as well as the execution of tests of statistical inferece, such as Pearson's correlation, the Chi-Square test and independence tests such as *t-student* and single-directional unity (ANOVA). The linear generalized model was developed including only the variables which showed to have a statistically significant effect in the probability of resulting in risky sexual behaviors. A significance level of 0.05 was given.

Risky sexual behaviors were defined as: having had sexual relations at 16 years of age or less; having two or more sexual partners in the last 12 months; failing to always use condom during the sexual relation in the last 12 months; having sexual relations after the ingestion of alcohol in the last 12 months.

For the knowledge scale, the number of correct answers was added in order to provide us with a general figure for knowledge, which means that the higher the number in the scale, the higher the level of knowledge is.

The scale regarding perceptions of STIs made up of 3 items varies between 3 and 15 and the scale of perceptions of condom use is composed of 2 items, varying between 2 and 10, with the highest figure attributed to the sum of the items meaning the more negative the attitudes of university students will be regarding STIs and the use of condom.

3. Results

Results show that the majority of university students (65.6%) was sexually active, with a higher prevalence of sexually active students frequenting the 3rd year (73.4%) when compared to students in the 1st year (59.3%) ($\chi^2(1)=18.393, p=.000$). Moreover, we noted that at the moment of data-gathering the students that had a romantic relationship (91.9%) were more sexually active and students who had no romantic partner (46.3%) ($\chi^2(1)=186.081, p=.000$). We also found that students who worked and studied (87.1%) were also more sexually active than full-time students (62.8%) ($\chi^2(1)=21\text{-}603, p=.000$). (Table 1).

The students who initiated their sexual life at an early age corresponded to 39.5% of the sexually active students. No statistically significant differences were found between an early start of sexual relations and the socio-demographic characteristics of the enquired students.

Sexual relations with multiple partners was the risky sexual behavior with the lesser prevalence among sexually active students, even though 18.7% of university students had 2 or more sexual partners in the last 12 months. The students who were not in a romantic relationship (31.1%) and those who had changed residence after entering higher education (25.7%) were the ones who presented a higher proportion of multiple partners in comparison with the students who were in a romantic relationship ($\chi^2(1)=38.265, p=.000$) and were physically dislocated ($\chi^2(1)=10.623, p=.001$), respetively.

The unprotected sexual relations were carried out by the majority of sexually active students (60.1%). And about a third of the sexually active students revealed having already had sexual relations after the consumption of alcohol in the last 12 months (32.3%). We can conclude through the observation of table 1 that 3rd year students (37.8%) acknowledged this type of practice more frequently when compared with the 1st year students ($\chi^2(1)=7.689, p=.006$). Similarly, statistically significant differences were identified between sexual relations under the effect of alcohol and the variables sex, romantic partnership and residence.

Correlations between the different risky sexual behaviors demonstrated the following: early sexual relations with multiple partners (r_{sp}=.111,p<.01), unprotected sexual relations (r_{sp}=.103,p<.05) and sexual relations under the effect of alcohol (r_{sp}=.124,p<.01). Moreover, sexual relatons with multiple partners are positively correlated with sexual relations under the effect of alcohol (r_{sp}=.307,p<.01). Generally, university students displayed, on average, 1.50±1.071 risky sexual behaviors, with 57.1% of sexually active students referring 2 or more behaviors of this type and 17.8% of students referring engaging in no risky sexual behavior.

The level of knowledge about sexuaility was of 3.99±1.194 correct answers, varying between 0 and 6 correct answers, allowing us to conclude that university students display a moderate level of knowledge.

An analysis of table 2 indicated the existence of statistically significant difference between the level of knowledge and the scientific area of study, the professional situation and the practice of sexual relations under the effect of alcohol. In this sense, students attending courses in the area of exact and natural sciences, working-students and students who had sexual relations after ingesting alcohol posess a level of knowledge higher than that of students belonging to engineering sciences courses (Z(3,824)=3.590,p=.013), full-time students (t(818)=-2.046,p=.041) and those who reported not having engaged in that type of behavior (t(539)=-2.159,p=.031), respectively.

The perceptions of university students regarding STIs and the use of condom showed themselves to be moderate, with the average of scales being 6.54±2.162 and 5.44±1.800, respetively.

Regarding the perceptions of STIs, male students displayed a more negative level of perception regarding STIs when compared to female students (t(823)=2.156,p=.031) (Table 2). In what concerns the scale of perceptions towards use of condom, students who were attending the 3rd academic year displayed a higher average when compared to students in the 1st year (t(829)=-2.844,p=.005). This means that the first possess more unfavorable perceptions towards the use of condom. In the same sense, male students and students who were in a romantic partnerhsip, a higher average is shown in the scale of perceptions of when compared to female students (t(829)=4.676,p=.000) and to the students who were not in a romantic partnership (t(822)=3.850,p=.000).

Regarding sexual behaviors, sexually active students who, in the last 12 months, had unprotected sexual relations and engaged in sex after consuming alcoholic beverages displayed more unfavorable perceptions towards the use of condom when compared to students who never had sexual relations (t(829)=7.171,p=.000), those who did not have unprotected sexual relations (t(539)=-6.767,p=.000) nor under the effect of alcohol (t(540)=-2.203,p=.028).

In the model, the variables which had a statistically significant effect in the model were: Perceptions regarding the use of condom ($G^2(1)=30.541, p=.000$); being in a romantic partnership ($G^2(1)=6.135, p=.013$) and current residence ($G(1)=7.102, p=.008$) (Table 3).

The model accurately predicted that university students who had a romantic partnership and hadn't changed their residence after entering higher education had a lesser propensity towards engaging in risky sexual behaviors. Moreover, the more negative the perceptions regarding condom use, the greater the probability will be of students engaging in risky sexual behaviors.

4. Discussion

This study evaluated the knowledge, perceptions and risky sexual behaviors of students attending a university in Northern Portugal, demonstrating, based on the results and the discussion presented later on, the need for higher education institutions to develop socio-educational programs with education in sexuality content.

The results of this study corroborate the results of the national study done about the same topic (Santos et al., 2016) and, in the same way as in international studies, the majority of university students was sexually active (Fernández-Silva & Sánchez-Martínez, 2018; Kebede et al., 2018; Leon-Larios & Macías-Seda, 2017; Mavhandu-Mudzusi & Asgedom, 2016; Shapiro et al., 1999; Spindola et al., 2019; Villafañe-Ferrer & González-Navarro, 2017)

Generally, potentially risky sexual behaviors were reported by 82.2% of sexually active university students. This high level of prevalence of risky sexual behaviors is corroborated by the findings of recent studies carried out with students of Higher Education (Sherab et al., 2019; Yang et al., 2019), although a sistematic review of the literature with Ethiopian university students estimates a prevalence of 41.62% (Amare et al., 2019).

The majority of enquired individuals had started their sexual lives at 17 years of age or less, as in other investigations (Shapiro et al., 1999; Spindola et al., 2019; Villafañe-Ferrer & González-Navarro, 2017), showing that entering higher education tends to co-occur with the age of the first sexual experience or occurs during the academic path (Ma et al., 2009; Mavhandu-Mudzusi & Asgedom, 2016). On another note, it is necessary to point out that a minimum of about 40% university students reported already having had sexual relations before enrolling in university (Magalhães et al., 2016; Rodríguez Carrión & Isabel Traverso Blanco, 2012).

Although some studies (Mukherjee et al., 2019) demonstrate a tendency for boys to become sexually active at an earlier age than girls, the results obtained did not produce evidence of these differences (Mavhandu-Mudzusi & Asgedom, 2016; SaraçoĞlu et al., 2014).

The inconsistent use of condom during sexual relations was the analyzed risky behavior with the highest prevalence among university students. The ones enquired in this study, just like the univeristy students recently enquired in the context and scope of studies carried out by others, reported an inconsistent use of condom in the majority of sexual relations (Castro, 2016; Dolphin

et al., 2018; Fairfortune et al., 2020; Folasayo et al., 2017; Golbasi & Kelleci, 2011; Hoffman et al., 2017; Kebede et al., 2018; Magalhães et al., 2016; Makgale & Plattner, 2017; Mavhandu-Mudzusi & Asgedom, 2016; Pastor & Rojas-Murcia, 2019; Perera & Abeysena, 2018; Santos et al., 2016; SaraçoĞlu et al., 2014; Shapiro et al., 1999; Xu et al., 2019).

Sexual relations under the effect of alcohol in the last year were reported by 32.3% of university students, which, although comprising what can easily be considered a high prevalence, is lower than the majority of analyzed studies (18.9% - Makgale & Plattner, 2017; 25.20% - Mavhandu-Mudzusi & Asgedom, 2016; 27.1% - Gebresllasie et al., 2017; 39.9% - Magalhães et al., 2016; 33.0% - Santos et al., 2016; 55% - Villafañe-Ferrer & González-Navarro, 2017; 56.3% - Á. Castro, 2016; 56.8% - Leon-Larios & Macías-Seda, 2017; 64.2% - Golbasi & Kelleci, 2011).

Sexual relations with multiple partners is one of the most important factors associated to STIs (Chen et al., 2016), however, in the last 12 months, this risky behavior was reported by 18.7% of university students. Analogous results were shown in international studies (Ma et al., 2009; Mavhandu-Mudzusi & Asgedom, 2016; Peltzer et al., 2016; Yi et al., 2018), in which, for example, 12.9% of students reported having had more than one sexual partner in the last six months (Magalhães et al., 2016), 26.2% of the enquired ones reported having had two or more sexual partners in the three months prior to the study (Makgale & Plattner, 2017) and the majority had already had more than one sexual partner in their lives (Spindola et al., 2019). Other international studies showed higher percentages of sexual relations with multiple partners (59.3% - Golbasi & Kelleci, 2011; 64.4% - Kebede et al., 2018; 66.7 % - A. T. Folasayo et al., 2017). Although in the present study we did not specifiy the type of sexual partners, a national study showed that a considerable proportion of students reported having had sexual relations with occasional partners (32.0%) (Santos et al., 2016).

Although globally the gender of the enquired individuals does not predict the risky sexual behaviors (Makgale & Plattner, 2017), when they are analyzed separately, boys reported the practice of sexual relations after the ingestion of alcohol more frequently when compared to girls, and we found existing studies which provide similar data and evidence or results (Hoffman et al., 2017). In the same sense, contrary to what was to be expected, due to the fact that it was verified in various studies (Amare et al., 2019; Gebresllasie et al., 2017; Hoffman et al., 2017; Leon-Larios & Macías-Seda, 2017; Magalhães et al., 2016; Mavhandu-Mudzusi & Asgedom, 2016; Perera & Abeysena, 2018; Sherab et al., 2019; Yi et al., 2018), no statistically significant differences were identified in the use of condom and the number of sexual partners between girls and boys.

The current scientific investigations revealed other correlations, namely between unprotected sexual relations and sexual relations under the effect of alcohol (Castro, 2016; Magalhães et al., 2016) and between unprotected sexual relations and having multiple sexual partners (Makgale & Plattner, 2017; Sherab et al., 2019), although the data arising from the

present study does not corroborate these findings (Leon-Larios & Macías-Seda, 2017; Peltzer & Pengpid, 2015).

Students attending Higher Education displayed a moderate level of knowledge of STIs (Folasayo et al., 2017; Santos et al., 2016; Sohbet & Geçici, 2014; Soleymani et al., 2015; Villafañe-Ferrer & González-Navarro, 2017), showing a higher level of knowledge than the one registered in other studies (Chen et al., 2016; Dutt & Manjula, 2017; Elias et al., 2017; Evcili & Golbasi, 2017; Fernández Rouco et al., 2018; Mukherjee et al., 2019; Olubola, 2014; Soleymani et al., 2015). Even so, the results showed that a lot of that knowledge remains superficial and full of myths (Dutt & Manjula, 2017; Spindola et al., 2019; Xu et al., 2019). Mukherjee and colleagues (2019) refer that the fact that the main source of information is the group of peers could in part account for high indexes of wrong information transmitted.

Previous studies had already demonstrated that women had better knowledge (Folasayo et al., 2017; Fonte et al., 2018; Leon-Larios & Macías-Seda, 2017; Oppong Asante, 2013; Santos et al., 2016; SaraçoĞlu et al., 2014; Shu et al., 2016; Sohbet & Geçici, 2014), however, in the present study, we did not identify those differences, with the average of correct answers given by boys and girls being identical.

Unlike what was verified in other researches in this area (Evcili & Golbasi, 2017; Folasayo et al., 2017; Fonte et al., 2018; Oppong Asante, 2013; Sohbet & Geçici, 2014; Soleymani et al., 2015), in which it was determined that the level of knowledge increases with age, this associated was not identified (Leon-Larios & Macías-Seda, 2017).

Similarly to what was verified in the study by Santos, Ferreira and Santos (2016), the scientific area of study also influence the knowledge of students. In accordance wity these authors, those who have an education in the areas of life and health sciences displayed a higher level of knowledge. In the presente study, however, the students belonging to exact and natural sciences were the ones who displayed more knowledge about STIs.

The perceptions of STIs were moderate, as is consistently reported in the literature (Santos et al., 2016; Sohbet & Geçici, 2014). In this context, international scientific research and investigations reported that youngsters, in a general way, consider it unlikely to contract STIs or HIV (Amare et al., 2019; Haile et al., 2017; Olubola, 2014), which means that they indicated a low level of perception of the susceptibility to risk. Therefore, the programs for prevention of STIs in the academic context must continue to address STIs and their ways of transmission (Haile et al., 2017).

The average scores attributed to the perception of STIs among smale students was higher than those attributed to female ones (Evcili & Golbasi, 2017; Fernández-Silva & Sánchez-Martínez, 2018; Leon-Larios & Macías-Seda, 2017), showing perceptions considered to be more unfavorable towards these infections.

The perceptions regarding the use of condom, although also moderate, with an obtained average which was only slightly higher than the average point of the scale, implies unfavorable perceptions. As can be verified in the study carried out by Shapiro and colleagues (1999), university students tend to agree that the use of condom makes sexual relations less pleasant and that those who are in a stable and long-lasting relationship does not need to use a condom. In the same sense, more recente investigations report that many university students believed that condoms reduced pleasure during the sexual relation(s) (Mukherjee et al., 2019) and that the trust put on sexual partners and the stability of romantic relationships justified the absence of the use of condom (Pastor & Rojas-Murcia, 2019).

In accordance with a systematic review of the existing literature carried out by Kabwama and Berg-Beckhoff (2015), inconsistent results can be observed regarding the correlation between knowledge about HIV and the perception of risk among university students. And the other studies which explicit a lesser degree of knowledge concluided that this fact was directly associated to a higher prevalence of risky sexual behaviors (Li et al., 2017; Perera & Abeysena, 2018; Shapiro et al., 1999). This way, although knowledge is obviously essential for young people to make informed and responsible redicions, one cannot ignore their inability to understand the risk even when they possess a good or fair level of knowledge. And for that reason, in a general way, this study demonstrated that the level of knowledge is not directly correlated with the perceptions and risky behaviors (Dutt & Manjula, 2017; Xu et al., 2019).

As happened in previous studies (Santos et al., 2016; Yang et al., 2019), the perceptions regarding the use of condom were a prominent predictor of risky sexual behaviors. Moreover, it is necessary to consider and take into serious account the students who changed their residence at the time of enrolling in higher education and the students who are not in a romantic partnership or relationship, due to the fact that these groups of students have a higher probability of engaging in risky sexual behaviors.

Two limitations should be taken into account. Firstly, it should be noted that the data-gethering was carried out in only one university, and for that reason transversal data make it more difficult to generalize the data provided by other Portuguese universities. And, secondly, the data-gathering was carried out by resorting to the appliance of a self-report questionnaire and taking into account the sensible character of the topic, students may have over or under-reported their sexual behaviors in their accounts or answers.

5. Conclusions

Ther present study evaluated the knowledge and the perceptions of STIs and the risky sexual behaviors in the context of Higher Education. University students displayed a high prevalence of risky behaviors, such as unprotected sexual relations, those engaged upon under the effect of alcohol or with multiple sexual partners. The level of knowledge and the perceptions

about STIs and the use of condom was moedrate, although we did not detect any correlation between these variables.

Among the predictors, or predictive factors, variables such as the perceptions regarding the use of condom, having a romantic relationship or the current residence were statistically significant and directly correlated with the inconsistency of condom use, multiple sexual partners, practicing sexual relations after the ingestion of alcohol and early sexual relations.

This study made it possible to further undertstand the factors that constitute an influence towards risky sexual behaviors among higher education students, and to conclude that understanding those factors is indeed of invaluable importance, not only for their predictive character, but also because the development of educational programs on sexuality may significantly improve when these interactions are subject to scientific study and known. In this sense, the data gathered in this investigation reinforces the need for higher education institutions – also due to the fact that the beginning of sexual activity usually occurs during the academic period – to incorporate debates on sexuality, to inluce in their curricular componente actual educational content dealing specifically with the subject of sexuality and the prevention of STIs, in order to enable youngsters and young university students in general to make conscious and responsible decisions.

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Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability statement

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

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Table 1 – Prevalence and Chi-Square test of risky sexual behaviors depending on socio-demographic characteristics

		Being sexually active			Early sexual relations			Sexual relations with multiple partners			Unprotected sexual relations			Sexual relations under the effect of alcohol		
		f	%	*p*	*f*	%	*p*	*f*	%	*p*	*f*	%	*p*	*f*	%	*p*
Academic Year	1st year	275	59.3	***	109	41.1	ns	60	21.9	ns	166	60.8	ns	73	26.7	*
	3rd year	276	73.4		104	38.0		43	15.6		163	59.5		104	37.8	
Scientific Area	Engineering Sciences	191	63.2	ns	70	36.6	ns	25	13.0	ns	107	56.0	ns	66	34.7	ns
	Exact and Natural Sciences	80	58.8		31	40.8		15	18.8		45	56.3		19	23.8	
	Jurisdictional and Economic Sciences	94	71.2		43	46.7		22	23.7		64	68.8		30	32.3	
	Social and Human Sciences	186	68.9		69	38.3		41	22.2		113	61.7		62	33.5	
Sex	Male	259	69.1	ns	110	42.8	ns	52	20.2	ns	148	57.6	ns	94	36.7	*
	Female	292	62.8		103	36.5		51	17.5		181	62.4		83	28.4	
Age	< 20	185	52.1	***	77	42.5	ns	36	19.5	ns	102	55.4	ns	46	25.0	**
	>= 20	366	75.5		136	38.0		67	18.4		227	62.5		131	36.0	
Romantic relationship	Yes	319	91.9	***	126	40.5	ns	32	10.1	***	197	61.9	ns	92	28.9	*
	No	225	46.3		86	38.9		70	31.1		128	57.7		83	37.2	
Residence	Dislocated	202	69.4	ns	74	37.4	ns	52	25.7	***	119	59.2	ns	87	43.3	***
	Not dislocated	340	63.3		134	40.4		49	14.5		203	60.2		88	26.0	
BMI	Low weight	33	56.9	ns	13	41.9	ns	6	18.2	ns	20	60.6	ns	8	24.2	ns
	Normal weight	388	64.8		143	37.7		77	19.8		235	60.7		133	34.4	
	Excessive weight	117	72.2		53	45.7		20	17.2		68	59.1		33	28.7	
Professionl situation	Full-time student	464	62.8	***	176	38.4	ns	87	18.8	ns	265	57.5	**	151	32.7	ns
	Working-student	81	87.1		35	46.1		16	20.0		61	76.3		25	31.3	
	Total	551	65.6		213	39.5		103	18.7		329	60.1		177	32.3	

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$; ns – not significant

Table 2 – Average, pattern deviation and independence tests (ANOVA and t-student) for the socio-demographic characteristiscs and the risky sexual behaviors depending on the knowledge about STIs and the perception of STIs and condom use

		Level of knowledge about STIs			Perception of STIs			Perception of the Use of Condom		
		M	*DP*	*p*	*M*	*DP*	*p*	*M*	*DP*	*p*
Academic Year	1st year	4.03	.056	ns	6.53	2.119	ns	5.28	1.767	**
	3rd year	3.94	.061		6.55	2.216		5.64	1.823	
Scientific Area	Engineering Sciences	3.82	.076	*	6.59	2.237	ns	5.75	1.672	**
	Exact and Natural Sciences	4.18	.089		6.27	1.989		5.23	1.710	*
	Jurisdictional and Economic Sciences	4.07	.102		6.57	2.165		5.44	1.930	
	Social and Human Sciences	4.04	.070		6.60	2.159		5.19	1.871	
Sex	Male	3.91	.065	ns	6.72	2.268	*	5.76	1.721	**
	Female	4.05	.053		6.39	2.062		5.18	1.822	*
Age	< 20	4.01	.063	ns	6.52	2.063	ns	5.13	1.752	**
	>= 20	3.97	.055		6.56	2.234		5.67	1.802	*
Romantic Relationship	Yes	4.09	.062	ns	6.49	2.214	ns	5.72	1.939	**
	No	3.93	.055		6.57	2.138		5.23	1.675	*
Residence	Dislocated	3.98	.069	ns	6.43	2.067	ns	5.45	1.770	ns
	Not dislocated	4.01	.052		6.57	2.190		5.42	1.824	
BMI	Low weight	4.10	.147	ns	6.23	1.832	ns	5.53	1.670	ns
	Normal weight	3.98	.048		6.53	2.112		5.43	1.818	
	Excessive weigt	4.01	.099		6.76	2.418		5.56	1.769	
Professional situation	Full/time student	3.96	.045	*	6.54	2.140	ns	5.41	1.781	ns
	Working student	4.23	.105		6.57	2.312		5.73	1.973	
Being sexually active	Yes	4.04	.051	ns	6.53	2.203	ns	5.75	1.892	**
	No	3.89	.071		6.56	2.085		4.84	1.432	*
Early sexual relations	No	4.05	.063	ns	6.55	2.084	ns	5.62	1.787	ns
	Yes	4.02	.089		6.55	2.381		5.94	2.000	
Sexual relations with multiple partners	No	4.04	.055	ns	6.44	2.204	ns	5.69	1.871	ns
	Yes	4.08	.124		6.90	2.182		6.04	1.970	
Unprotected sexual relations	No	4.12	.076	ns	6.55	1.997	ns	5.11	1.657	**
	Yes	4.00	.068		6.54	2.329		6.19	1.917	*
Sexual relations under the effect of alcohol	No	3.97	.065	*	6.54	2.321	ns	5.63	1.806	*
	Yes	4.21	.079		6.49	1.936		6.01	2.050	
	Total	3.99	1.194		6.54	2.162		5.44	1.800	

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$; ns – not significant

Table 3 - Adjusted odds ratio (OR) and confidence intervals of 95 (CI) of the linear generalized model for predicting risky sexual behaviors

		B	Error	χ^2 Wald	df	*p*	Exp(B)	95% CI	
Intercept		.795	.1592	24.936	1	.000	2.214	1.621	3.024
Romantic relationship	Yes	-.229	.0924	6.135	1	.013	.795	.664	.953
	No	0[a]					1		
Current residence	Dislocated	.251	.0941	7.102	1	.008	1.285	1.069	1.545
	Not dislocated	0[a]	.	.	.	.	1	.	.
Perception of Condom Use		.132	.0239	30.541	1	.000	1.141	1.089	1.196

[a] Reference category
OR: odds ratio; 95 CI: 95 confidence interval

8. ESTUDO 8: CONHECIMENTOS, ATITUDES E COMPORTAMENTOS PREVENTIVOS EM RELAÇÃO AO COVID-19: UM ESTUDO COM ESTUDANTES DO ENSINO SUPERIOR EM PORTUGAL [11]

Referência bibliográfica:

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Resumo

Enquadramento: Inúmeras inconsistências científicas foram registadas desde a emergência da COVID-19, contribuindo para a criação de mitos e desinformação. Pois, a falta de conhecimentos acerca da forma de transmissão ou dos sintomas pode aumentar a exposição das pessoas ao vírus. E, para além disso, as atitudes positivas face a doenças constituem, na maioria das vezes, preditores de comportamentos protetores de saúde.

Objetivo: O objetivo deste estudo foi avaliar conhecimentos, atitudes e comportamentos acerca do COVID-19 entre estudantes portugueses/as do ES.

Métodos: Em maio de 2020, todos/as os/as estudantes de uma Universidade portuguesa foram convidados/as a participar no preenchimento de um questionário online. Participaram 262 estudantes. Foram avaliados o conhecimento relacionado ao COVID-19, as atitudes em relação ao COVID-19 e os comportamentos preventivos. As diferenças entre os resultados e os dados sociodemográficos foram analisadas por meio de testes t independentes e da ANOVA. Um modelo linear generalizado foi calculado para determinar as variáveis preditivas dos comportamentos preventivos.

Resultados: Os/as estudantes revelaram bons conhecimentos sobre o COVID-19, acertando 13,06 (DP = 1,25) questões em um total de 14 e atitudes favoráveis aos comportamentos preventivos (M = 32,73, DP = 2,88). Os/as estudantes relataram sempre, em média, 5,81 (DP = 2,61) dos 12 comportamentos analisados. O sexo feminino apresentou maior nível de conhecimento, atitudes mais positivas e mais comportamentos preventivos do que o masculino. Ser licenciado/a (Exp (β) = 8.213, IC 95%: 1.791–

[11] No âmbito deste artigo realizaram-se uma publicação em jornal local e uma comunicação: **1)** Precioso, J., Alves, R. &, Samorinha, C. *Que comportamentos adotam os estudantes universitários face à prevenção da COVID-19?,* Diário do Minho, 24 Out 2020 e **2)** no 7º Congresso Internacional de Saúde: contextos e problemáticas emergentes. Instituto de Educação da Universidade do Minho, Braga, Portugal. 7 a 9 de Outubro de 2020 (intitulada "Conhecimentos, atitudes e comportamentos face à COVID-19 em estudantes do Ensino Superior").

37.670, p <0.01) ou estudante de mestrado (Exp (β) = 7.568, IC 95%: 1.598–35.835, p < 0.05) e ter atitudes positivas em relação ao comportamento preventivo de COVID-19 previram a adoção desses comportamentos preventivos (Exp (β) =1.340, IC de 95%: 1.189-1.510, p <0.001).

Conclusões: Este estudo fornece dados úteis para o planeamento de programas de educação em saúde sobre o COVID-19 entre estudantes do ES. O investimento contínuo das universidades em campanhas preventivas é fundamental para a promoção de bons comportamentos preventivos no próximo ano letivo.

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Knowledge, attitudes and preventive behaviors toward COVID-19: a study among higher education students in Portugal

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Abstract

Purpose – The purpose of this study was to assess knowledge, attitudes and behaviors about COVID-19 among Portuguese higher education students.

Design/methodology/approach – In May 2020, all students from a Portuguese University were invited to participate in completing an online questionnaire. A total of 262 students participated. COVID-19 related knowledge, attitudes toward COVID-19 and preventive behaviors were assessed. Differences between outcomes and sociodemographics were analyzed through independent *t*-tests and the ANOVA. A generalized linear model was calculated to determine the predictive variables of preventive behaviors.

Findings – Students revealed good knowledge about COVID-19, correctly answering 13.06 (SD = 1.25) questions in a total of 14 and favorable attitudes toward preventive behaviors ($M = 32.73$, SD = 2.88). Students reported always engaging in, on average, 5.81 (SD = 2.61) of the 12 behavior analyzed. Females presented higher levels of knowledge, more positive attitudes and engaged in more preventive behaviors than males. Being a bachelor's (Exp (β) = 8.213, 95% CI: 1.791–37.670, $p < 0.01$) or a master's degree student (Exp (β) = 7.568, 95% CI: 1.598–35.835, $p < 0.05$) and having positive attitudes toward preventive behavior of COVID-19 predicted the adoption of those preventive behavior (Exp (β) = 1.340, 95% CI: 1.189–1.510, $p < 0.001$).

Originality/value – This study provides useful data to plan health education programs about COVID-19 among higher education students. The continuous investment by universities in preventive campaigns is essential to promote good preventive behaviors in the next academic year.

Keywords Coronavirus infections, Health knowledge, Risk reduction behavior, University students, COVID-19

Paper type Research paper

Introduction

The coronavirus disease 2019 (COVID-19) was declared a pandemic by the WHO on March 11th 2020 due to its high rate of infection which caused thousands of deaths worldwide and

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continues to expand [1]. The transmission route of COVID-19 is made directly between humans through droplets and respiratory secretions and indirectly through contact with contaminated surfaces and can also be transmitted by asymptomatic individuals. The main symptoms of the disease are essentially fever, dry cough and tiredness. Based on epidemiological investigations, the incubation period is 1–14 days. The elderly and chronically ill are at the highest risk of COVID-19 infection [2].

To control the pandemic, almost all countries have implemented public measures which included population behavior restrictions such as border closures, social isolation and school closures among other measures. Similar to other countries, the main individual protection measures adopted and recommended in Portugal and widely disseminated among the population were the use of a mask in indoor public places and public transportation; hand washing (with soap) and maintaining physical distance [3].

A community that is informed about the modes of transmission of the virus and how the exposure can occur, about the symptoms and the use of personal protective equipment among other topics is more prone to develop positive attitudes toward preventive measures, which, in most cases, is a predictor of the adherence to preventive health behaviors, thereby diminishing the spread of the virus. These assumptions are based on two of the most used models in health psychology: the health belief model [4], which assumes that the perceived susceptibility and severity of disease (risk perception), the perceived benefits and barriers related to prevention and treatment behaviors determine the health behaviors adopted and the theory of planned behavior [5], highlighting the importance of the attitudes toward the behavior to the formation of an intention to perform that action.

Emerging adulthood as a stage of life, in which higher education students are included, corresponds to a stage of learning and personality development, in the cognitive, physical, affective, sexual, family and social domains [6]. However, scientific evidence reveals a high prevalence of health risk behaviors among university students [7] which tend to persist throughout life and to have a considerable long-term impact on their health and well-being [8]. Moreover, university students should be regarded as emerging developmental agents, based on the belief that they have privileged knowledge due to their academic background and, consequently, own the power to influence a population's health. This can be exerted either through their individual choices, through hypothetical future occupations which imply responsibilities in building health policies or decision-making processes about them [9–11]. These emerging adults are, in this context, responsible for opening a range of preventive alternatives to society based on knowledge transmission and the adoption of protective attitudes toward potential infectious diseases.

The study aimed to identify the knowledge, attitudes and preventive behaviors of COVID-19 among higher education students in Portugal and to analyze the predictors of the adoption of those preventive behaviors.

Methods

Participants and procedure

This was a cross-sectional observational study. An online questionnaire was purposely developed and made available through Google Forms between 7th and 17th May 2020. All students enrolled in the academic year 2019/2020 at the University of Minho (Braga, Portugal), in any of the educational levels (bachelor's, master's or PhD) were eligible and were invited to participate in the study. The invitation was sent by e-mail to the institutional e-mails used by the students. At the University of Minho, all the enrolled students have access to their institutional e-mails, so they all received an invitation. In these e-mails, information about the objectives of the study as well as the ethical guarantee of confidentiality and anonymity in the data collected as stated in the informed consent were explained. Participation was completely

free and voluntary, and no personal data were collected from any participant. Of the 19632 enrolled students, a total of 262 higher education students participated in the study (response rate: 0.013%).

Instruments

The questionnaire was developed based on a literature review including (1) information provided by and guidelines from the Health Authorities (Portuguese General Health Directorate and World Health Organisation) regarding COVID-19 and (2) studies already performed on the same topic in other countries where several common items were used to assess each of the dimensions analyzed in this study. The proposed items were then grouped, and redundant items were removed.

A preliminary version of the instrument was reviewed by two researchers in the fields of health and science education to validate its content. A pre-test was then performed with a small sample of higher education students to test for comprehension and difficulty. All the questions remained without modifications. The psychometric characteristics of the questionnaire were tested, as described in the statistical analysis subsection.

The final version of the questionnaire contained 43 questions; four about sociodemographic data (sex, educational level, scientific area and professional status) and 39 items divided into three sections (Appendix 1).

COVID-19-related knowledge: this scale consisted of 14 statements related to the symptoms of COVID-19, the modes of transmission, the use of personal protective equipment, hand washing, disinfection and exposure to the virus. The participants were asked to respond if they considered those statements as "True", "False" or "I don't know". One point was assigned to each correct answer, while providing an incorrect answer or responding "I don't know" received 0 points. The sum of all items was made hence higher scores corresponded to a higher level of knowledge. Cronbach's alpha for the scale calculated with the sample of this study was acceptable ($\alpha = 0.663$).

Attitudes toward COVID-19: this scale was composed of 12 items, and the response categories consisted of a five-point Likert scale (from 1–strongly disagree to 5–agree), with the highest score corresponding to more positive attitudes toward preventive behaviors. Some items on the scale were inverted for the analysis. The exploratory factor analysis extracted two factors for this scale which were designated according to their content as "Attitudes toward preventive behaviors" and "Attitudes toward risk perception" and explained 51.46% of the total variability. The coefficient of internal consistency for each factor was acceptable ($\alpha = 0.725$ and $\alpha = 0.509$, respectively). A sum of all the items within each factor was made to obtain a score. The "Attitudes toward preventive behaviors" factor consisted of seven items and varied from 7 to 35, with the highest score corresponding to more positive attitudes toward preventive behaviors. The "Attitudes toward risk perception" factor included five items in a range between 5 and 25 and the higher values corresponded to a greater perception of risk.

Preventive behavior: this scale referred to the number of preventive behaviors adopted and included 13 items (personal protective equipment, physical distance, hand washing, disinfection and exposure to COVID-19). The data analysis reports to 12 items because the two items related to the use of a mask were grouped (use of either a surgical mask or a community mask). Each item was answered using a five-point scale (From 1–Never to 5–Always), with one point assigned to each behavior that was always practiced. The number of behaviors practiced was added up. A high score on this scale indicated good preventive behaviors, ranging from 0 to 12. The internal consistency of the scale was $\alpha = 0.711$.

Statistical analysis

The analysis was performed using IBM Statistical Package for the Social Sciences *Statistics for Windows*, version 26.0, Armonk, NY, USA. In order to analyze the psychometric

characteristics of the scales, an exploratory factor analysis, using principal component analysis with varimax rotation, was carried out. An item was disregarded if the factor loading was lower than 0.4. Afterward, reliability was analyzed through the calculation of item-total correlation coefficients and Cronbach's alpha (α) for the scales of the questionnaire. The descriptive analyses were presented in absolute (n) and relative (%) frequencies, mean (M) and standard deviations (SD). To assess the differences between the outcome variables (knowledge, attitudes and behaviors toward COVID-19) and the sociodemographic characteristics, considering the sample size, independent t-tests and the ANOVA were used, as appropriate. The correlations between the outcomes of the study were calculated by Pearson's correlation. Lastly, a generalized linear model was calculated to determine the predictive variables of the preventive behaviors. Exp (β) and the respective 95% confidence intervals (95% CI) were presented. Statistical significance was defined as $p < 0.05$.

Ethical considerations

This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH) of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

Results

This study comprised a total of 262 higher education students. The sociodemographic characteristics of the sample are presented in Table 1. Most higher education students were female ($n = 206$, 78.4%) and full-time students ($n = 195$, 76.8%). 158 students were registered for a bachelor's degree course (60.3%), 94 students were in master's degree programs (35.9%) and 10 respondents were Ph.D. students (3.8%). The highest number of students were studying human and social sciences ($n = 124$, 47.5%), followed by engineering sciences ($n = 57$, 21.8%) and law and economic sciences ($n = 57$, 21.8%).

Students revealed a good level of knowledge about COVID-19, correctly answering a mean of 13.06 ($SD = 1.25$) questions in a total of 14. The item "Loss of smell is a symptom of COVID-19" had the lowest proportion of correct responses (59.9%). There were differences in the level of knowledge according to the sex of the students: female students showed a higher level of knowledge compared to male students ($M = 13.15$, $SD = 0.98$ vs $M = 12.75$, $SD = 1.91$, respectively; $t\,(252) = -2{,}121$, $p < 0.05$) (Table 1).

Concerning attitudes toward COVID-19, students showed in general highly favorable attitudes toward preventive behavior ($M = 32.73$, $SD = 2.88$), these being higher among females ($M = 33.04$, $SD = 2.19$) than males ($M = 31.55$, $SD = 4.43$) ($t\,(252) = -3.507$, $p < 0.001$). The perception of risk among university students was moderate ($M = 16.82$, $SD = 2.97$), differing by sex: females showed a higher perception of risk than males ($M = 17.10$, $SD = 2.74$ vs $M = 15.79$, $SD = 3.56$, respectively; $t\,(252) = -2.981$, $p < 0.01$) (Table 1).

Regarding behaviors, considering the 12 preventive behavior studied, students reported always engaging in, on average, 5.81 ($SD = 2.61$) of these behavior. An analysis by sex showed that females more frequently engaged in preventive behavior than males ($M = 6.01$, $SD = 2.59$ vs $M = 5.09$, $SD = 2.60$, $t\,(260) = -2.358$, $p < 0.05$). In addition, Ph.D. students exhibited a lower number of preventive behavior ($M = 3.70$, $SD = 2.71$) compared to master's students ($M = 5.93$, $SD = 2.32$) and bachelor's students ($M = 5.88$, $SD = 2.73$) ($Z\,(2.259) = 3.473$, $p < 0.05$).

The analysis of the correlations between the outcomes of the study – knowledge, attitudes and behaviors – revealed the existence of positive and statistically significant correlations between the preventive behaviors and knowledge related to COVID-19 ($r = 0.241$, $p < 0.01$),

Table 1.
Differences in outcomes according to the sociodemographic characteristics of participants ($N = 262$)

Sociodemographic characteristics	*n* (%)	COVID-19 related knowledge (Range 0–14) *M* (SD)	*t/F* value	Attitudes toward preventive behaviors (Range 7–35) *M* (SD)	*t/F* value	Attitudes toward risk perception (Range 5–25) *M* (SD)	*t/F* value	Preventive behavior (Range 0–12) *M* (SD)	*T/F* value
Sex									
Male	56 (21.37)	12.75 (1.91)	−2.121*	31.55 (4.43)	−3.507***	15.79 (3.56)	−2.981**	5.09 (2.60)	−2.358*
Female	206 (78.63)	13.15 (0.98)		33.04 (2.19)		17.10 (2.74)		6.01 (2.59)	
Educational level									
Bachelor	158 (60.31)	12.97 (1.42)	1.297	32.61 (3.27)	0.956	16.74 (2.99)	0.145	5.88 (2.73)	3.473*
Master	94 (35.88)	13.16 (.92)		33.00 (2.09)		16.95 (3.06)		5.93 (2.32)	
Ph.D	10 (3.82)	13.50 (.71)		31.90 (2.73)		16.90 (1.97)		3.70 (2.71)	
Scientific area									
Engineering sciences	57 (21.84)	13.05 (0.93)	1.414	32.67 (2.38)	0.383	16.63 (3.25)	1.885	5.26 (2.57)	1.086
Exact and natural sciences	14 (5.36)	13.43 (0.65)		32.93 (1.33)		16.14 (2.32)		6.36 (1.82)	
Law and economic sciences	57 (21.84)	13.00 (1.00)		32.44 (2.63)		17.65 (2.50)		5.81 (2.54)	
Health sciences	9 (3.45)	13.89 (0.33)		33.44 (2.19)		15.44 (4.98)		6.56 (2.19)	
Human and social sciences	124 (47.51)	13.00 (1.52)		32.87 (3.29)		16.72 (2.89)		5.98 (2.75)	
Professional situation									
Full time student	195 (76.77)	13.05 (1.31)	−0.206	32.66 (2.83)	−0.802	16.82 (2.85)	0.209	5.85 (2.51)	0.564
Worker/student	59 (23.23)	13.08 (1.09)		33.00 (3.07)		16.73 (3.26)		5.63 (2.94)	
Total	262 (100.00)	13.06 (1.25)		32.73 (2.88)		16.82 (2.97)		5.81 (2.61)	

Note(s): *M*, mean; *SD*, standard deviation; *Z*, ANOVA test value
***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

the attitudes toward preventive behaviors ($r = 0.389$, $p < 0.01$) and the risk perception ($r = 0.130$, $p < 0.05$). These two last variables were also intercorrelated (Table 2).

Results from the generalized linear model indicated that the educational level and the attitudes toward preventive behaviors had a statistically significant effect on the preventive behaviors adopted. Thus, being a bachelor's (Exp (β) = 8.213, 95% CI: 1.791–37.670, $p < 0.01$) or a master's student (Exp (β) = 7.568, 95% CI: 1.598–35.835, $p < 0.05$) and having positive attitudes toward preventive behavior of COVID-19 predicted the adoption of those preventive behavior (Exp (β) = 1.340, 95% CI: 1.189–1.510, $p < 0.001$) (Table 3).

Discussion

The results regarding the COVID-19-related knowledge revealed a good understanding of the symptoms of COVID-19 as well as its preventive measures and recommendations. Previous studies among higher education students revealed good knowledge about this pathology [12–15]. However, whilst previous studies were mainly pertaining to medical students, our sample mostly comprised students in the human and social science fields. Thus, although we could expect lower levels of knowledge among students of non-health-related fields, this was not verified in our results. For example, the study by Alzoubi and colleagues [12] showed the inexistence of differences in COVID-19 knowledge between medical and non-medical colleges. Other research with students from diverse scientific areas revealed only average levels of knowledge about coronavirus infections [16, 17].

Although we have not collected data about the sources of information used by the students, based on the above we can hypothesize that knowledge about COVID-19 may

Variables	Preventive behavior	COVID-19-related knowledge	Attitudes toward preventive behaviors	Attitudes toward risk perception
Preventive behavior	1			
COVID-19-related knowledge	0.241**	1		
Attitudes toward Preventive behavior	0.389**	0.503**	1	
Risk perception	0.130*	0.180**	0.270**	1

Note(s): **$p < 0.01$; *$p < 0.05$

Table 2. Pearson's correlation coefficient between the study outcomes

		β	SE	χ^2 wald	df	p	Exp (β)	95% CI	
Intercept		−8.064	2.0844	14.969	1	0.000	0.000	5.291E-6	0.019
Sex	Male	−0.449	0.3688	1.479	1	0.224	0.639	0.310	1.316
	Female	0[a]							
Educational level	Bachelor	2.106	0.7771	7.342	1	0.007	8.213	1.791	37.670
	Master	2.024	.7934	6.507	1	0.011	7.568	1.598	35.835
	Ph.D	0[a]							
COVID-19-related knowledge		0.165	0.1369	1.444	1	0.230	1.179	0.901	1.542
Attitudes toward Preventive behavior		0.293	0.0611	22.904	1	0.000	1.340	1.189	1.510
Risk perception		0.015	0.0515	0.086	1	0.770	1.015	0.918	1.123

Note(s): [a]Reference category
OR: odds ratio; 95% CI: 95% confidence intervals; AIC = 1209.358; χ^2 (6) = 52.434, $p < 0.001$

Table 3. Generalized linear model predicting preventive behaviors of COVID-19

have been acquired outside the academic context. Previous studies [12, 18] showed that the commonest sources of information about COVID-19 for university students are the media [14, 18, 19] and social networks. These sources were followed by the WHO, TV, the Internet, the Ministry of Health and friends [12, 18]. This aspect shows the importance of the internet in conducting health education campaigns aimed at higher education students [14, 20], namely the websites from the different national [3] and international health authorities [2, 21]. Official announcements released by governments [18] were also among the main sources of information for university students. The study carried out by Yang and colleagues [18] showed that 95% of the students surveyed obtained information about COVID-19 in government press releases and revealed confidence in that information.

This study also showed that students have positive attitudes regarding how people should behave toward COVID-19, similar to other international studies [12, 14–16] and reflected the correct way to prevent infection by COVID-19, such as careful hand washing and disinfecting surfaces and objects. Assad and colleagues [14] identified a high prevalence of university students who said they were afraid of the possibility of a family member contracting MERS-CoV (Middle East Respiratory Syndrome), a viral respiratory disease also caused by a coronavirus. In the present study, the fear of having a family member infected by the virus, which was evaluated through the attitudes toward risk perception, was moderate, as observed in other studies [13].

Contrary to international scientific evidence [12, 13, 18], it is not possible to affirm that higher education students have good preventive behaviors against COVID-19 since there were behaviors – such as the need for social distancing or disinfection of footwear and purchased products – that were not highly prevalent.

Bivariate analyses revealed sex differences regarding the main variables with females' scores systematically higher than males' scores. This is aligned with the "men's health-gap" revealing that globally, health outcomes are substantially worse among men than women [22]. Due to social constructions of masculinity, males are more unwilling and lack the motivation to search for health-related information [23], moreover, traditional masculinity is associated with risky behaviors and less utilization of preventive health care [24].

In addition, one of the most important results of this study refers to the positive and significant correlation between preventive behavior and the perception of risk. As previously shown in other health-related behaviors such as smoking, perceiving them as risky is related to a reduced intent to adopt unhealthy behaviors [25]. In this case, as risk perception increases, preventive behaviors also increase. In the study by Yang and colleagues [18], the increase in risk perception led most students to adopt greater compliance with preventive practices. This suggests that the students who most fear the virus will protect themselves the most. This result contrasts with the results of the study by Chen and colleagues [26], in which the two variables were negatively correlated. Also in line with the theories of health behavior studied by Ajzen [5], this study showed that having positive attitudes toward preventive behaviors predicted the adoption of those preventive behaviors which highlight the relevance of including these dimensions in awareness campaigns aimed at promoting attitudes to increase healthy behaviors. The fact that bachelor's and master's students were more prone to engage in preventive behaviors than Ph.D. students, who constituted a small part of our sample (n = 10; 3.82%), can be considered a surprising outcome, taking into account we expect the same or a higher level of information among these students, and thus higher levels of adoption of the recommended behaviors. This result would benefit from a qualitative study to complement this quantitative work and would help to capture and understand how people make meaning and sense of this health dimension [27].

Limitation

First, the data collected with the use of an online platform can result in some bias, particularly in the knowledge scale since there is no guarantee that students have not searched for answers in any resource. Being aware of this possibility, this was the best way to develop this study due to the confinement restrictions experienced. Moreover, by making it possible for students to have sought answers to questions of knowledge, the social impact of this study may have been worthwhile, considering that, according to the results obtained, knowledge about COVID-19 correlates positively with preventive behaviors. In addition, the preventive behaviors were self-reported so may not reflect exactly how the students behave. Lastly, this study was carried out at a single university. Although the University of Minho welcomes students from diverse regions of the country as well as foreign students from various countries, and its academic courses offer a wide range of scientific fields, the fact that only a small proportion participated in the study implies that the generalizability of data to other Portuguese university students should be made with caution. However, we may hypothesize that the wide exposure to national and international media coverage of this topic contributed to similar levels of knowledge among students from different universities.

Conclusions

This study revealed a good knowledge level about COVID-19 among higher education students in Portugal and indicated positive attitudes toward preventive behaviors, moderate risk perception and a moderate adoption of preventive behaviors. Moreover, it reinforces that a high-risk perception is associated with practicing preventive behaviors and that having positive attitudes toward preventive behaviors is a main determinant of these behaviors. Thus, this study can provide policymakers with relevant cues to help plan health education programs at universities, promoting preventive behaviors and reducing the spread of the virus. As supported by Bokadia and Ganapathy [16], health education programs about the coronavirus should be promoted to reinforce knowledge and attitudes that will positively influence the behaviors adopted. The provision of reliable information by the institutions with consideration for the specific target audiences [28] is essential to increase individuals' confidence. Finally, investment in the creation of a health-promoting environments in universities which promotes citizens' trust regarding the safety of using public spaces, by offering, for example, disinfectant gel, regulating the use of masks and organizing the spaces to guarantee the required physical distancing [3] is fundamental to promote behavior adherence.

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(The Appendix follows overleaf)

Appendix 1
Questionnaire items about COVID-19 related knowledge, attitudes toward COVID-19 and preventive behavior

COVID-19 Related Knowledge
1. Sneezing or coughing into the forearm helps to reduce exposure and transmission of COVID-19. - T
2. The use of a face mask does not help prevent COVID. – F
3. Maintaining a safety distance of at least 2 meters is essential to avoid infection with COVID-19. - T
4. Measures to prevent the spread of the disease include frequent hand washing. – T
5. COVID-19 can be transmitted through contact with contaminated surfaces and objects. - T
6. The people most at risk of serious COVID-19 disease are the elderly and people with chronic illnesses. - T
7. Young people are not at risk of being infected with the COVID-19 virus. - F
8. COVID-19 is the same as the seasonal flu. - F
9. Loss of smell is a symptom of COVID-19. - T
10. It is possible to be infected with COVID-19 and not have any symptoms. - T
11. All confirmed cases of COVID-19 require hospitalization. - F
12. Cough, fever, or shortness of breath are the main symptoms of COVID-19. - T
13. COVID-19 is only transmitted by close contact with infected people. - F
14. It is possible to contract COVID-19 by contact with contaminated objects. - T
Attitudes towards COVID-19
Attitudes towards preventive behaviors
1. The use of personal protective equipment should be a personal decision.
2. The use of protective equipment helps to prevent infection.
3. The use of a mask should be mandatory in all closed public places, for example, in supermarkets.
4. Careful handwashing is important to prevent contagion by COVID-19.
5. It is important to wash/disinfect surfaces and objects that may be contaminated.
6. The permanence in public spaces should be more restricted.
7. It is acceptable to have symptoms of COVID-19 and to walk on the street.
Attitudes towards risk perception
1. I have confidence in the Health Authorities.
2. I feel safe because I use appropriate protective measures.
3. I feel insecure if I have to go to university.
4. I am afraid of contracting COVID-19.
5. I am afraid that a family member or friend will contract COVID-19.
Preventive Behaviours
1. I wear a protective surgical mask indoors.
2. I wear a community protective mask ("homemade") in indoor public places.
3. I put on a face mask as soon as I leave the house.
4. I wear disposable gloves indoors.
5. I wear a visor in indoor public places.
6. When I am talking to someone, I maintain a safe distance.
7. When I am walking or doing sports outdoors, I maintain a safe distance.
8. I avoid social interactions that requires physical proximity.
9. I wash my hands according to the guidelines of the General Directorate of Health.
10. I use alcohol or hand sanitizer.
11. I disinfect and/or change my shoes when I get home.
12. I disinfect the products I buy.
13. I disinfect objects such as door handles, taps, or handrails in my home.
Note(s): T – True; F - False

Table A1.
Questionnaire items about COVID-19 Related Knowledge, Attitudes towards COVID-19, and Preventive Behaviours

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9. ESTUDO 9: RELAÇÃO ENTRE CONHECIMENTOS E ATITUDES RELACIONADAS COM A SAÚDE E COMPORTAMENTOS DE RISCO PARA A SAÚDE EM ESTUDANTES UNIVERSITÁRIOS PORTUGUESES [12]

Referência bibliográfica:

Alves, R. (em revisão). The Relationship between health-related knowledge and attitudes, and health risk behaviors among Portuguese university students.

Resumo

Enquadramento: Vários estudos têm analisados os conhecimentos, as atitudes e os comportamentos em diferentes áreas da saúde dos/as estudantes universitários/as. No entanto, não conhecemos nenhum estudo que tenha testado o modelo KAP incluindo vários comportamentos de risco dos/as estudantes universitários/as e analisando os dados através da análise de mediação.

Objetivos: Avaliar a relação entre conhecimentos e atitudes relacionadas com a saúde e comportamentos de risco para a saúde em estudantes universitários/as portugueses/as.

Métodos: Este é um estudo transversal com uma amostra estratificada e proporcional de estudantes universitários/as (n = 840) inquiridos/as com o recurso a um questionário validado. A análise de medição foi utilizada para analisar o papel mediador das atitudes face à saúde.

Resultados: Os resultados desta pesquisa demonstraram que os/as universitários/as adotam comportamentos que constituem risco para sua saúde, revelando pouco conhecimento sobre saúde e atitudes moderadamente favoráveis à adoção de comportamentos de risco. A análise de mediação indicou que o grau ou qualidade do conhecimento sobre saúde e as atitudes em relação à saúde foram fatores preditivos estatisticamente significativos para a identificação de comportamentos de risco. Além disso, foi demonstrado e revelado que as atitudes em relação à saúde têm um efeito mediador entre o conhecimento sobre a saúde e os comportamentos de risco para a saúde.

Conclusões: Os resultados deste estudo indicam que as políticas públicas de saúde e educação devem promover comportamentos saudáveis entre os estudantes universitários. As intervenções podem aproveitar e expandir os comportamentos positivos de saúde e considerar as diferenças individuais.

[12] No âmbito deste artigo realizaram-se duas comunicações: **1)** no 8º Congresso Internacional de Saúde. UNIJUÍ, Estado do Rio Grande do Sul, Brasil (online), 18 a 21 de maio de 2021 (intituladas "Atitudes face aos comportamentos de risco para a saúde no Ensino Superior" e "Conhecimentos acerca dos malefícios dos comportamentos de risco para a saúde dos estudantes universitários" e será realizada uma comunicação **2)** no XVI Congresso Galego-Português de Psicopedagogia Instituto de Educação da Universidade do Minho, Braga, Portugal. 1 a 3 de setembro de 2021 (intitulada "O modelo racional na investigação em educação para a saúde") e apresentado um póster **3)** no XVI Congresso da APE y XIX Congreso SESPAS. Universidad de León, León, Espanha. 7 a 10 de setembro de 2021 (intitulado "Preditores sociodemográficos de múltiplos comportamentos de risco em estudantes universitários").

The Relationship between health-related knowledge and attitudes, and health risk behaviors among Portuguese university students

Abstract

Scientific evidence reveals a high prevalence of health risk behavior among university students, this would call for the creation of educational programs that promote increased knowledge about health. However, knowledge alone is not enough to change behaviors; other factors, including attitudes to health, should be considered.

The objective of this cross-sectional study, was to analyze the relationship between knowledge, attitudes, and health risk behaviors among university students. For this, a previously validated, self-report questionnaire, was applied to a stratified sample of 840 students. In addition to sociodemographic issues, the questionnaire contains a Health-related knowledge scale, an attitudes towards health scale, and questions about health risk behaviors.

Students displayed poor knowledge about health, correctly answering 17.77 (SD = 4.59) questions out of a total of 36, and moderate scores concerning attitudes toward health (M = 2.61, SD = 0.48). Students reported always engaging in, on average, 3.88 (SD = 1.45) of the seven behaviors subject to analysis. Mediation analyzes indicated that knowledge about health and attitudes towards health, were statistically significant predictors of risky behaviors. Furthermore, it was indicated that attitudes towards health have a mediating effect between health knowledge, and health risk behaviors.

Findings from this study indicate that public health and education policies should promote healthy behaviors among university students. Taking into account not only the level of knowledge, but essentially, a development of positive attitudes faced with behavior which is a health risk.

Keywords: health risk behaviour; health risk knowledge; atittudes towards health; higher education; health education

Under Peer Review

INTRODUCTION

The scientific investigations related to health behaviors, in the context and environment of higher education, have shown that university students were predisposed to certain risk conducts (1–6) associated to non-transmissable chronic illnesses, developed throughout one's life (7). These investigations revealed an excessive consumption of alcoholic beverages, tobacco and other drugs, phyiscal inactivity, unbalanced eating habits, and risky sexual conducts, as the most prevalent negative behaviors among university students. Moreover, there is a variety of scientific evidence which proves the correlation between various risk behaviors (5,8).

Health behaviors are influenced by several factors, such as attitudinal influencing factors (9), which include knowledge and attitudes. These factors are identified in different health education research theories, such as the rational model - model of knowledge-attitude-practice (KAP) (transmission of knowledge/information), the model of health beliefs (influencing attitudes, beliefs and motivations) or the theory of planned behavior (which addresses attitudes towards a behavior).

In the scientific literature, several investigations have addressed the relationship between knowledge, attitudes, and health behaviors. Specifically, several studies have shown that students have a low level of knowledge about health (10–14), suggesting that increasing knowledge about the health hazards of risky behaviors would decrease the adoption of these types of behaviors (15–17). Therefore, interventions should provide information about risks, transmit knowledge related to health hazards, and develop skills to avoid risky behaviors (18). Although the cognitive factor can provide a basis for action (19,20), it is not enough. In other words, a higher level of knowledge cannot necessarily guarantee responsible health behaviors. Thus, moreso than knowledge, attitudes are among the theoretical constructs that most predict health risk behaviors (21–26), functioning as

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facilitators of behavioral changes. For example, a positive attitude towards contraceptive methods will positively influence the use of condoms, in order to protect from STIs (27), and negative expectations (such as decreased cognitive ability), would tend to lead to a decrease in the consumption of alcoholic beverages (28).

Even so, knowledge is essential to develop attitudes towards different behaviors, and to assist individuals in making decisions and actions aimed at healthy behaviors. In other words, knowledge and attitudes indirectly affect the health status of individuals, promoting behavioral change (29,30). In this sense, the objective of this study was to determine the relationship between knowledge, attitudes, and health risk behaviors among university students. The theoretical constructs of the rational model (KAP), health beliefs, and the theory of planned behavior, were used as the theoretical basis for the development of hypothesized relationships: H1: the level of knowledge has a direct effect on risk behaviors for one's health; H2: attitudes regarding health directly affect the prevalence of risk behaviors for one's health; H3: knowledge about health has an impact on the attitudes regarding or towards health; H4: attitudes regarding health have a mediating effect between the knowledge about health, and the risk behaviors for one's health.

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MATERIALS AND METHODS

Research Method

A cross-sectional study was carried out using a proportional representative sample of Portuguese college students in one public university during the 2018/2019 academic year. The current study protocol was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

Participants and Sample

The study population included students attending the 1st and 3rd year of integrated bachelor's and master's degrees (N = 5447). The sampling method was carried out by randomly selecting courses according to the year of study (1st and 3rd years), and the scientific area (Human and Social sciences, Law and Economic sciences, Exact and Natural sciences and Engineering sciences), and proportionally to the number of students enrolled in each scientific area.

The response rate was 96.2% (95% CI 94.8-97.6), 33 questionnaires were excluded for not being answered, or incorrectly filled out. So we invited 873 university students to participate in this study.

The total number of participants was 840 university students, mainly female (n = 465, 55.4%) and those attending university on a full-time basis (n = 739, 88.8%). On average, students were 20.78 (SD = 4.221) years old. Given the technical approach used, the majority of subjects enquired attended the 1st year (n = 464, 55.2%) and a large portion belonged to the scientific area of Engineering sciences (n = 302, 36.0%).

Instruments

According to the objectives of the study, the scales of this study were built in three stages: construction of the scale (1st stage); content validity (2nd stage); psychometric validity (3rd stage), according to the procedures defined by Bowling (34), and the Guide to develop WHO KAP investigations (32).

Health Risk Behavior Scale

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This scale was divided into 7 categories: Alcohol Consumption, Smoking Status, Illicit Drugs Consumption, Prevalence of Self-Medication, Healthy Dietary Habits, Prevalence of Physical Activity, and Sexual Risk Behaviors.

Smoking Status was found via the question: "Do you currently smoke?", and analysed according to the classification: non-smoker or former smoker, and current smoker.

Alcohol Consumption was measured using the AUDIT-3 scale (3 items with a 5-point scale coded from 0 to 4 (range 0-12), with risky drinking being seen in scores above 4 (greater than or equal to 5) in boys, or above 3 (greater than or equal to 4) in girls (33).

The Consumption of Illicit Drugs, included three questions about the consumption of Cannabis, Cocaine, and Hallucinogens ("In the past 12 months, how many times have you consumed…?"). The Consumption of Illicit Drugs was classified in a binary item: consummation of at least one of the listed psychoactive substances.

The Prevalence of Self-Medication was measured through the question "In the last 12 months, how many times have you consumed any of the psychoactive substances listed: AntidepressantsSedatives/Soothing/Tranquilizers (without prescription); Analgesics/Anti-inflammatories (without prescription); Vitamins/Food Supplements (without prescription)". Self-medicating was classified as such in the case of use of any of the psychoactive substances, without prescription, consumed at least once in the last year.

Healthy Dietary Habits were assessed using four food groups during the past 7 days including vegetables, fruit, sweet products, and fast food. Additionally, we asked students about the number of times they skipped breakfast, or lunch and/or dinner in the last 7 days. For the analyses, we considered unhealthy dietary practices as having engaged in any of the following behaviors in the last 7 days: skipping breakfast; skipping lunch and/or dinner; insufficient fruit consumption (two or fewer times per day); insufficient

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consumption of vegetables (two or fewer times per day); higher consumption of sweet products (four or more times per week), and higher fast food consumption (four or more times per week).

We used the Godin Leisure-Time Exercise Questionnaire (34), in order to measure the Prevalence of Physical Activity. Total activity scores were calculated by adding the MET calculations for each PA intensity level (multiplying episodes of vigorous activity by 9, moderate activity by 6, and mild activity by 3), and fewer than 14 units were classified as Insufficiently Active/Sedentary.

Sexual Risk Behaviors were measured in accordance with the study carried out by Reis and colleagues (30). As such, we consider risky sexual behaviors as having undertaken, or engaged upon, at least one of the following: having sexual intercourse for the first time at 16 years of age or younger, having had two or more sexual partners in the last 12 months; failing to use a condom in all sexual relations in the last 12 months; having sexual relations after drinking alcohol, or consuming drugs in the last 12 months.

The health risk behaviors variable was calculated through the sum of the answers given to each one of the seven categories, varying from 0 to 7, with the highest value corresponding to the higher number of health-related risk behaviors.

Health-related knowledge

This scale is composed of 36 items: 6 items related to tobacco, alcohol, nutrition, sexuality, and physical activity, and 3 items corresponding to illicit drugs and medication categories. The available options given for answering the questions presented in the scale were as follows: True, False, Don't Know. One point was given for each correct answer, while providing an incorrect answer, or responding "I don't know" resulted in 0 points. The sum of all items was calculated, scores varied between 0 to 36, hence higher scores correspond to a higher level of knowledge.

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Attitudes towards health

This scale consists of 30 items on a 5-point likert scale (1 - strongly disagree, 5 - fully agree), which include attitudes regrading health-related behaviors referred to in the *Health Risk Behavior Scale*. The results obtained on this scale, show the following dynamics: the higher the average of the scale, the more negative the attitudes of university students toward health were, ranging from 1 to 5.

Procedure and Statistical analysis

The data was gathered in a classroom by the main investigator, after the objective(s) of the study had been explained, and informed consent given. It took about 20 minutes to complete the paper-pencil questionnaire.

Data were analysed using the IBM SPSS Statistics for Windows, version 26.0 (IBM Corp., Armonk, NY, USA) and PROCESS (Version 3.5, 2018).

A mediation model was used to analyze the mediating role of attitudes concerning health (35), according to Hayes bootstrapping method (39) of 5000 samples, using "model 4", designation e, and a confidence interval of 95%. Through this analysis, 5 ways were calculated: the "a" path connects the "health-related knowledge" predictive variable with the "attitudes toward health" (H3) predictive variable; "b" path connects the "attitudes toward health" mediating variable to the "health risk behaviors" (H2) result; "c" path refers to the total effect (of the "health-related knowledge" predicting variable for the "health risk behaviors" result variable, without adjustment to the mediating variable) (H1), the direct effect regarding "c' " way (of the "health-related knowledge" predictive variable to the "health risk behaviors" result variable in the presence of the mediating variable "attitudes toward health") (H4); and the indirect effect (calculated as the product of the measurement of the a*b paths) (35,36).

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RESULTS

Descriptive analyses

Students displayed a poor level of knowledge about health, correctly answering a mean of 17.71 (SD = 4.59) questions out of a total of 36. The knowledge regarding sexual risk practices was the category in which students displayed a higher level of knowledge (M = 3.99, SD = 1.19).

Concerning attitudes toward health, students showed moderate scores of attitudes toward health (M = 2.61, SD = 0.48). The most favorable attitudes were registered in the tobacco sub-scale (M = 1.85, SD = 0.79), while regarding the consumption of illicit drugs and alcohol, students displayed attitudes above the sub-scales's medium or average point (M = 3.66, SD = 0.78; M = 3.14, SD = 0.84, respectively).

Concerning health risk behaviors, students reported engaging in, on average, 3.88 (SD = 1.45) of the seven behaviors subject to analysis.

The results have shown that knowledge about health was positively associated with risk behaviors (r = .146, p < .01), and the attitudes towards health (r = .083, p < .05). Furthermore, the latter was correlated with the behaviors (r = .293, p < .01). Statistically significant relations between all sub-scales of knowledge regarding health scale were detected, which varied between .162 (p < .01) and .405 (p < .01), and between all sub-scales of the attitudes towards health scale (r = .081, p < .05 to r = .435, p < .01), with the exception of the attitudes towards illicit drugs, and regarding self-medication behaviors (Supplemental file 1).

By the same logic, knowledge about alcohol, tobacco and illicit drugs displayed and revealed a positive correlation with the risk behaviors (r = .162, p < .01; r = .103, p < .05; r = .197, p < .01, respetively), effectively indicating that the higher the knowledge

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about these categories are, the greater the chances are that subjects will engage in health-related risks.

Measurement Model

The relationship, or correlation, between knowledge about health and risk behaviors regarding one's health, was significatively measured by means of the attitudes regarding health, and has accounted for 16.7% of the total variance in the risk behaviors for the subject's health ($R2 = 0.1358$, $F(1,412) = 7.735$, $p < .001$). As is illustrated in figure 1, hypothesis 3 (way a), which proposed the theory that the knowledge about health would produce a significant effect in the attitudes towards health, it hasn't been empirically supported or consubstantiated ($\beta = 0.01$, $p > .05$). However, the "b" way of attitudes towards health-related risk behaviors (H2), was statistically significant ($\beta = 0.87$, $p < .001$). This indicates that regardless of the knowledge about health, students more prone to negative attitudes, have a higher or stronger tendency, or a predisposition to engage in risky behaviors.

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Insert Figure 1 here

The direct effect (c, H1) ($\beta = 0.046$, $p < .01$) and the total effect (c', H4) ($\beta = 0.038$, $p < .05$) have shown to be statistically significant. Finally, the indirect number was 0.008 (IC 95%: 0.001–0.017) and statistically significant ($p < .05$), which indicates that students who possess more or higher-level knowledge about health, have shown a higher number of health-related risk behaviors as a result of their attitudes regarding health.

The final results of the effects' variable, regarding each one of the categories which were subject to analysis, in the relation between knowledge and risk behaviors in each category

(Supplemental file 2).

Regarding the alcohol category, it has been verified that the total effect of knowledge about alcohol in risk-level consumption patterns was significant ($\beta = 0.095$, $p < .001$), and with the inclusion of the mediating variable (attitudes regarding alcohol consumption), the impact of the level or degree of knowledge in risky consumption was still found to be significant ($\beta = 0.060$, $p < .001$). In a similar way, for the categories of illicit drugs and self-medication, results have shown that the level of knowledge about illicit drugs and about self-medication did indeed produce an effect or impact in the volume of consumption of these types of psychoactive substances ($\beta = 0.121$, $p < .001$; $\beta = 0.042$, $p < .05$, respetively), and that when we include the mediating variable (attitudes), this effect is still present ($\beta = 0.120$, $p < .001$; $\beta = 0.048$, $p < .05$, respetivey). Being an active smoker has shown not to be influenced by the level of knowledge about tobacco and the effects of its consumption, although we did indeed find that the higher the level of negative attitudes was regarding tobacco consumption, the higher the probability of being or becoming an active smoker ($\beta = 0.173$, $p < .001$). Similarly, leading a sedentary lifestyle is not influenced by the knowledge about the practice of physical exercise, but the attitudes regarding physical activity have shown to have a positive effect on the actual practice of physical exercise ($\beta = 0.180$, $p < .001$).

The nutritional category was the only one among all categories subject to analysis, in which an indirect effect was registered as a result of the "nutritional knowledge" predictive variable, which resulted in the fact that "unhealthy dietary habits" by means of the "nutrition attitudes" variable was negative ($\beta = -0.003$, $p < .05$).

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DISCUSSION

This study demonstrated that university students adopt behaviors that put their health at risk, have low knowledge about health, and attitudes moderately favorable to the adoption of risky behaviors. This demonstrates that despite the existence of national efforts to promote health in the school and academic context, unhealthy behaviors are commonly practiced and accepted by university students, even when they have information about the harm of certain behaviors.

Regarding the level of knowledge about alcohol, illicit drugs, self-medication, healthy eating and physical exercise, there was a low level of knowledge among the students interviewed (10–14,37). In turn, the level of knowledge about STIs and tobacco consumption was moderate (38–41). Even so, the results showed that much of this knowledge remains superficial and full of misconceptions (42–44), suggesting, for example, that the increase in knowledge on the effects of smoking, in order to reduce smoking rates during the academic course (15).

The relationship between the knowledge variable and the behavior variable was significant, showing that a higher level of knowledge about health produces a greater number of risk behaviors (45). For example, the level of knowledge about alcohol is higher in students classified as risk consumers, the increase in knowledge about illicit drugs contributes to an increase in the chances of consuming this type of drugs and the students who reported having practiced self-medication in the last 12 months, were the ones who had the highest level of knowledge about self-medication. These results seem to indicate that the efforts made in and by EpS, namely information on the effects of alcohol, have been quite unsuccessful.

Analysis of the relationship between the variables attitudes and behaviors, showed that unfavorable attitudes influence the adoption of risky behaviors. That is, the lack of

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social support, time limitations, lack of motivation, and erroneous beliefs, are some of the factors identified in the unhealthy practices of university students (3,8). For example, perceptions of condom use were a prominent predictor of risky sexual behaviors (46). In this way, SPS programs in ES must promote positive attitudes in students in order to change their unhealthy behaviors. Students are likely to act in a healthy and conscientious manner if they believe in the significant value of their actions. These motivations can be further reinforced by successful experiences, as well as by positive feedback in relation to certain behaviors.

In general, knowledge about health predicted unhealthy behaviors through the mediating effect of attitudes towards health. In other words, students with a higher level of knowledge, were inclined to have unfavorable attitudes towards the adoption of healthy behaviors, which in turn was related to a greater number of risky behaviors. This is inconsistent with previous studies, in which the results show that health literacy contributes to preventive health behaviors (1), or that risk behavior and high levels of knowledge about health were not correlated (47).

At a theoretical level, we are based on the belief that there is a potential mediator of attitudes in the relationship between knowledge and health behaviors (48). The results of this study showed that a higher level of knowledge positively influences unhealthy behaviors. That is, although students exhibit numerous health risk behaviors, they are informed about the harm of said behaviors. Therefore, knowledge alone is not sufficient to result in a change in the attitudes or behaviors of university students (47). It is in this sense that, in the analysis of the factors associated with health risk behaviors, other factors are due, to motivate and result in actions (49). This study also revealed that attitudes are significantly important in adopting behavior. Therefore, health education programs in Higher Education must promote positive attitudes in students in order to change their

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unhealthy behaviors. Students are likely to act in a healthy and conscientious manner if they believe that what they do will be of significant value. This motivation can be further reinforced by successful experiences, as well as by positive feedbacks in relation to certain behaviors.

Some limitations should be considered when interpreting the results presented. For example, the fact of being involved in a data collection using a self-report questionnaire. Despite the anonymity and confidentiality of the data and data collection being guaranteed in the context of the classroom, some aspects should be considered regarding social desirability, especially with reference to the concealment of some risky behaviors. In addition, the fact that data collection took place in the classroom means that it is not possible to guarantee the representation of all students, since there is a possibility that students with a greater number of health risk behaviors will be absent from school classes.

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CONCLUSIONS

This study showed that knowledge about health, and attitudes towards health, were statistically significant predictors of risky behaviors. Furthermore, that attitudes towards health have a mediating effect between health knowledge and health risk behaviors. In this sense, it is still necessary to carry out this type of study on a regular basis and on a larger scale, in order to better act with regard to socio-educational intervention programs and public policies.

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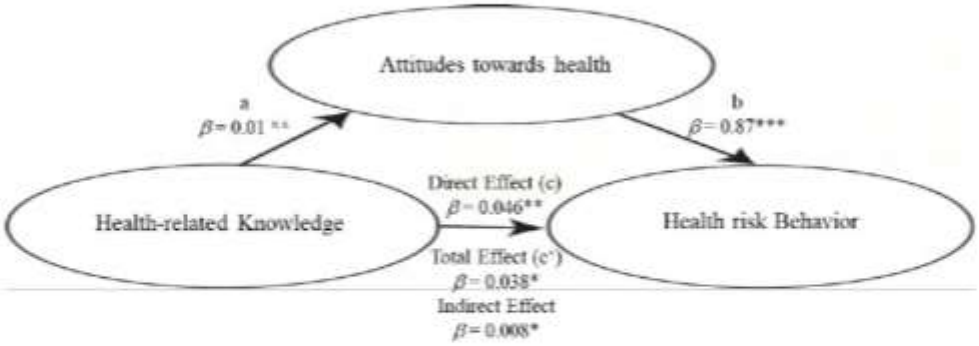
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$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Figure. 1

Final structural model

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Table 1

Descriptive statistics, internal consistencies, and correlations of variables.

	M(SD)	α	1	1a	1b	1c	1d	1e	1f	1g	2	2a	2b	2c	2d	2e	2f
1. **Health related knowledge (range 1-36)**	**17.77(4.59)**	**.830**															
1a. Alcohol Knowledge (range 1-6)	2.10(1.14)	.509	.574**														
1b. Tobacco Knowledge (range 1-6)	3.11(1.26)	.556	.638**	.279**													
1c. Nutrition Knowledge (range 1-6)	2.58(1.31)	.515	.632**	.232**	.274**												
1d. Physical Activity Knowledge (range 1-6)	2.74(0.90)	.496	.492**	.206**	.162**	.236**											
1e. Sexual Risk Knowledge (range 1-6)	3.99(1.19)	.573	.594**	.192**	.265**	.198**	.185**										
1f. Illicit Drugs Knowledge (range 1-3)	1.63(0.96)	.491	.629**	.228**	.299**	.240**	.188**	.307**									
1g. Medication Knowledge (range 1-3)	1.60(0.94)	.488	.592**	.180**	.262**	.266**	.179**	.274**	.405**								
2. Attitudes towards health (range 1-5)	**2.61(0.48)**	**.800**	**.083***	.097**	.074*	.010	-.021	.062	.123**	-.020							
2a. Alcohol Attitudes	3.14(0.84)	.762	.162**	.211**	.124**	.033	-.026	.064	.194**	.043	.659**						
2b. Tobacco Attitudes	1.85(0.79)	.749	.021	.118**	.003	.025	-.017	-.046	.101**	-.082*	.623**	.435**					
2c. Nutrition Attitudes	2.62(0.87)	.671	-.069	-.011	-0.19	-.091**	-.015	-.001	-.052	-.085*	.597**	.169**	.194**				
2d. Physical Activity Attitudes	2.26(0.84)	.742	.017	-.024	.004	.020	.025	.020	.037	.009	.643**	.111**	.202**	.370**			
2e. Illicit Drugs Attitudes	3.66(0.78)	.765	.136**	-.007	.144**	.068	-.003	.147**	.083*	.079*	.421**	.257**	.098**	.081*	.124**		
2f. Medication Attitudes	2.17(0.95)	.708	-026	-.015	-.016	.019	.005	-.040	-.009	-.074*	.362**	.098**	.175**	.101**	.173**	.065	
3. Health risk behavior (range 1-7)	**3.88(1.45)**	-	**.146****	.162**	.103*	.076	.056	.010	.197**	-.018	**.293****	.337**	.340**	.052	.135**	.028	.064

*$p < .05$; **$p < .01$

Table 2

Total, direct and indirect effects of health-related knowledge on health risk behaviors

	Total effect c	Direct effect c'	Path a	Path b	Indirect Effects a*b			
	β	*β*	*β*	*β*	*β*	SD	*t*	CI 95%
Health-related Knowledge → Attitudes toward health → Health risk Behaviors	**0.048****	**0.040****	**0.009**	**0.867*****	**0.008***	**0.003**	**2.174**	**.001 - .017**
Alcohol Knowledge → Alcohol Attitudes → Risky Drinking	0.095***	0.060***	0.115***	0.227***	0.035***	0.007	5.307	0.022 – 0.048
Tobacco Knowledge → tobacco Attitudes → Being an Active Smoker	0.011	0.011	0.002	0.173***	4.641e-4	0.004	0.901	-0.017 – 0.008
Nutrition Knowledge → Nutrition Attitudes → Having unhealthy dietary habits	-0.011	-0.008	-0.061**	0.053***	-0.003*	0.001	-2.357	-0.006 – -5.300e-4
Physical Activity Knowledge → Physical Activity Attitudes → Leading a Sedentary Lifestyle	-0.027	-0.031	0.023	0.180***	0.004	0.006	0.677	-0.007 – 0.015
Illicit Drugs Knowledge → Illicit Drugs Attitudes → Consuming illicit drugs	0.121***	0.120***	0.067*	0.003	1.767e-4	0.001	0.141	-0.002 – 0.003
Medication Knowledge → Medication Attitudes → Self-medication Practices	0.042*	0.048*	0.057	0.090***	-0.007*	0.003	-1.967	-0.017 – -2.297e-5

For Peer Review

10. ESTUDO 10: BEM-ESTAR E PERCEÇÃO DE SAÚDE DE ESTUDANTES UNIVERSITÁRIOS/AS EM PORTUGAL: A INFLUÊNCIA DO APOIO PARENTAL E DA RELAÇÃO AMOROSA [13]

Referência bibliográfica:

Alves, R., Precioso, J. &, Becoña, E. (2020). Well-being and health perception of university students in Portugal: the influence of parental support and love relationship. *Health Psychology Report 8*(2): 145-154. DOI: 10.5114/hpr.2020.94723

País: Polónia; Emerging Sources Citation Index (ESCI): JCI = 0.27. ; SJR = Q4.

Resumo

Enquadramento: A saúde mental dos/as estudantes universitários/as tem sido objeto de grande atenção das investigações científicas, não apenas para fornecer informações contextualizadas, mas também porque elevados níveis de bem-estar previam uma educação de qualidade.

Objetivos: Avaliar a perceção de bem-estar e saúde de estudantes universitários/as, explorando as propriedades psicométricas da EPBeS e analisando a influência de variáveis sociodemográficas.

Métodos: Foi aplicado um questionário a uma amostra representativa de 840 estudantes universitários/as em Portugal estratificados por ano de frequência e área científica de estudo. O EPBeS consiste em 5 itens medidos em uma escala Likert de 5 pontos. Foram consideradas como variáveis explicativas o ano de estudo e área científica, sexo, idade, relacionamento amoroso, situação profissional e IMC.

Resultados: O WbHPS apresentou boas propriedades psicométricas, indicando a presença de fator explicativo de 58,45% da variância e boa consistência interna (α = 0.81). Os resultados obtidos identificaram a WbHPS como estando independentemente associada a ter uma relação amorosa, ter peso normal e não ter sido deslocada após o início da universidade.

Conclusões: É preciso (re)pensar em ações de prevenção de doenças e PrS no ES, com intervenções psicossociais que reflitam verdadeiramente sobre o bem-estar e a saúde dos/as universitários/as.

[13] No âmbito deste artigo realizaram-se uma publicação e uma comunicação: **1)** Alves, R. &, Precioso, J. (2019). Perceção de bem-estar e saúde no Ensino Superior In M. Peralbo, A. Risso, A. Barca-Lozano, B. Silva, L.S. Almeida, & J.-C. Brenlla-Blanco (eds.) *Libro de atas XV Congreso Internacional Gallego-Portugués de Psicopedagogía / II Congreso de la Asociación Científica Internacional de Psicopedagogía.* (pp. 4497-4506). Coruña: Universidade da Coruña e **2)** no XV Congresso Internacional Galego-Português de Psicopedagogia. Universidade da Coruña, Coruña, Espanha. 4 a 6 de setembro de 2019.

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ORIGINAL ARTICLE

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Well-being and health perception of university students in Portugal: the influence of parental support and love relationship

BACKGROUND
The mental health of university students has been the subject of great attention from scientific investigations, not only to provide contextualised information, but additionally since high levels of well-being predicted a quality education. This study aims to evaluate the perception of well-being and health of university students, exploring the psychometric properties of the Well-being and Health Perception Scale (WbHPS) and analysing the influence of sociodemographic variables.

PARTICIPANTS AND PROCEDURE
A questionnaire was applied to a representative sample of 840 university students in Portugal stratified by year of academic attendance and scientific area of study. The WbHPS consists of 5 items measured on a 5-point Likert scale. We considered as explanatory variables the year of study and scientific area, sex, age, love relationship, professional situation and BMI.

RESULTS
The WbHPS showed good psychometric properties, indicating the presence of an explanatory factor of 58.45% of variance and a good internal consistency (α = .81). The obtained results identified WbHPS as being independently associated with being in a love relationship, having a normal weight and not being displaced after starting at university.

CONCLUSIONS
It is necessary to (re)think about disease prevention and health promotion actions in higher education, with psychosocial interventions that truly reflect on the well-being and health of university students.

KEY WORDS
higher education; happiness; life satisfaction

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AUTHORS' CONTRIBUTIONS – A: Study design · B: Data collection · C: Statistical analysis · D: Data interpretation · E: Manuscript preparation · F: Literature search · G: Funds collection

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BACKGROUND

Subjective well-being (SWB), in general terms, is an assessment, both cognitive and affective, of one's own existence, the inner experience of each individual who makes a judgment of how he or she feels, or his or her degree of satisfaction with life.

The concept of SWB as a complex concept does not have a definition reached by consensus (Diener, Suh, Lucas, & Smith, 1999); however, most researchers agree that the study of SWB should comprise both cognitive and affective dimensions (Diener, Napa-Scollon, Oishi, Dzokoto, & Suh, 2000; Galinha & Ribeiro, 2005; Albuquerque & Tróccoli, 2004). The cognitive dimension of SWB is reflected in the cognitive judgment of life satisfaction, while the affective dimension is presented as descriptions of the emotional state, and may be related to pleasant (positive emotions) and unpleasant (negative emotions) feelings, both in specific terms and, overall, with happiness (Galinha & Ribeiro, 2005; Albuquerque & Tróccoli, 2004; Diener et al., 1999; Rojas & Elizondo-Lara, 2012). In other words, SWB is related to self-satisfaction and different areas of life, as well as a more holistic assessment, called overall life satisfaction or vital satisfaction.

Life satisfaction is a construct that refers to the contentment one feels in thinking about one's life as a whole (Bardagi & Hutz, 2010), subjective assessments or judgments that the individual makes regarding their experiences, if they have provided (dis) satisfaction with life. To this end, the individual compares the circumstances of life with a set of self-imposed standards and the extent to which their quality of life corresponds to those standards. Thus, according to Pavot and Diener (2009) and Diener, Inglehart, and Tay (2013), life satisfaction is a conscious cognitive judgment of life in which the judgment criteria are personal. In practical terms, individuals with high well-being should have a high degree of satisfaction with life and positive emotions and low levels of negative emotions.

As already mentioned, other important indicators for measuring SWB refer to the concept of subjective happiness, that is, the individual's perceptions of happiness or positive effects (Lyubomirsky & Lepper, 1999; Trinh & Khanh, 2019), the quality of life defined as the perception of an individual about his position in life, in the context of his culture and the value systems in which he lives, and in relation to his goals, expectations, standards and concerns (The WHOQOL Group, 1995). From this perspective, the definitions in the literature of health-related quality of life, life satisfaction, SWB and happiness suggest a conceptual overlap (Camfield & Skevington, 2008), and these dimensions are closely related (Medvedev & Landhuis, 2018).

Emerging adulthood, considered a new life transition phase in which university students are included, is viewed as a time of exploration and experimentation (Arnett, 2000). This phase, by itself, can be a stage of the life cycle that is somewhat troubled, in which individuals are more independent in relation to parental control, but still free from commitments and responsibilities (Arnett, 2000). In addition, entry into higher education includes psychosocial development and a stage that leads to a number of new and sometimes adverse situations that can have negative repercussions (Abdel-Khalek, 2013; Auerbach et al., 2016; Demirli, Türkmen, & Ark, 2015; Feldman & Dreher, 2012; Molina et al., 2012; Pedrelli, Nyer, Yeung, Zulauf, & Wilens, 2015; Stoyles, Chadwick, & Caputi, 2015) on academic performance and the entire teaching-learning process (American College Health Association, 2018; Bücker, Nuraydin, Simonsmeier, Schneider, & Luhmann, 2018; Fernández, Araújo, Vacas, Almeida, & González, 2017; Ratelle, Simard, & Guay, 2013).

Additionally, these can have effects on general well-being, contributing to an increase in depression, licit and illicit drug abuse and eating disorders in college students (Auerbach et al., 2016; Benotsch, Koester, Luckman, Martin, & Cejka, 2011; Hingson, Zha, & Weitzman, 2009; Monahan, Bracken-Minor, McCausland, McDevitt-Murphy, & Murphy, 2012). In this climate, although they may be difficult to achieve, life satisfaction and happiness are extremely important aspects in the lives of college students, although difficult to achieve (Diener et al., 2000) and impacting their attitudes and behaviours (Khramtsova, Saarnio, Gordeeva, & Williams, 2007).

Although entering higher education is a controversial period in its own right and deserves special attention, and many young adults suffer from psychological distress during their first year of college (Davidson, Feldman, & Margalit, 2012), the study of well-being must be considered throughout the academic path. This is because other studies have shown that barriers to well-being, such as anxiety, stress and depression, increase with permanence in higher education (Beiter et al., 2015; Elias, Ping, & Abdullah, 2011; Fawzy & Hamed, 2017), with one in five university students reporting having an active mental illness (American College Health Association, 2018).

In this framework, this study aimed to analyse the psychometric properties of the Well-being and Health Perception Scale (WbHPS) and to explore predictors of WbHP among both first-year and third-year university students in Portugal.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

Data collection was carried out at a Portuguese university in the academic year 2018/2019. The total

sample was estimated from a population of 5447 students enrolled in the 1st and 3rd year of the undergraduate and master's degrees, according to a confidence interval of 95% and a maximum error of 3%. For this purpose, stratified probabilistic sampling of university students was performed according to the year of study and the scientific area of study. In this sense, the different undergraduate and master's degrees were divided into scientific areas (as defined by the Foundation for Science and Technology): Human and social sciences, Law and economic sciences, Exact and natural sciences and Engineering sciences. Excluded from the sample were courses related to health sciences and postgraduate integrated masters or masters courses or those who did not have classes in the 1st or 3rd year.

The response rate was 96.2% (95% CI 94.8-97.6), and 33 questionnaires were excluded for not being answered or incorrectly filled out. For reasons of proportionality with the target population, the majority of respondents were in the first year of study (n = 464, 55.2%) and were female (n = 465, 55.4%). The sample of the present study mainly includes students who are not in a love relationship (n = 486, 58.3%), who changed residence at the time of entering higher education (n = 537, 64.9%). In addition, the majority of respondents were full-time student (n = 739, 88.8%) and had a BMI corresponding to normal weight (n = 599, 73.1%). The average age of the sample is 20.78 (SD = 4.22), ranging from 18 to 54, and only 3% of the students are 30 years old or older.

PROCEDURE

WbHPS development was carried out in three stages: scale construction (1st stage); content validity (2nd stage); psychometric validity (3rd stage). For the construction of the scale (1st stage) we proceeded by consulting and analysing other instruments of SWB, quality of life and happiness for young adults and/or university students. Considering the various national and international instruments, an analytical matrix was created and questions or items were selected in the original form of the following instruments: the World Health Organization Quality of Life Instruments – BREF (WHOQOL-BREF; Vaz Serra et al., 2006); the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985); the Subjective Well-Being Scale (SWBS; Albuquerque & Tróccoli, 2004); the Happiness Measure (HM; Fordyce, 1977, 1988), the Overall Life Satisfaction (OLS; Hutz, 2014); the Personal Wellbeing Index (PWI; Cummins, Eckersley, Pallant, van Vugt, & Misajon, 2003); the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS; Huebner, Seligson, Valois, & Suldo, 2006); the Oxford Happiness Questionnaire (OHQ; Hills & Argyle, 2002); the single item Delighted-Terrible Scale (Andrews, 1974), the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999); Self-Anchoring (Cantril, 1965); the Global Happiness Item (Bradburn, 1969). Then, the different items were divided according to the cognitive and affective dimension of SWB, and those with the same semantic similarities were eliminated.

Given the conceptual overlap of SWB and the literature review by Medvedev and Landhuis (2018), the items were grouped into different categories: quality of life, life satisfaction, self-satisfaction, happiness, health, positive and negative effects. From these dimensions, a response item was created for each of the dimensions, except for positive and negative effects, for the sake of measuring the predicted scale. Note that a 5-point Likert scale response format was adopted.

According to Diener and collaborators (2013), well-being scales can be influenced by factors such as the order of the questions, the importance attached to certain aspects, or social comparison. In constructing this scale we tried to control these effects. Thus, the definite order meant that respondents reflected primarily on their life in general, then moved on to specific situations such as self-satisfaction. Additionally, information about health and finances, rather than only using information about social relationships or academic life, that is, considering all aspects of life, was used. In addition, the wording of certain items directed the answers to comparison with people of the same age, for example, "Compared with people your age, how do you rate your overall health?"

The scale in question was called the Well-being and Health Perception Scale (WbHPS), omitting the frequently used subjective term. The "subjective" descriptor delimits the construct indicating an assessment of life satisfaction from one's own perspective. And while this scale focuses on each individual's personal view of his or her own life, the statements in each of the items predict that assessment of well-being is not as subjective as on other scales analysed.

Then, for the content validity (2nd stage) 10 PhD researchers from several Portuguese universities with recognized work in the area of Health Education in Higher Education were invited. For validity purposes, the feedback from 5 of the invited investigators was considered and all proposed semantic changes were considered. In the same way, the instrument was applied to 12 university students, using the "thinking aloud" method (Almeida & Freire, 2008) to identify items that might be confusing and exclude less relevant or redundant items. In order to obtain greater objectivity, the following scale was used as the criterion of clarity evaluation for each item: 1 – *confused*; 2 – *unclear*; 3 – *clear*. The item related to quality of life was considered redundant

and was eliminated. Additionally, we reflected on the need to add an item related to satisfaction with physical form and lifestyle changes after entering higher education.

After the suggested restatements, the preliminary version of the WbHPS was presented to a sample of 32 students, with an average age of 22.12 ± 5.98 years. This pre-test was performed in order to observe the average filling time and possible inconsistencies due to possible misunderstanding of the questions. In this sense, it was found that the issues were understood and there were no misconceptions and no further linguistic changes were necessary. The scale obtained a Cronbach's α of .79, including the 6 scale items.

The questions of sociodemographic characterization included year of study and scientific area, sex, age, love relationship, weight and height (to calculate body mass index – BMI), current residence and professional situation.

The application of the instrument was performed in the classroom context for all students in the sample and in paper-and-pencil format for all students in the sample, after presenting the study objectives and informed consent. All ethical requirements for research procedures with human beings were met, and the present study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019.

Data were analysed using IBM SPSS Statistics for Windows, version 25.0. The structure of the WbHPS scale was assessed by exploratory factor analysis (EFA) using the principal component analysis (PCA) method. For this, Bartlett's sphericity test was applied and the Kaiser-Meyer-Olkin (KMO) sampling adequacy measure was determined to test the validity of the factor analysis. The number of factors to be extracted was determined by the Kaiser criterion, considering the percentage of variance explained (Marôco, 2018). The factor loadings of each item and their commonalities (h2) were also evaluated. To evaluate the reliability of the scale, the item-total and inter-item correlation coefficients were calculated and for the internal consistency evaluation, Cronbach's α values were calculated.

A generalized linear model was developed including all sociodemographic variables with the intention of exploring possible predictors of well-being and health perception. A significance level of .05 was considered.

Table 1

Factorial load of each WbHPS item

WbHPS items	Factorial load
Satisfaction with life	.84
Self-satisfaction	.87
Felt happiness	.81
Perceived health	.61
Satisfaction with physical form	.65
Variance explained (%)	58.37

RESULTS

PSYCHOMETRIC PROPERTIES OF THE SCALE

Initially, a lifestyle changes item had been incorporated into the scale after entering higher education; however, after analysing the correlations and reliability of the construct, it was found that this item had a low correlation with the other items and that their exclusion from the scale increased the scale's reliability index. Thus, all analyses presented were performed for a scale of 5 items related to the dimensions: Satisfaction with life; Self-satisfaction; Felt happiness; Perceived health and Satisfaction with physical form. WbHPS showed good internal consistency (α = .81). Scale items had an item-total correlation between .47 and .74 and the Cronbach's α value if the item is eliminated between .73 and .81. The item "Perceived Health" showed the least correlation with the scale, slightly increasing the value of Cronbach's α if it were eliminated. However, given its importance, we chose to keep it. Also, the inter-item correlation coefficients for the scale ranged from .33 to .73.

Before performing the factor analysis, the assumptions of homoscedasticity and sphericity were verified. In the sample, the KMO value was .79 and Bartlett's sphericity test was significant ($\chi^2(10) = 1663.08$, $p < .001$), showing that EFA is executable (Field, 2009).

The PCA results suggested the extraction of a factor that explains 58.4% of the explained variance, and the factor weights obtained ranged from .61 to .87. The item "Perceived health" presented the lowest factor weight in the model presented (Table 1).

WbHPS is strongly correlated with all of its component items ($r_{\text{SATISFACTION LIFE}} = .77$, $p < .001$, $r_{\text{SELFSATISFACTION}} = .82$, $p < .001$, $r_{\text{FELT HAPPINESS}} = .72$, $p < .001$, $r_{\text{PERCEIVED HEALTH}} = .63$, $p < .001$, $r_{\text{PHYSICAL FORM}} = .72$, $p < .001$).

Table 2 shows that the average for the 5 items that make up the scale ranged from 3.32 (*SD* = 1.01) to 3.89 (*SD* = 0.88), corresponding to the items "Satisfaction with physical form" and "Satisfaction with life", respectively. In this sense, 77.8% ($n = 652$) of respondents indicated that they were satisfied or very satisfied with their life and 49.5% ($n = 415$) with their physical form. The average WbHPS was 3.73 ± 0.64, ranging from 1 to 5 (Table 2).

Table 2

Mean and standard deviation of WbHPS and frequencies (%) of each WbHPS item

	M	*SD*	*n* (%)				
			Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
Satisfaction with life	3.89	0.88	18 (2.1)	49 (5.8)	119 (14.2)	475 (56.7)	177 (21.1)
Self-satisfaction	3.72	0.94	24 (2.9)	78 (9.3)	143 (17.1)	543 (54.1)	140 (16.7)
Satisfaction with physical form	3.32	1.01	31 (3.7)	160 (19.1)	232 (27.7)	337 (40.2)	78 (9.3)
			Very unhappy	Unhappy	Neither happy nor unhappy	Happy	Very happy
Felt happiness	3.87	0.76	10 (1.2)	29 (3.5)	157 (18.8)	507 (60.6)	134 (16.0)
			Terrible	Bad	Reasonable	Good	Great
Perceived health	3.85	0.79	9 (1.1)	28 (3.3)	195 (23.2)	458 (54.6)	149 (17.8)
WbHPS	18.66	3.32					

WBHPS ACCORDING TO SOCIODEMOGRAPHIC CHARACTERISTICS

The bivariate analysis showed that the scientific area and year of study have no effect on students' perception of well-being and health ($F(3, 829) = 2.55$, $p > .05$, $t(831) = -1.00$, $p > .05$). However, when considering the love relationship, current residence and BMI there were statistically significant differences of means between the different groups for each independent variable and WbHPS ($t(824) = 4.13$, $p < .001$, $t(819) = -3.25$, $p < .001$, $F(3, 809) = 14.99$, $p < .001$, respectively). This indicates that respondents currently in a love relationship have, on average, a greater perception of well-being and health compared to those who have no romantic relationship ($M = 19.20 \pm 3.09$, $M = 18.24 \pm 3.43$, respectively). Also, students who had not changed their residence after entering higher education ($M = 19.96 \pm 3.21$) show higher well-being and health compared to students who had left their familial home ($M = 18.17 \pm 3.39$). Considering BMI, it was concluded that students with BMI classified as overweight had a lower level of well-being and health ($M = 17.47 \pm 3.28$) compared to students with normal weight ($M = 19.03 \pm 3.26$) and with low weight ($M = 18.28 \pm 3.01$). Regarding the sex of respondents and professional situation, there were no statistically significant differences between groups as a function of WbHPS ($t(831) = 1.84$, $p > .05$, $t(823) = -0.57$, $p > .05$, respectively).

Table 3 presents the associations between scores of WbHPS and other covariates. WbHPS was independently associated with having a love relationship, having normal weight and not being displaced after starting at university.

DISCUSSION

The results of this study suggest that WbHPS shows excellent psychometric properties, being characterized by good internal consistency and a single explanatory factor of 58.4% of variance. This corroborates with Diener et al. (1985), who point out that factorial analyses of multi-item life satisfaction scales often reveal a single underlying dimension. The WbHPS briefly and broadly presents its key advantages by assessing the domain of overall life satisfaction and the affective component of well-being.

The results revealed a significant proportion of students who are satisfied or very satisfied with their lives ($n = 652$, 77.8%), results similar to other national (Bertoquini & Pais-Ribeiro, 2006) and international studies (Arias-de la Torre, Molina, Fernández-Villa, Artazcoz, & Martín, 2019b; Auerbach et al., 2016; Bardagi & Hutz, 2010; Hardeman et al., 2015; Pedrelli et al., 2015; Storrie, Ahern, & Tuckett, 2010). However, 22.8% of students were very dissatisfied or dissatisfied with their physical form, an aspect that should be considered when designing health education interventions.

In a meta-analysis by Wood, Rhodes, and Whelan (1989), it was found that women revealed more happiness than men. However, according to Marrero Quevedo, González Villalobos, and Carballeira

Table 3

Standardized β-coefficients (generalized linear model – gamma regression) of multivariate analyses of the WbHPS scores according to other covariates (n = 840)

Predictors	Exp (β)	95% CI
Year of study		
1st year	0.98	0.98-1.03
3rd year	1.00	
Scientific area		
Engineering Sciences	0.96	0.91-1.01
Exact and Natural Sciences	0.99	0.93-1.06
Law and Economic Sciences	0.98	0.92-1.04
Human and Social Sciences	1.00	
Sex		
Male	0.99	0.96-1.02
Female	1.00	
Age (years)	1.00	1.00-1.01
Love relationship		
Yes	1.05**	1.01-1.08
No	1.00	
Current residence		
Displaced	0.96*	0.93-0.99
Not displaced	1.00	
BMI		
Low weight	1.05	0.93-0.99
Normal weight	1.05***	0.99-1.11
Overweight	1.00	
Professional situation		
Full time student	1.02	0.97-1.07
Worker / Student	1.00	

Note. AIC = 4199.32; p(model) < .01; p(intercept) < .01. *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Abella (2014), the most recent investigations show inconsistencies regarding the influence of gender on well-being. The present study did not reveal statistically significant differences between boys and girls, as were found in others studies (Bardagi & Hutz, 2010; Barrantes-Brais & Ureña-Bonilla, 2015).

In the sample of college students no significant differences were found between age or year of academic attendance and perception of well-being and health. These data differ from the few studies available, which seem to indicate a decrease in well-being levels along the academic path (Beiter et al., 2015; Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010; Fernández et al., 2017; Kovess-Masfety et al., 2016; Pedrelli et al., 2015; Rotenstein et al., 2016).

This study showed differences between the love relationship and the perception of well-being and health. As found in other scientific studies (Czyżowska, Gurba, Czyżowska, & Kalus, 2020; Hills & Argyle, 2002; Myers & Diener, 1995; Ratelle et al., 2013), people in a loving relationship have a better perception of well-being and health. These data corroborate other international studies on well-being and happiness in college students by indicating that being in a loving relationship provides not only greater emotional stability but also greater well-being in all dimensions of life. (Diener et al., 1999; Lu, 2000; Marrero Quevedo et al., 2014).

The results indicated that non-displaced students have higher levels of well-being, as in other studies (Arias-de la Torre et al., 2019a; Fernández et al., 2017; Pedrelli et al., 2015; Rotenstein et al., 2016; Storrie et al., 2010). Family support continues to be one of the predictors of well-being for university students, both economically and emotionally. In line with the concept of emerging adulthood (Arnett, 2000), students are still free of the obligations inherent to adulthood and they are still dependent on their parents. In addition, if there was sufficient family support, this could help the individual develop their psychosocial and academic skills, free of financial responsibilities. Thus, it is important that in the processes of adaptation to higher education, implemented by universities, they consider strategies to improve family support (Aguayo et al., 2019; Claxton, Onwumere, & Fornells-Ambrojo, 2017; Kovess-Masfety et al., 2016).

The body mass index was considered a predictor of the model found in the present study. In this sense, it was found that overweight students showed a lower level of well-being than students with normal weight or underweight (Chen et al., 2016; Vankim & Nelson, 2013).

Finally, the economic factor can be considered relevant to the achievement of the well-being of university students (Arias-de la Torre, Vilagut, Martín, Molina, & Alonso, 2018), mainly due to the financial pressure on families (Arias-de la Torre et al., 2019b). On the other hand, being a student-worker can be a source of stress for the student (Aguayo et al., 2019). The multivariate analysis performed did not show the professional situation as a predictor of the level of well-being and health perception. This situation is different from other scientific studies with the university population, which show increased levels of psychological suffering caused by financial pressure (Barbaglia, Ten Have, Dorsselaer, Alonso, & de Graaf, 2015; Kovess-Masfety et al., 2016).

LIMITATIONS AND FUTURE RESEARCH

The most common limitations of this kind of welfare studies, and to which the present study is not immune, as reported by Eid and Larsen (2008), involve the transitions presented by mood states and contextual influences, which may affect participants' responses. However, throughout the data collection process, efforts were made to minimize these effects by collecting data in the classroom context, in different classes and at different times of the day.

The geographical restriction of the present study should be considered in this subsection, and the study should be extended to include other higher education institutions, as well as the study of the psychometric properties of the scale to other populations.

Another limitation concerns the study design. Its cross-sectional nature precludes causal interpretation. However, this study is the starting point for further analyses with a longitudinal perspective. In other words, future longitudinal research is needed to understand the impact of a year of study on well-being and health perception.

Finally, we believe that future research should consider lack of satisfaction with the decision to choose the field of study, the results that the student obtains during his studies and the participants' social support; their support from peers or friends. It is also important to take into account student activity in scientific, sports and other organizations at the university and beyond. In this sense, it is worth considering the division of variables: individual and relational (Trinh & Khanh, 2019).

CONCLUSIONS

Well-being (subjective) is a construct made up of different but distinctly related clearing components. People with higher levels of perception of well-being and health tend to be healthier, happier and more satisfied.

The growing number of higher education welfare programmes underline the efforts of higher education institutions to improve the well-being and health of college students (Chow, 2005). This study identifies this need, reinforcing the urgency of creating disease prevention and health promotion actions, with psychosocial interventions that allow university students to reflect on their well-being and happiness, contributing to their holistic development.

The results indicate that it is necessary to (re) think about disease prevention and health promotion actions in higher education, with psychosocial interventions that truly reflect on the well-being and health of university students.

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11. ESTUDO 11: A ASSOCIAÇÃO ENTRE BEM-ESTAR E COMPORTAMENTOS DE RISCO À SAÚDE EM ESTUDANTES UNIVERSITÁRIOS/AS: O PAPEL MEDIADOR DA INFLUÊNCIA SOCIAL [14]

Referência bibliográfica:

Alves, R. (em revisão). The association between well-being and health-risk behaviors in university students: the mediating role of social influence.

Resumo

Enquadramento: O bem-estar positivo aliado a estilos de vida saudáveis constituem determinantes importantes do estado de saúde percebido e reduzem o risco de envolvimento em alguns comportamentos de saúde. Por outro lado, a influência social prediz positivamente o bem-estar dos estudantes universitários, reforçando a ideia do valor adaptativo do apoio de pares no ambiente de ES.

Objetivo: Examinar o papel mediador da influência social (pares consumidores, viver com a família e parceiro/a romântico/a) na relação entre o bem-estar e os comportamentos de risco para a saúde.

Métodos: este é um estudo transversal com uma amostra probabilística (n = 840) de estudantes universitários/as portugueses/as. Os dados foram recolhidos utilizando um questionário de papel e lápis que incluiu três dimensões principais: Escala de Perceção de Saúde e Bem-estar, Comportamentos de Saúde e Influência Social. A modelagem de equações foi utilizada para construir o modelo e uma análise de mediação para testa o efeito mediador da influência social na relação entre Bem-estar e comportamento de risco para a saúde.

Resultados: A modelagem de equações estruturais mostrou que o comportamento de risco para a saúde se associavam positivamente com a influencia de pares consumidores e negativamente com as variáveis par romântico e viver com a família. Uma análise de mediação evidenciou que a influência social média sobrevida em relação entre o bem-estar e os comportamentos de risco para a saúde.

Conclusão: Este estudo evidencia a importância de se considerar a participação das redes sociais próximo no desenho de EpS no ES.

[14] No âmbito deste artigo realizaram-se uma comunicação e um póster: **1)** no 7° Congresso Internacional de Saúde: contextos e problemáticas emergentes. Instituto de Educação da Universidade do Minho, Braga, Portugal. 7 a 9 de outubro de 2020 (intitulada "Exercício Físico, Sedentarismo e Bem-Estar dos/as Estudantes Universitários/as Portugueses/as"); **2)** no 2nd International Congress of Health and Well-Being Intervention (ICHWBI 2021). Instituto Piaget, Viseu, Portugal, 28 e 29 de maio de 2021 (intitulado "Health-Risk Behaviors and Well-being among university students")

The association between well-being and health-risk behaviors in university students: the mediating role of social influence

Abstract

Objective: to examine the mediating role of social influence (consuming peers, living with the family and romantic partnership) in the correlation between well-being and health-risk behaviors.

Design and Main Outcome Measures: this is a cross-sectional study with a probabilistic sample (n=840) of Portuguese university students. The data collected was gathered using a paper-and-pencil questionnaire which included three main dimensions: Well-being and Health Perception Scale, Health Behaviors and Social Influence. The modelling of structural equations was used to build the model and the analysis in order to test the mediating effect of the social influence factor in the correlation between well-being and health-related risk behaviors.

Results: Structural equation modeling showed que os comportamentos de risco para a saúde se associavam positivamente com a influencia de pares consumidores e negativamente com as variáveis par romântico e viver com a família. A análise de mediação evidenciou que a influência social mediou significativamente a relação entre o bem-estar e os comportamentos de risco para a saúde.

Conclusion: This study highlights the importance of taking into account the participation of social networks close to the designing of educational interventions towards health in Higher Education.

Keywords: health-risk behavior, well-being, social influence, mediation effect, structural equation modeling

Introduction

Well-being is an ample and broad indicator of how individuals value or evaluate their lives, with the possibility of being divided between a cognitive component (cognitive evaluation of satisfaction with life in general) and an affective component (emotional aspects, such as happiness) (Diener & Biswas-Diener, 2008). In broader terms, positive well-being is linked and correlated with various resources valued by society, such as health behaviors. This way, positive well-being associated with healthy lifestyles constitute important defining factors for the perceived state of one's health (Ahn et al., 2014; El Ansari et al., 2011; Joh et al., 2017; Lolokote et al., 2017; Murphy et al., 2018; Park & Kim, 2020; Pengpid & Peltzer, 2019; Seo et al., 2018; Yarcheski et al., 2004) and reduce the risk of developing illnesses in the medium and long-term which affect the health of individuals and of society (Ay et al., 2012; Chen et al., 2017; Grant et al., 2009; Seo et al., 2018). In this regard, a recent meta-analysis identified the correlation between health state and subjective well-being (Ngamaba et al., 2017).

Taking into consideration the cognitive component of well-being, scientific studies have proven that satisfaction with one's life is negatively correlated with some health behaviors, such as smoking, drinking or leading a sedentary lifestyle among university students in different cultures (Grant et al., 2009; Pengpid & Peltzer, 2019). In a similar manner, regarding the affective component, a series of significant correlations between happiness and certain health behaviors has been identified and verified, such as eating habits, namely not skipping breakfast and ingesting fruits and vegetables on a daily basis, the regular practice of physical exercise, the absence of addictions such as smoking, consuming alcohol or illicit drugs and risky sexual behaviors (Cook & Chater, 2010; Grant et al., 2009; Kye & Park, 2014; Monahan et al., 2012; Murphy et al., 2018; Peltzer et al., 2017; Peltzer & Pengpid, 2013; Pengpid & Peltzer, 2019; Piqueras et al., 2011; Shahab & West, 2012). In other words, the results arising from these studies have revealed that happiness has multiple benefits, and it is correlated and precedes countless health behaviors. This means that happy individuals have less probability of getting involved in a variety of destructive and unhealthy behaviors, such as the ones mentioned earlier.

It is important to point out that unhealthy behaviors among university students continue to display high prevalence levels, such as the excessive consumption of alcoholic beverages (El Ansari et al., 2011), refraining from practicing the recommended physical exercise (Alves et al., 2021a; Lee & Kim, 2019), tobacco consumption, or smoking (Alves

et al., 2020a; Jeon et al., 2016) using illicit drugs (Alves et al., 2021b), and engaging in inappropriate eating habits (Alves & Precioso, 2020).

Entering Higher Education meaning or involving leaving the parents' home results in a decrease of the direct dependence on the parents and other members of their social networks (for example, neighbours, brothers), with the potential of resulting in affective isolation and financial difficulties (Cheng et al., 2012). In this sense, although university students get involved in other social contexts, a close family relationship contributes to the increase in the level of well-being (satisfaction with one's life and general happiness) (Brannan et al., 2013; Demir, 2010; Diener & Biswas-Diener, 2008; Kong et al., 2012; Liem et al., 2010; Proctor et al., 2009; Uchida et al., 2008), but it also constitutes an important predictive factor for risk behaviors for the health of university students (Allahverdipour et al., 2015; Park & Kim, 2020; Yarcheski et al., 2004; Zhao et al., 2014). Social support can also be perceived and even measured by means of understanding friendship relations and established peer connections. Other studies demonstrated that the perception of social support provided by friends and peers positively predicts the well-being of university students (Cobo-Rendón et al., 2020; Diener & Biswas-Diener, 2008), reinforcing the idea of the adaptative value of peer support in the Higher Education environment or context (Figueira et al., 2017). Moreover, during this stage of one's life, the majority of individuals, if not all, make an effort to establish and maintain romantic partnerships or relationships (Arnett, 2000), while it is also recommended to proceed to an examination of the influence of the romantic partner (Ratelle et al., 2013) in the understanding of well-being and health behaviors.

The purpose of this study was to analyze the dimensions of well-being (satisfaction with life, satisfaction with oneself, happiness felt and perceived health state) and the risk behaviors for one's health (such as smoking habits, alcohol consumption, usage of illicit drugs and medication, physical activity, eating habits and sexual behaviors), evaluating the mediating role of the family's social influence, as well as that of friends and one's romantic partner. Based on the review of the literature which has been carried out, the following hypothesis was proposed: H1. Social influence (family, friends and romantic partner) mediates the correlation between the dimensions of well-being and risk behaviors for one's health.

Materials and methods

This is a study of cross-sectional character and structure and was carried out in a university in northern Portugal, with a probabilistic sample of students enrolled in the 2018/2019 academic year. This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), under the protocol CEICSH 009/2019.

Population and Sample

The population subject of this study consists of 5447 university students enrolled in the 2019/2020 academic year and attending the 1st and 3rd years. The population sample was selected by means of the stratified sampling, from the year of attendance and the scientific area of the course. The size of the sample was calculated with a minimum of 592 (margin of error = 5 %, confidence level = 99 %, and response distribution = 50 %). Out of the 873 questionnaires distributed, 33 were discarded before the analysis due to the fact that they were left blank or were inappropriately filled. The answer rate was 96.2% (IC 95% 94.8-97.6).

The sample was composed of 840 university students, mainly belonging to the female gender (n = 465, 55.4%) and with ages between 18 and 54 (M = 20.78; DP = 4.22). The socio-demographic characteristics of the sample are presented in table 1.

Instruments

Well-being and Health Perception Scale (WbHPS) (Alves et al., 2020b)

This is a scale previously validated for the university population composed of 5 items related to the following dimensions: Satisfaction with life; Self-satisfaction; Felt happiness; Perceived health and Satisfaction with physical form. WbHPS showed good internal consistency (α = .81).

Life satisfaction was assessed with the question "Considering all aspects of your life, what is your degree of satisfaction with life in general?". Answers varied between 1 = very unsatisfied 5 = very satisfied, with the highest scores representing a greater satisfaction with life.

Self-satisfaction was measured with the question "Considering all aspects of your life, what is the degree of your satisfaction with yourself?". Answers varied between 1 = very unsatisfied 5 = very satisfied, with the highest scores representing a greater satisfaction with oneself.

Felt happiness was assessed with the item: Considering all aspects of your life, what is the degree of happiness you feel?. Answers varied between 1 (Very unhappy) and 5 (Very happy), with the highest scores representing a greater level of happiness felt.

Perceived health was measured with one item, "Comparing with people of your age group, how do you evaluate your health in general?" with the following answering options: 1 = poor; 2 = fair; 3 = good; 4 = very good; 5 = excellent. Responses scored with higher levels depict better health.

Satisfaction with physical form was assessed with the item: Comparing with people of the same age group as you, what is the degree of satisfaction with your current physical form? Answers varied between 1 = very unsatisfied and 5 = very satisfied, with the highest score representing a greater level of satisfaction with one's current physical form.

Variables of health behaviors

The health behaviors included in this study were measured using unique/single items:

- Smoking status: we evaluated the consumption of tobacco with the question: "Do you currently smoke?", the responses were categorized as Non-smoker or former smoker (0) and Current smoker (1).
- Alcohol consumption: we measured alcohol consumption using the AUDIT-C (Barry et al., 2015) scale, and we categorized the responses regarding risk-level consumption – Yes (1) and No (0).
- Illicit drugs consumption: we evaluated the use of illicit drugs with one question: "In the last 12 months, how many times have you consumed any of the listed psychoactive substances: Cannabis, Cocaine, and Hallucinogens. The answering options available were 0 = Never to 5 = 10 or more times and categorized according to a binary method: consumption of illicit drugs – Yes (1) and No (0).
- Self-medication consumption: In the last 12 months, how many times have you consumed any of the psychoactive substances listed: Antidepressants/ Sedatives/ Soothing/ Tranquilizers (without prescription); Analgesics/ Anti-inflammatories (without prescription); Vitamins/ Food Supplements (without prescription)" and categorized according to a binary method: self-medication – Yes (1) and No (0).
- Dietary habits: we evaluated the eating habits through 4 questions about the consumption of fruit products with the question "In the last 7 days, how many times have you ingested fruits (excluding natural fruit juices or drinks)?", the consumption of vegetables with the question "In the last 7 days, how many times per day did you eat

vegetables?", the consumption of sugar with the question "In the last 7 days, how many times did you ingest food products with added sugar (ex. sodas, sweets, desserts, chocolates)?" and the consumption of *fast food* with the question "In the last 7 days, how many times did you consume fast food products (*fast food*) (ex. hamburgers, hotdogs, pizzas, …)?" in a scale of 0 = Never to 5 = 3 or more times a day. Additional information about eating behavior(s) included the frequency with which individuals skip breakfast and lunch or dinner. We categorized the questions according to a binary method, attributing 1 point to those who do not complete at least one of the recommendations for a healthy pattern of eating habits.

- Physical activity: We evaluated the level of physical activity in the last seven days using the Godin Leisure-Time Exercise Questionnaire (Godin & Shephard, 1997). The scores followed information provided by the authors of the questionnaire and for purposes of the present study those scores were classified according to a binary method: Being sedentary – Yes (1) and No (0).

- Risk sexual behaviors: we used 4 questions to evaluate this type of behavior: Age of first sexual relation ("How old were you when you had sexual relations for the first time?"; Possible answers - 12 or less; Between 13 and 14 years of age; Between 15 and 16 years of age; 17 or more), number of sexual partners ("In the last 12 months, with how many people did you have sexual relations (vaginal, oral or anal)?"; Possible answers – None; 1 person; 2 persons; 3 persons; 4 or more persons)); usage of condom and alcohol or illicit drugs consumption before engaging in sexual relations ("In the last 12 months, how frequently did you use a condom (feminine or masculine) in your sexual relations (vaginal, oral or anal)?" and "In the last 12 months, how frequently did you have sexual relations (vaginal, oral or anal) after having ingested alcohol or having consumed illicit psychoactive substances (marijuana, cocaine, hallucinogenics, …)?"; Possible answers – Never or almost never; Few times; Sometimes; Most of the times; Almost Always or Always). We classified and categorized the questions according to a binary method, attributing 1 point to those who reported at least one risky sexual behavior.

The health risk behaviors variable was calculated through the sum of the answers given to each one of the seven categories, varying from 0 to 7, with the highest value corresponding to the higher number of health-related risk behaviors.

Social Influence

- Peers Consumers: we evaluated the consumption of peers with three questions: "Out of all your friends, how many of them consume alcoholic beverages regularly«?", "Out of all your friends, how many smoke regularly?" and "Out of all your friends, how many consume illicit psychoactive substances (marijuana, cocaine, hallucinogenics, …) regularly?" – Possible answers: None or almost none; Few; Some; The Majority; Almost Everyone or Everyone. We categorized the questions according to a binary method, attributing 1 point to those who reported having consuming friends/peers.
- Romantic partner: in order to evaluate this variable, we attributed 1 point to all students who were disengaged and in a romantic relationship and to those who were married or were living together.
- Life with Family: we attributed 1 point to all students who lived with their parents or other family members.

Demographic Characteristics Form

Socio-demographic items included age, sex, scientific area, year of study, professional situation.

Procedure and statistical analysis

The questionnaires were applied at the end of classes belonging to the courses which were selected in order to compose the sample. The application of the questionnaires was carried out by the person who was responsible for the investigation/study. The students were informed of the purposes and objectives of the investigation and of the issue of voluntary gathering of information, which was also anonymous as well as confidential, with obvious prior consent provided (or not) by the individuals approached.

Statistical analyses were conducted with JASP (version 0.14.1) performed with lavaan syntax. Descriptive statistics, such as independence tests (ANOVA and t-student) and levels or scores of Pearson correlation were used to summarize the general characteristics, to determine the differences between groups and, finally, to evaluate the correlation between all variables which compose the study. Cronbach's α was measured to verify the reliability of the scores and measuring tools/instruments.

The estimated values of the recommended model were obtained by means of resorting to the Structural Equation Modeling (SEM) model and the Maximum Likelihood Estimation (MLE) technique/approach. The following criteria was used in order to evaluate the quality of the models which compose the test: χ^2/df, Root Mean Square Error of

Approximation (RMSEA), Comparative Fit Index (CFI), Index de Tucker e Lewis (TLI), Goodness of Fit Index (GFI) and Standardized Root Mean Square Residual (SRMR). In order to find what the best model for these purposes was, we carried out an additional examination of the Akaike Information Criterion (AIC), which represented and revealed if the hypothetical model was better adjusted (Marôco, 2014).

We used the mediation model proposed by Hayes (2018) and a bootstrapping method with 5.000 samples in order to test the indirect effects of the variables of social influence in the relation between the well-being dimensions and the risk behaviors for one's health.

Results

Descriptive statistics

Table 1 displays the descriptive statistics and the differences displayed by each main variable in accordance with the socio-demographic and social support characteristics.

The average score for the WbHPS was 18.70 (SD = 3.32) in a maximum of 25. In particular terms, the average of satisfaction with one's life was of 3.89 (SD = .88), satisfaction with oneself of 3,72 (SD = .95), happiness felt of 3.87 (SD = .76), perceived health state of 3.85 (SD = .79) and satisfaction with one's physical form of 3.32 (SD = 1.00). Statiscally significant differences were registered depending on the scientific area and the satisfaction with one's life, satisfaction with oneself and level of felt happiness. In a similar manner, we registered that the students displayed higher scores of satisfaction with life and happiness felt in comparison with non-students. We did not identify any statistically significant differences in the variables that compose the WbHPS and the year of academic frequency and professional situation.

The prevalence of risk behaviors for one's health was high, taking into account that, on average, we identified 3.88 ± 1.45 risk behaviors. The students who were attending the 3rd academic year displayed a higher level or score of risk behaviors when compared with students belonging to the 1st year (t (457) = -2.767, p <.01).

Table 2 shows a negative correlation of risk behaviors for one's health and WbHPS and its dimensions, which vary between -.110 (p<.05) and -.174 (p<.01), with the variable romantic partner (r = -.163, p<.01) and living with the family (r = -.169, p<.01). This means that the increase in the levels or degrees of well-being, having a romantic partner/being in a romantic relationship and living with family diminishes the number of unhealthy behaviors. On the other hand, having friends or peers who are active consumers of illicit psychoactive substances increases the number of risk behaviors (r = .341, p<.01).

Structural equation model

The final model presented in image 1 showed a good adjustment (χ^2 (21) = 28.244, p <.133; RMSEA = .028; CFI = .993; TLI = .982; NFI = .974; SRMR = .035; GFI = .988). The influence of peers who are active consumers was positive and significantly correlated or associated with risk behaviors for one's health (β = .51, p < .05), while the mediating variables "romantic partner" and "living with the family" displayed a significant correlation with unhealthy behaviors (β = -.32, p < .05, β = -.37, p < .01, respectively). The WbHPS had a marginally non-significant association with peers influence (β = -.89, p = .058), romantic partner (β = .39, p = .061) and living with one's family (β = .43, p = .058).

Mediation analysis

Table 3 displays the total, direct and indirect mediating effects of social influence in the correlation between well-being and risk behaviors for one's health. Its analysis has revealed and shown that living with the family significantly mediated the effects of the perceived health state, satisfaction with one's physical form and perceived well-being and health in the risk behaviors for one's health.

The influence of peers who are consumers significantly mediated the effect of satisfaction with life, satisfaction with oneself and the perception of well-being and health in risk behaviors for one's health. The estimates for the indirect effects or results varied between -.01 and -.06 and magnitude ranging from 16.0 to 35.8 percent.

The "Romantic Partner" variable presented itself as a mediating factor for the correlation between general satisfaction with life, satisfaction with oneself, happiness and general well-being in the health behaviors for one's health. The indirect effects had an estimated ranging of -.01 to -.05 and a level of magnitude ranging from 11.3% to 20.9%.

In a more particular manner, social influence of consuming peers and romantic partner mediated, when put together, the effects in the satisfaction with life (magnitude = 56.7%), satisfaction with oneself (magnitude = 38.0%) in unhealthy behaviors, while, in a general way, the three variables that constitute the overall factor of social influence, when put together, mediated at 36.9% the effect in the perception of well-being and health in the risk behaviors for one's health.

Discussion

The results of this study demonstrated that university students displayed a high prevalence of risk behaviors for their health and moderate levels of well-being and health (Aktaş et al., 2019). However, the average scores of satisfaction with life (Grant et al., 2009; Schnettler et al., 2015) and felt happiness (Peltzer et al., 2017; Piqueras et al., 2011) were inferior to those revealed and shown in the international scene, although this reflects the tendency for a higher level of subjective well-being and happiness in western countries (Piqueras et al., 2011). Moreover, it has been revealed that the satisfaction with life is correlated with the gender of those which were subjects of this study (Proctor et al., 2009) and that the levels of happiness were higher among women (Grant et al., 2009; Piqueras et al., 2011).

As is demonstrated in a meta-analysis carried out by Ngamaba e colegas (2017), the variables which compose the well-being and health scale are positively correlated. This means that happiness, satisfaction with life, perception of one's health, satisfaction with oneself and physical form were correlated between or among themselves.

The analyses of correlation showed significantly negative correlations between well-being and risk behavior(s). Other studies had already displayed strong evidence of these correlations, in which happiness (Kye & Park, 2014; Peltzer et al., 2017; Piqueras et al., 2011; Richards et al., 2015), satisfaction with life (Aktaş et al., 2019; Grant et al., 2009) and perception of one's health (Ahn et al., 2014; Aktaş et al., 2019; Botha et al., 2019; Park & Kim, 2020; Piqueras et al., 2011) were shown and demonstrated to be directly correlated and associated with positive health behaviors. This indicates that increasing the levels of happiness, perceived satisfaction with life among university students may bring multiple benefits, due to the fact that it is positively associated with health behaviors that could produce a reduction and decrease of the risk of developing illnesses or diseases at both the medium and long terms. Therefore, most of these studies recommends that increasing the subjective well-being should be a key-argument in future campaigns designed towards the promotion of health in the Higher Education environment and context.

Through the analysis of data collected, we identified a correlation between the well-being and the variables that have been identified as social influence, which shows that living with the family (Brannan et al., 2013) and having a romantic partner increases the levels of well-being among university students (Jackson et al., 2007; Yıldırım et al., 2017), while, on the other hand, having friends/peers who are active consumers of psychoactive

substances diminished or decreased the perceived level of well-being (Brannan et al., 2013; Cobo-Rendón et al., 2020).

The results of this study, as was hypothesized, demonstrated that the factor of social influence significantly mediated the correlation between well-being and risk behaviors for one's health. Our mediation model has been statistically confirmed.

The results demonstrated that well-being, and, specifically, the perceived health state and the satisfaction with one's physical form, predict in a rather decisive manner unhealthy behaviors, mediated by the effect of the "living with the family" variable. This means that university students who had a higher (as in, better) perception of well-being and health, live with their families, which, in turn, results in a lower level or degree of risk behaviors for their health (Griggs & Crawford, 2019). These results are consistent with the results provided by others or arising from them, which also demonstrate the importance of family, namely family help and support, in the adoption of healthy behaviors (Aktaş et al., 2019; Allahverdipour et al., 2015) and the perception of each component of one's well-being (Brannan et al., 2013; Schnettler et al., 2015).

The analysis of mediation demonstrated that the influence of friends who are consumers played a significant mediating role in the correlation between general well-being and, specifically, satisfaction with one's life and with oneself, and risk behaviors (Griggs & Crawford, 2019). This was nothing but an already expected results, since the scientific evidence already available showed that students with a lower level of well-being and satisfaction with life and themselves have a much higher tendency to have friends who are active consumers of psychoactive substances, and, therefore, are more prone and susceptible to engage in unhealthy behaviors regardless of their level or degree of severity or seriousness (Aktaş et al., 2019; Lai & Ma, 2016).

Regarding the "Partner Romantic" mediating variable, results have shown that the increase in the level of well-being and satisfaction with life, with themselves and general feeling of overall happiness when associated with the fact of having a romantic partner reduce the number of unhealthy behaviors among university students (Kye & Park, 2014; Ratelle et al., 2013).

The interpretation of the results must take into consideration some limitations. The data was collected and gathered by means of a self-report questionnaire, however, the moment of data gathering was properly controlled, with the intent of providing the enquired students with the same exact conditions. In the future, other means and especially specific developed techniques for gathering data and information should be considered.

Although the gathering of information and data included only students belonging to one single university, thereby disabling us to adequately generalize the results to all university students regardless of their location and other factors, the university in question incorporates students who come from various different regions and we have used a sample which is representative of students enrolled in that particular academic year.

Despite the limitations presented, this study is one of the first in Portugal to investigate the mediating effect of social influence in the correlation between well-being and health-related risk behaviors among university students, having analyzed social influence through three specific agents (family, friends and romantic partner), well-being through 5 specific dimensions and having included 7 health-related risk behaviors for our general and detailed analysis.

Social influence directly predicts the adoption of unhealthy behaviors and has a negative impact or effect in the development of emotional well-being among students, and that is why it is a factor that must be taken into serious account when designing and generating direct, active educational interventions towards health aimed at Higher Education. As is suggested by recent scientific investigations (Cobo-Rendón et al., 2020; Figueira et al., 2017; Ye et al., 2019), these intervention programs should be able to enable students in making conscious and positive choices and options of life, promoting the development of skills towards emotional regulation and the active participation of the closest social networks. In other words, and summarizing, efforts should be made to increase the level of awareness among parents/family, friends and romantic partners for the prevention of risk behaviors and the increase of well-being of students.

Conclusions

This study has proven that social influence (living with family, having friends who are consumers of illicit psychoactive substances and having a romantic partner) mediates the correlation between well-being and health-related risk behaviors in the context of Higher Education. In a more particular way, the influence of peers who are consumers and that of a romantic partner account for more than 50% of the effect of satisfaction with one's life and the adoption or propensity to engage in unhealthy behaviors.

These results have practical implications in the investigation on education for health in Higher Education. On one hand, it shows the importance of regular and proactive monitorization by the institutions of higher education of unhealthy behaviors and the levels of well-being, and, on the other hand, that incorporating the mentioned variables

as a general, overall factor that constitutes social influence, as it consists of them, is instrumental in designing and implementing educational programs directed towards health, as it quite unmistakably improves their level of practical efficiency.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

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Table 1

Mean, standard deviation and independence tests (ANOVA and t-student) for sociodemographic characteristics and health risk behaviour, WbHPS and its dimensions

	n(%)/*M*(SD)	Health risk behavior (range 1-7)		WbHPS (range 5-25)		Satisfaction with life		Self-satisfaction		Felt happiness		Perceived health		Physical Form Satisfaction	
		M(SD)	*t/F/r*	*M*(SD)	*t/F/r*	*M*(SD)	*t/F/r*	*M*(SD)	*t/F/r*	*M*(SD)	*t/F/r*	*M*(SD)	*t/F/r*	*M*(SD)	*t/F/r*
Year of study															
1st year	464 (55.2)	3.69(1.40)	-2.767**	18.56(3.18)	-1.004	3.87(.84)	-.806	3.66(.94)	-2.144*	3.85(.70)	-.811	3.85(.81)	.282	3.31(1.02)	-.465
3rd year	376 (44.8)	4.06(1.47)		18.79(3.50		3.91(.93)		3.80(.95)		3.89(.83)		3.84(.76)		3.34(.99)	
Scientific area															
Engineering sciences	302 (36.0)	3.99(1.43)	1.393	18.41(3.40)	2.63	3.78(.92)	3.872**	3.64(.97)	3.133*	3.75(.80)	2.491*	3.91(.78)	.692	3.30(.99)	1.23
Exact and natural sciences	136 (16.2)	3.89(1.55)		18.39(3.24)		3.87(.81)		3.64(.97)		3.89(.77)		3.79(.80)		3.21(.99)	
Law and economic sciences	132 (15.7)	3.98(1.43)		18.62(3.40)		3.88(.94)		3.69(.99)		3.89(.75)		3.83(.79)		3.33(1.01)	
Human and social sciences	270 (32.1)	3.68(1.41)		19.11(3.20)		4.03(.82)		3.88(.86)		3.98(.70)		3.81(.79)		3.41(1.02)	
Sex															
Male	375 (44.6)	3.95(1.48)	1.013	18.43(2.46)	-1.839	3.79(.91)	-2.789**	3.67(.97)	-1.539	3.78(.79)	-3.166**	3.86(.83)	.500	3.30(1.02)	-.641
Female	465 (55.4)	3.81(1.41)		18.85(3.20)		3.96(.85)		3.77(.92)		3.94(.72)		3.83(.75)		3.34(.99)	
Professional situation															
Full time student	739(88.8)	3.84(1.48)	-1.170	18.64(3.29)	-0574	3.88(.87)	-.692	3.70(.94)	-1.707	3.87(.75)	.144	3.85(.77)	.671	3.31(.99)	-.460

Worker / Student	93(11.2)	4.06(1.27)		18.85(3.30)		3.95(.95)		3.88(.98)		3.86(.86)		3.80(.88)		3.37(1.11)	
BMI															
Low weight	58(7.1)	3.96(1.27)	.036	18.28(3.01)	14.99***	3.71(.90)	4.696**	3.59(.97)	6.101**	3.79(.72)	.933	3.81(.66)	12.560**	3.38(.90)	32.3***
Normal weight	599(73.1)	3.88(1.48)		19.03(3.26)		3.94(.86)		3.79(.92)		3.89(.77)		3.92(.78)		3.48(.96)	
Overweight	162(19.8)	3.87(1.43)		17.47(328)		3.74(.91)		3.52(.96)		3.81(.74)		3.58(.80)		2.77(1.01)	
Social Support															
Peers	2.31(0.79)		.341***		-0.063		-.102**		-.083*		-.045		-.060		-.01
Consumers															
Romantic Partner															
Yes	347 (41.7)	3.69(1.39)	-3.510**	19.20(3.09)	-4.13***	4.04(.80)	-4.416**	3.84(.94)	-3.105**	4.04(.65)	-5.887**	3.90(.73)	-1.937	3.38(1.05)	-1.35
No	486 (58.3)	4.17(1.50)		18.24(3.43)		3.77(.91)		3.64(.95)		3.73(.81)		3.80(.82)		3.28(.98)	
Living with Family															
Yes	537 (64.9)	3.68(1.43)	3.644**	18.96(3.21)	-3.25**	3.93(.82)	-1.798	3.77(.90)	-2.014*	3.92(.73)	-2.008*	3.93(.78)	-3.888***	3.40(1.01)	-2.88**
No	291 (35.1)	4.18(1.43)		18.17(3.39)		3.82(.96)		3.64(1.00)		3.81(.79)		3.71(.76)		3.19(.97)	
Total	**840(100.0)**	**3.88(1.45)**		**18.7(3.32)**		**3.89(.88)**		**3.72(.95)**		**3.87(.76)**		**3.85(.79)**		**3.32(1.00)**	

*$p < .05$; **$p < .01$; ***$p < .001$

Table 2

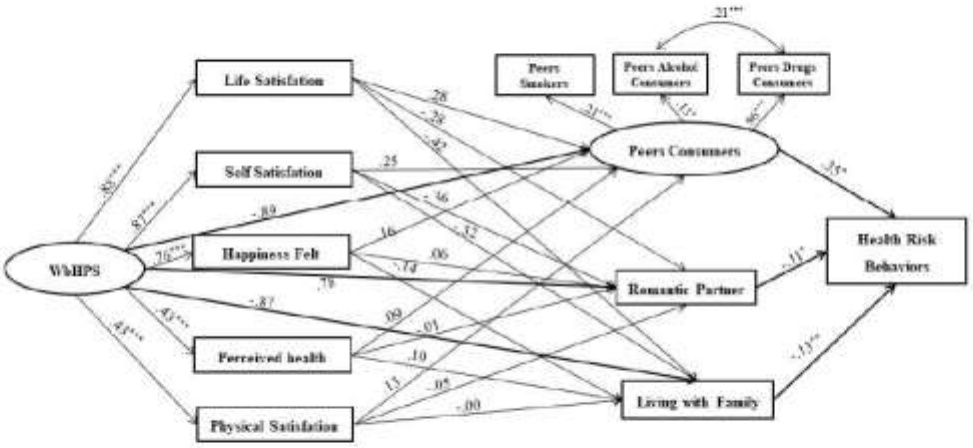
Correlations of main variables

	1	1a	1b	1c	1d	1e	2a	2b	2c
1. **WbHPS (range 5-25)**									
1a. Satisfaction with life	.811***								
1b. Self-satisfaction	.853***	.727**							
1c. Felt happiness	.775***	.677**	.654**						
1d. Perceived health	.642***	.343**	.369**	.329**					
1e. Physical Form Satisfation	.710***	.347***	.465***	.344***	.450***				
2. Social Support									
2a. Peers Consumers	-.079*	-.102**	-.083*	-.045	-.060	-.025			
2b. Romantic Partner	.142***	.152**	.107**	.200**	.067	.047	.037		
2c. Living with Family	.113**	.063	.070*	.070*	.134**	.100**	-.152**	.037	
3. Health risk behavior (range 1-7)	**-.171*** **	-.110*	-.128**	-.140**	-.174**	-.118*	.341**	-.163**	-.169**

*$p < .05$; **$p < .01$; ***$p < .001$

Figure 1

A structural equation model to examine the relationships between WbHPS and health-risk behaviors with social influence as the mediators.



*$p < .05$; **$p < .01$; ***$p < .001$. All are standardized estimates.

12. ESTUDO 12: HEALTH *ON* YOU PROGRAM: DESENVOLVIMENTO E IMPLEMENTAÇÃO DE INTERVENÇÃO DE EDUCAÇÃO PARA A SAÚDE BASEADA NA WEB PARA ESTUDANTES UNIVERSITÁRIOS/AS [15]

Referência bibliográfica:

Alves, R. (em revisão). Health on You Program: Development and implementation of Web-Based Health Education Intervention for university students.

Resumo

Enquadramento: A adoção de comportamentos de saúde saudáveis durante o percurso académico tem um impacte determinante no estado de saúde ao longo da vida. Assim, os/as estudantes universitários/as são uma população prioritária para intervenções em EpS.

Objetivos: Este artigo descreve o processo de desenvolvimento e implementação de um programa de EpS fornecido na Web, para promover comportamentos de saúde positivos em estudantes universitários/as.

Métodos: O desenho do programa baseou-se no modelo PRECEDE-PROCEED e teve como objetivo dotar os estudantes de conhecimentos e estratégias que lhes permitissem decidir a favor da sua saúde, ao adquirir comportamentos de saúde saudáveis e positivos no seu dia-a-dia. O Health *On* You é uma intervenção baseada na web, recorrendo a uma plataforma de ensino-aprendizagem e estratégias pedagógicas de carácter mais interativo, composto por 6 módulos (tabaco, álcool, outras drogas, sexualidade, alimentação e atividade física) e foi implementado com 37 estudantes.

Resultados: A apreciação global do programa foi bastante positiva 5.00 (máximo de 5), bem como com cada um dos módulos desenvolvidos (média dos scores, 4.66-5.00).

Conclusões: O programa Health *On* You apresenta-se como uma solução inovadora pela abordagem multifacetada que apresenta, quer em termos de temáticas a abordar, quer no que concerne a variedade de estratégicas pedagógicas para cada um dos módulos.

[15] No âmbito deste artigo realizaram-se duas comunicações: **1)** no Simpósio Internacional de Psicologia da Educação: passado, presente e futuro. Universidade de Aveiro, Aveiro, Portugal. 24 e 25 de setembro de 2020 (intitulada "Health On You Program: Desenvolvimento de uma Intervenção de Educação Para a Saúde no Ensino Superior") e **2)** no XV Congresso Internacional Galego-Português de Psicopedagogia. Universidade da Coruña, Coruña, Espanha. 4 a 6 de setembro de 2019 (intitulada "Alimentação Saudável no Ensino Superior: Intervenção em formato e-learning").

Abstract

Objective

Engaging in reasonable health behaviors during a person's academic course is a defining factor in terms of its impact in the health of that person throughout their life. Therefore, university students are one of the population groups that constitute a priority when it comes to health education interventions. This article describes the process of development and implementation of a web-based health program intervention, in order to enable students to acquire the knowledge and strategies to allow them to make decisions that favour their health, by adopting healthy and positive behaviors in their daily lives

Design

The design of the Health *On* You program was based on the PRECEDE-PROCEED model, and, because it is a web-based intervention, it used an online platform designed for self-learning and more interactive teaching strategies.

Setting

Data collection took place in one public university in Portugal.

Method

The program is composed of 6 modules (Drinking responsibly; Living free of smoke; Saying no to illicit drugs and to self-medication; Balanced, Healthy and Sustainable Diet; Moving Yourself; Preventing Sexually Transmitted Infections) and was implemented on 37 students.

Results

The global appreciation of the program was fairly positive - 5.00 (with 5 as the highest mark), as well as the appreciation revealed for each of its developed modules (mean scores, 4.66-5.00).

Conclusion

The Health On You program appears as an innovative solution due to the broad approach it pressuposes, both in terms of the topics to tackle and in terms of the variety of teaching or learning strategies for each of the modules.

Keywords: PRECEDE-PROCEED; University Students; Health Education; Intervention; Web-based

Introduction

Research in the area of Health Education in Higher Education is becoming ever more recurrent at a national and international level, directed essentially towards the study of the positive health behaviors and those that constitute a risk (Amare et al., 2019; Arsandaux et al., 2020; T. Bennett & Holloway, 2017; Xu et al., 2019). In this regard, the scientific evidence reveal a high prevalence of risky health behaviors among university students (U.S. Department of Health and Human Services, 2020), such as 1) consumption of psychoactive substances such as tobacco, alcohol, or illicit drugs; 2) self-medication; 3) unbalanced diets and eating habits; 4) absence of the practice of physical exercise; 5) sexual practices considered to be risky. Furthermore, there is evidence to back up the claim for the existence of grouping of risk behaviors, which means, the majority of studies carried out on the issue points towards the existence of a positive correlation between the different risky behaviors (Buckner et al., 2010).

The importance and the appliance of Health Education in Higher Education is discussed by several national and international researchers, who suggest the existence of programs designed with university students in mind (Alves et al., 2020b; Liu, 2010; Rosenthal et al., 2008; Yager & O'Dea, 2008) and aim to tackle numerous health behaviors, guided by international guidelines such as: 1) the Sustainable Development Goals (SDGs) 2030, namely the 3rd SDG – to guarantee access to quality healthcare and to well-being of everyone, of all age groups; 2) the Healthy People 2030 (U.S. Department of Health and Human Services, 2021), in which young adults, namely university students, constitute a priority as a social group; 3) Healthy Campus 2020 (American College Health Association, 2018) which presents guidelines that compel to the implementation of well-being and health programs among universities.

The internet is a promising informative method when it comes to develop Health Education programs directed to young adults, by providing broad and relatively inexpensive methods (Bingham et al., 2011; Kattelmann et al., 2014; Tahaney & Palfai, 2017) in an encouraging

For Peer Review

manner; there is some evidence that such interventions may have positive effects in health behaviors (Jemmott et al., 2011; Visser et al., 2020; Webb et al., 2010; Werch et al., 2007; Zhang & Cooke, 2012).

The present article describes the process of development and implementation of a web-based educational program for health, enabling students to have access to knowledge and strategies to allow them to make healthy decisions by engaging in healthy and positive behaviors in their daily lives.

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Methods

Study Design

The "Health *On* You" program was elaborated in accordance with the stages of development of a health intervention typical of the PRECEDE-PROCEED model (Predisposing, Reinforcing and Enabling Constructs in Educational/Ecological Diagnosis and Evaluation and Policy, Regulatory and Organizational Constructs in Educational and Environmental Development) (Green & Kreuter, 2005). This model is widely used for intervention in Health Education among university students (Ashton et al., 2017; Kattelmann et al., 2014; Whatnall et al., 2019), and it develops itself in 8 stages: the first 4 stages (PRECEDE) serve the purpose of planning and evaluating the needs of the ones involved, while the PROCEED component (4 stages) involves the implementation and evaluation of the process, the progress of its results and its impact.

Table 1 presents a general overview of the PRECEDE-PROCEED model and a description of how each component of the project works.

Table 1

Intervention development

Stage 1: Social Diagnostic

The focus while on stage 1 was to identify the necessary information in order to guide the development of the intervention, specifically towards Higher Education students. In this regard, different reviews of the literature were made, in accordance with previously identified risk behaviors such as those prevalent among Higher Education students (excessive consumption of tobacco, alcohol and illicit drugs, self-medication, unbalanced diets or eating habits, insufficient physical exercise and unprotected sexual relations). In the studies identified in these reviews, the need for the creation of Health Education programs in Higher Education was strongly highlighted.

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Stage 2: Epidemiologic, Behavioral and Environmental Diagnostic

In this stage elements such as environmental and behavioral factors are explored, focusing on an analysis of the risk behaviors for the students' health (Alves et al., 2020a, 2021; Alves & Precioso, 2020a, 2020b) and on an identification of the environmental factors present in the campus that may negatively affect the health of the students, such as the existence of vending machines containing articles of food of high caloric content and of restaurants in the vicinity of the campus offering unbalanced meals, the identification of countless coffee shops and bars offering the possibility of acquiring alcoholic beverages and tobacco products in kiosks near the campuses. However, one should also point out the existence of certain services made available at the campus, such as the existence of spaces designed for practicing physical activity and a canteen with carefully prepared meals made in accordance with a nutritionist's advice. This information made it possible to understand in what way the environmental factors may or may not support unhealthy habits and provide evidence for carrying out environmental or political changes.

Stage 3: Educational and Ecological Diagnostic

Stage 3 is based on the logic model of stage 2, exploring the factors of predisposition (information and beliefs/attitudes), reinforcement (abilities and resources/instruments) and facilitators (influence of the social environment and surrounding people) which have an impact in behavior (Green & Kreuter, 2005). Therefore, transversal studies mentioned in stage 2 also included an analysis of the knowledge and the attitudes when it comes to the adoption of health behaviors and the influence of peers in certain risky practices (Alves et al., 2020a, 2021; Alves & Precioso, 2020a, 2020b).

In this stage a review of the available literature was also conducted, in order to identify the level of efficiency of web-based interventions and those which are potentially applicable to university students. The interventions provided by the Internet seem to possess the potential to become an efficient and cost-effective source of interventions designed to promote health (Evers, 2006) and when it comes to changing one's behavior towards health (G. G. Bennett & Glasgow, 2009; Brouwer et al., 2011; Cugelman et al., 2011; Kohl et al., 2013; Webb et al., 2010), with this type of interventions becoming ever more common and displaying countless benefits in terms of how using the internet as a means to promote health among young students may be effective: accessibility 24 hours a day and 7 days a week, pace of acquiring information tailored to each individual, guarantee of anonymity (very beneficial aspect for young adults who become ashamed when presented with particular questions related, for example, to the use of condom), the possibility of maintaining and updating interventions and the possibility of providing individual and personalized sessions (Atkinson & Gold, 2002; Cugelman et al., 2011; Griffiths et al., 2006).

The intervention presented in this article was based in other web-based interventions directed towards university students (Alcohol – *M-PASS* (Barretto et al., 2011; Bingham et al., 2011);

Multi-Media Assessment of Student Health - Project MMASH (Dimeff & McNeely, 2000); the *AlcoholEdu* (Paschall et al., 2011); *THRIVE - Online Alcohol Intervention* (Hallet et al., 2009; Kypri et al., 2009); *MyStudentBody.com: Alcohol* (Chiauzzi et al., 2005) e *Alcohol Skills Training Program* (Kivlahan et al., 1990); Tobacco – RealU Program (An et al., 2008), *Tweet2Quit* (Pechmann et al., 2017) and *Questions Sharing and Interactive Assignments – QSIA* (Essa-Hadad et al., 2015); Illicit drugs – *Cannabis eCHECKUP TO GO (e-TOKE)* (San Diego State University Research Foundation, 2009); Eating - *Eating Advice To Students (EATS)* (Whatnall et al., 2019); *Web-Based Nutritional Health Education Module* (El-Refaay et al., 2017); *Web-Based Nutrition Education Intervention* (Poddar et al., 2010); Physical activity - *Active Transition* (Kwan et al., 2013); *Internet-based Physical Activity Program - i-PAP* (Okazaki et al., 2014); a web-based intervention of 8 weeks, based on the HAPA model (Health Action Process Approach) (Schwarzer, 2008); Sexuality - *F.O.R.E.Play* (Moore et al., 2012) *Electronic-KIOSK Intervention for Safer Sex - e-KISS* (Shafii et al., 2019)).

Stage 4: Administrative Diagnostic and Policies and Alignment with the Intervention

Stage 4 centers on determining the components of the intervention which are deemed necessary to carry out a campaign of awareness-raising for the need and importance of changes in behavior identified in previous stages, while taking into consideration the organizational and administrative resources available. In accordance with the authors of this model (Green & Kreuter, 2005), this stage requires the inclusion of theories for changing one's behavior to support the objectives that the intervention seeks to achieve. This way, the intervention is supported by the Theory of Triadic Influence (TTI) (Flay & Petraitis, 1994), due to the fact that its meta-theoretical structure allows for the grouping together of multiple theories, combining them, such as the rational model, the Theory of Planned Behavior (Ajzen, 1991), the Social Cognitive Theory of Bandura (1986) and the Model of Health-related Beliefs of Janz and

Becker (1984), the most commonly used in programs designed to change health behaviors (Evers et al., 2003) and with efficient results in behavioral changes among young adults (Ashton et al., 2017; Cooke et al., 2013). Based on these theoretical constructs, and despite the fact that some authors support the belief that 1 hour interventions, or even 5 minute-interventions, may be efficient with university students (Kulesza et al., 2010; Tanner-Smith & Lipsey, 2015), the option was made to follow the guidelines of Fleming (2002) and of Brendryen et al. (2013).

In this stage the logo was also developed, the educational wall of the program (http://www.nonio.uminho.pt/healthonyou/) and its digital platform, in which links were added to relevant and additional information, tips for the adoption of healthy behaviors, interactive questionnaires for self-assessment of behaviors and access to the digital platform where the intervention program was hosted. The website's and the digital platform's management was designed by the researcher in charge of the program.

The Health *On* You program is a theory-based and web-based intervention to promote the adoption of positive behaviors for the health of students in Higher Education based on two general objectives: to promote (i) the literacy and knowledge in the context and area of health behaviors – that is, a set of knowledge, skills and behaviors related to tobacco, alcohol, illicit drugs, medication, eating habits, physical exercise and sexuality – of young university students, as well as (ii) psychosocial strategies associated with the change of health-related behaviors. In this sense, it is expected that by the end of the intervention, the students will have become prone to adopt positive health behaviors, knowing how to apply preventive strategies to certain risky behaviors in the academic context. Moreover, it is also expected that the students involved in this program will or may be able to positively influence health behaviors of other university students.

The components of the intervention were available in the Thinkific.com platform, protected by a login and password system. Through the digital platform, it was possible to add and update

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the contents of the sessions and of the instruments of data-gathering, monitoring the activity of participants and recovering all the data accumulated throughout the study.

The Health *On* You program is divided in 6 modules and sub-divided in educational mini-sessions, focused on the previously analyzed dimensions: Drinking responsibly; Living free of smoke; Saying no to illicit drugs and to self-medication; Balanced, Healthy and Sustainable Diet; Moving Yourself; Preventing Sexually Transmitted Infections. In an Introductory session a welcoming message is shown, as well an explanation about the functioning of the platform, the objectives of the intervention, and ending with a motivational message. The sessions were projected to be short and interactive with educational content and strategies for the adoption of healthy behaviors and to resist the social pressure(s) to which young adults are subsequently exposed in the academic environment. Throughout the programs, different pedagogic practices and strategies are presented, directed to the promotion of positive health-related behaviors: *Campus Focus* (in the form of a table or graphic demonstrating the prevalence of a particular health-related behavior in Higher Education); *Website Health* (it refers to a website which complements the knowledge of a certain module and allows interactivity on the web); *Top 10* (referring to a list of practical and relevant tips for health); *Voices* (referring to small testimonials of university students); *Preventive Strategies* (referring to a list of advice on prevention of certain risky behaviors); *Strategies for Change* (it presents a *checklist* of behavioral change); *To reflect upon* (presenting questions of self-reflection and introspection about health-related behaviors); and *Health Videos* (videos developed specifically for this program with motivational strategies). Furthermore, a deepening bibliography was added in all modules to satisfy the needs of those wishing to have access to more information, along with questionnaires designed to evaluate the modules. A detailed description of all intervention components is available in Additional file 1.

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According to the model followed, a pilot test for refining these dynamics was carried out, with 2 specialists in the area of Health Education and Educational Technologies which have helped in perfecting the components of the intervention. All intervention components have been tested individually with 5 voluntary students to guarantee the comprehension and the interest of/in the sessions, the language used and the visual presentation. The changes included the improvement of the colour scheme used, the adding of usage instructions for the platform and a reduction of the amount of information, with the latter being transformed in videos built for the intended purpose. It should be noted that the specialists considered the objectives of the sessions to be clear and the contents to be adequate in order to attain the intended goals. The design used in the platform was considered to be appropriate in terms of size and style of writing/letters, as well as the bold used to highlight the most important contents. The students believed the program to be beneficial for their peers and that the contents covered would promote an increase in knowledge, as well as helping in the adoption of positive health behaviours. No difficulties in the use of the platform were reported.

The estimated time for the conclusion of the program turned out to be approximately 35 hours, depending on the depth of content acquisition desired by each student, throughout a period of two months. One months after the beginning of the program reminders in the form of e-mails were sent to motivate the participants to conclude the program and, after the conclusion, all participants received a further e-mail with a certificate of training.

Stage 5: Implementation of the Health On You Program

This study was approved by the Ethics Committee for Research in Social and Human Sciences (CEICSH), of the University of Minho Ethics Council, under the protocol CEICSH 009/2019. The implementation took place in the months of April and May of 2021 and was carried out with university students as subjects (n = 37) recruited through the institutional e-mail address

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and through informal contact networks, such as social networks. Any student enrolled in the university was eligible to take part in the program after informed consent was obtained.

Participants and recruitment

The sample of students who concluded the course was nearly in its totality female students (n = 36, 97.3%) with ages ranging between 21 and 23. The totality of participants was full-time students frequenting the 1st year of master's degree in a course belonging to the area of Social and Human Sciences. The participants were predominantly not married, not engaged and at the time not in a romantic relationship (n = 23, 62.2%) and all of them were living with their parents/fathers/mothers or family members.

Stage 6 and 8- Assessment of the process and of results

Instruments

The assessment of the intervention was divided in 3 parts: Diagnostic (related to the previous conditions); Monitoring (corresponding to the evaluation during the process) and Results (referring to the global appreciation of the program).

Diagnostic – Questionnaire for the Identification of Expectations (QIE)

Before initiating the program, the participants were invited to fill a questionnaire composed of three open questions, which allowed for an analysis of motivations, expectations and anticipated obstacles. Moreover, at this stage the students were invited to answer the Questionnaire about the Behaviors, Knowledge and Attitudes in Higher Education (QBKAHE) in order to make it possible to, in the future, assess the impact of the intervention in the participants' knowledge, attitudes and health-related behaviors.

Monitoring – Scale of Assessment of Modules (SAM) (adapted from Jardim & Pereira, 2006)

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This scale adapted from Jardim and Pereira (2006) was applied at the end of each module, allowing the students to express their opinions through 23 items divided in 5 categories (Global appreciation of this module – 5 items; Objectives – 4 items; Contents – 7 items; Activities – 4 items; Development – 3 items) and assessed resorting to a Likert scale of 5 points ("Bad", "Poor", "Satisfactory", "Good" and "Very Good"). Besides this, questions of sociodemographic character were included with the purpose of understanding the adaptation of each module in accordance with the characteristics of each individual, separate student.

Results – Scale of Assessment of the Implementation of Programs (SAIP) (adapted from Jardim & Pereira, 2006)

This scale was adapted with the aim of assessing the degree of efficacy and the quality of the program. After adapting it, 28 items were selected and distributed between 5 categories (Global appreciation of this module – 6 items; Objectives – 4 items; Contents – 10 items; Activities – 5 items; Development – 3 items) and assessed according to a Likert scale (in which 1 = "Bad"; 2 = "Poor"; 3 = "Satisfactory"; 4 = "Good"; 5 = "Very Good"). Besides this, at this stage of the final evaluation, students were asked to answer anew to the QBKAHE with the aim of analyzing the differences before and after the intervention.

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Procedures and Data Analysis

The QIE was filled and answered at the moment of access to the program, before the beginning of the first module, while the SAM and SAIP were filled at the end of each model and at the end of the program, respectively. The process of filling these scales took around 5 minutes.

The analysis of the data gathered was carried out by resorting to the IBM Statistical Package for the Social Sciences (SPSS), Statistics for Windows (version 26.0), with a special focus on descriptive and inferential statistics. In order to read the results of the scales, the higher the average of the scale, the higher the satisfaction with each of the categories that compose the

scales (interval of 0–5). The open questions of the QIE were subjected to a content analysis, in order to create explanatory categories for each of the questions posed.

Results

The analysis of the answers allowed for verifying that the expectations regarding the program were circumscribed to, essentially, three categories: to have a healthier life and to improve health-related behaviors (15 times – 40.5%); to increase knowledge (12 times – 32.4%) and to improve the professional skills to help others (19 times – 51.4%). All participants pointed out that the main motivation to take part in the program was to learn, whether it was about their health and lifestyle or about intervention programs encompassing their family members, friends and the overall community. The only obstacle mentioned by the majority of participants was the lack of time, when it came specifically to being able to take part in it while simultaneously fulfilling their other academic and professional activities or responsibilities.

Table 2 summarizes the average ranking given to the components of each module and the program it its totality, showing that there was a quite positive level of satisfaction. The answers indicated that the participants made a positive global appreciation of the module (mean scores, 4.66-5.00), considering the objectives, the contents and the activities inherent to each module to be appropriate (mean scores, 3.45-4.59; 4.76-5.00; 3.45-4.54, respectively).

Discussion

The Health Education in Higher Education is crucial to avoid and prevent the adoption of risky or damaging behaviors for the health of the students. This study presents the development and assessment of the Health *On* You program, as a solution for many of the difficulties faced by the university students in the adoption of positive behaviors for their health. The expectations and motivations presented by the participants were in line with the ones shown in other studies,

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in which students considered it to be necessary to acquire knowledge about health and to have access to educational tools for health (Xukai, 2019).

The results have shown that the participants considered the components of intervention developed in each module to be relevant and useful. One of the key benefits of this program refers to the usage of the PRECEDE-PROCEED model for designing the intervention, along with the Theory of Triadic Influence (TTI) as the theoretical basis for the intervention and the guidelines of Fleming (2002) and of Brendryen et al. (2013) for the projection of the sessions in each module. In accordance with the review of the literature that was carried out, this program is the first application of the module to a web-based intervention directed to university students focusing in various health-related risky behaviors.

One limitation of the results presented refers to the voluntary participation of students, that is, due to the fact that taking part in the program was a voluntary decision, that may indicate or mean that the students who did choose to participate were already more aware, interested and receptive to the adoption of positive health-related behaviors, leaving aside the students who could benefit from such type of programs because of their higher prevalence or predisposition towards risk behaviors. In this regard, although this is not a sample that firmly represents the target-population, also due to the size of the sample being relatively small, this study allows to draw essential conclusions for future interventions.

In terms of the design of the program, one of the disadvantages of using a web-based format is that it proved difficult to measure the quantity and quality of the interaction that the participants had with the web program, and although there is the possibility to comment each of the sessions and despite the fact that there are multiple incentives to the participation in forums about the sessions, there were but a few free comments written by the participants. Also, it should be considered that the participants should have been questioned about what they thought about the

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format of the web-based program, because the inclusion of this information could have contributed to validate the format chosen to carry out the intervention.

In the future, it is essential to assess the impact of intervention (Stage 7 of PROCEED) through analysis of data gathered thanks to the filling and answering of QBKAHE at the beginning and at the end of the program. Although we did not resort to a control group and, thus, it will not be possible to reach a conclusion on what potential behavioral improvements may have resulted exclusively from the intervention.

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Conclusions

The Higher Education Institutions constitute privileged spaces for the application of strategies for the promotion of healthy lifestyles, enabling students to have an active and efficient participation in the building of a healthy society. Web-based interventions such as the Health *On* You program should be broadly divulged and implemented at a national level, and the results of this study have shown a global positive appreciation of the program with further potential to facilitate some changes in lifestyles and improve the health-related behaviors among university students.

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Table 1

General overview of the development and assessment of the "Health *On* You" Program, according to each stage of the PRECEDE-PROCEED model

	Stage of Model	Components of the Project
PRECEDE	Stage 1 – Social Diagnostic Stage 2 – Epidemiologic, Behavioral and Environmental Diagnostic Stage 3 – Educational and Ecological Diagnostic	Formative Research - Review of the literature on health-related behaviors among young adults; - Transversal studies of the health-related risk behaviors and knowledge and attitudes on health from HE students; - Review of the literature on web-based interventions with university students. Launching of the Health *On* You Educational Wall - http://www.nonio.uminho.pt/healthonyou/
	Stage 4 – Administrative Diagnostic and Policies and Alignment of the Intervention	Development of the Health *On* You program Pilot test and subsequent refinement
PROCEED	Stage 5 - Implementation Stage 6 – Assessment of the process Stage 7 – Assessment of impact Stage 8 – Assessment of results	Implementation of the Health *On* You program; Assessment of the process; Assessment of the results of the intervention. Assessment of the impact (discussed in subsequent article – related to the data gathered through the QBKAHE)

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Table 2

Rankings for Global Appreciation, Objectives, Contents, Activities and Development for modules and program components [a]

	SAM						SAIP
	Alcohol	**Tobacco**	**Other Psychoactive Substances**	**Eating Habits**	**Physical Exercise**	**Sexuality**	**Health On You Program**
	M (SD)	*M* (SD)	*M* (SD)	*M* (SD)	*M* (SD)	*M* (SD)	*M* (SD)
Global Appreciation	4.66 (.04)	5.00 (.00)	4.86 (.03)	4.90 (.02)	5.00 (.00)	5.00 (.00)	5.00 (.00)
Objectives	4.49 (.08)	3.45 (.08)	4.35 (.08)	4.36 (.06)	4.59 (.08)	4.54 (.08)	4.23 (.38)
Contents	4.76 (.06)	5.00 (.00)	5.00 (.00)	4.82 (.03)	5.00 (.00)	5.00 (.00)	4.89 (.10)
Activities	4.51 (.08)	3.45 (.08)	4.00 (.00)	4.49 (.08)	4.30 (.04)	4.54 (.08)	4.57 (.50)
Development	3.74 (.09)	4.03 (.12)	3.91 (.10)	4.15 (.08)	4.06 (.05)	4.03 (.06)	4.19 (.17)

[a] Maximum score = 5

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Appendix 1

Health On You Program Educational modules, general objective, Sessions for each module and your objectives and pedagogic strategies.

Modules	General objective	Sessions	Specific Objectives	Pedagogic Strategies
Drinking responsibly	To provide information about young adults about the consumption of alcohol and its respective dependence and to enable the development of abilities in order to avoid, resist and establish limits to the consumption of alcohol.	Session 1 – Epidemiology of the Consumption of Alcohol	To identify the types and patterns of the consumption of alcohol; To analyze the predictive factors of the consumption of alcohol; To understand and know the current state and the evolutional tendencies of the consumption of alcoholic beverages.	*Campus Focus* – The Consumption of Alcohol at the Campus.
		Session 2 – The bodily and behavioral effects of the consumption of alcohol	To understand the effects of alcohol in both the short and long term; To list the negative individual and social consequences of alcohol abuse.	*Website Health* – Effects of alcohol in the Organism.
		Session 3 – Myths about the consumption of alcohol	To identify the percentage of alcohol in alcoholic beverages; To be able to measure the level of alcohol in blood; To identify the amount of sugar present in alcoholic beverages; To identify some of the myths surrounding the consumption of alcohol.	*Top 10* – Myths about the consumption of alcohol; *To reflect upon*: #Case 1 and #Case 2 – Students with alcoholism problems
		Session 4 – Prevention strategies for the consumption of alcohol	To identify strategies in order to promote healthy consumption; To understand ways of drinking moderately and responsibly; To be able to measure spending associated with the consumption of alcoholic beverages.	*Preventive Strategies* – How to promote responsible consumption/drinking; *Top 10* – Ways of drinking alcohol in a moderate and responsible manner; *Strategies towards change* – Calculation of the spending associated with alcoholic beverages *Health Video*
Living free of smoke	To provide information about the negative consequences of cigarette smoking and recommendations for stopping smoking, by means of planning a strategy directed	Session 1 – Epidemiology of Tobacco Consumption (Smoking)	To describe the typical user of tobacco and the reasons for its consumption; To understand the current state and the evolutional tendencies of the tobacco epidemic.	*Campus Focus* – Tobacco Consumption at the Campus.
		Session 2 – Negative consequences of cigarette smoking and exposure to passive smoking	To analyze the (individual and health, family, social and economical) consequences directly associated with the consumption of tobacco (smoking); To understand the advantages that arise from ceasing to smoke; To understand the effects of exposure to passive smoking arising from the consumption of smoking among peers.	*Website Health* – Effects of smoking in one's Health. *Website Health* – Measuring of cost and calculation of money spending with cigarettes.

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	towards maintaining the environment free of smoke.	Session 3 – Myths about the consumption of tobacco (smoking) and the components of the smoke of tobacco	To understand and identify the components of tobacco which pose a risk to one's health; To analyze the myths associated with the consumption of tobacco and its social acceptability.	*To Reflect Upon* – Video featuring the components of tobacco smoke. *Top 10* – Myths associated with smoking.
		Session 4 – Strategies for the prevention and resistance to smoking	To plan a strategy for a life free of tobacco smoke.	*Strategies for Change* – How to stop smoking. *Health Video*
Saying no to illicit drugs and to Self-Medication	To prevent, reduce, decrease and minimize the problems related to the consumption/use of illicit psychoactive substances and self-medicating behaviors.	Session 1 – Epidemiology of the use of illicit drugs	To understand the concept of illicit drugs and their effects; To understand the current state and evolutional tendencies associated to or regarding the use of illicit psychoactive substances.	*Campus Focus* – The Consumption/Use of illicit drugs at the Campus.
		Session 2 – Epidemiology of consumption/use of medication	To understand the concept of over-the-counter medication and its effects; To understand the current state and the evolutional tendencies related to the usage of medication.	*Campus Focus* – The Consumption/Use of medication at the Campus.
		Session 3 – Myths about the consumption of illicit drugs and medication	To recognize some of the myths associated with the consumption of illicit psychoactive substances and medication; To identify the over-the-counter medication depending on the symptoms	*Top 10* – Myths about illicit drugs. *Top 10* – Myths about medication in its many variants and types. *Website Health* – The right medication *To reflect upon* – Case #1 and Case #2 – Students who are users of illicit drugs and medication
		Session 4 – Preventive strategies for the consumption of illicit psychoactive substances and self-medication	To plan strategies in order to prevent the usage of illicit drugs; To identify common mistakes associated with (self-)medication.	*Preventive strategies* – To Prevent Temptation *Preventive Strategies* – Say No to Drugs; *Preventive strategies* – To identify a potential drug problem *Top 10* – Ways to know if a colleague/friend is (ab)using drugs *Health Video*
Balanced, Healthy and	To promote balanced and	Session 1 – Food and its components	To understand the concept of a healthy diet and what its components should be/consist of;	*Campus Focus* – Eating habits at the Campus

Sustainable Diet	healthy nutritional habits in the long run.		To define the necessary nutrients and their importance for a balanced and healthy diet; To describe the food pyramid and to explain its significance for one's diet; To identify the concept of the portion/quantity of food to be consumed and to understand and know the proportion with which each of the different food groups should be consumed. To understand and become aware of the current state and the evolutional tendencies regarding food-related behaviors;	*Website Health* – Nutritional composition of Food.
		Session 2 – Food safety and sustainable diet	To explain the importance of food safety for one's health; To understand in which way food habits can contribute for environmental sustainability.	*Top 10* – Tips to avoid food poisoning; *Strategies towards Change* – How to maintain a sustainable diet; *To Reflect Upon* – Case #1 *Website Health* – Plan for Food Sustainability
		Session 3 – Relationship between food and diseases	To explain the contributions of a healthy diet in order to prevent heart-related illnesses/ailments or types of cancer. To identify the benefits of certain food types in accordance with the main organs of the human body.	*Strategies for chance* – Tips for a healthy diet
		Session 4 – Food identification and nutritional planning	To explain what the current recommendations are towards keeping a healthy diet; To use nutritional information present in the food packages in order to be able to make healthier food choices. To develop a balanced and healthy nutritional plan	*Website Health* – Platform for information about food in Portugal *App Health* – Fat Secret *Health Video*
Moving Yourself	To inform students about the importance of doing exercise and promoting its practice on a daily basis.	Session 1 – Epidemiology of physical activity	To explain the components of physical aptitude; To analyze the pyramid of physical activity; To identify the indicators of the level of physical activity; To explain the benefits of physical exercise as a strategy for preventive health; To understand the current state and the evolutional tendencies of sedentary behaviors and the overwhelmingly recommended practice of physical exercise.	*Campus Focus* – Sedentary behaviors and the practice of physical exercise at the Campus *Top 10* – Physical benefits of the practice of physical exercise *Top 10* – Psychological benefits of the practice of physical exercise
		Session 2 – Index of body mass and keeping the ideal weight	To describe different anthropometric methods in order to determine bodily mass; To explain the notion/concept of the index of body mass; To understand how to calculate the ideal weight and the number of necessary daily calories.	*Website Health* – To calculate the index of body mass and necessary daily calories *Strategies for Change* – Tips for practicing physical exercise.

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		Session 3 – Recommendations about the practice of physical exercise	To understand what the (inter)national recommendations are regarding the practice of physical exercise; To compare and make the contrast between aerobic exercises and exercises directed more towards muscular and flexibility strengthening.	
		Session 4 – Motivational strategies for the practice of physical exercise	To plan a program for physical exercise; To list and comprehend the motivational strategies for the maintenance of physical exercise.	*To Reflect Upon* – Case #1 and Case #2 *Health Video*
Preventing Sexually Transmitted Infections	To raise awareness among students regarding the risks involved in sexual behaviors and the importance of adopting preventive strategies for ISTs.	Session 1 – Epidemiology of sexually transmitted diseases (ISTs) and HIV/AIDS	To explain the different ISTs, and their respective symptoms and available treatments; To define HIV/AIDS and to describe the symptoms and available treatment(s); To understand the current state and evolutional tendencies of ISTs and HIV/AIDS;	*Campus Focus* – Risk sexual behaviors at the Campus
		Session 2 – Contraception methods	To identify preventive means and the means by which ISTs and HIV/AIDS is transmitted.	*Top 10* – How to avoid an unwanted and/or unplanned pregnancy; *Preventive strategies* – To reduce the risk of exposure to ISTs and to HIV/AIDS
		Session 3 – Myths about sexually transmitted diseases	To understand the main myths about the prevention and transmission of ISTs and HIV/AIDS.	*Strategies for change* – How to say "no to sex". *Top 10* – Rules for sexual etiquette; *To Reflect Upon* - #Case 1
		Session 4 – Preventive strategies for ISTs	To describe methods designed to prevent ISTs and HIV/AIDS; To encourage the carrying out of a preventive test for HIV/AIDS.	*Preventive Strategies* – How to tell one's partner you have an IST. *Top 10* – Ways to efficiently prevent an IST. *Preventive Strategies* – What can be done when one has an IST. *Preventive Strategies* – What can be done one one's friend has HIV/AIDS? *Website Health* – Take Care of Yourself Program *Health Video*

CAPÍTULO IV

CONSIDERAÇÕES FINAIS

Neste capítulo final são apresentados os principais contributos empíricos e teóricos resultantes dos principais resultados dos estudos apresentados. Para uma melhor facilidade de exposição e leitura optou-se por apresentar os principais contributos empíricos por estudo e apresentar os contributos teóricos em torno dos fatores de influência considerados pela TIT. Mas também porque de acordo com Painter e colegas (2008) apenas 37,5% dos estudos na área dos comportamentos de saúde mencionam o modelo teórico, incentivando os/as investigadores a testarem teorias existentes e criarem novas teorias no sentido de impulsionarem o desenvolvimento deste campo de investigação. Findas estas considerações, discutem-se as limitações mais importantes e as possíveis implicações para práticas de intervenção em EpS e estudos futuros.

1. CONTRIBUTOS EMPÍRICOS E PRINCIPAIS RESULTADOS

Estudo 1 *- Comportamento tabágico e exposição ao fumo passivo entre estudantes universitários/as no Norte de Portugal: Relações com o conhecimento acerca do uso de tabaco e as atitudes em relação ao tabagismo*

Neste estudo analisaram-se os hábitos tabágicos (idade de início de consumo, número de cigarros consumidos, tentativas de cessação), verificando-se que 1 em cada 5 estudantes universitários/as era fumador/a, sendo que a maioria destes/as fumadores/as começou a fumar antes dos 17 anos e relatou nunca ter tentado parar de fumar. Embora se tratem de jovens adultos/as, identificou-se uma elevada proporção de estudantes ex-fumadores/as (11,2%).

Com o objetivo de identificar os preditores do consumo de tabaco no ES caraterizaram-se os conhecimentos acerca do consumo de tabaco e atitudes em relação ao tabagismo, a exposição ao FAT e os pares consumidores de tabaco. Os resultados mostraram que a maioria dos/as estudantes universitários/as se encontrava exposta semanalmente ao FAT e tinha amigos/as consumidores/as de tabaco. Acresce que as atitudes face ao tabagismo eram favoráveis e os conhecimentos acerca dos malefícios do consumo de tabaco para a saúde eram moderados.

Este estudo mostrou que os/as estudantes a tempo integral, menos expostos/as ao FAT, com menos amigos/as fumadores/as, numa relação amorosa e com atitudes mais desfavoráveis face ao consumo de tabaco tendem a apresentar uma menor probabilidade de se tornarem fumadores/as.

Estudo 2 *- Conhecimento e atitudes relacionadas ao consumo de álcool enquanto preditores do consumo de bebidas alcoólicas entre estudantes universitários/as portugueses/as*

Neste estudo em que se analisou a prevalência de comportamentos de consumo de álcool em universitários/as e sua associação com o conhecimento sobre o consumo de álcool e as atitudes gerais em relação ao uso de álcool, destacou que cerca de 95% dos/as estudantes universitários/as já tinham ingeridos bebidas alcoólicas e que a maioria o fez antes do ingresso no ES.

De acordo com os resultados agrupados do AUDIT-C, grande parte dos/as universitários/as apresenta um nível problemático de consumo de risco, sendo superior nos/as estudantes mais velhos/as e deslocados/as. Para além disso, a maioria dos/as inquiridos/as tem amigos/as que consomem bebidas alcoólicas e identificou, pelo menos, um episódio de embriaguez nos últimos 12 meses.

De um modo geral, os/as estudantes apresentaram atitudes moderadas face ao consumo de álcool e revelaram um baixo nível de conhecimentos sobre as consequências do consumo de álcool.

Este estudo mostrou que a probabilidade de consumir álcool em excesso aumenta com o nível de conhecimento e atitudes em relação ao consumo de álcool, ou seja, quanto maior o nível de conhecimento e das atitudes negativas maior o consumo de álcool. Para o mesmo nível de conhecimentos e atitudes, a probabilidade de apresentar consumo de álcool de risco é superior nos/as estudantes que não mudaram de residência ao ingressar no ES e que têm amigos/as consumidores/as de álcool.

Estudo 3 *- Uso de drogas ilícitas entre estudantes universitários/as: A importância do conhecimento sobre drogas, de viver em casa de familiares e a influência dos colegas*

Este estudo focou-se na análise da prevalência do consumo de drogas ilícitas entre estudantes universitários/as, assim como nos fatores preditivos desse consumo. Os resultados mostraram um elevado consumo de drogas ilícitas (21,9% de consumidores/as), no último ano, sendo a cannabis a droga mais consumida. Para além disso, a maioria dos/as estudantes referiu ter amigos/as consumidores/as de algum tipo de droga ilícita.

Os conhecimentos e as atitudes acerca dos malefícios das drogas ilícitas são moderados, verificando-se variações em função do consumo de drogas, de ter amigos/as consumidores/as e de outras variáveis sociodemográficas.

Este estudo mostrou que o aumento do nível de conhecimentos, ter amigos/as consumidores/as de drogas ilícitas, ser do sexo masculino, ter mudado de residência após ingressar no ES e frequentar o 3º ano constituem fatores (por vezes combinados) que aumentam as chances de pertencer ao grupo de estudantes consumidor de drogas ilícitas.

Estudo 4 *- Conhecimentos, atitudes e prática da automedicação entre estudantes universitários/as em Portugal: Um estudo transversal*

O estudo 4 forneceu informações acerca dos conhecimentos, atitudes e práticas de automedicação dos/as universitários/as, mostrando que a automedicação era uma prática comum entre os/as universitários/as, uma vez que mais da metade dos/as mesmos/as fez uso de algum tipo de medicamentos sem prescrição médica, no último ano. Os analgésicos / anti-inflamatórios foram os medicamentos (sem prescrição médica) mais consumidos pelos/as inquiridos/as.

O nível de conhecimento sobre automedicação foi, em média, de 1.60 ± 0.936 respostas corretas (num máximo 3) e a média da escala das atitudes foi de 2.17 ± 0.950 (num máximo de 5), mostrando que os/as estudantes apresentaram atitudes favoráveis à automedicação.

Este estudo mostrou que a área científica de estudo, o sexo dos/as estudantes e as atitudes em relação à automedicação tiveram efeito estatisticamente significativo nas práticas de automedicação, ou seja, frequentar cursos da área das ciências da engenharia, ser do sexo feminino e ter atitudes favoráveis à automedicação predizem a adoção dessas práticas.

Estudo 5 *- Conhecimentos, atitudes e hábitos alimentares saudáveis entre estudantes universitários/as em Portugal*

No estudo 5 pretendeu-se avaliar os conhecimentos, as atitudes e as práticas sobre alimentação saudável entre universitários/as portugueses/as. Os resultados mostraram que os/as estudantes universitários/as têm hábitos alimentares desequilibrados, ingerindo frutas e vegetais abaixo do recomendado e várias vezes por semana comidas rápidas e produtos açucarados. Para além disso, saltar o pequeno-almoço e o almoço e/ou jantar foram consideradas práticas comuns.

O nível de conhecimento sobre alimentação saudável foi baixo e na escala de atitudes face à alimentação saudável obteve-se uma média de 13,54 ± 3,492 (variação entre 4 e 20), sendo o maior valor correspondente a atitudes positivas em relação à alimentação saudável.

Este estudo mostrou que a existência de uma relação positiva e significativa entre conhecimentos, atitudes e hábitos alimentares.

Estudo 6 *- Atividade física de estudantes universitários/as portugueses/as e sua relação com o conhecimento e barreiras percebidas*

O foco deste estudo foi analisar a relação entre o conhecimento sobre as recomendações sobre a prática de atividade, as barreiras percebidas e a prática de atividade física. Os resultados mostram que 35,7% dos/as estudantes inquiridos/as era sedentário, passando, em média e num dia normal, 7,44 ± 2,656 horas sentados. As correlações realizadas neste estudo indicaram que as estudantes são mais sedentárias e menos ativas em comparação com os estudantes e que os estudantes a tempo inteiro e dos cursos da área das ciências engenharia foram aqueles/as que declaram mais horas sentados diariamente. O nível de conhecimento acerca das recomendações foi baixo e a principal barreira à prática de atividade física foi a falta de tempo, seguida da falta de motivação.

Este estudo mostrou que à medida que as barreiras percebidas aumentam, diminui a probabilidade de se praticar atividade física, assim como ser do sexo feminino diminui a probabilidade de praticar atividade física.

Estudo 7 *- Prevalência de comportamentos sexuais de risco e sua relação com o conhecimento e as atitudes acerca dos comportamentos sexuais de estudantes universitários/as*

Este estudo avaliou os conhecimentos, perceções e comportamentos sexuais de risco dos/as estudantes, demonstrando que a maioria dos/as estudantes universitários/as se envolveram em comportamentos sexuais de risco, no último ano. Ou seja, dos/as estudantes sexualmente ativos/as, 39,5% iniciou a sua vida sexual em idade precoce; 18,7% teve 2 ou mais parceiros/as sexuais nos últimos 12 meses; 60,1% teve relações sexuais desprotegidas nos últimos 12 meses e 32,3% revelou ter tido relações sexuais após o consumo de álcool, no último ano. De um modo geral, 57,1% dos/as estudantes sexualmente ativos/as referiu ter tido 2 ou mais comportamentos sexuais de risco.

O nível de conhecimentos acerca da sexualidade foi de 3,99 ± 1,194 respostas corretas (num máximo de 6) e as perceções dos/as estudantes face às ISTs e ao uso de preservativo mostraram-se moderadas.

Este estudo mostrou que os/as estudantes universitários/as que tinham uma relação amorosa e que não tinham mudado de residência após o ingresso no ES eram menos propensos a ter comportamentos sexuais de risco. Para além disso, ficou evidenciado que quanto mais negativas forem as perceções face ao uso do preservativo maior será a probabilidade dos/as estudantes terem comportamentos sexuais de risco.

Estudo 8 *- Conhecimentos, atitudes e comportamentos preventivos em relação ao COVID-19: Um estudo com estudantes do ensino superior em Portugal*

Neste estudo transversal, foram analisados os conhecimentos relacionados à COVID-19, as atitudes face aos comportamentos preventivos, as atitudes relativas à perceção de risco e os comportamentos preventivos da COVID-19 entre estudantes do ES, tendo sido este o primeiro realizado em Portugal.

Os resultados revelaram que os/as estudantes tinham bons conhecimentos relacionados com a COVID-19, visto que grande parte dos itens apresentou mais de 90% de respostas corretas. Para além disso, a maioria dos/as universitários/as revelou atitudes favoráveis em função de cada um dos itens das atitudes face à COVID-19. Em termos de comportamentos preventivos, considerando os doze comportamentos apresentados, verificou-se que, em média, os/as estudantes relataram ter sempre 5,81 ± 2,61 desses comportamentos, sendo que 50% da amostra indicou até 6 comportamentos preventivos.

Este estudo mostrou que ser estudante de licenciatura ou mestrado e ter perceções positivas face aos comportamentos preventivos influencia a adoção de comportamentos preventivos.

Estudo 9 *- Relação entre conhecimentos e atitudes relacionadas com a saúde e comportamentos de risco para a saúde em estudantes universitários portugueses*

Neste estudo analisou-se a relação entre conhecimentos e atitudes relacionadas com a saúde e comportamentos de risco para a saúde, verificando-se, em termos gerais, os/as estudantes apresentaram baixos conhecimentos acerca da saúde, scores moderados na escala das atitudes e envolveram-se, em média, em 3,88 (DP = 1,45) comportamentos de risco para a saúde (num máximo de 7).

Considerando o objetivo do estudo, os resultados mostraram que a relação entre o conhecimento acerca da saúde e os comportamentos de risco para a saúde foi significativamente mediada pelas atitudes face à saúde e explicou 16,7% da variância total para os comportamentos de risco para a saúde.

Estudo 10 *- Bem-estar e perceção de saúde de estudantes universitários/as em Portugal: A influência do apoio parental e da relação amorosa*

Este estudo pretendeu avaliar a perceção de bem-estar e saúde de estudantes universitários/as, explorando as propriedades psicométricas da EPBeS e analisando a influência de variáveis sociodemográficas.

Os resultados deste estudo sugerem que a EPBeS mostra excelentes propriedades psicométricas, sendo caracterizada por uma boa consistência interna e um único fator explicativo de 58,4 % da variância. Portanto, o estudo corrobora a investigação de Diener e colaboradores (1985), ao referirem que as análises fatoriais de escalas de satisfação de vida multi-item geralmente revelam uma única dimensão subjacente.

A média da EPBeS foi de 3,73 ± 0,664, variando entre 1 e 5, mostrando uma perceção de bem-estar e saúde moderada, sendo que as estudantes apresentaram maiores scores de satisfação com a vida e felicidade sentida em comparação com os estudantes. Os resultados mostraram que os/as estudantes que não se encontram atualmente numa relação amorosa, que atualmente moram numa habitação própria ou com os pais, que têm um IMC classificado com normal apresentam uma maior perceção de bem-estar e saúde.

Estudo 11 *- A associação entre bem-estar e comportamentos de risco à saúde em estudantes universitários/as: O papel mediador da influência social*

Neste estudo pretendeu-se examinar o papel mediador da influência social (pares consumidores, viver com a família e parceiro/a romântico/a) na relação entre o bem-estar e os comportamentos de risco para a saúde. Tal como verificado em estudos precedentes, os/as estudantes apresentaram uma perceção de bem-estar e saúde moderada e uma elevada prevalência de comportamentos de risco para a saúde. Os resultados mostraram que o aumento dos níveis de bem-estar, ter um par romântico e viver com a família diminuem o número de comportamentos não-saudáveis. Por seu lado, ter amigos/as consumidores/as de substâncias psicoativas aumenta o número de comportamentos de risco.

Este estudo mostrou que as variáveis da influência social mediaram significativamente o efeito da perceção do bem-estar e saúde nos comportamentos de risco para a saúde.

Estudo 12 *- Health On You Program: Desenvolvimento e implementação de intervenção de educação para a saúde baseada na web para estudantes universitários/as*

Este estudo descreveu o processo de desenvolvimento e implementação de um programa de intervenção em EpS fornecido na Web, para dotar os/as estudantes de conhecimentos e estratégias que lhes permitissem decidir a favor da sua saúde, ao adotar comportamentos de saúde saudáveis e positivos no seu dia-a-dia.

Os resultados mostraram que os/as participantes consideraram relevantes e úteis os componentes de intervenção desenvolvidos em cada módulo. Um dos pontos fortes deste programa refere-se à utilização do modelo PRECEDE-PROCEED para o desenho da intervenção, com a Teoria da Influência Triádica (TTI) enquanto base teórica da intervenção e as diretrizes de Fleming (2002) e de Brendryen e colegas (2013) para a projeção das sessões de cada módulo.

O programa Health *On* You mostrou ser uma solução para muitas das dificuldades enfrentadas pelos/as estudantes universitários/as na adoção de comportamentos positivos para a saúde, recomendando-se a sua ampla divulgação e implementação a nível nacional.

2. CONTRIBUTOS TEÓRICOS E PRINCIPAIS CONCLUSÕES

Os estudos apresentados nesta tese (à exceção do estudo 12) identificam os comportamentos de risco para a saúde e analisam os fatores de influência intrapessoal (perceção de bem-estar e características sociodemográficas), atitudinal (conhecimentos e atitudes face à saúde) e social (influência de pares e pessoas significativas).

2.1. Comportamentos de Risco para a Saúde e Perceção de Bem-estar e Saúde

Os resultados dos estudos apresentados mostraram que os/as estudantes universitários/as apresentam uma elevada prevalência de comportamentos de risco para a saúde (Aktaş et al., 2019). Os resultados mostraram que 1 em cada 5 universitário/a é fumador/a, mas que a prevalência de tabagismo nesta universidade foi menor do que a identificada em outros estudos nacionais (C. Albuquerque & Franco, 2010; Luz et al., 2010; Mendes & Lopes, 2014; Rodrigues et al., 2010) e internacionais realizados com estudantes universitários/as, como em Espanha (Castro Cuesta et al., 2014; Guillén et al., 2003; Hernández-González et al., 2018), na Grécia (Alexopoulos et al., 2010), no Irão (Askarian et al., 2013), na Austrália (Clark et al., 2004), na Jordânia (Kofahi & Haddad, 2005), na

Palestina (Musmar, 2012), no Líbano (Salameh et al., 2014), no Reino Unido (Mallia & Hamilton-West, 2010), na Itália (Lucenteforte et al., 2010), na República Checa (Schneidrová et al., 2016), na Sérvia (Milošević Georgiev et al., 2019), no Brasil (Damasceno et al., 2016), na Arábia Saudita (Almutairi, 2016), na Bélgica (Patel et al., 2016), no Chile (Barra et al., 2015), na Polónia (Książek et al., 2019) e na Turquia (Babaoglu, 2017). No entanto, um estudo nacional (Balsa et al., 2017) mostrou que 37,2% dos/as jovens entre os 15 e os 34 anos consumiram tabaco nos últimos 30 dias.

De acordo com a revisão realizada por Davoren e colegas (2016), nos estudos que utilizaram o AUDIT, a proporção de estudantes que relatou um consumo de álcool de risco variou de 62,8% em 2003 a 84% em 2014. O estudo nacional desenvolvido por Balsa e colegas (Balsa et al., 2017) utilizando o mesmo instrumento de medida demonstrou que 10,7% dos/as jovens com idades compreendidas entre os 15 e os 34 anos apresentavam um consumo excessivo de álcool. Os resultados do estudo 2 aproximam-se da prevalência verificada por DeMartini e Carey (2012), ou seja, 52% dos/as estudantes universitários/as preencheram os critérios para um status de consumo de risco. No entanto, é essencial observar que, nos países em desenvolvimento, a prevalência de consumo de risco é menor do que nos países ocidentais (Amare & Getinet, 2019; Peltzer & Pengpid, 2016a).

Os/as estudantes universitários/as inquiridos apresentaram um elevado consumo de drogas ilícitas, no último ano, sendo a droga mais consumida a marijuana. Estes resultados são consistentes com outros estudos que demonstram que o consumo de marijuana nos últimos 12 meses entre estudantes universitários/as ronda os 20-30% (Dennhardt & Murphy, 2013; Redonnet et al., 2012), podendo chegar aos 40% na população jovem espanhola (Arias-De la Torre et al., 2019).

Quanto às práticas de automedicação, os resultados mostraram que mais de metade dos/as universitários/as referiram consumir medicamentos sem prescrição médica, nos últimos 12 meses, o que corrobora com um estudo realizado em 2014, em Portugal, onde se constatou que 58,7% dos/as estudantes primeiristas se automedicavam (Mendes & Lopes, 2014). Outros estudos internacionais identificaram uma prevalência semelhante, nomeadamente no Egito – 55% (El-Ezz & Ez-Elarab, 2011); no Bangladesh - 54,5% (Idris et al., 2016) e no Reino do Bahrein –44,8% (James et al., 2006). No entanto, os estudos realizados com estudantes universitários/as da Europa e da região do Médio Oriente, evidenciaram uma frequência de automedicação bastante superior, como na Palestina – 98% (Sawalha, 2008); no Kuwait – 70,4% (Mitra et al., 2019); em Nova Deli – 85,4% (Adhikary et al., 2014); na Arábia Saudita – 73% (Al Shawi et al., 2018) e 65,58% (Mustafa & Rohra, 2017); na Índia – 84,0% (Kumar et al., 2013); no Nepal – 83,3% (Karmacharya et al., 2018) e 81,9% (Gyawali, 2015); na Itália – 69,2% (Garofalo et al., 2015); na Grécia – 44,6% (Skliros et al., 2010); e na Sérvia – 79,9% (Lukovic et al.,

2014). Por sua vez, os/as estudantes universitários/as africanos/as foram aqueles/as com a menor prevalência de automedicação, de acordo com o estudo de Abay e Amelo (2010) na Etiópia. Tal como verificado na revisão da literatura e metaanálise realizada por Xu e colegas (2019), estes dados indicam que a situação económica de um país pode influenciar as práticas de automedicação entre estudantes universitários/as.

Como esperado, os analgésicos/anti-inflamatórios foram os medicamentos mais usados por estudantes universitários/as (Bennadi, 2014; Hughes et al., 2001; James et al., 2006; Karmacharya et al., 2018; López-Cabra et al., 2016; Lukovic et al., 2014; Mehta & Sharma, 2015), seguindo-se das vitaminas/suplementos alimentares (Lukovic et al., 2014; Mir, 2015; Silva Chávez, 2019).

Os/as estudantes universitários/as têm hábitos alimentares inadequados, corroborando com outros estudos internacionais, nomeadamente nos Estados Unidos da América (Yahia et al., 2016), em Espanha (Moreno-Gómez et al., 2012), na Itália (Lupi et al., 2015), na Alemanha (Hilger et al., 2017) e no Reino Unido (Dodd et al., 2010)). Pensa-se ser essa constatação decorrente da alta prevalência de consumo inadequado de frutas e vegetais (Dodd et al., 2010; Tanton et al., 2015) e consumo de *fast food* (Al-Nakeeb et al., 2015; Cooke & Papadaki, 2014; El Ansari et al., 2011; Moreno-Gómez et al., 2012; Papadaki et al., 2007; Tanton et al., 2015; Thorpe et al., 2014). Para além disso, a prática de atividade física foi baixa, ou seja, 35,7% dos/as estudantes inquiridos/as era sedentário ou insuficientemente ativo. Apesar desse fator negativo, a percentagem de estudantes inativos/as encontra-se dentro da variação percentual verificada a nível internacional (entre os 23% e 39% nos países ocidentais (Haase et al., 2004) e entre 21,9% e 80,6% em países não europeus (Pengpid et al., 2015)). Apesar das variações registadas deve-se ressaltar que, em média, a prevalência de inatividade física dos/as jovens universitários/as é inferior nos países europeus em comparação com outros países não europeus.

Uma possível explicação para a baixa prevalência de PA poderia referir-se ao número de horas que os alunos passam sentados (Arias-Palencia et al., 2015). No entanto, neste estudo, não se encontrou relação entre o número de horas que os estudantes passam sentados diariamente e a prática de PA. O número de horas que os estudantes passam sentados por dia (cerca de 7 horas), coincide com a verificada noutros estudos (Farinola & Bazán, 2011; Rouse & Biddle, 2010).

A maioria dos/as estudantes universitários/as era sexualmente ativa (Fernández-Silva & Sánchez-Martínez, 2018; Kebede et al., 2018; Leon-Larios & Macías-Seda, 2017; Mavhandu-Mudzusi & Asgedom, 2016; M. J. Santos et al., 2016; Shapiro et al., 1999; Spindola et al., 2019; Villafañe-Ferrer & González-Navarro, 2017), apresentando uma elevada prevalência de comportamentos sexuais de risco (Sherab et al., 2019; X. Yang et al., 2019), como o uso inconsistente de preservativo durante as relações sexuais

(Castro, 2016; Dolphin et al., 2018; Fairfortune et al., 2020; Folasayo et al., 2017; Golbasi & Kelleci, 2011; Hoffman et al., 2017; Kebede et al., 2018; Magalhães, 2016; Makgale & Plattner, 2017; Mavhandu-Mudzusi & Asgedom, 2016; Pastor & Rojas-Murcia, 2019; Perera & Abeysena, 2018; M. J. Santos et al., 2016; SaraçoĞlu et al., 2014; Shapiro et al., 1999; H. Xu et al., 2019). As relações sexuais sob o efeito de álcool é outro comportamento sexual de risco referenciado na literatura e evidenciado nos resultados do estudo 7 e de outros estudos (Castro, 2016; Gebresllasie et al., 2017; Golbasi & Kelleci, 2011; Leon-Larios & Macías-Seda, 2017; Magalhães, 2016; Makgale & Plattner, 2017; Mavhandu-Mudzusi & Asgedom, 2016; M. J. Santos et al., 2016; Villafañe-Ferrer & González-Navarro, 2017).

As relações sexuais com múltiplos parceiros é um dos fatores mais importantes associados às ISTs (Chen et al., 2016), sendo também no âmbito deste estudo classificado como um comportamento sexual de risco. Os resultados do estudo 7 revelaram que 18,7% dos/as estudantes sexualmente ativos/as tinham tido 2 ou mais parceiros/as sexuais, no último ano. Resultados análogos foram apresentados em estudos internacionais (Ma et al., 2009; Mavhandu-Mudzusi & Asgedom, 2016; Peltzer et al., 2016; Yi et al., 2018).

Os resultados do estudo 11 evidenciaram níveis moderados de bem-estar e saúde (Aktaş et al., 2019). No entanto, os scores médios da satisfação com a vida (Grant et al., 2009; Schnettler et al., 2015) e da felicidade sentida (Peltzer et al., 2017; Piqueras et al., 2011) foram inferiores aos evidenciados a nível internacional. Tal como demonstrado numa metaanálise realizada por Ngamaba e colegas (2017), as variáveis que compõem a escala do bem-estar e saúde encontram-se positivamente correlacionadas. Isto quer dizer que a felicidade, satisfação com a vida, perceção de saúde, satisfação consigo próprio e com a forma física se encontram relacionadas. Para além disso, verificou-se que a satisfação com a vida se relaciona com o sexo dos inquiridos (Proctor et al., 2009) e que os níveis de felicidade são superiores nas mulheres (Grant et al., 2009; Piqueras et al., 2011).

2.2. Fatores de influência intrapessoal

A prevalência do tabagismo aumentou com a permanência no ES, o que corrobora a literatura científica (Danjoy León et al., 2010; Kofahi & Haddad, 2005; Musmar, 2012; Pinilla-Vásquez & Angarita-Fonseca, 2012; Weitzman & Chen, 2005), verificando-se que no grupo de estudantes mais velhos/as se incluem mais fumadores/as e um maior número de cigarros consumidos por dia ou por semana. De igual modo, o ingresso no ES apresenta-se como um fator de exposição ao consumo de álcool e ao seu consumo recorrente (Swann et al., 2014), propicia a experimentação e perpetuação do consumo de drogas ilícitas (Allen et al., 2017; Moyle & Coomber, 2019; Pinchevsky et al., 2012; Stewart & Moreno,

2013; Suerken et al., 2014) e tem um impacto positivamente significativo nas práticas de automedicação (Al Shawi et al., 2018; Garofalo et al., 2015; Helal & Abou-ElWafa, 2017; James et al., 2006; Kasulkar & Gupta, 2015; Klemenc-Ketis et al., 2010), verificando-se, nos estudos apresentados, um maior consumo de álcool e drogas ilícitas em estudantes mais velhos/as, embora estes consumos tendam a diminuir após a conclusão dos estudos (Allen et al., 2017; Marlatt et al., 1993).

O ingresso no ES tende a coincidir com a idade da primeira experiência sexual ou ocorre durante o percurso académico (Ma et al., 2009; Mavhandu-Mudzusi & Asgedom, 2016), visto que a maioria dos/as estudantes inquiridos/as iniciaram a sua vida sexual com 17 ou mais anos, tal como noutras investigações (Shapiro et al., 1999; Spindola et al., 2019; Villafañe-Ferrer & González-Navarro, 2017).

Ao contrário da maioria dos estudos nacionais e internacionais por demonstrarem a existência de um maior consumo de tabaco (Askarian et al., 2013; Barra et al., 2015; Danjoy León et al., 2010; Granja et al., 2020; Karadoğan & Önal, 2018; Luz et al., 2010; Musmar, 2012; Öncel et al., 2011; Pinilla-Vásquez & Angarita-Fonseca, 2012; Rodrigues et al., 2010; Sarioglu et al., 2016), de álcool (Balasch et al., 2018; Balsa et al., 2017; Byrd, 2016; Sanchez et al., 2013; Tartaglia et al., 2017; Tavolacci et al., 2016), de hábitos alimentares desequilibrados (El Ansari et al., 2011; Hilger et al., 2017; Li et al., 2012; Lupi et al., 2015; Moreno-Gómez et al., 2012; Yahia et al., 2016) e de comportamentos sexuais de risco (uso inconsistente de preservativo e maior número de parceiros/as sexuais) (Amare et al., 2019; Chi et al., 2012; Gebresllasie et al., 2017; Hoffman et al., 2017; Leon-Larios & Macías-Seda, 2017; Magalhães, 2016; Mavhandu-Mudzusi & Asgedom, 2016; Perera & Abeysena, 2018; Sherab et al., 2019; Yi et al., 2018) em estudantes do sexo masculino, os estudos desta tese não encontram diferenças no consumo de tabaco, de álcool, nos hábitos alimentares e nos comportamentos sexuais de risco em função do sexo dos/as estudantes.

No que se refere ao consumo de drogas ilícitas, os estudantes encontraram-se mais propensos ao seu consumo em comparação com as estudantes, corroborando outras pesquisas científicas (Ajayi & Somefun, 2020; Colell et al., 2013; Edwards et al., 2019; Helmer et al., 2014; McCabe et al., 2014; Mohammadpoorasl et al., 2014). No entanto, a prevalência de consumo de drogas ilícitas foi elevada em ambos os sexos, enfatizando-se que, embora os estilos de vida pouco saudáveis possam ser tradicionalmente associados aos rapazes, existe uma tendência para o aumento de consumo de drogas ilícitas entre raparigas (Colell et al., 2013; Kollath-Cattano et al., 2020). No mesmo sentido, os resultados de outros estudos expostos nesta tese indicaram que as estudantes apresentaram uma maior prevalência de práticas de automedicação (Garofalo et al., 2015; Helal & Abou-ElWafa, 2017; James et al., 2006) e

de sedentarismo (Rodriguez Rodriguez et al., 2016; Romaguera et al., 2011; Wu et al., 2015) por comparação com os estudantes.

A análise dos resultados em função da área científica de estudo mostrou que os/as estudantes dos cursos da área das ciências da engenharia se encontram mais propensos à adoção de comportamentos de risco para a saúde, apresentando uma maior probabilidade de se automedicarem, passando, em média, mais horas sentados/as e revelando atitudes mais permissivas face ao consumo de álcool e à ausência de uso de preservativo. Essas conclusões podem estar relacionadas com o facto dos cursos da área das ciências da engenharia serem bastante exigentes em termos académicos, o que explicaria porque os/as futuros/as engenheiros/as foram os/as que mais consumiram vitaminas/suplementos alimentares, no último ano. Por outro lado, os/as estudantes dos cursos da área das ciências exatas e da natureza foram aqueles/as que evidenciaram um maior nível de conhecimentos acerca da automedicação, da alimentação saudável, das recomendações para a prática de atividade física e das ISTs.

As análises realizadas no Estudo 11 revelaram relações negativas significativas entre o bem-estar e os comportamentos de saúde. Outros estudos já tinham evidenciado estas associações, em que a felicidade (Kye & Park, 2014; Peltzer et al., 2017; Piqueras et al., 2011; Richards et al., 2015), a satisfação com a vida (Aktaş et al., 2019; Grant et al., 2009) e a perceção de saúde (Ahn et al., 2014; Aktaş et al., 2019; Botha et al., 2019; Park & Kim, 2020; Piqueras et al., 2011) foram positivamente associada a comportamentos positivos de saúde. Isto indica que aumentar os níveis de felicidade, satisfação com a vida e saúde percebida entre os estudantes universitários poderá trazer múltiplos benefícios, ao estar positivamente associada a comportamentos de saúde que poderiam reduzir o risco de desenvolvimento de doenças a médio e a longo prazo. Por isso, a maioria destes estudos recomenda que o aumento do BES deve ser um argumento-chave em campanhas futuras de PrS no ES.

2.3. Fatores de influência atitudinal

Os resultados dos estudos realizados mostraram que os/as estudantes universitários/as têm baixos conhecimentos acerca da saúde e atitudes moderadamente favoráveis à adoção de comportamentos de risco. Isto é demonstrativo de que apesar da existência de esforços nacionais na EpS em contexto escolar, as informações acerca dos malefícios de determinados comportamentos são reduzidas e os comportamentos não-saudáveis são comummente praticados e aceites pelos/as estudantes universitários/as.

Em termos de conhecimento sobre o consumo de tabaco, os resultados evidenciaram um nível moderado de conhecimentos sobre o tabaco (Askarian et al., 2013; Danjoy León et al., 2010; Musmar, 2012), sendo superior nos/as estudantes ex-fumadores/as (Clark et al., 2004; Kofahi & Haddad, 2005), sugerindo-se o aumento dos conhecimentos sobre os efeitos do tabagismo com o intuito de diminuir as taxas de tabagismo durante o percurso académico (Pinilla-Vásquez & Angarita-Fonseca, 2012).

Em relação ao nível de conhecimentos sobre o álcool, drogas ilícitas, automedicação, alimentação saudável e prática de atividade física, observou-se um baixo nível de conhecimento entre os/as estudantes inquiridos/as (Abula et al., 2018; Gyawali, 2015; Hyska et al., 2014; James et al., 2006; Keating et al., 2009; J. Martins et al., 2019; Mitra et al., 2019). Por sua vez, o nível de conhecimentos acerca das ISTs foi moderado (Folasayo et al., 2017; M. J. Santos et al., 2016; Sohbet & Geçici, 2014; Soleymani et al., 2015; Villafañe-Ferrer & González-Navarro, 2017), apresentando um nível de conhecimentos mais elevado do que o registado noutros estudos (Chen et al., 2016; Dutt & Manjula, 2017; T. C. Elias et al., 2017; Evcili & Golbasi, 2017; Fernández Rouco et al., 2018; Mukherjee et al., 2019; Olubola, 2014; Soleymani et al., 2015). Mesmo assim, os resultados evidenciaram que muito desse conhecimento permanece superficial e repleto de crenças erradas e mitos (Dutt & Manjula, 2017; Spindola et al., 2019; H. Xu et al., 2019).

A relação entre a variável *conhecimentos* e a variável *comportamentos* foi significativa, mostrando que um maior nível de conhecimentos acerca da saúde produz um maior número de comportamentos de risco (Dermota et al., 2013). Por exemplo, o nível de conhecimento sobre álcool é superior nos/as estudantes classificados como consumidores/as de risco, o aumento dos conhecimentos acerca das drogas ilícitas contribui para o aumento das chances de consumir esse tipo de drogas e os/as estudantes que relataram ter praticado automedicação, nos últimos 12 meses, foram os/as que apresentaram maior nível de conhecimento sobre a automedicação. Estes resultados parecem indicar que os esforços empregues na e pela EpS, nomeadamente a informação sobre os efeitos do álcool, têm sido bastante mal-sucedidos. Para além disso, o facto do nível de conhecimentos acerca das drogas ilícitas ser superior nos/as estudantes do 1º ano em comparação com os/as estudantes do 3º ano, demonstra que este tipo de conhecimentos são não necessariamente adquiridos em contexto académico, mas através de estratégias de prevenção nas escolas (Souza et al., 2018) e que provavelmente as vivências universitárias permitem consolidar alguns mitos relativamente aos malefícios do consumo de drogas ilícitas.

A análise da relação entre as variáveis *atitudes* e *comportamentos* mostrou que as atitudes desfavoráveis influenciam a adoção de comportamentos de risco. Ou seja, a falta de apoio social, limitações de tempo, falta de motivação, e crenças erróneas constituem alguns dos fatores identificados

nas práticas não-saudáveis dos/as estudantes universitários/as (Calamidas & Crowell, 2018; Steptoe & Wardle, 1992). Por exemplo, as perceções face ao uso do preservativo foram um preditor proeminente dos comportamentos sexuais de risco (M. J. Santos et al., 2016; X. Yang et al., 2019). Desta forma, os programas de EpS no ES devem promover atitudes positivas nos/as estudantes a fim de mudar os seus comportamentos não-saudáveis. Os/as estudantes provavelmente agirão de modo saudável e consciente se acreditarem no valor significativo das suas ações. Essas motivações podem ser mais reforçadas por experiências bem-sucedidas, bem como pelo feedback positivo em relação a determinadas condutas.

Tal como noutros estudos (Clark et al., 2004; Musmar, 2012), os não fumadores/as demonstraram pontuações mais positivas do que os/as fumadores/as e ex-fumadores/as. De igual modo, os/as estudantes que mantiveram atitudes favoráveis face ao consumo de álcool foram aqueles/as que apresentaram uma maior prevalência de comportamentos problemáticos relacionados ao álcool (Neighbors et al., 2006). Essas atitudes podem estar relacionadas aos motivos pelos quais os/as estudantes consomem álcool, seja pela expectativa de que o álcool ajude na melhoria da sua vida sexual (Brown et al., 2016; Florimbio et al., 2018; Lefkowitz et al., 2016; Tuliao & McChargue, 2014), na fuga ao stresse (Musselman & Rutledge, 2010), no aumento da diversão (Studer et al., 2016; Wardell et al., 2012) e/ou na procura pelo prazer social (Zamboanga et al., 2010).

Embora as atitudes face ao consumo de drogas ilícitas não se tenha apresentado como uma variável preditora deste tipo de consumo, outros estudos confirmaram esta relação (Stone et al., 2012), mostrando que os/as estudantes do ES tendem a aprovar o consumo de drogas pelos pares ou a consumir por influência dos pares (Buckner, 2013; Helmer et al., 2014; Sanders et al., 2013).

Relativamente à automedicação, os/as estudantes inquiridos/as apresentaram atitudes desfavoráveis, demonstrando corretamente que não era aconselhável usar medicamentos sem prescrição por um curto período de tempo e/ou usar medicamentos previamente prescritos para tratar os mesmos sintomas (James et al., 2006; Mehta & Sharma, 2015).

A falta de tempo para preparar refeições saudáveis devido a compromissos académicos foi a principal barreira enunciada á prática de uma alimentação saudável (Hilger et al., 2017; Musaiger et al., 2014; Pelletier & Laska, 2012). De igual modo, a falta de tempo é percecionada como a principal barreira à prática de exercício (Castañeda et al., 2018; Daskapan et al., 2006; Deliens et al., 2013; Gómez-López et al., 2010; Martínez-Lemos et al., 2014; Ramírez-Vélez et al., 2016; Samara et al., 2015; Silliman et al., 2004), seguindo-se a falta de motivação (King et al., 2014) e a falta de energia (Ramírez-Vélez et al., 2016; Samara et al., 2015),

As perceções face às ISTs foram moderadas, conforme consistentemente relatado na literatura (M. J. Santos et al., 2016; Sohbet & Geçici, 2014), considerando-se improvável contrair ISTs ou Vírus Imunodeficiência Humana (VIH) (Amare et al., 2019; Haile et al., 2017; Olubola, 2014; Rojas-Murcia et al., 2015). As perceções face ao uso do preservativo, embora também tenham sido moderadas, obtendo-se uma média um pouco superior ao ponto média da escala, apontam que as perceções sejam desfavoráveis. Tal como verificado no estudo de Shapiro e colegas (1999), os/as estudantes universitários/as tendem a concordar que o uso do preservativo torna as relações sexuais menos agradáveis e que quem se encontra numa relação estável e duradoura não necessita de usar preservativo. No mesmo sentido, investigações mais recentes referem que muitos/as universitários/as acreditavam que os preservativos reduziam o prazer durante a relação sexual (Mukherjee et al., 2019) e que a confiança nos/as parceiros/as sexuais e a estabilidade das relações amorosas justificam a ausência de uso de preservativo (Pastor & Rojas-Murcia, 2019).

De um modo geral, os conhecimentos acerca da saúde previram os comportamentos não saudáveis por meio do efeito mediador das atitudes face à saúde. Por outras palavras, os/as estudantes com um maior nível de conhecimentos tiveram propensão a ter atitudes desfavoráveis à adoção de comportamentos saudáveis, o que, por sua vez, esteve relacionado a um maior número de comportamentos de risco. Isto é inconsistente com estudos anteriores, nos quais os resultados mostram que a literacia em saúde contribui para os comportamentos preventivos de saúde (Barsell et al., 2018) e que comportamento de risco e elevados níveis de conhecimentos acerca da saúde não estavam correlacionados (P. A. Cook & Bellis, 2001; Piko, 2002).

A inclusão dos fatores de influência atitudinal da TIT permitiram analisar a teoria do modelo racional, ao basear-se o estudo 9, na crença de que existe um potencial mediador das atitudes na relação entre conhecimento e comportamentos de saúde (Jones et al., 2015). Os resultados desse estudo mostraram que um maior nível de conhecimentos influencia positivamente os comportamentos não-saudáveis. Por conseguinte, embora os/as estudantes apresentem inúmeros comportamentos de risco para a saúde, eles/as encontram-se informados/as acerca dos seus malefícios. Assim colocado, os conhecimentos por si só não são suficientes para resultarem numa mudança nas atitudes nem nos comportamentos dos/as estudantes universitários/as (P. A. Cook & Bellis, 2001). É neste sentido que, na análise dos fatores associados aos comportamentos de risco para a saúde, se devem identificar outros fatores que motivem e resultem em ações (Glanz et al., 2008).

Face à pandemia COVID-19, os resultados relativos aos conhecimentos acerca da COVID-19 foram bons, revelando um profundo conhecimento sobre os sintomas do COVID-19, bem como sobre as

medidas preventivas e recomendações. Estudos anteriores já tinham demonstrado que os/as estudantes do ES revelavam bons conhecimentos sobre esta patologia (Alzoubi et al., 2020; Asaad et al., 2019; Maheshwari et al., 2020; Taghrir et al., 2020). Para além dessa evidência, os/as estudantes mostraram atitudes positivas em relação a como as pessoas se devem comportar em relação ao COVID-19, semelhante a outros estudos internacionais (Alzoubi et al., 2020; Asaad et al., 2019; Bokadia & Ganapathy, 2020; Maheshwari et al., 2020). Nessa base empírica, as perceções dos/as estudantes refletem a forma correta de prevenir a infeção pela COVID-19, como a lavagem cuidadosa das mãos e a desinfeção de superfícies e objetos. Ao contrário das evidências internacionais (Alzoubi et al., 2020; Taghrir et al., 2020; H. Yang et al., 2020), não foi possível afirmar que os/as estudantes tinham bons comportamentos preventivos contra COVID-19, uma vez que havia comportamentos - como necessidade de distanciamento social ou desinfeção de calçado e produtos adquiridos - que não eram muito prevalentes.

Um dos resultados mais importantes deste estudo refere-se à correlação positiva e significativa entre o comportamento preventivo face à COVID-19 e a perceção de risco, sendo esta última uma variável preditora, no sentido em que, conforme aumenta a perceção de risco, os comportamentos preventivos também aumentam (H. Yang et al., 2020).

2.4. Fatores de influência social

Entre os inúmeros fatores de influência social, os/as jovens adultos/as, nomeadamente os/as estudantes universitários/as, são sensíveis aos comportamentos dos seus pares (Dumas et al., 2019; Graupensperger et al., 2020; Krieger et al., 2016; Lac & Donaldson, 2018; Lewis et al., 2015), sendo este considerado um preditor psicossocial robusto (McBride, Barrett, Moore, & Schonfeld, 2014).

A maioria dos/as estudantes fumadores/as relatou ter amigos/as fumadores/as. Assim expresso, o facto de que ter amigos/as fumadores/as parece influenciar o consumo de tabaco entre os/as universitários/as (Al-Dubai et al., 2014; Almutairi, 2016; Askarian et al., 2013; Granja et al., 2020; Kamimura et al., 2018; Menati et al., 2016; Milošević Georgiev et al., 2019; Öncel et al., 2011; Sarioglu et al., 2016; Soliman et al., 2017). Da mesma forma, o consumo de álcool pelos pares parece estar relacionado ao consumo de álcool dos/as estudantes, indicando que os/as estudantes que interagem com mais amigos/as que bebem tendem a consumir mais bebidas alcoólicas e a envolverem-se em consumos excessivos (Borsari & Carey, 2001; Byrd, 2016; Kassa et al., 2016; McBride et al., 2014; Tartaglia et al., 2017). Na mesma linha, os resultados dos estudos apresentados mostraram que ter amigos/as consumidores/as de drogas ilícitas aumenta exponencialmente a probabilidade de também

consumir esse tipo de substâncias psicoativas, sugerindo que as redes socialmente próximas têm um impacto no uso relatado de substâncias psicoativas ilícitas (Blavos et al., 2017; Buckner, 2013; Edwards et al., 2019; Helmer et al., 2014; Kilmer et al., 2006; Napper et al., 2015; Neighbors et al., 2008; Pinchevsky et al., 2012; Zeferino et al., 2015).

A influência de amigos/as consumidores/as desempenhou um papel mediador significativo na relação entre o bem-estar geral e, especificamente a satisfação com a vida e consigo próprio/a, e os comportamentos de risco (Griggs & Crawford, 2019). Este foi um dos resultados esperados, visto que as evidências científicas indicavam que os/as estudantes com menor nível de bem-estar e satisfação com a vida e consigo próprio/a, têm mais amigos/as consumidores/as de substâncias psicoativas e, por isso, se envolvem em mais comportamentos não-saudáveis (Aktaş et al., 2019; Lai & Ma, 2016).

A este aspeto da influência de pares alia-se o facto de muitos/as jovens adultos/as mudarem de residência após o ingresso no ES. Nos estudos apresentados, os/as estudantes deslocados/as apresentaram uma maior prevalência de consumo de tabaco, álcool (Kassa et al., 2016; Shields et al., 2016; Tartaglia et al., 2017; Tavolacci et al., 2016; Wicki et al., 2010) e drogas ilícitas (Ajayi & Somefun, 2020; Arias-De la Torre et al., 2019; T. H. Bennett & Holloway, 2015; Hosseini et al., 2018; Massah et al., 2016; Mohammadpoorasl et al., 2014; Napper et al., 2015; Peltzer & Pengpid, 2016b; Pinchevsky et al., 2012) e de práticas alimentares desequilibradas (El Ansari et al., 2011; Papadaki et al., 2007; Peltzer & Pengpid, 2014; Tanton et al., 2015; M. C. Whatnall et al., 2020).

No Estudo 11, identificou-se a relação entre o bem-estar e as variáveis que se definiram como influência social, mostrando que viver com a família (Brannan et al., 2013) e ter um parceiro romântico são características que aumentam os níveis de bem-estar dos/as estudantes universitários/as (Jackson et al., 2007; Yıldırım et al., 2017), enquanto ter pares consumidores de substâncias psicoativas diminuiu a perceção de bem-estar (Brannan et al., 2013; Cobo-Rendón et al., 2020).

A família, nomeadamente na condição de apoio e suporte familiar, parece ter um papel fundamental na adoção de comportamentos saudáveis (Aktaş et al., 2019; Allahverdipour et al., 2015) e na perceção de cada componente do bem-estar (Brannan et al., 2013; Schnettler et al., 2015), devendo ser considerado no desenvolvimento de programas de prevenção em contexto académico (Ajayi & Somefun, 2020). Ou seja, devem ser apoiadas estratégias que capacitem os pais e as mães a reconhecerem e exercerem os seus papéis na prevenção do consumo de substâncias psicoativas dos/as seus/suas filhos/as (Pinchevsky et al., 2012), visto que o grau de autonomia e responsabilidade conferidos pelo ingresso no ES não constitui por si só um distanciamento dos comportamentos de risco.

Relativamente à variável *Parceiro/a Amoroso/a*, os resultados mostraram que o aumento dos níveis de bem-estar com a vida, consigo próprio e felicidade, aliado ao fato de ter um parceiro/a amoroso/a, reduzem o número de comportamentos não-saudáveis dos/a estudantes universitários/as (Kye & Park, 2014; Ratelle et al., 2013).

2.5. (Auto)Supervisão Pedagógica

O modelo autosupervisivo desenvolvido através das narrativas reflexivas possibilitaram um melhor planeamento, ação e monitorização das próprias experiências de investigação e integrá-las nas experiências anteriores, de forma a facilitar o crescimento pessoal enquanto profissional reflexivo, não ficando limitado às práticas e conceções anteriores, mas submetendo o desempenho formativo a uma constante reflexão, com vista a melhorá-lo. A autosupervisão foi entendida como um processo de desenvolvimento pessoal e profissional e de transformação da identidade profissional, pelo constante autoquestionamento das práticas. Por isso, assumiu-se desde sempre uma postura ativa e de envolvência pessoal num processo que se quis realista e criativo, (co)respondendo às situações de cada momento da melhor forma possível (Alarcão & Tavares, 2007).

Para além da autosupervisão do processo metodológico, o próprio processo de recolha de dados (pela componente pedagógica do questionário desenvolvido), assim como, o programa de EpS construído com base no modelo PRECEDE-PROCEED apresenta inúmeros componentes da Supervisão, cuja essência remete para a construção e desenvolvimento da autonomia profissional (Alarcão & Roldão, 2008) de todos/as os/as envolvidos/as, mas também comporta as funções de apoiar, orientar e regular o processo formativo (Vieira, 1993). Nomeadamente, a criação de espaços para a realização de aprendizagens colaborativas e de socialização, como os fóruns das sessões; as inúmeras oportunidades para o aprofundamento dos conhecimentos, através de bibliográfica de aprofundamento; a aplicação prática e resolução de problemas quotidianos, levando os/as estudantes a refletir e criar soluções para os problemas equacionados (por exemplo, os dilemas apresentados ou o cálculo dos gastos com o consumo de tabaco ou álcool); o respeito pelos diferentes ritmos de aprendizagem e adaptação, já que, a avaliação é sempre feita da mesma forma e apenas no final do módulo; a diversificação das atividades e estratégias pedagógicas apresentadas ao longo do programa.

2.6. O Programa Health *On* You

Embora as intervenções que se centram apenas num comportamento de risco possam ser mais bem-sucedidas (Coons et al., 2000), observa-se que as potencialidades das intervenções focadas em

múltiplos comportamentos, considerando que uma intervenção ideal seria aquela que visa mudar e melhorar vários comportamentos de risco simultaneamente (Prochaska et al., 2008), na medida em que vários comportamentos de risco se encontrarem correlacionados, formando perfis comportamentais (De Vries et al., 2008).

As análises realizadas no âmbito dos programas de intervenção em EpS no ES mostraram que raramente os artigos científicos descrevem em profundidade o desenvolvimento, implementação e avaliação das intervenções (Barretto et al., 2011; Bartholomew et al., 2016; F. Bradley et al., 1999; Campbell, 2000; Fernandez et al., 2019). No estudo 12 apresentou-se todas as etapas do desenvolvimento do Programa Health *On* You com base no Modelo PRECEDE-PROCEED pois considerou-se que descrição de cada uma das fases e o seu planeamento permitirão: orientar o desenvolvimento de novas intervenções nesta área e o refinamento desta intervenção em estudos futuros; fornecer a metodologia utilizada permitirá a sua utilização por outros/as investigadores/as e profissionais da área; aumentar a transparência e credibilidade do processo de desenvolvimento da intervenção e dos resultados obtidos.

3. LIMITAÇÕES GERAIS DOS ESTUDOS

Todas as investigações científicas apresentam limitações metodológicas, e embora os/as investigadores/as procurem que as mesmas não condicionem o desenvolvimento das investigações, a leitura dos resultados de cada um dos estudos deverá considerá-las. Nesta secção procurou-se apresentar as limitações globais dos estudos, salientando-se que cada estudo apresenta as suas limitações específicas.

Em primeiro lugar, destaca-se o ter sido pretendido, considerando os objetivos da tese, construir uma amostra representativa dos/as estudantes da universidade em estudo, de modo a obter resultados fiáveis. Apesar desta representatividade restringir o estudo a uma única universidade, limita a generalização dos resultados a todos/as estudantes universitários/as portugueses/as, devendo essa generalização ser encarada com cautela. Mais especificamente justifica-se referir que, embora se trate de um estudo transversal, mostrou-se apropriada a realização de análises de mediação, tal como verificado noutros estudos (Boyd & Wilcox, 2020; Buckner et al., 2019; Domínguez-Valerio et al., 2019; Lai & Ma, 2016; Romeo et al., 2021).

Por sua vez, ao ter sido eleito um instrumento de recolha de dados, na forma de autorrelato, se mostra adequado para utilização num curto espaço de tempo e com um grande número de sujeitos. No

entanto, sabe-se existirem limitações que podem afetar a validade das informações fornecidas, como as seguintes: 1) a desejabilidade social ou a falsificação das respostas, dado que a natureza das questões pode causar algum embaraço ao serem demasiado pessoais, levando a sub ou sobreestimar determinados comportamentos; 2) a influência da memória pelas dificuldades em recordar determinados aspetos, visto que os/as estudantes foram questionados/as acerca de comportamentos ocorridos no passado (por exemplo, usando expressões como nos últimos 12 meses ou nos últimos 30 dias); e 3) as diferentes perceção face a cada um dos itens apresentados, por exemplo, poderão ter existido enviesamentos no que concerne à dificuldade de distinguir os diferentes níveis de atividade, embora se tenham apresentado exemplos de cada tipo de atividade.

No que se refere aos comportamentos ocorridos no passado, e apesar da recolha de dados ter sido planeada e realizada num momento da vida académica que excluísse festividades, os comportamentos relatados podem não ser representativos do comportamento típico, principalmente no que concerne os hábitos alimentares, ao serem considerados os últimos 7 dias.

Apesar das limitações apresentadas, a validade dos questionários de autorrelato em estudos de comportamentos de saúde é sustentada (Rebagliato, 2002), mostrando uma elevada confiabilidade para autorrelatos relacionados com o consumo de substâncias psicoativas e uma confiabilidade moderadas, em estudos relativos à atividade física (Brener et al., 2003), ao destacar-se a confidencialidade e anonimato aquando da aplicação dos questionários.

Para contornar estas limitações, procedeu-se de forma a que as circunstâncias de preenchimento dos questionários fossem as mesmas para todos/as os/as estudantes, ao serem aplicados em sala de aula e em formato de papel. Este procedimento levantou outra limitação, ao existir a possibilidade de que os/as estudantes com determinados comportamentos de risco estejam sub-representados. Por exemplo, de acordo com Arria e colegas (2015), os/as estudantes consumidores/as de drogas ilícitas apresentam uma menor probabilidade de frequentar as aulas.

Embora se compreendam as vantagens associadas à recolha de dados online (mais económico, mais rápido, mais cómodo), no âmbito deste estudo, a utilização de instrumentos de autorrelato online não pareceu adequada, seja pelo facto de não se controlar o momento de resposta de todos/as os/as estudantes. Pode ser fornecido o seguinte exemplo: em questões de bem-estar, se o/a estudante se encontrasse a responder ao questionário num ambiente mais tenso, certamente as suas respostas seriam diferentes. E, também considerando as respostas à escala dos conhecimentos sobre saúde, existia a possibilidade dos/as estudantes recorrerem a outras fontes de informação para conhecerem as respostas, enviesando o seu nível de conhecimentos.

Por sua vez, no estudo 8, recorreu-se ao uso de uma plataforma online para a recolha de dados e, por isso, uma das suas limitações refere-se ao facto de não existir a garantia de que os/as estudantes não tenham procurado as respostas, para a aquisição de conhecimento pedido com a escala conhecimentos. Mesmo assim, destaca-se a componente pedagógica inerente a esta recolha de dados, pois quer tenham ou não procurado as respostas aos itens da escala de conhecimentos acerca da COVID-19, os conhecimentos demonstrados correlacionam-se positivamente com os comportamentos preventivos face à COVID-19.

Uma outra limitação reporta-se à exclusão dos/as estudantes a frequentar cursos da área das ciências da saúde. Esta exclusão foi pensada pelo viés que poderia ser causado, nomeadamente na escala dos conhecimentos sobre saúde (Hyska et al., 2014). Esta opção metodológica não significa de forma alguma que tenha sido descartada a importância de analisar os comportamentos de saúde dos/as estudantes desta área científica em pesquisas futuras. Acresce assumir que na metaanálise realizada por Xu e colaboradores (2019) verificou-se uma prevalência significativamente superior de práticas de automedicação com antibióticos, entre estudantes de medicina quando comparados/as com os/as estudantes de outros domínios científicos.

Outras limitações específicas são enunciadas em cada um dos estudos apresentados. Por exemplo, no caso do estudo 1, não foi considerado o consumo de cigarros eletrónicos ou de tabaco aquecido, na medida em que o uso desse tipo de produtos tabágicos foi residual, em estudantes universitários/as, partindo da validação do questionário e do estudo de Feijão (2015) com jovens estudantes portugueses/as. Em relação ao estudo 4, não foram considerados os períodos específicos de automedicação (por exemplo, durante o estudo e preparação para exames).

Uma das limitações do **programa Health *On* You** refere-se à participação voluntária dos/as estudantes, ou seja, sendo a inscrição no programa voluntária poderá indiciar que esses/as estudantes se encontram mais sensibilizados/as, interessados/as e recetivos/as à adoção de comportamentos positivos de saúde. Deixando de fora aqueles/as estudantes que deveria beneficiar deste tipo de programas por apresentar uma maior prevalência de comportamentos de risco. Para além dessa limitação, a implementação do programa não incluiu uma amostra representativa da população-alvo, sendo também o tamanho da amostra relativamente pequeno, nem um grupo de controlo. Desta forma, reitera-se a necessidade de interpretar os resultados com alguma precaução e que eventuais melhorias comportamentais poderão não ser resultado exclusivo da intervenção.

Em termos de desenho do programa, uma das desvantagens de usar um formato baseado na Web é que era difícil medir a quantidade e a qualidade da interação que os/as participantes tinham com o

programa da Web, apesar de existir a possibilidade comentar cada umas das sessões e de existirem vários incentivos à participação nos fóruns das sessões, poucos foram os comentários livres realizados pelos/as participantes. Para além disso, considera-se que os/as participantes deveriam ter sido questionados sobre o que pensavam sobre o formato da intervenção baseado na web, sendo que a inclusão desta informação teria contribuído para validar o formato escolhido para a realização da intervenção.

Por último, referir que a **análise das narrativas reflexivas** inerentes ao processo metodológico desta tese não foram alvo de análise, sendo um processo de desenvolvimento pessoal e profissional, não fez sentido nesta tese analisar todas as dimensões elencadas em cada um dos momentos vivenciados. No entanto, na seção anterior elencaram-se as potencialidades deste processo na construção do conhecimento científico e desenvolvimento profissional do/a investigador/a.

4. IMPLICAÇÕES PARA PRÁTICAS E ESTUDOS FUTUROS

Partindo do pressuposto de que a investigação científica é um processo circular ou, mais corretamente, um processo em espiral (Alferes, 1997), os contributos empíricos e teóricos discutidos ao longo deste capítulo sugerem várias implicações práticas e apontam para pesquisas futuras que permitam dar continuidade à investigação realizada e mostrar a pertinência de se manter uma atualização constante das tendências comportamentais (bem como cognitivas e afetivas).

Os resultados dos estudos apresentados permitiram adquirir conhecimentos acerca da problemática dos **comportamentos de risco para a saúde** dos/as estudantes universitários/as, bem como uma exploração mais aprofundada de alguns **fatores subjacentes** e da possível influência de outros determinantes. O modelo de comportamentos de saúde proposto por Flay e Petraitis (1994) sugere a importância de estudar os determinantes dos comportamentos de saúde relacionados com diferentes domínios (social, interpessoal e intrapessoal). Os diferentes estudos identificaram as variáveis preditoras relativas a cada um dos comportamentos de risco analisados, assim como, se considerou o efeito mediador da variável "Atitudes face à saúde" (estudo 9) e da variável "Influência social" (estudo 11). No entanto, investigações futuras deverão explorar outros procedimentos e possíveis efeitos mediadores e moderadores, bem como o agrupamento de comportamentos de risco, criando **perfis comportamentais**. Ou seja, é importante examinar com mais profundidade os comportamentos que se agrupam e que podem ser influenciados por fatores semelhante, a fim de preparar programas de prevenção mais eficientes que permitam um foco em vários comportamentos ao mesmo tempo e

dirigidos a estudantes com os mesmos perfis comportamentais. Da mesma forma, prevê-se a publicação de um artigo que explore as inter-relações do item relativo à perceção do estilo de vida, após o ingresso no ES.

Nesta tese abordaram-se sete comportamentos de risco para a saúde, no entanto, ambiciona-se ampliar a análise deste tipo de comportamentos, incluindo a saúde oral (lavagem dos dentes e realização de check-ups dentários), a segurança rodoviária (uso de cinto de segurança, consumo de bebidas alcoólicas e condução, cumprimento dos limites de velocidade) e a qualidade do sono (número de horas dormidas, horários estáveis).

No que diz respeito aos instrumentos utilizados, embora as análises estatísticas realizadas demonstrem boas características psicométricas, o **estudo e o aprofundamento psicométrico** dos instrumentos utilizados podem constituir um aspeto a ter em conta em estudos futuros [16].

Estudos futuros deverão considerar **outras variáveis** entre os diferentes fatores de influência, como, por exemplo, o nível socioeconómico, que está claramente associado ao consumo de substâncias psicoativas (Redonnet et al., 2012), a hábitos alimentares desequilibrados e sedentarismo (Rodríguez-Espinosa et al., 2015) e à forma como os/as jovens percecionam o seu bem-estar (Schnettler et al., 2015).

O desenho da investigação incluiu uma amostragem por ano de frequência académica, com o intuito de comparar as caraterísticas comportamentais dos/as estudantes no início e no final do percurso académico. No entanto, não invalida o desenvolvimento de **estudos longitudinais**, ambicionando-se, futuramente, a compreensão destes fenómenos ao longo do tempo, clarificando aspetos contraditórios encontrados na literatura e verificando se a prevalência dos comportamentos de risco, que segue a tendência descrita nas pesquisas científicas. Na mesma ótica, sugere-se a **replicação** destes estudos com outras populações, nomeadamente **jovens adultos/as que não estudam nem trabalham** e **estudantes universitários/as de outras IES** (para a obtenção de uma amostra representativa da realidade nacional) e de **outros países** que permitirá confirmar ou infirmar os resultados obtidos.

O bem-estar (subjetivo) é um constructo constituído por diferentes componentes claramente diferenciados, embora relacionados. Esta investigação demonstrou que o **bem-estar** deve ser

[16] Embora os estudos desta tese não incluam as análises psicométricas gerais da escala dos conhecimentos acerca dos comportamentos de saúde e da escala de atitudes face aos comportamentos de saúde foi realizada uma análise fatorial confirmatória para cada uma das escalas e os resultados da mesma serão redigidos em forma de artigo científica e publicados futuramente. The CFA analysis of the Health-related knowledge scale by testing the model composed of 7 factors related to each of the categories subject to analysis and one factor of secondary order has shown that we have obtained a model with satisfying indexes (RMSEA = 0.028; SRMR = .040; TLI = .880; NFI = .759; CFI = .891; GFI = .935; χ^2 (912.147) / df (569) = 1.60). The indexes, or scores, of reliability of each of the factors varied between .488 and .578, and a good reliability index was obtained for the general factor (α = .830). The quality indexes of the Attitudes towards health scale indicated, after adjustment and deletion of items which did not present an acceptable factorial relevance, an acceptable adjustment (RMSEA = 0.042; SRMR = .040; TLI = .928; NFI = .908; CFI = .944; GFI = .951; χ^2 (476.493) / df (199) = 2.39). The reliability indexes of each of the factors varied between .671 and .765, and we have obtained a highly satisfactory reliability index for the general factor (α = .800).

considerado no estudo dos **comportamentos de saúde**, visto que os/as estudantes com níveis mais elevados de perceção de bem-estar e saúde apresentaram comportamentos de saúde mais saudáveis. Assim, os estudos desenvolvidos reforçaram a necessidade das IES implementarem **programas socioeducativos** para desencorajar a adoção de hábitos não-saudáveis aquando do ingresso no ES, permitindo a tomada de decisões conscientes e responsáveis, mas também **intervenções psicossociais** que permitam que os/as estudantes universitários/as reflitam sobre o seu bem-estar e felicidade, contribuindo para o seu desenvolvimento holístico.

Uma das implicações práticas mais evidentes que decorre desta investigação é o Programa Health *On* You, um programa multifacetado alojado numa plataforma de ensino a distância, baseando-se na premissa de que melhorar e desenvolver o domínio dos conhecimentos sobre saúde deverá ser o primeiro passo para o estabelecimento de comportamentos saudáveis. Assim, os módulos iniciaram-se com o acesso a conteúdos relevantes que tratassem de forma específica, aprofundada e científica o conhecimento sobre saúde, passando por diferentes ferramentas interativas e, terminando, com a inclusão de informações sobre estratégias de prevenção de comportamentos de risco. Por conseguinte, considera-se que este programa apresenta indicações precisas em termos de objetivos, de conteúdos, de metodologia e de estratégias de prevenção, e de instrumentos de avaliação. No entanto, ressalva-se a importância de **aprimorar o currículo do programa Health *On* You**, designadamente direcionado a sua aplicação a **estudantes deslocados/as** (que mudaram de residência no momento de ingressar no ES) ou a **grupos específicos de estudantes** (selecionados/as a partir dos fatores facilitadores de adoção de comportamentos de risco), bem como, a inclusão de um **feedback personalizado** para os/as estudantes que revelem comportamentos de risco (Leeman et al., 2015). No mesmo sentido, considera-se pertinente a inclusão de **testemunhos de estudantes** (com problemas de saúde derivados dos seus comportamentos de risco) e **de profissionais/especialistas** das áreas específicas, desafiando-os/as a falar na primeira pessoa acerca da sua experiência pessoal ou profissional. Embora o intuito desta investigação não fosse identificar estudantes em situações de risco, a verdade é que a prevalência de comportamentos de risco cria novos desafios às IES, que devem estar atentas e envolverem-se mais no tratamento dos problemas existentes e na intervenção junto daqueles/as que estão em maior risco.

Considerando que os resultados dos estudos mostraram que uma das principais barreiras referidas pelos/as estudantes na adoção de comportamentos saudáveis foi a **falta de tempo**. Embora o programa desenvolvido tenha abordado indiretamente esta dimensão, parece fazer sentido que as IES apostem em ações de formação de organização e gestão do tempo. De igual forma, tendo-se verificado

uma associação entre o bem-estar e os comportamentos de risco, sugere-se que o aprimoramento do Programa Health *On* You passe pela inclusão de um módulo acerca do **Bem-estar** no ES, que permita a aquisição de competências para um percurso académico saudável e feliz, ao abordar temáticas como a regulação emocional, a autoestima, o pensamento crítica e assertividade.

Os programas socioeducativos na promoção de comportamentos positivos de saúde deverão integrar o **desenvolvimento de competências sociais e pessoais** para lidar com situações e contextos sociais de risco e de **influência social**, especialmente as competências necessárias para resistir às pressões emergentes de pares, que fortaleçam as competências sociais de assertividade e autoeficácia (Mbuthia et al., 2017; Pinchevsky et al., 2012). O Programa Health *On* You inclui várias estratégias neste âmbito, apresentando, em cada módulo, informações para adquiri hábitos saudáveis e estratégias para prevenir comportamentos de risco. No entanto, uma forma de incluir as influências sociais nos programas de EpS no ES é a utilização do modelo de **Educação por Pares** que se tem mostrado um meio eficaz de promover comportamentos de saúde (Webel et al., 2010; Yan et al., 2014). Mas também se justificar serem adotadas estratégias como o **Peer Counseling** (Quintiliani & Whiteley, 2016), o **Peer Suport** (Crisp et al., 2020) ou o **Peer Mentoring** (Collings et al., 2014), ao oferecerem uma abordagem promissora para gerir o ingresso no ES, permitindo uma melhoria da saúde e bem-estar físico e mental (Oarga et al., 2015). Neste contexto, o Programa Health *On* You poderia ser utilizado para formar a estudantes mais velhos/as que se tornassem Agentes Promotores de Saúde no ES. Poderiam aliar-se a este programa as atividades de **voluntariado**, que também mostraram melhorar as habilidades sociais, de comunicação e organizacionais e melhorar a confiança dos/as estudantes (Williamson et al., 2018). Outra possibilidade poderia ser a integração do presente projeto ao de **Tutoria por Pares da UMinho**, que visa promover a integração saudável e proactiva dos/as estudantes universitários/as, ao adquirirem competências pessoais, sociais, académicas e de relacionamento interpessoal (Freire, 2016; Freire & Beiramar, 2017). Evidentemente que tal implicaria o aprimoramento do programa e a sua validação com um maior número de estudantes.

Apesar das melhorias almejadas, julga-se que o Programa Health *On* You é perfeitamente adequado por ter sido desenvolvido de acordo com as necessidades identificadas e ao apresentar uma ação intencional, sistemática e dinâmica. Neste sentido não invalide a necessidade de desenvolver estudos quasi-experimentais, que integrem distintos momentos de avaliação (pré-teste, pós-teste e follow-up).

O Programa Health *On* You, em formato online, não invalida a implementação de programas presenciais, bem como a **criação de estruturas de apoio no *campus* universitário**, que visem a

implementação de campanhas de prevenção universal, no esclarecimento de situações de risco e no treino de competências relacionadas com a aquisição de hábitos saudáveis, desde a cessação tabágico ao rastreio de ISTs. No estudo 12 foi possível identificar alguns fatores ambientais passíveis de afetar negativamente a saúde dos/as estudantes, mas também destacou a disponibilização de serviços a toda a comunidade académica compatíveis com a missão de uma Universidade Promotora de Saúde. De acordo com Precioso (2004), as IES deveriam proporcionar a todos/as os/as estudantes formação em EpS, incorporando nos currículos académicos conteúdos de EpS que apostem numa aprendizagem significativa, na mudança de atitudes face aos comportamentos de risco para a saúde (Alves et al., in press; Blavos et al., 2017; Souza et al., 2018), através de uma disciplina curricular de EpS transversal aos vários cursos do ES e/ou de ações extracurriculares com evidência no Suplemento ao Diploma. Para além disso, sugere-se a importância de se criarem ***espaços*** **de partilha e convivência saudável** entre os/as estudantes, nos quais se promovam reflexões em diferentes aspetos: relacionais, comunicacionais e técnico-científicos.

Somente uma ação conjunta de todas as estruturas sociais será capaz de reduzir os riscos para a saúde provenientes de comportamentos não-saudáveis, embora não existam dúvidas que o primeiro passo seja a consciencialização do/a estudante. Assim, parece oportuno referir o **papel do Estado**, propondo-se a reflexão acerca de medidas específicas e de políticas nacionais, por exemplo, ao demonstrar que a exposição ao fumo passivo influencia o consumo de tabaco ou da necessidade de medidas que reduzam a acessibilidade às drogas ilícitas em contexto académico (Allen et al., 2017; Coomber et al., 2016; Mbuthia et al., 2017).

Embora não se tenham recolhidos dados sobre as **fontes de informação utilizadas** pelos/as estudantes, é possível hipotetizar que os conhecimentos acerca da saúde podem ter sido adquiridos fora do contexto académico. Por exemplo, estudos recentes relativos à temática de COVID-19 mostraram que as fontes mais comuns de informação por estudantes universitários/as são os meios de comunicação social (Asaad et al., 2019; Lyu, 2012; H. Yang et al., 2020) e redes sociais (Alzoubi et al., 2020; H. Yang et al., 2020)]. Este aspeto evidencia a importância da internet na realização de campanhas de EpS dirigidas a estudantes do ES (Asaad et al., 2019; Hassan, 2016), sugerindo-se que, por um lado, os estudos futuros considerem as fontes de informação utilizadas pelos/as estudantes para aquisição de informações e conhecimentos e, por outro lado, que independentemente das estruturas criadas ou dos programas de intervenção desenvolvidos, se aposte na aposta na sua divulgação, utilizando a **internet** e as **redes sociais** enquanto forma de informar e orientar para comportamentos preventivos e de autoproteção. No âmbito desta investigação, o programa Health *On* You foi divulgado junto da

comunidade académica, recorrendo a redes informais (grupos de WhatsApp) e redes formais (facebook institucional da AAUM).

O website criado (www.nonio.uminho.pt/healthonyou) teve em vista a produção de conteúdo didático. Futuramente, prevê-se a criação de uma nova seção no formato de **weblivro** com diversos conteúdos didáticos de acesso gratuito, acessível, em multilinguagem (texto, imagens e vídeos), com linguagem dialógica, multirreferencial (incluindo todas as fontes de conhecimento além da literatura-científica: notícias, literatura, música, filmes, entre outros artefactos culturais) e interatividade (debates e entrevistas, fóruns).

A problemática abordada ao longo da tese mostrou-se pertinente e merecedora de uma contínua monitorização, especialmente quando se hipotetiza que a pandemia COVID-19 tenha modificado alguns dos comportamentos de risco prevalentes no ES. Neste âmbito, almeja-se a criação de um **Observatório de Comportamentos de Risco para a Saúde no Ensino Superior** com o propósito de identificar as políticas de saúde dirigidas ao ES, enquanto domínio científico e de educação. Assim, seriam objetivos deste Observatório: 1) Reunir informação relevante e atualizada nos vários domínios da EpS no ES; 2) Monitorar e avaliar os comportamentos de risco para a Saúde no ES; 3) Desenvolver atividades de intervenção socioeducativa na área da Educação e Promoção da Saúde; 4) Apresentar propostas de atuação em matérias em que a educação possa contribuir para o desenvolvimento pessoal e social dos/as estudantes universitários/as; 5) Estimular e facilitar o trabalho dos/as investigadores/as nesta área, proporcionando a partilha de experiências; 6) Promover a construção de uma rede de agentes culturais e académicos nacionais e internacionais; 7) Desenvolver ações de cooperação com organismos públicos que possam beneficiar de instrumentos de EpS e assim promover comportamentos de saúde positivos; 8) Prestar serviços a entidades terceiras, no domínio da formação, consultadoria, estudos e pareceres; e 9) Promover investigação-ação que contribua para a aproximação entre a academia e a sociedade civil.

Os contributos teóricos na área da (auto)supervisão mostraram a importância de acompanhar o processo de investigação científica de estratégias supervisoras e reflexivas. Desta forma, sugere-se um estreitamento de laços entre a componente curricular e a investigação, de modo a incrementar nos/as estudantes a adoção de estratégias supervisivas como elemento potencializador das suas práticas para o desenvolvimento das suas investigações científicas e da sua profissionalidade.

Independentemente do modelo utilizado para a conceção, planeamento, implementação e avaliação das intervenções em EpS, considera-se essencial que este seja acompanhado por um processo

de supervisão pedagógica, observando a práxis, orientando as ações e avaliando os resultados, tal como o modelo PRECEDE-PROCEED.

No "términus" deste longo processo de investigação, está-se em crer ser de afirmar que este constituiu um modo de cooperar cientificamente com todos/as os/as que investem na EpS e PrS no ES. É certo que o caminho não terminou, que fica encetada uma longa caminhada de investigação e intervenção científica e que todas as implicações e sugestões mencionadas anteriormente demonstram a necessidade de continuar a investir neste segmento educacional, centrado na investigação na área da EpS e no desenho e avaliação de programas de EpS no ES.

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ANEXOS

ANEXO I Parecer da Comissão de Ética para a Investigação em Ciências Sociais e Humanas

ANEXO I - PARECER DA COMISSÃO DE ÉTICA PARA A INVESTIGAÇÃO EM CIÊNCIAS SOCIAIS E HUMANA

Universidade do Minho

Conselho de Ética

Comissão de Ética para a Investigação em Ciências Sociais e Humanas

Identificação do documento: CEICSH 009/2019

Título do projeto: *Conhecimentos, atitudes e comportamentos de saúde em estudantes do Ensino Superior: avaliação e monitorização de um programa de intervenção socioeducativa em contexto não-formal*

Investigador(a) Responsável: Regina Ferreira Alves, Estudante do Doutoramento em Ciências da Educação – Especialidade em Supervisão Pedagógica, Centro de Investigação em Estudos da Criança (CIEC), Instituto de Educação, Universidade do Minho e José Alberto Gomes Precioso (Orientador), Professor Auxiliar do Departamento de Estudos Integrados de Literacia, Didáctica e Supervisão, Instituto de Educação, Universidade do Minho

PARECER

A Comissão de Ética para a Investigação em Ciências Sociais e Humanas (CEICSH) analisou o processo relativo ao projeto de investigação acima identificado, intitulado *Conhecimentos, atitudes e comportamentos de saúde em estudantes do Ensino Superior: avaliação e monitorização de um programa de intervenção socioeducativa em contexto não-formal.*

Os documentos apresentados revelam que o projeto obedece aos requisitos exigidos para as boas práticas na investigação com humanos, em conformidade com as normas nacionais e internacionais que regulam a investigação em Ciências Sociais e Humanas.

Face ao exposto, a CEICSH nada tem a opor à realização do projeto, emitindo o seu parecer favorável.

Relatores: Manuel Sarmento Pereira (CEICSH - UMinho) e Inês Sousa (CEICVS - UMinho)

Braga, 16 de maio de 2019.

O Presidente da CEICSH

Assinado por: **ACÍLIO DA SILVA ESTANQUEIRO ROCHA**
Num. de Identificação Civil: BI042754054
Data: 2019.05.29 16:45:30 Hora de Verão de GMT

CARTÃO DE CIDADÃO

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APÊNDICE I - QUESTIONÁRIO DE COMPORTAMENTOS, CONHECIMENTOS E ATITUDES DE SAÚDE NO ENSINO SUPERIOR (QCCASES)



TERMO DE CONSENTIMENTO INFORMADO

Convidamo-lo/a a participar neste estudo que visa analisar os conhecimentos, as atitudes e os comportamentos de saúde dos/as estudantes do Ensino Superior. A sua participação é voluntária, podendo livremente recusar ou abandonar a sua participação a qualquer momento, sem quaisquer consequências para si.

Esta investigação é realizada em conformidade com os procedimentos éticos exigidos na investigação científica. Todas as informações recolhidas serão anónimas e confidenciais, pelo que solicitamos que as suas respostas sejam tão próximas da realidade quanto possível. Os dados recolhidos serão utilizados exclusivamente para fins de investigação científica, sendo posteriormente codificados e analisados de forma agregada. Nenhuma informação fará parte do arquivo académico institucional.

A sua participação contribuirá para o avanço do conhecimento científico acerca dos conhecimentos, atitudes e comportamentos dos/as estudantes universitários/as.

Por favor, leia cada uma das questões com atenção antes de responder, seguindo as instruções de cada secção. O preenchimento dos questionários demorará cerca de 15 minutos. Pode colocar questões acerca deste estudo ou sobre a sua participação em qualquer altura, enviando um email à investigadora responsável id6958@alunos.uminho.pt.

Li a informação acima apresentada e compreendo as condições da minha participação. Fui informado/a que a minha participação é voluntária, anónima e confidencial, e que os dados serão tratados exclusivamente para fins de investigação. Fui ainda informado/a que tenho o direito de interromper ou cancelar a minha participação a qualquer momento.

Concordo participar no estudo ❑

Este trabalho é financiado por Fundos Nacionais através da FCT – Fundação para a Ciência e a Tecnologia, I.P., no âmbito do projeto SFRH/BD/120758/2016.

FCT Fundação para a Ciência e a Tecnologia

QUESTIONÁRIO DE COMPORTAMENTOS, CONHECIMENTOS E ATITUDES DE SAÚDE NO ENSINO SUPERIOR

Questionário sobre comportamentos de saúde

Registe a sua resposta preenchendo com uma cruz (X), o item que corresponde à sua situação.

1. Quantos anos tinha quando ingeriu bebidas alcoólicas pela primeira vez? Nunca ingeri bebidas alcoólicas ❑ ➡ **Passe para a Questão n.º 6** | 12 ou menos anos ❑ | Entre 13 e 14 anos ❑ | Entre 15 e 16 anos ❑ | 17 ou mais anos ❑

2. Nos últimos 12 meses, com que frequência consumiu bebidas que contém álcool? Nunca ❑ ➡ **Passe para a Questão n.º 6** | Uma vez por mês ou menos ❑ | 2 a 4 vezes por mês ❑ | 2 a 3 vezes por semana ❑ | 4 ou mais vezes por semana ❑

3. Nos últimos 12 meses, quando bebeu, quantas bebidas contendo álcool consumiu? 1 ou 2 bebidas ❑ | 3 ou 4 bebidas ❑ | 5 ou 6 bebidas ❑ | 7 a 9 bebidas ❑ | 10 ou mais bebidas ❑

4. Nos últimos 12 meses, com que frequência consumiu cinco bebidas (quatro se for mulher) ou mais numa única ocasião (numa tarde ou numa noite)? Nunca ❑ | Uma vez por mês ou menos ❑ | 2 a 4 vezes por mês ❑ | 2 a 3 vezes por semana ❑ | 4 ou mais vezes por semana ❑

5. Nos últimos 12 meses, com que frequência ficou bêbado/a por ter consumido bebidas com álcool (por exemplo, sentir dificuldade em andar, ter dificuldade em falar, vomitar, não se lembrares do que aconteceu)? Nunca ❑ | Uma vez por mês ou menos ❑ | 2 a 4 vezes por mês ❑ | 2 a 3 vezes por semana ❑ | 4 ou mais vezes por semana ❑

6. Dos/as seus/suas amigo/as, quantos/as consomem bebidas alcoólicas regularmente? Nenhum/a ou Quase nenhum/a ❑ | Poucos/as ❑ | Alguns/ Algumas ❑ | A maioria ❑ | Quase Todos/as ou Todos/as ❑

7. Atualmente, fuma?
- Nunca fumei ❑
- Não fumo, mas já fumei regularmente (pelo menos 1 cigarro por semana) ❑ — **Passe para a Questão n.º 10**
- Não fumo, mas já fumei diariamente (pelo menos 1 cigarro por dia) ❑
- Sim, ocasionalmente (menos de um cigarro por semana) ❑
- Sim, regularmente (pelo menos um cigarro por semana, mas não todos os dias) ❑ — Quantos cigarros fuma por semana? _____ cigarros
- Sim, diariamente (pelo menos 1 cigarro por dia) ❑ — Quantos cigarros fuma por dia? _____ cigarros

8. Quantos anos tinha quando fumou pela primeira vez? 12 ou menos anos ❑ | Entre 13 e 14 anos ❑ | Entre 15 e 16 anos ❑ | 17 ou mais anos ❑

9. Alguma vez tentou deixar de fumar? Nunca ❑ | Sim, uma vez ❑ | Sim, duas a três vezes ❑ | Sim, mais de três vezes ❑

10. Dos/as seus/suas amigo/as, quantos/as fumam regularmente? Nenhum/a ou Quase nenhum/a ❑ | Poucos/as ❑ | Alguns/ Algumas ❑ | A maioria ❑ | Quase Todos/as ou Todos/as ❑

11. Ao longo da semana, quanto tempo está em espaços fechados junto de fumadores/as? Nunca ou quase nunca ❑ | Poucas vezes ❑ | Algumas vezes ❑ | A maioria das vezes ❑ | Quase Sempre ou Sempre ❑

12. Com que frequência lhe acontece

a. não tomar o pequeno-almoço. Nunca ou quase nunca ❑ | Poucas vezes ❑ | Algumas vezes ❑ | A maioria das vezes ❑ | Quase Sempre ou Sempre ❑

b. saltar o almoço ou o jantar. Nunca ou quase nunca ❑ | Poucas vezes ❑ | Algumas vezes ❑ | A maioria das vezes ❑ | Quase Sempre ou Sempre ❑

13. Nos últimos 7 dias, quantas vezes comeu frutas (não inclui os sumos naturais de fruta)? Nunca ❑ | 1 a 3 vezes por semana ❑ | 4 a 6 vezes por semana ❑ | 1 ou 2 vezes por dia ❑ | 3 ou mais vezes por dia ❑

14. Nos últimos 7 dias, quantas vezes por dia comeu legumes/vegetais? Nunca ❑ | 1 a 3 vezes por semana ❑ | 4 a 6 vezes por semana ❑ | 1 ou 2 vezes por dia ❑ | 3 ou mais vezes por dia ❑

15. Nos últimos 7 dias, quantas vezes ingeriu alimentos com açúcar adicionado (ex. refrigerantes, doces, sobremesas, chocolates)? Nunca ❑ | 1 a 3 vezes por semana ❑ | 4 a 6 vezes por semana ❑ | 1 ou 2 vezes por dia ❑ | 3 ou mais vezes por dia ❑

16. Nos últimos 7 dias, quantas vezes consumiu comidas rápidas (*fast food*) (ex. hambúrgueres, cachorros quentes, pizzas, ...)? Nunca ❑ | 1 a 3 vezes por semana ❑ | 4 a 6 vezes por semana ❑ | 1 ou 2 vezes por dia ❑ | 3 ou mais vezes por dia ❑

17. Numa semana normal, quantas vezes, em média, faz os seguintes tipos de exercício por mais de 30 minutos: **Número de vezes**

a. exercício físico intenso (implica batimentos cardíacos mais rápidos do que o normal, como correr, fazer aeróbicos, nadar, andar de bicicleta ou fazer jogging)? _____ vezes

b. exercício físico moderado (não exaustivo, como pedalar ou nadar a uma velocidade regular, jogar futebol, voleibol, basquete ou ténis)? _____ vezes

c. exercício físico leve (esforço mínimo, como fazer yoga, caminhadas ou jogar golf)? _____ vezes

18. Num dia normal, quantas horas passa sentado/a? _____ horas

19. Alguma vez teve relações sexuais (vaginal, oral ou anal)? Sim ❑ | Não ❑ ➡ **Passe para a Questão n.º 24**

20. Quantos anos tinha quando teve relações sexuais pela primeira vez? 12 ou menos anos ❑ | Entre 13 e 14 anos ❑ | Entre 15 e 16 anos ❑ | 17 ou mais anos ❑

21. Nos últimos 12 meses, com quantas pessoas teve relações sexuais (vaginal, oral ou anal)? Nenhuma ❑ | 1 pessoa ❑ | 2 pessoas ❑ | 3 pessoas ❑ | 4 ou mais pessoas ❑

22. Nos últimos 12 meses, com que frequência utilizou preservativo (feminino ou masculino) nas suas relações sexuais (vaginal, oral ou anal)? Nunca ou quase nunca ❑ | Poucas vezes ❑ | Algumas vezes ❑ | A maioria das vezes ❑ | Quase Sempre ou Sempre ❑

23. Nos últimos 12 meses, com que frequência teve relações sexuais (vaginal, oral ou anal) após ter ingerido álcool ou consumido substâncias psicoativas ilícitas (marijuana, cocaína, alucinogénios, ...)?	Nunca ou quase nunca ❑	Poucas vezes ❑	Algumas vezes ❑	A maioria das vezes ❑	Quase Sempre ou Sempre ❑	
24. Nos últimos 12 meses, quantas vezes já consumiu alguma das substâncias psicoativas listadas.						
a. Antidepressivos / Sedativos / Calmantes / Tranquilizantes (sem prescrição médica)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
b. Analgésicos / Anti-inflamatórios (sem prescrição médica)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
c. Vitaminas / Suplementos alimentares (sem prescrição médica)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
d. Marijuana (haxixe, erva, cannabis, pólen, ...)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
e. Cocaína (coca, crack, ...)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
f. Alucinogénios (LSD, cogumelos, ácidos, ecstasy, ...)	Nunca ❑	1-2 Vezes ❑	3-5 vezes ❑	6-9 vezes ❑	10 ou mais vezes ❑	
25. Dos/as seus/suas amigo/as, quantos/as consomem substâncias psicoativas ilícitas (marijuana, cocaína, alucinogénios, ...) regularmente?	Nenhum/a ou Quase nenhum/a ❑	Poucos/as ❑	Alguns/ Algumas ❑	A maioria ❑	Quase Todos/as ou Todos/as ❑	

Escala de perceção de bem-estar e saúde

1. Considerando todos os aspetos da sua vida, qual é o seu grau de satisfação com a vida em geral?	Muito insatisfeito/a ❑	Insatisfeito/a ❑	Nem insatisfeito/a nem satisfeito/a ❑	Satisfeito/a ❑	Muito satisfeito/a ❑
2. Considerando todos os aspetos da sua vida, qual é o seu grau de satisfação consigo próprio/a?	Muito insatisfeito/a ❑	Insatisfeito/a ❑	Nem insatisfeito/a nem satisfeito/a ❑	Satisfeito/a ❑	Muito satisfeito/a ❑
3. Considerando todos os aspetos da sua vida, qual o grau de felicidade que sente?	Muito infeliz ❑	Infeliz ❑	Nem feliz nem infeliz ❑	Feliz ❑	Muito Feliz ❑
4. Comparando com as pessoas da sua idade, como avalia a sua saúde em geral?	Péssima ❑	Má ❑	Razoável ❑	Boa ❑	Excelente ❑
5. Comparando com as pessoas da sua idade, qual é o seu grau de satisfação com a sua atual forma física?	Muito insatisfeito/a ❑	Insatisfeito/a ❑	Nem insatisfeito/a nem satisfeito/a ❑	Satisfeito/a ❑	Muito satisfeito/a ❑
6. Como avalia o seu estilo de vida depois de ter entrado para a universidade?	Muito menos saudável ❑	Menos saudável ❑	Tão saudável quanto era antes ❑	Mais saudável ❑	Muito mais saudável ❑

Escala de conhecimentos sobre saúde

Atendendo às afirmações que se seguem, se considerar que a afirmação é **Verdadeira** desenhe um círculo à volta do **V** e se considerar que é **Falsa** desenhe um círculo à volta do **F**, caso não conheça a resposta (**Não sabe**), desenhe um círculo à volta do **NS**.

1. As bebidas alcoólicas destiladas (por exemplo, whisky, gim, vodka) geralmente contêm cerca de 15-20% de álcool por volume.	V	F	NS
2. Beber leite antes de ingerir uma bebida alcoólica retarda a absorção de álcool pelo organismo.	V	F	NS
3. Uma bebida alcoólica misturada com refrigerante aleta o organismo mais rapidamente do que uma bebida alcoólica simples.	V	F	NS
4. Comer enquanto bebe não tem nenhum efeito sobre a absorção de álcool no corpo.	V	F	NS
5. O álcool é inteiramente absorvido pelo tubo digestivo, cerca de 30% no estômago e de 65% no duodeno.	V	F	NS
6. Beber café ou tomar um banho frio pode ser uma maneira eficaz de ficar sóbrio.	V	F	NS
7. Os/as fumadores/as são mais propensos/as a contrair cancro do pulmão do que os/as não fumadores/as.	V	F	NS
8. Os/as fumadores/as sentem-se cansados/as com maior facilidade do que os/as não-fumadores/as.	V	F	NS
9. O coração de um/a fumador/a trabalha mais porque o monóxido de carbono faz com que o sangue transporte menos oxigénio.	V	F	NS
10. A nicotina presente nos cigarros diminui a pressão arterial.	V	F	NS
11. A nicotina presente nos cigarros é um estimulante do sistema nervoso.	V	F	NS
12. Os/as fumadores/as são mais propensos/as a desenvolver osteoporose do que os/as não fumadores/as.	V	F	NS
13. Um sumo de laranja contém mais fibra do que uma laranja.	V	F	NS
14. Um copo de leite simples contém mais gordura do que um copo de refrigerante.	V	F	NS
15. As bananas são excelentes fontes de potássio.	V	F	NS
16. 100 gramas de lentilhas contém mais proteína do que 100 gramas de peito de frango.	V	F	NS
17. As claras de ovo contêm mais colesterol do que as gemas de ovo.	V	F	NS
18. A maionese contém mais açúcar do que o ketchup, em quantidades equivalentes.	V	F	NS
19. De modo a que exista algum benefício para a saúde, uma pessoa deve praticar exercício físico a maioria dos dias da semana.	V	F	NS
20. De modo a que exista algum benefício para a saúde, uma pessoa deve praticar exercício físico durante pelo menos 30 minutos por dia.	V	F	NS
21. Dez minutos de exercício físico três vezes por dia proporcionam os mesmos benefícios para a saúde que uma única sessão diária de 30 minutos.	V	F	NS
22. É necessária a prática de exercício físico intenso para alcançar benefícios para a saúde.	V	F	NS
23. O índice de massa corporal (IMC) é calculado utilizando o peso e a altura.	V	F	NS
24. A gordura corporal é importante porque ajuda na absorção de vitaminas.	V	F	NS
25. As doenças sexualmente transmissíveis surgiram como consequência do comportamento homossexual.	V	F	NS
26. Uma pessoa pode parecer muito saudável e estar infetada com o VIH/SIDA.	V	F	NS
27. O risco de contrair uma infeção sexualmente transmissível é maior numa mulher do que num homem.	V	F	NS
28. O risco de contrair uma infeção sexualmente transmissível aumenta sempre que a pessoa tem um/a novo/a parceiro/a sexual.	V	F	NS
29. A prática de sexo anal é o comportamento que tem menor risco na transmissão de infeções sexualmente transmissíveis.	V	F	NS

30. Uma relação sexual ocasional é suficiente para uma pessoa poder contrair uma infeção sexualmente transmissível.	V	F	NS
31. O consumo regular de cannabis é tão perigoso para a saúde como o consumo regular de heroína.	V	F	NS
32. Apenas as drogas consideradas ilícitas produzem toxidade e dependência.	V	F	NS
33. Um dos principais efeitos da cocaína no cérebro é a psicose paranoica.	V	F	NS
34. O uso excessivo de paracetamol causa toxicidade hepática.	V	F	NS
35. A mudança de horários da toma de medicamentos não causa perigo.	V	F	NS
36. Os suplementos alimentares podem ser consumidos sem prescrição médica porque não causam efeitos negativos no organismo.	V	F	NS

Escala de atitudes face à saúde

Atendendo às afirmações que se seguem, indique o seu **grau de concordância** com cada uma das afirmações, fazendo um círculo à volta do número a que corresponde a sua opinião.

Utilize uma escala: 1 - Discordo Totalmente a 5 - Concordo Totalmente

1. Os/as jovens sentem-se mais extrovertidos/as e sociáveis quando consomem bebidas alcoólicas.	1	2	3	4	5
2. Os/as jovens sentem-se sexualmente mais ativos/as quando consomem bebidas alcoólicas.	1	2	3	4	5
3. Uma festa é mais divertida quando se consome bebidas alcoólicas.	1	2	3	4	5
4. O consumo de bebidas alcoólicas proporciona fuga ao stress e preocupações.	1	2	3	4	5
5. É mais fácil expressar sentimentos quando se consome bebidas alcoólicas.	1	2	3	4	5
6. Fumar ajuda a relaxar e a reduzir o stress.	1	2	3	4	5
7. Fumar ajuda a pensar.	1	2	3	4	5
8. Fumar permite controlar o peso corporal.	1	2	3	4	5
9. Aceitar um cigarro de um/a amigo/a fará com que seja aceite pelo/a amigo/a.	1	2	3	4	5
10. Prefiro estar com amigos/as que não fumam.	1	2	3	4	5
11. Tenho falta de tempo para preparar refeições saudáveis devido aos meus compromissos académicos.	1	2	3	4	5
12. Não tenho conhecimentos para planear, comprar, preparar ou cozinhar alimentos saudáveis.	1	2	3	4	5
13. As recomendações sobre a alimentação saudável mudam tantas vezes, que é difícil saber no que acreditar.	1	2	3	4	5
14. Considero que os rótulos nutricionais dos produtos alimentares difíceis de compreender.	1	2	3	4	5
15. O conteúdo informativo dos rótulos nutricionais influencia as minhas escolhas alimentares.	1	2	3	4	5
16. Não tenho energia suficiente para fazer exercício físico ou praticar algum desporto.	1	2	3	4	5
17. Não tenho motivação para fazer exercício físico ou praticar algum desporto.	1	2	3	4	5
18. Não disponho de recursos financeiros para me inscrever num ginásio.	1	2	3	4	5
19. A minha família ou amigos/as não me encorajam a praticar exercício físico.	1	2	3	4	5
20. Não tenho tempo livre para praticar exercício físico por causa das minhas responsabilidades académicas.	1	2	3	4	5
21. Tenho receio de um dia vir a contrair uma infeção sexualmente transmissível.	1	2	3	4	5
22. Se eu contrair uma infeção sexualmente transmissível, o/a único/a culpado/a será o/a meu/minha parceiro/a.	1	2	3	4	5
23. Os/as jovens consideram que o preservativo reduz o prazer sexual.	1	2	3	4	5
24. Os/as jovens que têm uma relação estável e duradoura devem continuar a usar preservativo.	1	2	3	4	5
25. É impossível contrair uma infeção sexualmente transmissível quando temos sempre o/a mesmo/a parceiro/a.	1	2	3	4	5
26. Os/as jovens experimentam drogas por curiosidade.	1	2	3	4	5
27. Os/as jovens experimentam drogas por problemas emocionais.	1	2	3	4	5
28. Os/as jovens experimentam drogas por influência dos/as amigos/as.	1	2	3	4	5
29. É aceitável usar medicamentos não prescritos por um curto período de tempo.	1	2	3	4	5
30. É aceitável usar medicamentos prescritos anteriormente para tratar os mesmos sintomas.	1	2	3	4	5

Informações Pessoais e Sociais

Registe a sua resposta preenchendo com uma cruz (X), o item que corresponde à sua situação.

Sexo: Masculino ❑ Feminino ❑

Data de Nascimento: _____ / _____ / _____

Estado Civil:

Solteiro/a, e atualmente numa relação ❑ Casado/a / União de facto ❑

Solteiro/a, e atualmente sem relação ❑ Divorciado/a / Separado/a / Viúvo/a ❑

Habitação Atual:

Residência Universitária ❑ Apartamento ou quarto partilhado ❑ Habitação Própria/Pais ❑

Casa de Familiares ❑ Outra Situação ❑

Peso: _____ kgs **Altura:** _____ cms

Situação perante a profissão: Estudante a tempo inteiro ❑ Trabalhador/a-Estudante ❑

MUITO OBRIGADO PELA SUA COLABORAÇÃO!

APÊNDICE II - QUESTIONÁRIO PARA A IDENTIFICAÇÃO DE EXPECTATIVAS (QIE)



QUESTIONÁRIO PARA A IDENTIFICAÇÃO DE EXPECTATIVAS (QIE)

Esta é uma pesquisa rápida para nos ajudar a entender os teus objetivos e expetativas.

1. Completa a frase: Depois de fazer este curso, serei capaz de:

2. Qual é a tua motivação para participar neste Curso?

3. Qual é o teu principal obstáculo à participação neste Curso?

4. Gostaria de te convidar a preencher o questionário que visa analisar os conhecimentos, as atitudes e os comportamentos de saúde dos/as estudantes do Ensino Superior.

Todas as informações recolhidas serão anónimas e confidenciais, pelo que solicitamos que as tuas respostas sejam tão próximas da realidade quanto possível. Os dados recolhidos serão utilizados exclusivamente para fins de investigação científica, sendo posteriormente codificados e analisados de forma agregada. Nenhuma informação fará parte do arquivo académico institucional.

Acede ao link disponibilizado abaixo!
https://forms.gle/ctKQcRJ28RRK2wdt6

APÊNDICE III – ESCALA DE AVALIAÇÃO DOS MÓDULOS (EAM)

ESCALA DE AVALIAÇÃO DOS MÓDULOS (EAM)

A cada um dos itens deve responder às questões colocadas em função da classificação que lhes atribuiu, numa escala de 1 a 5.

Utilize uma escala: **1 – Mau; 2. – Fraco; 3 – Razoável; 4 – Bom; 5 - Muito Bom**

Apreciação global deste módulo						
1.	De um modo geral, este módulo foi	1	2	3	4	5
2.	A organização deste módulo foi	1	2	3	4	5
3.	Os resultados alcançados foram	1	2	3	4	5
4.	A duração deste módulo foi	1	2	3	4	5
5.	Os conhecimentos adquiridos neste módulo tendo em conta a sua utilidade e ações práticas foram	1	2	3	4	5
Objetivos						
6.	A clareza dos objetivos deste módulo era	1	2	3	4	5
7.	A importância dos objetivos era	1	2	3	4	5
8.	A consecução dos objetivos foi	1	2	3	4	5
9.	A adequação das estratégias à consecução dos objetivos foi	1	2	3	4	5
Conteúdos						
10.	O modo como os conteúdos foram abordados foi	1	2	3	4	5
11.	Os conhecimentos teóricos transmitidos foram	1	2	3	4	5
12.	A compreensão dos temas aprofundados foi	1	2	3	4	5
13.	A aplicabilidade dos temas foi	1	2	3	4	5
14.	A novidade dos temas abordados foi	1	2	3	4	5
15.	O interesse dos temas abordados foi	1	2	3	4	5
16.	O nível de detalhe no tratamento dos temas foi	1	2	3	4	5
Atividades						
17.	As atividades realizadas neste módulo foram	1	2	3	4	5
18.	A utilidade prática das atividades propostas foi	1	2	3	4	5
19.	A adequação dos exercícios para desenvolver as competências foi	1	2	3	4	5
20.	A utilidade futura das técnicas aprendidas é	1	2	3	4	5
Desenvolvimento						
21.	No início do módulo, o grau de conhecimentos sobre os temas/competências abordados era	1	2	3	4	5
22.	No fim do módulo, o grau de conhecimento sobre os temas/competências é	1	2	3	4	5
23.	Os estímulos dados para continuar a aprofundar as competências desenvolvidas foram	1	2	3	4	5

Informações Pessoais e Sociais

Registe a sua resposta preenchendo com uma cruz (X), o item que corresponde à sua situação.

Sexo: Masculino ❑ Feminino ❑ **Idade:** _____

Estado Civil:

Solteiro/a, e atualmente numa relação ❑ Casado/a / União de facto ❑

Solteiro/a, e atualmente sem relação ❑ Divorciado/a / Separado/a / Viúvo/a ❑

Habitação Atual:

Residência Universitária ❑ Apartamento ou quarto partilhado ❑ Habitação Própria/Pais ❑

Casa de Familiares ❑ Outra Situação ❑

Peso: _____ kgs **Altura:** _____ cms

Situação perante a profissão: Estudante a tempo inteiro ❑ Trabalhador/a-Estudante ❑

Universidade: _____ **Ano de frequência:** _____

Área Científica do Curso que frequenta:

Área das Ciências da Engenharia ❑ Área das Ciências Exatas e da Natureza ❑

Área das Ciências da Saúde e da Vida ❑ Área das Ciências Sociais e Humanas ❑

Área das Ciências Económicas e Judiciais ❑

Nível de Ensino:

Licenciatura ❑ Mestrado integrado ❑ Mestrado ❑ Doutoramento ❑

MUITO OBRIGADO PELA SUA COLABORAÇÃO!

Página 1 de 1

APÊNDICE IV - ESCALA DE AVALIAÇÃO DA IMPLEMENTAÇÃO DE PROGRAMAS (EAIP)

ESCALA DE AVALIAÇÃO DA IMPLEMENTAÇÃO DE PROGRAMAS (EAIP)

A cada um dos itens deve responder às questões colocadas em função da classificação que lhes atribuiu, numa escala de 1 a 5.

Utilize uma escala: **1 – Mau; 2. – Fraco; 3 – Razoável; 4 – Bom; 5 - Muito Bom**

Apreciação global do curso						
1.	O curso, de um modo geral, foi	1	2	3	4	5
2.	Ter participado neste curso foi	1	2	3	4	5
3.	A satisfação face às minhas expectativas iniciais foi	1	2	3	4	5
4.	Os resultados alcançados foram	1	2	3	4	5
5.	A duração do curso foi	1	2	3	4	5
6.	Os conhecimentos adquiridos neste curso, tendo em conta a sua utilidade e aplicações práticas foram	1	2	3	4	5
Objetivos						
7.	A clareza dos objetivos do curso era	1	2	3	4	5
8.	A importância dos objetivos era	1	2	3	4	5
9.	A consecução dos objetivos foi	1	2	3	4	5
10.	A adequação das estratégias à consecução dos objetivos foi	1	2	3	4	5
Conteúdos						
11.	O modo como os temas foram abordados foi	1	2	3	4	5
12.	A quantidade de temas abordados foi	1	2	3	4	5
13.	Os conhecimentos teóricos transmitidos foram	1	2	3	4	5
14.	A compreensão dos temas aprofundados foi	1	2	3	4	5
15.	A aplicabilidade dos temas foi	1	2	3	4	5
16.	A novidade dos temas abordados foi	1	2	3	4	5
17.	O interesse dos temas abordados foi	1	2	3	4	5
18.	O nível de detalhe no tratamento dos temas foi	1	2	3	4	5
19.	A adequação dos métodos utilizados aos temas foi	1	2	3	4	5
20.	A coerência global/interligação dos temas foi	1	2	3	4	5
Atividades						
21.	As atividades realizadas nos módulos, em geral, foram	1	2	3	4	5
22.	As atividades propostas para realizar em casa foram	1	2	3	4	5
23.	A utilidade prática das atividades propostas foi	1	2	3	4	5
24.	A adequação dos exercícios para desenvolver as competências foi	1	2	3	4	5
25.	A utilidade futura das técnicas aprendidas é	1	2	3	4	5
Desenvolvimento						
26.	No início do projeto o grau de desenvolvimento das minhas competências era	1	2	3	4	5
27.	No fim do projeto o grau de desenvolvimento das minhas competências é	1	2	3	4	5
28.	Os estímulos dados para continuar a aprofundar as competências desenvolvidas foram	1	2	3	4	5

Informações Pessoais e Sociais

Registe a sua resposta preenchendo com uma cruz (X), o item que corresponde à sua situação.

Sexo: Masculino ❑ Feminino ❑ **Idade:** _____

Estado Civil:

Solteiro/a, e atualmente numa relação ❑ Casado/a / União de facto ❑

Solteiro/a, e atualmente sem relação ❑ Divorciado/a / Separado/a / Viúvo/a ❑

Habitação Atual:

Residência Universitária ❑ Apartamento ou quarto partilhado ❑ Habitação Própria/Pais ❑

Casa de Familiares ❑ Outra Situação ❑

Peso: _____ kgs **Altura:** _____ cms

Situação perante a profissão: Estudante a tempo inteiro ❑ Trabalhador/a-Estudante ❑

Universidade: _____ **Ano de frequência:** _____

Área Científica do Curso que frequenta:

Área das Ciências da Engenharia ❑ Área das Ciências Exatas e da Natureza ❑

Área das Ciências da Saúde e da Vida ❑ Área das Ciências Sociais e Humanas ❑

Área das Ciências Económicas e Judiciais ❑

Nível de Ensino:

Licenciatura ❑ Mestrado integrado ❑ Mestrado ❑ Doutoramento ❑

MUITO OBRIGADO PELA SUA COLABORAÇÃO!

Página **1** de **1**

APÊNDICE V – MANUAL DO PROGRAMA HEALTH *ON* YOU

Manual do Programa Health *On* You

Promoção de Comportamentos de Saúde Positivos

Regina Ferreira Alves

Este trabalho é financiado por Fundos Nacionais através da FCT – Fundação para a Ciência e a Tecnologia, I.P., no âmbito do projeto SFRH/BD/120758/2016.

1

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Consentimento Informado

O "Health *On* You" é um estudo no âmbito de um projeto de Doutoramento em Ciências da Educação, financiado a nível nacional pela FCT - Fundação para a Ciência e a Tecnologia (ref. SFRH/BD/120758/2016.), que tem como missão a promoção de hábitos saudáveis no Ensino Superior.

O programa Promoção de Comportamentos de Saúde Positivos tem como objetivo promover (i) a literacia no âmbito dos comportamentos de saúde - isto é, um conjunto de conhecimentos, competências e comportamentos relacionados com o tabaco, o álcool, as drogas ilícitas, os medicamentos, a alimentação, o exercício físico e a sexualidade - de jovens universitários, bem como (ii) as estratégias psicossociais associadas à mudança de comportamentos de saúde.

Mecanismos Digitais e de Proteção de Dados

Para fins de tratamento de dados, a identificação de todos/as os/as participantes é codificada pelos/as próprios/as através do **Código Pessoal de Participante** (que tem por base as iniciais do nome completo e os últimos dois dígitos do ano de nascimento). A confidencialidade dos dados é assegurada, sendo os mesmos codificados e garantindo o anonimato para a divulgação dos resultados obtidos em meios exclusivamente científicos.

Para concretizar este programa online a todos/as os/as participantes serão solicitados o registo na plataforma através do endereço de email. Esta forma de contacto será utilizada para o esclarecimento de eventuais dúvidas e para o envio dos certificados de formação e participação no estudo.

Qualquer participante pode interromper a sua participação a qualquer momento na intervenção, sem quaisquer penalizações ou prejuízos.

Realça-se que a tua participação é de elevada importância para a expansão do conhecimento científico nacional, e sublinha-se que a tua participação é voluntária.

Para quaisquer questões adicionais ou esclarecimentos prévios à participação na intervenção, contacte a Investigadora Responsável (Dra. Regina Alves).

Muito obrigado pelo teu interesse e disponibilidade.

Até breve!

Regina.

Health On You Program

Website: https://www.nonio.uminho.pt/healthonyou/

Email:healthonyou.education@gmail.com

Bem-vindo/a ao programa!

Para mim é uma honra estares aqui, uma alegria enorme em receber-te neste programa e espero te ajude a encaixar no puzzle da tua vida as peças para um estilo de vida saudável que te faltam.

Este programa surgiu no âmbito do meu doutoramento e das necessidades identificadas em investigações cientificas, nas quais se verificaram algumas lacunas nos conhecimentos, atitudes e comportamentos de saúde dos/as estudantes universitários/as.

Este programa foi pensado para que possas obter informações e desenvolver competências que te permitam adquirir e manter hábitos saudáveis durante o teu percurso académico, convidando-te, essencialmente, a refletir sobre os teus hábitos de consumo de substâncias psicoativas, sobre a tua alimentação e prática de exercício físico, sobre a forma como te relacionas com o Outro, nomeadamente o/a teu/tua parceiro amoroso. E ainda a pensares em ti de uma forma holística, como um todo, potenciando o teu bem-estar.

Este programa encontra-se dividido por módulos, sendo que poderás começar pelo módulo que te sintas mais confortável ou que te desperte maior curiosidade. Não existe uma sequência pré-definida, sendo que o tempo dedicado ao aprofundamento de cada módulo dependerá apenas de ti. Não vale a pena tentares fazer tudo ao mesmo tempo, mas sim mudares pequenas coisas aqui e ali no teu dia a dia.

Este programa reúne estratégias consideradas importantes para cuidares de ti, por dentro e por fora. Permitindo ainda que possas influenciar positivamente aqueles que te rodeiam, seja os teus/tuas colegas da universidade, seja os teus familiares ou amigos/as fora da universidade. Espreita as ferramentas de cada módulo, os vídeos, os pdfs, e toda a bibliografia complementar como livros e websites, para reunires toda a informação que precisas para tomares decisões informadas, conscientes e, acima de tudo, saudáveis.

No final deste programa irás ter uma maior noção dos teus comportamentos, daqueles que deves e queres manter, dos que já não te servem e daqueles onde existe espaço para melhorias.

Lembra-te que não estás sozinho/a, contata-nos por email ou através das redes sociais.

Desejamos que a realização deste Programa te traga muita reflexão, inspiração e novas aprendizagens.

Antes de Começar...

Esta é uma pesquisa rápida para nos ajudar a entender os teus objetivos e expetativas.

1. Completa a frase: Depois de fazer este programa, serei capaz de:

2. Qual é a tua motivação para participar neste Programa?

3. Qual é o teu principal obstáculo à participação neste Programa?

4. Gostaria de te convidar a preencher o questionário que visa analisar os conhecimentos, as atitudes e os comportamentos de saúde dos/as estudantes do Ensino Superior.

Todas as informações recolhidas serão anónimas e confidenciais, pelo que solicitamos que as tuas respostas sejam tão próximas da realidade quanto possível. Os dados recolhidos serão utilizados exclusivamente para fins de investigação científica, sendo posteriormente codificados e analisados de forma agregada. Nenhuma informação fará parte do arquivo académico institucional.

Acede ao link disponibilizado abaixo!
https://forms.gle/ctKQcRJ28RRK2wdt6

Módulo 1 - Beber com responsabilidade

Introdução

Olá!

Bem-vinda/o ao módulo 1, módulo no qual iremos abordar as questões do consumo de álcool no Ensino Superior.

O álcool é das substâncias psicoativas mais consumida no mundo. Noventa por cento dos estudantes universitários consomem bebidas alcoólicas, e uma elevada prevalência relata episódios de embriaguez!

Este módulo fornece informações acerca das consequências, a prevalência e a etiologia do consumo de bebidas alcoólicas, assim como as medidas preventivas adotadas para controlar o consumo de álcool. Antes de se falar sobre os riscos associados ao consumo de bebidas alcoólicas torna-se fundamental definir, com rigor, o conceito de bebida alcoólica.

Sessão 1 - Epidemiologia do Consumo no Álcool

Objetivos específicos

Identificar as tipologias e padrões de consumo de álcool;

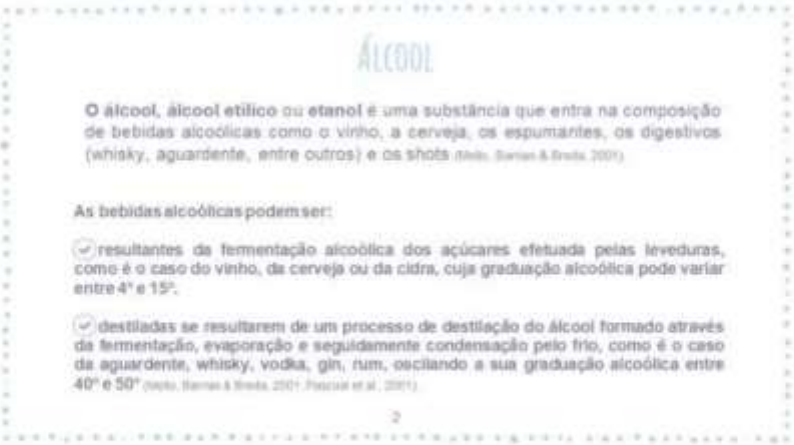
Analisar os fatores preditores do consumo de álcool;

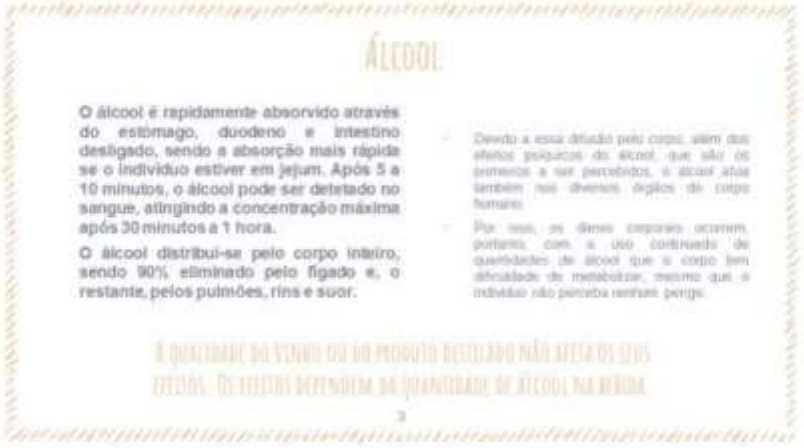
Conhecer o estado atual e as tendências evolutivas do consumo de bebidas alcoólicas.

Estratégias Pedagógicas

Campus Focus – O Consumo de álcool no Campus







ÁLCOOL

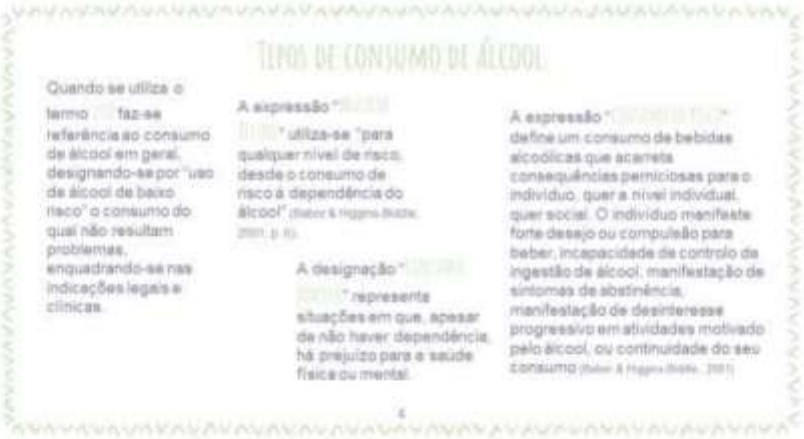
O álcool é rapidamente absorvido através do estômago, duodeno e intestino delgado, sendo a absorção mais rápida se o indivíduo estiver em jejum. Após 5 a 10 minutos, o álcool pode ser detetado no sangue, atingindo a concentração máxima após 30 minutos a 1 hora.

O álcool distribui-se pelo corpo inteiro, sendo 90% eliminado pelo fígado e, o restante, pelos pulmões, rins e suor.

- Devido a essa difusão pelo corpo, além dos efeitos psíquicos do álcool, que são os primeiros a ser percebidos, o álcool atua também nos diversos órgãos do corpo humano.
- Por isso, os danos corporais ocorrem, portanto, com o uso continuado de quantidades de álcool que o corpo tem dificuldade de metabolizar, mesmo que o indivíduo não perceba nenhum perigo.

A QUALIDADE DO VINHO OU DO PRODUTO DESTILADO NÃO AFETA OS SEUS EFEITOS. OS EFEITOS DEPENDEM DA QUANTIDADE DE ÁLCOOL NA BEBIDA

3



TIPOS DE CONSUMO DE ÁLCOOL

Quando se utiliza o termo [illegible] faz-se referência ao consumo de álcool em geral, designando-se por "uso de álcool de baixo risco" o consumo do qual não resultam problemas, enquadrando-se nas indicações legais e clínicas.

A expressão "[illegible]" utiliza-se "para qualquer nível de risco, desde o consumo de risco à dependência do álcool" (Babor & Higgins-Biddle, 2001, p. 6).

A designação "[illegible]" representa situações em que, apesar de não haver dependência, há prejuízo para a saúde física ou mental.

A expressão "[illegible]" define um consumo de bebidas alcoólicas que acarreta consequências perniciosas para o indivíduo, quer a nível individual, quer social. O indivíduo manifesta forte desejo ou compulsão para beber, incapacidade de controlo da ingestão de álcool, manifestação de sintomas de abstinência, manifestação de desinteresse progressivo em atividades motivado pelo álcool, ou continuidade do seu consumo (Babor & Higgins-Biddle, 2001).

4



PADRÕES DE CONSUMO DE ÁLCOOL

LIGHT DRINKING

Baixo consumo de bebidas alcoólicas, menos de 3 bebidas por semana.

INFREQUENT DRINKING

Consumo esporádico de bebidas. Neste caso, os/as consumidores/as ingerem menos de uma bebida alcoólica por mês, mas consomem bebidas alcoólicas pelo menos uma vez por ano.

MODERATE DRINKING

Consumo moderado de bebidas com álcool, refere-se a um nível de consumo que não interfere nem ameaça a saúde, as relações sociais, as obrigações diárias ou a segurança dos outros. Não deve beber mais do que duas bebidas standard por dia (10 gr de álcool puro = 1 copo de cerveja ou um copo de vinho) (limite calculado para homens com boa condição de saúde e de corpulência média. As pessoas com problemas de saúde, de baixo peso e as mulheres não devem ultrapassar, diariamente, metade deste consumo.

5

PADRÕES DE CONSUMO DE ÁLCOOL

SOCIAL DRINKING

Refere-se a padrões de consumo aceites por amigos/as e colegas. O consumo social será aceite em função do consumo que é realizado pelos pares. Assim, se nas festas académicas, os/as jovens consomem, em média, 6 cervejas, esta quantidade de bebidas passará a ser aceite socialmente.

PROBLEM DRINKING

Qualquer consumo que interfira com a vida pessoal, social e profissional

BINGE DRINKING

Refere-se a um consumo excessivo usualmente definido como o consumo de cinco ou mais bebidas (quatro ou mais para as senhoras) numa determinada ocasião num intervalo de duas horas (o que corresponde a uma concentração de álcool no sangue em torno dos 0,08% ou superior).

6

PADRÕES DE CONSUMO DE ÁLCOOL

Não há nenhum nível de consumo recomendável e, contrariamente ao que é mais ou menos aceite pela opinião pública e por alguns profissionais de saúde, não há motivos para consumir álcool.

É difícil calcular "[illegible]" dado que a taxa de álcool no sangue, em determinado momento, depende de diversos fatores que nunca são constantes, o que impede o cálculo com precisão (como o peso; a idade; o sexo; a doença e/ou a hereditariedade; o estado de fadiga; estados emocionais alterados; certos medicamentos; mudanças bruscas de temperatura; a pressão atmosférica; a gravidez; a quantidade e características dos alimentos consumidos; o tempo decorrido desde a última refeição (Castro & Matos, 1999).

Assim, a mesma quantidade de álcool, contida na mesma bebida, ingerida por pessoas diferentes origina taxas de alcoolémia diferentes.

7

ETIOLOGIA DO CONSUMO DE ÁLCOOL

A literatura científica tem vindo a demonstrar que existem diferentes fatores de risco (variável associada a uma maior probabilidade de consumo de bebidas alcoólicas) para a experimentação, manutenção e aumento do consumo.

Os fatores genéticos interagem com o meio (Addiction & Cognition, 1997), pelo que se torna difícil distinguir o que é natural do que foi aprendido (Freixa, 1998). Por isso, o risco de consumo de álcool resulta da interação entre a informação contida no genótipo e os fatores de risco/protetores presentes no meio (WHO, 2000).

Exemplo

Os/as filhos/as de pais e mães alcoólicos/as correm um risco três a quatro vezes maior de desenvolver dependência de álcool, comparativamente com filhos/as de pais e mães não alcoólicos/as, bem como os/as progenitores/as dependentes de álcool têm quatro ou cinco vezes mais hipóteses de terem filhos/as que desenvolvam esses hábitos.

Os/as filhos/as de pais e mães alcoólicos/as tendem a apresentar maior tolerância ao consumo de álcool, comparativamente com filhos/as de pais e mães não alcoólicos/as (Addiction & Cognition, 1997).

Comparativamente com os homens, as mulheres atingem níveis de alcoolémia superiores, com doses equivalentes de álcool, uma vez que apresentam, no estômago, níveis mais baixos de ADH (enzima alcooldesidrogenase) (Portugal & Gomes, 1997).

9

O álcool tem a propriedade de interagir com neurotransmissores cerebrais e a capacidade de se infiltrar ao nível das membranas celulares. Contudo, enquanto os efeitos do alcoolismo agudo são euforizantes, resultante do acréscimo de turnover de noradrenalina, elevação dos níveis de serotonina e estimulação do GABA, os efeitos do alcoolismo crónico geram ansiedade e depressão, pois ocorre diminuição da noradrenalina e serotonina, verificando-se uma maior afinidade dos recetores serotoninérgicos.

A sensação de prazer e satisfação resultante da ativação de sistemas de compensação cerebral justificam o início e manutenção do consumo de álcool, tendo como fatores determinantes da sua regulação os neurónios dopaminérgicos, serotoninérgicos e as endorfinas, cuja atividade é estimulada pelo álcool (Addiction & Cognition, 1997).

10

FATORES PSICOLÓGICOS

São vários os fatores de risco psicológicos relacionados com o início do consumo de álcool e entre estes encontram-se as características de personalidade.

A sensação de bem-estar e os efeitos ansiolíticos produzidos pelo consumo de álcool podem conduzir à manutenção de comportamentos de consumo abusivo já que predispõem ao alívio de sintomatologia depressiva e ansiogénea (Abbey & Lancaster, 1997; Mello, Barbosa & Breda, 2001). Assim, o risco de dependência alcoólica aumenta em indivíduos com baixas competências de "coping" e para quem o álcool é utilizado enquanto redutor de stress (Cartwright & Robbins, 1997).

FATORES INTERPESSOAIS

O início do consumo ocorre muitas vezes devido à [illegible] (para experimentar) e acontece frequentemente em casa.

- aceitar com facilidade ofertas de bebidas alcoólicas: ter mãe, irmãos e/ou os namorados/as consumidor/as de bebidas alcoólicas; percecionar que a maioria dos jovens da sua idade ingere álcool; percecionar que a maioria dos amigos consome; ter recebido ofertas de álcool; ser pressionado pelos amigos para o consumo e achar que o melhor amigo(a), o namorado(a) e outras pessoas "gostavam que consumisse bebidas alcoólicas".

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FATORES MULTIVARIADOS

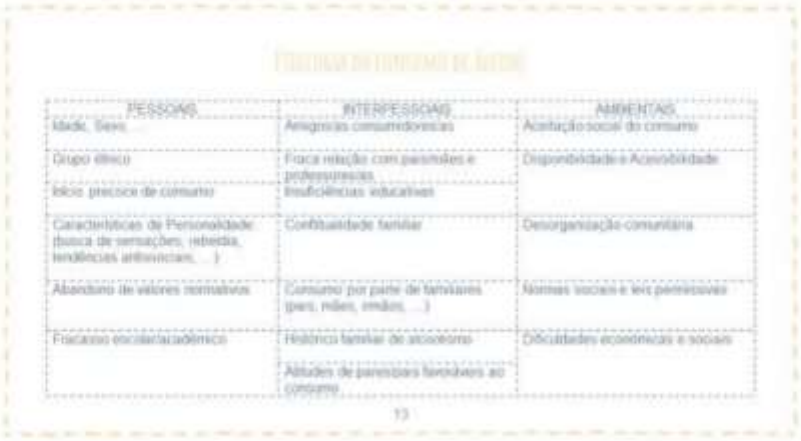
O consumo dos conviventes (mãe, irmão ou outro familiar) parece ter um papel fundamental no consumo de bebidas alcoólicas pelos/as jovens (os/as consumidores/as de álcool são, provavelmente, mais tolerantes com o consumo podendo mesmo incentivá-lo).

O risco de consumo de bebidas alcoólicas era maior no grupo de alunos/as que afirmam que pessoas próximas (pai, mãe, irmão, familiares e outras pessoas) já lhes haviam oferecido álcool, confirmando a influência dos conviventes (Magalhães & Precioso, 2010).

O consumo de álcool pelos/as amigos/as parece ser, igualmente, um forte fator de risco relacionado com o consumo dos/as alunos/as. Isto é explicável pelo facto de muitos/as alunos/as começarem a beber em contexto de grupo, por influência, mais ou menos ativa, dos pares. É, portanto, natural que os/as jovens que consomem refiram que possuem mais amigos/as consumidores/as (Calafat, Muñoz 1998; Magalhães & Precioso, 2010).

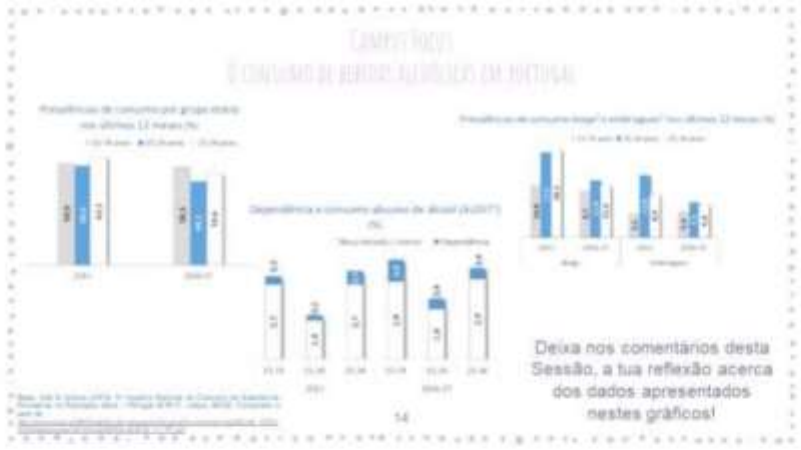
A determinada altura é um fenómeno dialético. Começa-se a consumir devido à influência dos/as amigos/as e depois convive-se com amigos/as que também bebem.

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PESSOAIS	INTERPESSOAIS	AMBIENTAIS
Idade, Sexo	Amigos/as consumidores/as	Aceitação social do consumo
Grupo étnico	Fraca relação com parentes e professores/as	Disponibilidade e Acessibilidade
Início precoce de consumo	Insuficiências educativas	
Características de Personalidade (busca de sensações, rebeldia, tendências antissociais, ...)	Conflitualidade familiar	Desorganização comunitária
Abandono de valores normativos	Consumo por parte de familiares (pais, mães, irmãos, ...)	Normas sociais e leis permissivas
Fracasso escolar/académico	Histórico familiar de alcoolismo	Dificuldades económicas e sociais
	Atitudes de parentes favoráveis ao consumo	

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Reflete sobre o consumo de álcool na Universidade.

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Sessão 2 – Os efeitos corporais e comportamentais do consumo do álcool

Objetivos específicos

Compreender os efeitos do álcool a curto e a longo prazo;
Listar as consequências negativas individuais e sociais do abuso de álcool.

Estratégias Pedagógicas

Website Health – Efeitos do álcool no Organismo

Principais consequências do consumo de álcool na saúde, na família, na sociedade e na economia

Os problemas causados pelo consumo excessivo de álcool algumas vezes não são percebidos imediatamente pelos/as consumidores/as e por aqueles/as que o/a rodeiam. Para além disso, o corpo adapta-se à presença no álcool, acabando por tolerar os seus efeitos psíquicos.

Efeitos a curto prazo

Os efeitos do álcool a curto prazo dependem principalmente:

- **Da quantidade de álcool ingerida** na ocasião que queremos avaliar, modulada por diversas circunstâncias como o peso da pessoa, o consumo de outros medicamentos ou drogas, etc.
- **Do tipo de atividade** que o/a consumidor/a exerce sob a influência de álcool.

Esses efeitos de curto prazo são especialmente percetíveis entre os/as jovens, devido aos seus padrões de consumo (social e binge drinking - ver sessão 1).

Embriaguez

A embriaguez é comum entre os/as jovens que consomem álcool aos finais de semana ou em festas académicas. Além de causar outros problemas, a própria embriaguez leva a náuseas, vómitos, dores de cabeça, falta de coordenação psicomotora... podendo terminar em coma alcoólico e morte. No dia seguinte, as consequências da embriaguez são a típica ressaca.

Acidentes Rodoviários

Os acidentes de trânsito são a principal causa de morte de jovens entre 18 e 24 anos. Uma em cada quatro mortes em acidentes rodoviários referem-se a jovens com menos de 25 anos. Note-se que os/as jovens com estas idades representam apenas 17% dos motoristas.

O nível de álcool permitido por lei é de 0,5 gr./l (dependendo do tipo de bebida alcoólica, da massa corporal e do sexo, duas ou três bebidas podem ser suficientes para ultrapassar o limite legal de condução). No entanto, mesmo com níveis inferiores aos autorizados, podem ocorrer alterações na nossa capacidade de condução.

Infeções Sexualmente Transmissíveis

O consumo de álcool promove comportamentos mais desinibidos e o esquecimento de uso de preservativos durante a prática de relações sexuais.

Gravidez indesejada

A gravidez indesejada associa-se ao consumo de álcool, considerando-se que o consumo de álcool diminui o efeito dos métodos contracetivos orais e constitui um fator de risco para a prática de relações sexuais sem uso de preservativo.

Violência e Atos de Vandalismo

O álcool desempenha um papel decisivo na prática de crimes como homicídios, ofensas sexuais, insultos às autoridades de segurança pública, violência entre pares, entre outros.

Desempenho escolar/académico

O consumo de álcool interfere com os resultados escolares/académicos, uma vez que influencia negativamente o desenvolvimento e maturação do cérebro, afetando capacidades como a memória, especialmente a memória de trabalho, a atenção, a aprendizagem, a maturação da atividade inteligente, a retenção e recuperação de informação verbal e não-verbal e o funcionamento viso-espacial.

Efeitos a longo prazo

Dependem basicamente da exposição continua ao álcool, por isso não é comum encontrar estes efeitos entre os/as jovens. Embora a prevalência das doenças derivadas do consumo de álcool atinja cada vez mais as faixas etárias mais jovens.

Praticamente todos os órgãos do corpo podem ser afetados pelo álcool, pois, devido à sua distribuição no corpo, ele entra em contato com todos eles.

A imagem abaixo apresenta alguns dos efeitos do álcool no organismo.



Podemos considerar:

- Doenças do aparelho digestivo (hepatite, cirrose, gastrite, pancreatite, câncer ...)
- Distúrbios cardiovasculares (doença cardíaca, hipertensão ...);
- Distúrbios neurológicos (encefalopatias, neurites ...), musculosquelético, metabólico;
- Problemas psicológicos (ansiedade, depressão e problemas do comportamento)

Website Health

Explora os seguintes Websites onde vais poder encontrar as consequências adversas do álcool em cada parte do organismo humano:

http://www.collegedrinkingprevention.gov/CollegeStudents/interactiveBody.aspx

https://www.drinkaware.co.uk/check-the-facts/health-effects-of-alcohol

Sessão 3 – Mitos sobre o consumo de álcool

Objetivos específicos

Identificar a percentagem de álcool nas bebidas;
Saber calcular o nível de álcool no sangue;
Identificar a quantidade de açúcar presente nas bebidas alcoólicas;
Identificar alguns mitos acerca do consumo de álcool.

Estratégias Pedagógicas

Top 10 – Mitos sobre o consumo de álcool;
A refletir: #Caso 1 e #Caso 2 – Estudantes com problemas de alcoolismo







Calcular a quantidade de álcool nas bebidas

Dado que um mililitro de álcool pesa 0.8 gramas, basta aplicar uma fórmula muito simples para descobrir a quantidade de álcool em uma bebida.

A fórmula é:

Álcool (gramas) = volume x percentagem de álcool na bebida x 0.8

Exemplo:

→ uma garrafa de cerveja (330 ml) com 5º de álcool contém:

330 x (5/100) x 0.8 = 13.2 gramas de álcool pur

→ Uma garrafa de vinho (75 cl) com 14º volume de álcool contém:

750 x (14/100) x 0.8 = 84 gramas de álcool puro

Um litro de vinho com graduação alcoólica de 14º, significa que tem 14% de álcool puro, ou seja, contém 140 ml de álcool puro.

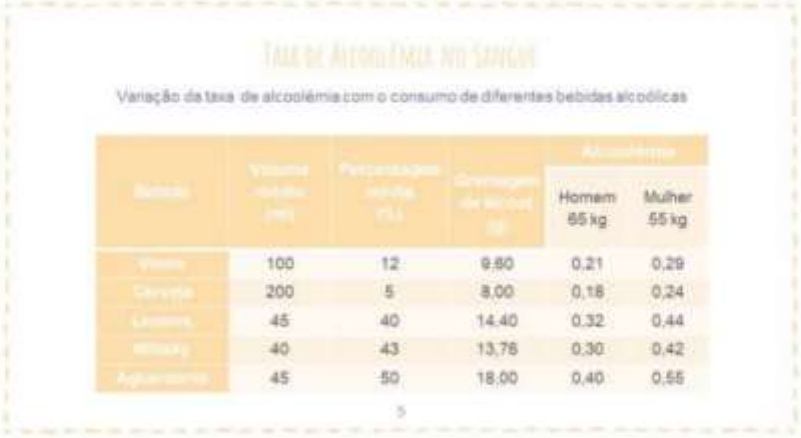
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Taxa de Alcoolémia no Sangue

A Taxa de Alcoolémia no Sangue (TAS) corresponde à quantidade de álcool no sangue de um indivíduo, num determinado momento, e exprime-se em gramas de álcool por litro de sangue (Paiva, 2007).

Para calcular a TAS de um indivíduo é necessário saber-se a quantidade, em gramas, de álcool ingerido e o seu peso (Paiva, 1998). Dado que as características biológicas do homem e da mulher são diferentes, já que as mulheres possuem maior quantidade de tecido adiposo, o que resulta numa difusão mais lenta do álcool, assim como o metabolizam de modo diferente, o cálculo da Taxa de Alcoolémia no Sangue faz-se utilizando a fórmula de Widmark.

$$\text{Taxa de Alcoolemia no Sangue} = \frac{\text{Peso do álcool puro consumido (em gramas)}}{\text{Peso corporal (em Kg)} \times \text{Coeficiente } (0{,}7 \text{ nos homens}) \; (0{,}6 \text{ nas mulheres}) \; (1{,}1 \text{ no decurso das refeições})}$$



Taxa de Alcoolémia no Sangue

Variação da taxa de alcoolémia com o consumo de diferentes bebidas alcoólicas

Bebida	Volume (ml)	Percentagem (%)	Quantidade de álcool (g)	Alcoolémia Homem 65 kg	Alcoolémia Mulher 55 kg
Vinho	100	12	9,60	0,21	0,29
Cerveja	200	5	8,00	0,18	0,24
Licores	45	40	14,40	0,32	0,44
Whisky	40	43	13,76	0,30	0,42
Aguardente	45	50	18,00	0,40	0,55



Taxa de Alcoolémia no Sangue

Relação entre a taxa de alcoolemia no sangue (g/l) e os sinais clínicos/sintomas de intoxicação alcoólica

Alcoolemia (g/l)	Fase clínica da intoxicação	Sinais clínicos e sintomas
0,1 a 0,3	Subvedade	Nenhuma influência aparente; testes clínicos revelam pequenos transtornos.
0,3 a 1,2	Euforia	Suave euforia, sociabilidade, decréscimo das inibições, diminuição da atenção, julgamento e controlo, perda da eficiência em testes neurológicos.
0,9 a 2,5	Excitação	Instabilidade emocional, decréscimo da inibição, perda do julgamento crítico, enfraquecimento da memória e compreensão, decréscimo da resposta sensitiva, dificuldade de coordenação motora.
1,8 a 3,0	Confusão	Desorientação, confusão mental e vertigens, estado emocional exagerado, distúrbio da perceção às cores, formas, movimentos e dimensões, dificuldade de equilíbrio, dificuldade de coordenação motora, dificuldade na articulação de palavras e vacilação no modo de andar.
2,7 a 4,0	Apatia	Apatia, letargia geral, diminuição do tempo de resposta a estímulos, significativa descoordenação motora, incontinência da urina e fezes por relaxamento espontâneo e involuntário dos esfíncteres, debilidade da consciência.
3,5 a 5,0	Coma	Completa inconsciência, coma, anestesia, diminuição ou abolição dos reflexos, incontinência da urina e fezes por relaxamento espontâneo e involuntário dos esfíncteres; hipotermia; dificuldades respiratórias e circulatórias; morte possível.
> 4,5	Morte	Paragem respiratória.

ELIMINAÇÃO DO ÁLCOOL CONSUMIDO

O corpo pode eliminar 0,1 grama de álcool por hora e quilo de peso.

Por outras palavras, uma pessoa elimina menos álcool a cada hora do que uma bebida padrão (10 gramas de álcool). O fato de haver muito ou pouco álcool no corpo não acelera esse processo, nem o consumo de café, vitaminas, banho frio, etc. Só o tempo permite que o álcool do corpo seja metabolizado e, portanto, baixe o álcool no sangue.

Qualquer que seja o nível máximo de álcool no sangue atingido, o nível de álcool no sangue diminui apenas cerca de 0,15 g / l para cada hora decorrida.

Por exemplo, um jovem do sexo masculino, com cerca de 65 kg, que tenham consumido uma cerveja e duas bebidas combinadas (por exemplo, vodka com limão) levará mais de oito horas para eliminar completamente o álcool do corpo, e sua taxa de alcoolemia não está dentro do limite legalmente autorizado para conduzir até seis horas. No caso de uma jovem, com peso médio de 55 kg, a eliminação total só ocorre após dez horas, e até oito horas o bafômetro não ultrapassa o limite legal para conduzir.

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AÇÚCAR PRESENTE NAS BEBIDAS ALCOÓLICAS

Exemplo:
→ uma garrafa de cerveja (330 ml) com 5º de álcool contém: 330 x (5/100) x 0.8 = 13.2 gramas de álcool puro → 13.2 x 8 = 105.6 kcal

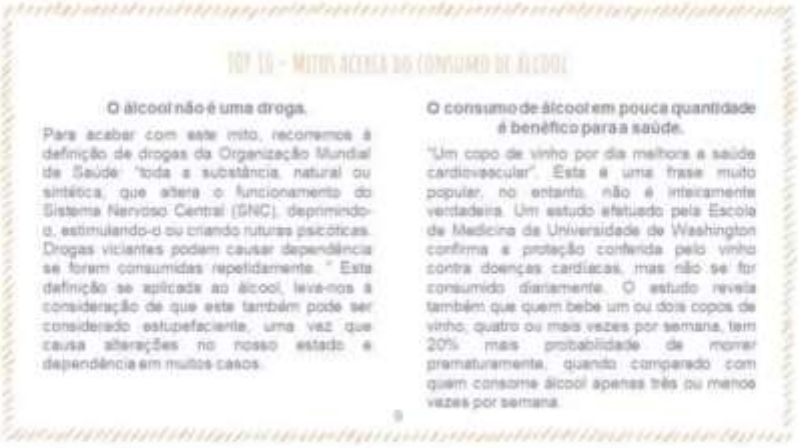
ACTIVIDADE:
https://www.drinkaware.co.uk/tools/unit-and-calorie-calculator
E calcule a quantidade de calorias que consome por semana em bebidas alcoólicas.

O álcool contém cerca de **sete calorias por grama** - quase tanto quanto a gordura pura.

As calorias do álcool são 'calorias vazias', o que significa que não têm valor nutricional. Eles não beneficiam nossos corpos de forma alguma.

Diferentes bebidas alcoólicas contêm diferentes quantidades de calorias e muitas são ricas em açúcar. Meio litro de cerveja pode conter o mesmo número de calorias que uma fatia de pizza, ou uma taça grande de vinho pode ter tantas calorias quanto um gelado.

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TOP 10 - MITOS ACERCA DO CONSUMO DE ÁLCOOL

O álcool não é uma droga.

Para acabar com este mito, recorremos à definição de drogas da Organização Mundial de Saúde: "toda a substância, natural ou sintética, que altera o funcionamento do Sistema Nervoso Central (SNC), deprimindo-o, estimulando-o ou criando ruturas psicóticas. Drogas viciantes podem causar dependência se forem consumidas repetidamente. " Esta definição se aplicada ao álcool, leva-nos à consideração de que este também pode ser considerado estupefaciente, uma vez que causa alterações no nosso estado e dependência em muitos casos.

O consumo de álcool em pouca quantidade é benéfico para a saúde.

"Um copo de vinho por dia melhora a saúde cardiovascular". Esta é uma frase muito popular, no entanto, não é inteiramente verdadeira. Um estudo efetuado pela Escola de Medicina da Universidade de Washington confirma a proteção conferida pelo vinho contra doenças cardíacas, mas não se for consumido diariamente. O estudo revela também que quem bebe um ou dois copos de vinho, quatro ou mais vezes por semana, tem 20% mais probabilidade de morrer prematuramente, quando comparado com quem consome álcool apenas três ou menos vezes por semana.

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TOP 10 - MITOS ACERCA DO CONSUMO DE ÁLCOOL

Se apenas bebo álcool aos fins-de-semana não faz mal.

O consumo de álcool, geralmente em grandes quantidades, concentrado num ou dois dias por semana é muito comum entre os jovens. No entanto, as consequências deste consumo de "fim de semana" são as mesmas que as provocadas por quem bebe durante toda a semana.

O álcool melhora as relações sexuais.

Este é outro dos grandes mitos do álcool e dos relacionamentos sociais que é completamente falso. Estudos mostram que o consumo de álcool pode até dificultar ou impedir relacionamentos.

Para enganar o bafómetro devemos mastigar pastilhas elásticas, ter dois grãos de café na boca ou soprar de uma certa forma.

Não podemos enganar, de forma alguma, o bafómetro se formos parados numa operação policial e tivermos bebido álcool. A única coisa que podemos conseguir ao tentar enganar a polícia é recebermos uma multa ou algo pior pelo desrespeito.

A cerveja é uma fonte de vitaminas.

A cerveja contém uma boa quantidade de niacina, a vitamina B3. Mas precisaria de ingerir cerca de 1 litro de cerveja para garantir os níveis diários necessários de niacina. O teor de outras vitaminas é muito baixo.

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Para recuperar dos efeitos do álcool: café e um duche frio.

Devemos compreender que a eliminação do álcool é um processo pelo qual teremos que passar e não há "soluções" ou "atalhos". Os banhos frios não vão ajudar-nos a reduzir o álcool no sangue e, de fato, a cafeína pode até ser prejudicial, pois é um estimulante para que possamos estar mais despertos, mas também mais agressivos e sem os reflexos adequados.

O álcool favorece o sono.

O álcool induz a sonolência, contudo perturba os padrões de sono, levando a um sono muito agitado e pouco descansado.

O álcool desinibe e ajuda a criar um ambiente festivo.

Embora o álcool possa trazer algum relaxamento, euforia e facilidade verbal e corporal, também pode camuflar outra série de problemas psicológicos, como a renúncia a uma parte da nossa personalidade (especialmente no caso das pessoas mais tímidas) e a esconder problemas de autoestima. Além disso, o consumo de álcool também pode causar perda de autocontrolo, dificuldade na linguagem, descoordenação de movimentos ou fazer-nos entrar num estado mais agressivo.

O álcool ajuda a fazer a digestão.

11 A verdade é que não há provas científicas

A REFLETIR - # CASO 1

Renato é um estudante de 19 anos que frequenta uma grande universidade portuguesa. É encontra-se a ser atendido num centro de saúde devido a uma queda do segundo andar enquanto festejava com os seus amigos. Renato apresenta uma fratura no pulso direito e uma laceração de 7 centímetros na testa, sendo o seu nível de álcool no sangue de 0.16.

Renato refere ter consumido algumas bebidas, mas não se lembra de quantas. Neste sentido, refere que na maioria dos fins de semana com os seus amigos, geralmente bebe 8 a 10 bebidas alcoólicas. Ele nega qualquer problema com álcool e mostra surpresa com esta conversa, pois diz que sendo o seu pai alcoólatra, já sabe tudo sobre problemas relacionados com álcool.

- Que conselhos darias ao Renato? Consideras que o Renato tem problemas com álcool?

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A Refletir – # Caso2

A Ana Margarida tem 21 anos e é uma estudante finalista. Durante uma consulta por causa de uma infeção urinária, a enfermeira fica impressionada com o seu ar triste e deprimido, considerando mesmo que a Ana Margarida revela sintomas moderados a graves de depressão. Com o desenrolar da conversa, a estudante confessa que ter tido uma série de experiências sexuais desagradáveis durante o período académico. E, neste seguimento da conversa, acaba por referir que usa o álcool 3 a 4 vezes por semana para relaxar e aliviar o stress. E que 2 a 3 vezes por mês festeja com amigos e amigas até ficar embriagada.

Ana Margarida encontra-se preocupada com o seu consumo frequente de bebidas alcoólicas, mas não sabe o que fazer para conseguir aliviar o stress e esquecer a tristeza que sente.

Conheces alguém que consome bebidas alcoólicas para aliviar o stress e relaxar? O que achas que deve ser feito por essas pessoas?

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Sessão 4 – Estratégias de prevenção do consumo de álcool

Objetivos específicos
Identificar estratégias para promover um consumo responsável;
Conhecer maneiras de beber com moderação e responsabilidade;
Saber calcular os gastos associados ao consumo de bebidas alcoólicas.
Estratégias Pedagógicas
Estratégias de prevenção– Como promover um consumo responsável;
Top 10 – Maneiras de beber com moderação e responsabilidade;
Estratégias para a mudança – Cálculo dos gastos com bebidas alcoólicas

Estratégias de Prevenção – Como promover um consumo responsável.

GUIÃO VÍDEO (5 minutos e 37 segundos)



1. Não existe um **nível "certo" de consumo**. Essas dicas servem apenas para reduzir riscos. Ao contrário de algumas informações, não há motivo de saúde que justifique o consumo de álcool. Todos os níveis de consumo apresentam algum risco.

2. Recusa andar de carro com alguém que tenha ingerido bebidas alcoólicas → Sempre que saires sozinho/a ou em grupo, designa sempre uma pessoa que não beba para servir de motorista. Nunca te sentes ao volante se tiveres bebido mais de duas bebidas em duas horas, especialmente se não tiver comido. Nunca deixe amigos/as que consumiram bebidas conduzir. Chamem um táxi, um Uber, conduz o seu carro se também não tiveres bebido. Ou arranjem um local seguro onde passar a noite.

3. Incentiva os/as teus/tuas amigos/as consumidores/as de bebidas alcoólicas a ter novos interesses e a participar noutras atividades de lazer do seu interesse. Por exemplo, a prática de exercício físico, proporciona uma melhoria da autoestima e reduz a perceção

negativa de bem-estar, por isso, poderá ser uma boa estratégia para aconselhares aos/às teus/tuas amigos/as.

4. **As mudanças no estilo de vida**, incluindo o desenvolvimento de relações com pessoas que não bebem; remover as bebidas alcoólicas de casa e evitar situações ou locais onde existe um elevado risco de consumir bebidas alcoólicas;

5. **Recusar**. Aprender a dizer "Não" → Ensaiar de várias maneiras estratégias de evitamento.

6. Ao preparar bebidas alcoólicas, **meça a quantidade de álcool que utiliza**.

7. **Evita "empurrar" bebidas aos outros ou reabastecer os seus copos rapidamente**.

8. **Serve sempre comida ao servir bebidas** – mas evite os salgados (amendoins ou batatas fritas, por exemplo).

9. **Não ingerir bebidas alcoólicas todos os dias**. A probabilidade de alto consumo é maior com o consumo diário. Por exemplo, preparamos-te uns cartões semanais, nos quais podes registar diariamente as bebidas que consomes. E no final da semana, poderás somar o número total de bebidas que consumiste. E:

   - **Felicitares**-te sempre que conseguiste não consumir bebidas alcoólicas;
   - **Não desistir** apenas porque houve um dia em que bebeste demais.
   - Aceite contratempos e recaídas com calma.

10. Aprende a lidar com situações de risco. Em certas situações, especialmente se tiveres um mau dia, poderás sentir-te tentado a beber para descomprimir. Por isso, quando estiveres num desses dias opta por:

   - Pensar em alguma coisa agradável para fazer sozinho/a ou com um/a amigo/a.
   - Telefona ou pede a um/a amigo/a para conversarem sobre algo assunto.
   - Exercício físico: dá um passeio, pratica um desporto ou vai ao ginásio.
   - Vê um filme, lê um livro, ou simplesmente, ouve música;
   - Podes praticar journaling, ou seja, escreve os teus sentimentos, algumas reflexões num caderno.
   - Acima de tudo, cerca-te de pessoas positivas e que não estejam a consumir bebidas alcoólicas.

- Estas ideias até podem não fazer sentido para ti, mas tenho a certeza que pensarás em outras coisas para fazer, evitando o consumo de bebidas alcoólicas.

11. Sabes porquê? Porque não consumires bebidas alcoólicas, irá permitir que:

- Tenhas um melhor rendimento académico;
- Vai reduzir as probabilidades de teres acidentes rodoviários;
- Vai diminuir as probabilidades de teres experiências sexuais indesejadas;
- Vais poupar dinheiro; → Exercícios;
- Vais sentir-te melhor;
- Vais ter mais energia;
- Vais reduzir o teu peso;
- Vais ter menos dores de cabeça e de estômago;
- Vais reduzir o risco de desenvolver vício de álcool;
- Vais diminuir as probabilidades de ter problemas de saúde relacionados com o consumo de álcool.

Top 10 – Maneiras de beber com moderação e responsabilidade

1. ***Não bebas sozinho/a***. Cultiva amizades com quem não bebe e com quem bebe com moderação e responsabilidade;
2. ***Não uses o álcool como um medicamento***. Em vez de procurares no consumo de bebidas alcoólicas uma forma de te ajudar a relaxar ou aliviar o stress, desenvolve meios alternativos de descontração, como exercício físico, meditação, ouvir música, etc.
3. ***Desenvolve um plano***. Se tens uma festa académica, estabelece um limite de quantas bebidas irás consumir e cumpre o que estabeleceste.
4. ***Não concentres o consumo de bebidas alcoólicas numa saída***. Por exemplo, em vez de beberes em todas as festas académicas, estabelece festas ou saídas, nas quais não irás beber.
5. ***Bebes devagar***. Nunca beba mais do que uma bebida por hora.

6. ***Come antes e enquanto bebes***. Tenta ingerir alguns alimentos enquanto consomes bebidas alcoólicas. No entanto, tenta evitar alimentos salgados, como amendoins ou batatas fritas, que aumentam a sede.

7. ***Tem atenção às bebidas misturadas com refrigerante*** (bebidas destiladas com refrigerantes). Por exemplo, vodka com sumo de limão ou whisky com redbull são bebidas que podem encobrir os estados de embriaguez.

8. ***Não faças do consumo de bebidas alcoólicas o foco principal das tuas saídas ou festas académicas.*** Cultive outros interesses e atividades nas quais pode disfrutar da companhia dos/as teus/tuas amigos/as.

9. ***Aprende a dizer que NÃO***. Um simples, "Obrigada mas já chega!" pode ser suficiente para recusares as ofertas de bebidas alcoólicas ou as propostas de beber "mais um copo". Assim, irás conseguir evitar ficar bêbado/a.

10. ***Tem atenção à tua segurança.*** Durante e depois de consumires bebidas alcoólicas, evite quaisquer tarefas, incluindo conduzir.

Imagem 1

Cartão para registo do número de registos de bebidas



SESSÃO 1 - Epidemiologia do consumo no álcool

Mantém um registro do que bebes nos próximos 7 dias

Data:

	Cerveja	Vinho	Bebidas Destiladas Simples	Bebidas Destiladas com Refrigerante	Alcopops	Shots	TOTAL
Segunda-feira							
Terça-feira							
Quarta-feira							
Quinta-feira							
Sexta-feira							
Sábado							
Domingo							
						TOTAL DA SEMANA	

Estratégias para a mudança – Cálculo dos gastos com bebidas alcoólicas [1]

Exercício 1

Na tabela abaixo estão representadas algumas das bebidas alcoólicas mais frequentemente consumidas pelos/as estudantes universitários e os respetivos preços médios de venda ao público.

Tabela 1 – Preços médios de venda de algumas bebidas alcoólicas em bares e cafés

 Cerveja Garrafa (33 cl.)	 Cerveja Copo	 Vodka Copo	 Whisky Copo	 Alcopops	 Shot's
1,50€	1,20€	4,00€	4,50€	2,50€	1,50€

1. O Filipe tem 18 anos e tem por hábito beber todos os dias uma cerveja (garrafa). Ao fim de semana gosta de sair com os amigos e geralmente consome uma vodka e um shot.

   1.1. Faz uma estimativa o mais aproximadamente possível do gasto semanal, mensal e anual que o Filipe tem na compra de bebidas alcoólicas, completando o quadro que se segue.

Gasto semanal	Gasto mensal	Gasto anual

   1.2. Reflete sobre o que o Filipe poderia comprar com o dinheiro que pouparia se não bebesse álcool:

   1.2.1. durante um mês?

   1.2.2. durante um ano?

   1.3. Consideras que beber álcool é caro ou barato? Justifica.

[1] Adaptado de Precioso, J., Dias, A., Correia, C., Sousa, I., Samorinha, C., Antunes, H. & Macedo, M. (2014). *O Essencial sobre Alcoolismo*. Braga: Coleção CIEC – Grupo Almedina

Exercício 2

2. Consumir bebidas alcoólicas é um hábito que muitas vezes se inicia com o ingresso no Ensino Superior, e que muitas vezes permanece ao longo da vida.

2.1. Calcula quanto dinheiro gastarias em bebidas alcoólicas se consumisse uma cerveja (garrafa) por dia durante o teu percurso académico (3 anos) (considera que cada ano tem 365 dias e que o preço médio de uma garrafa de cerveja é de 1,50 euros).

2.2. A este cálculo, acrescenta o valor que gastarias em álcool se uma vez por semana (durante as noites académicas ou ao fim de semana), além do consumo acima, também consumisse duas bebidas destiladas (Whisky com coca-cola ou vodka com sumo de limão)(considera que cada ano tem 52 semana se que o preço médio dessas bebidas é de 4,50 euros).

2.3. O que poderias comprar com o dinheiro que gastaste embebidas alcoólicas durante o teu percurso académico?

Exercício 3

3. Reflete sobre o teu próprio consumo, calcula o valor que gastas ou já gastaste em bebidas alcoólica se pensa em tudo aquilo que poderás comprar senão consumires álcool.

Extra: _ Bibliografia para Aprofundamento_

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Avaliação do Módulo

Gostaríamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

https://forms.gle/JxTh6wKL5R8ZEoiH6

Módulo 2 – Viver livre de fumo

Introdução

Olá!

Bem-vinda/o ao módulo 2, módulo no qual iremos abordar as questões do consumo de tabaco no Ensino Superior.

Imaginaste a viver numa sociedade livre de fumo?! Na qual ninguém acenderia um cigarro na mesa ao lado! Não haveria fumo nas paragens de autocarro ou à saída dos estabelecimentos comerciais. Os parques e as praias não estariam repletos de pontas de cigarros. Os outdoors e publicidades não retratariam este hábito.

Os não fumadores são agora uma proporção bastante superior à dos fumadores. No entanto, aqueles que fumam enfrentam ou enfrentarão vários problemas de saúde. o consumo de tabaco é o principal fator de morte por causa evitáveis.

Neste modulo iremos discutir os efeitos do consumo de tabaco no corpo, padrões de consumo e dependência, o fumo passivo do tabaco e estratégias para a mudança.

As informações deste modulo podem ajudar-te a respirar melhor e a garantir um ar mais limpo para todos. Para além disso, também desenvolverás competências que te ajudem a tornaste um agente de mudança na construção de um país livre do fumo de tabaco.

Sessão 1 - Epidemiologia do Consumo de Tabaco

Objetivos específicos

Descrever o consumidor típico de tabaco e as razões para o consumo;

Conhecer o estado atual e as tendências evolutivas da epidemia tabágica.

Estratégias Pedagógicas

Campus Focus – O Consumo de tabaco no Campus.





PERFIS DE FUMADORES/AS

FUMADOR OCASIONAL: é um tipo de fumador que fuma em ocasiões específicas, fuma praticamente porque os outros fumam. Embora não seja viciado em tabaco, o contato esporádico com a nicotina pode fazer com que ele desenvolva a dependência no futuro. É um erro pensar que ele pode abandonar o cigarro facilmente a qualquer momento.

FUMADOR NEGATIVO OU EM STRESS: é aquele/a que fuma em situações de nervosismo, considerando que o tabaco o ajuda a relaxar e aliviar a tensão.

FUMADOR HEDONISTA OU POR PRAZER: é aquele/a que fuma por prazer, com o objetivo de obter a sensação imediata de satisfação, bem-estar e felicidade. Normalmente consome um cigarro no final das refeições, neste caso é mais difícil de deixar o vício.

3

PERFIS DE FUMADORES/AS

FUMADOR PASSIVO: é aquele que não consome tabaco, mas é afetado pelo consumo de outras pessoas. A combustão do cigarro em pessoas próximas ao fumador/a, pela expulsão de substâncias gasosas, polui e intoxica o corpo de quem não fuma, pois o que o/a fumador/a expele é três vezes mais tóxico do que o que inala. No caso do/a fumador/a passivo ser uma criança, as consequências não seriam mais graves.

Testa que tipo de fumador/a és tu?! Faz este teste aos teus familiares e amigos/as!

https://www.escolavirtual.pt/themes/conteudos/assets/AulasExemplo/LPCC/lpcc_04/index.html

4

DETERMINANTES DO CONSUMO DE TABACO

O consumo de tabaco ou a iniciação desse consumo é influenciada por um vasto conjunto de fatores INDIVIDUAIS (biológicos, psicológicos), MICROSSOCIAIS (família, escola, amigos), MACROSSOCIAIS (em que os media têm um papel preponderante), AMBIENTAIS, CULTURAIS e ECONÓMICOS (Mendes, Pérez, & Fagan, 1994), embora cada pessoa possa ser afetada e influenciada por fatores diferentes e reaja aos mesmos de forma igualmente diferente, o que torna os esforços preventivos uma tarefa complexa.

5

DETERMINANTES DO CONSUMO DE TABACO

INFLUÊNCIA DOS PARES E DOS PAIS

A formação de uma atitude (positiva ou negativa em relação ao tabaco) está relacionada com o processo de socialização primária que ocorre no meio familiar, com o início do processo de socialização secundária, que ocorre na escola (com os amigos), e através dos "media" (Fay, 1988; Viau, 1995). Na formação de uma atitude positiva em relação ao consumo de tabaco são particularmente fortes o consumo de tabaco pelos pais, a opinião destes em relação ao consumo e a exposição continuada a mensagens dos meios de comunicação social, em especial a televisão (Escofet & Vázquez, 1996; 1998; Fay, Hu & Richardson, 1998; Nebenzahl, Mendelson, & Newman, 1993). Os pais/mães servem como modelo social para os filhos e, sendo fumadores, contribuem para a "normalização" social deste consumo.

8

Determinantes do consumo de tabaco

Experimentação e curiosidade

A experimentação está associada ao processo de socialização secundária que decorre, em particular, na escola com os amigos mais próximos. Na experimentação do cigarro são particularmente fortes as seguintes influências ou fatores de risco: a curiosidade acerca dos cigarros em si e dos seus efeitos; o desejo de aceitação social; a curiosidade relativamente aos hábitos dos adultos; o consumo de tabaco pelos amigos mais próximos; o consumo de tabaco pelos pais; os "media", especialmente a televisão e as revistas; a acessibilidade e disponibilidade da substância, entre outros (Dinella & Weisgram, 1996; USDHHS, 1994).

7

Determinantes do consumo de tabaco

Autoestima, Autoimagem, Autocontrolo

São variáveis frequentemente associadas ao início (e manutenção) do hábito (HHS, 2001). Além disso, a tendência para a busca de sensações novas e aumento de sensações positivas está relacionada com a facilidade em correr riscos e procurar o consumo desta substância.

Falta de conhecimentos

Os adolescentes que não receberam informações acerca dos malefícios do consumo de tabaco, sobretudo por um professor, têm um risco acrescido de virem a ser consumidores (Santinha et al., 2005). São particularmente influentes na manutenção do hábito de fumar as convicções sobre os efeitos do tabaco (por exemplo: "acalma", "dá confiança", "controla o peso", "dá-me prazer").

8

Determinantes do consumo de tabaco

Pressão Social e Imitação

A pressão social direta ou indiretamente exercida pelos amigos foi desde sempre considerada um dos mais influentes fatores relacionados ao consumo de tabaco nos jovens. Vários estudos referem que ter um "melhor amigo" fumador é um fator de risco muito influente para que os jovens venham a consumir tabaco no futuro (Ennett, Palmersheim, & Glynch, 2000; Pisarski, et al., 2008; Precioso, 2008; Vilela, Silva, & DeVries, 2007; USDHHS, 2001).

Acessibilidade e disponibilidade de dinheiro

A nível ambiental, a acessibilidade, a disponibilidade e o baixo custo da substância são associados ao consumo experimental e ocasional, mas deixam de ser referidos no consumo regular (Precioso et al., 2008).

9

Determinantes do consumo de tabaco

Dependência

Para o estabelecimento da dependência contribuem os fatores relacionados com a fase precedente, a que se associam a dependência física da nicotina e a dependência psicológica e social (Becoña & Vázquez, 1998; 1998; Mayhew, Flay, & Mott, 2000; USDHHS, 1994).

Associação a outros fatores

O consumo de tabaco aparece também estreitamente relacionado com outros consumos, como café e álcool (Arias & Nebot, 2002), e como forma de "ocupação do tempo livre" (Precioso et al., 2008).

10

Tendências evolutivas da epidemia tabágica

Resultados do ECATD-CAD – 2019

é um estudo transversal que resulta da aplicação do questionário ESPAD em amostras representativas dos alunos do ensino público com idades entre os 13 e 18 anos, em Portugal.

Resultados do ECATD-CAD – 2019

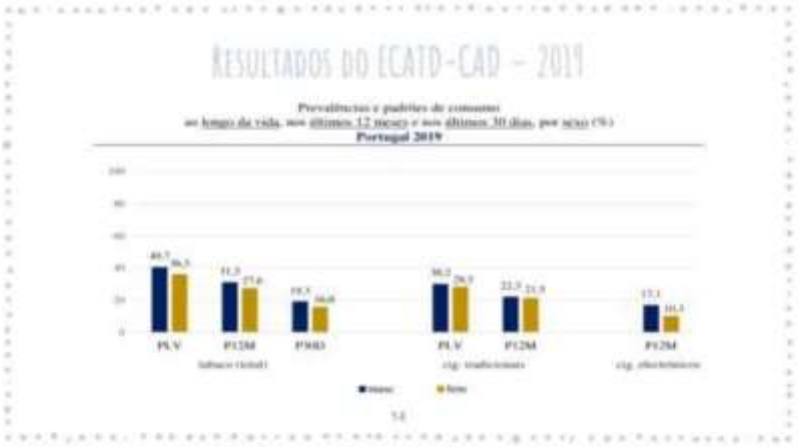
O tabaco é a segunda substância psicoativa mais consumida: 38% dos inquiridos fumaram tabaco alguma vez na vida, enquanto 29% fizeram-no no último ano e 18% no último mês.

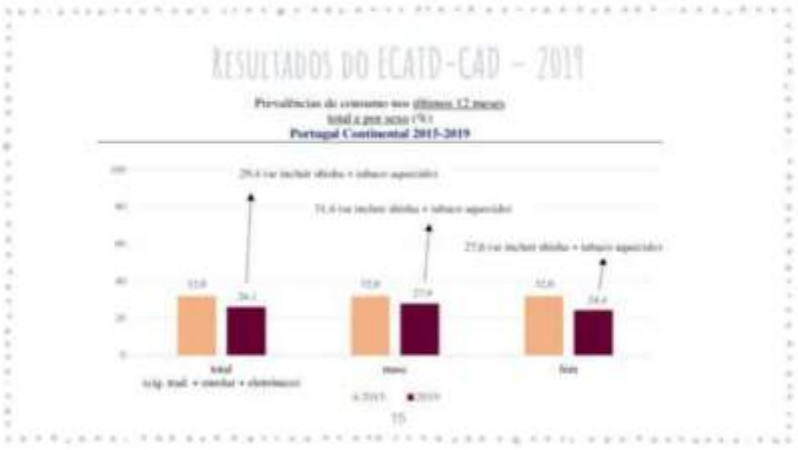
Entre as formas de tabaco mais consumidas, destaca-se o tabaco de combustão (cigarros ditos tradicionais), seguindo-se os cigarros eletrónicos, cuja prevalência de experimentação (22%) já se aproxima da do consumo de tabaco de combustão (29%).

Menos comuns são outras formas de consumo, como a shisha e, sobretudo, o tabaco aquecido (15% e 5% ao longo da vida, respetivamente).

12


RESULTADOS DO ECATD-CAD – 2019
Prevalências de consumo ao longo da vida, nos últimos 12 meses e nos últimos 30 dias (%)
Portugal 2019
Consumo diário*=3,9
(entre consumidores atuais=28,4)
Consumo diário*=1,0
(entre consumidores atuais=22,1)
36,4
29,4
17,6
29,3
21,9
13,4
22,2
13,4
4,7
15,0
10,5
3,7
4,9
3,8
1,9
tabaco (total)
cig. tradicionais
cig. electrónicos
shisha
tab. aquecido
*20 ou mais ocasiões nos últimos 30 dias
P5_V
P12M
P30D
13


RESULTADOS DO ECATD-CAD – 2019
Prevalências e padrões de consumo
ao longo da vida, nos últimos 12 meses e nos últimos 30 dias, por sexo (%)
Portugal 2019
46,7
36,3
31,3
27,6
18,3
16,0
36,2
28,9
22,7
21,9
17,1
11,3
P5_V
P12M
P30D
P5_V
P12M
P12M
tabaco (total)
cig. tradicionais
cig. electrónicos
14


RESULTADOS DO ECATD-CAD – 2019
Portugal Continental 2015-2019

CAMPUS FOCUS

O CONSUMO DE TABACO NA UMINHO

		n	%	Number of cigarettes m (SD)
Smoking Status	Ex-smoker	94	11.2	
	Current smoker	168	20.0	
	Occasional Smoker	61	7.3	
	Regular Smoker	24	2.9	8.43 (6.462)
	Daily Smoker	83	9.9	8.33 (4.870)
First experience of smoking	12 years or less	12	7.2	
	13 - 14 years	41	24.7	
	15 - 16 years	49	29.5	
	17 years or more	64	38.6	
Cessation attempts	Never	92	59.7	
	Yes, once	28	18.2	
	Yes, two or three times	21	13.6	
	Yes, more than three times	13	8.4	

		n	%
Smoker peers	None or Almost none	136	15.2
	Few	270	32.6
	Some	313	38.0
	Most	98	11.8
	Almost All or All	20	2.4
SHS exposure	Never or almost never	286	34.4
	Few times	288	34.6
	Sometimes	174	21.0
	Most of the time	52	6.3
	Almost Always or Always	31	3.7

Deixa as tuas conclusões com base nos gráficos e nestas tabelas nos comentários desta sessão!

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Sessão 2 - Malefícios do consumo de tabaco e exposição ao fumo passivo

Objetivos específicos

Analisar as consequências (individuais e de saúde, familiares, sociais e económicas) do consumo de tabaco;
Compreender as vantagens que advém da cessação tabágica;
Conhecer os efeitos do fumo passivo do tabaco.

Estratégias Pedagógicas

Website Health – Efeitos do consumo de tabaco na Saúde.
Website Health – Cálculo dos gastos com cigarros.

Malefícios do consumo de tabaco para a saúde

Os cancros relacionados com o tabaco parecem constituir 16% do total da incidência anual de cancros e estima-se que, nos países desenvolvidos, 25 a 30% das mortes devidas a esta patologia estejam ligadas ao consumo de tabaco (WHO, 1999). Calcula-se que 25% de todas as mortes por cancro e 15% de todas as mortes que ocorrem na União Europeia sejam atribuídas ao tabaco (Public Health, 2007). Admite-se também que o fumo do tabaco seja responsável por cerca de 25% das doenças cardiovasculares e por 90% das doenças pulmonares obstrutivas crónicas (sobretudo bronquite crónica e enfisema).



Website Health

- **https://tobaccobody.fi/en/**

Acede ao website abaixo indicado e explora as consequências a curto e a longo prazo do consumo de tabaco.

- **https://pt.calcuworld.com/calculadoras-da-saude-e-de-exercicios/calculadora-do-gasto-em-tabaco/**

Acede ao Website indicado e calcula o quanto gastas, gastaste e gastarás com o consumo de tabaco. REFLETE: Já pensaste o que podes fazer com esse dinheiro se deixares de fumar? Deixa-nos a tua opinião nos comentários desta sessão!

Se deixar de fumar:

- **20 minutos:** O pulso e a pressão arterial começam a ficar normais. A circulação começa a melhorar. A temperatura das mãos e pés começa a aumentar até a atingir a normalidade.
- **8 horas:** O corpo eliminou metade da nicotina e do monóxido de carbono no sangue. O oxigénio para o cérebro e músculos é mais abundante. Há medida que os níveis de químicos dos cigarros desaparecem, os níveis de oxigénio voltam ao normal.
- **12 horas**: Meio dia depois da grande decisão os níveis de monóxido de carbono no sangue voltam ao normal. O seu coração agradece o alívio.
- **24 horas**: Uma pessoa que fume um maço por dia tem o dobro da probabilidade de ter um ataque cardíaco do que um não fumador. Ao passar apenas um dia sem fumar acabou de reduzir esse risco.
- **48 horas**: As terminações nervosas do seu palato e do cheiro começaram a sarar e os seus sentidos estão mais ativos. O seu organismo começou também a limpar os malefícios do tabaco. Os seus pulmões começam a expelir secreções. *Pode até começar a tossir mais, mas é uma reação normal do corpo e não durará muito mais do que um dia.* **Deixou de ter nicotina no sangue**.
- **3 dias**: Respira mais facilmente e tem mais energia. Os seus pulmões começam a recuperar à medida que os brônquios começam a relaxar. Se se mantiver resoluto na sua decisão de deixar de fumar este processo vai ainda melhorar.
- **2 a 12 semanas**: O fluxo sanguíneo melhora. Os pulmões funcionam cada vez melhor. A sua capacidade atlética aumenta e pode sentir maior facilidade na prática de exercício físico.
- **3 a 9 meses**: Nesta fase consegue inspirar mais profundamente e de modo mais límpido. Vai estar menos atreito a constipações e a outras enfermidades. Os seus pulmões recuperaram até 10% da função respiratória. Os seus níveis de energia não param de aumentar.
- **9 meses a 1 ano**: Os pulmões recuperaram praticamente toda a sua função. No final do primeiro ano sem fumar, o risco de ataque cardíaco baixou para metade comparado com uma pessoa que continue ainda a fumar.
- **5 anos**: O seu organismo já se regenerou ao ponto que as suas artérias e vasos capilares estão mais desimpedidos. Os riscos de AVC reduziram para os mesmos de um não fumador. Em comparação com o dia em que deixou de fumar já reduziu os riscos de cancro da boca, garganta, esófago e bexiga para metade.
- **10 anos**: Comparativamente com quem ainda é fumador, tem menos 50% de possibilidades de contrair cancro do pulmão.

- **15 anos**: Parabéns! Neste ponto, o risco de vir a ter uma doença cardiovascular é o mesmo de um não-fumador.
- **20 anos**: O risco de vir a morrer por causas relacionadas com ter sido fumador é o equivalente a quem nunca fumou. Este facto inclui o risco de doenças relacionadas com os pulmões, doenças cardiovasculares ou cancro.

E ainda...

- Diminuição da tosse pela manhã;
- Melhoria do paladar e do olfato;
- Melhoria do tom e do aspeto da pele;
- Desaparecimento do cheiro a tabaco no hálito e na roupa;
- Mais energia e melhor bem-estar geral;
- Menor aparecimento de rugas precoces na face;
- Melhor saúde oral;
- Contribui para que as crianças e jovens nunca venham a adotar esse vício;
- Diminui a exposição involuntária dos não fumadores ao fumo ambiental do tabaco.
- Vais poupar dinheiro diariamente que poderás investir de forma mais saudável e que lhe dê prazer.

Efeitos do fumo passivo do tabaco

Por tabagismo passivo entende-se a exposição involuntária dos não fumadores ao fumo do tabaco dos fumadores, também denominado por fumo ambiental do tabaco (FAT). O fumo passivo refere-se à exposição ao fumo proveniente da corrente lateral ou secundária, ou seja, o fumo que sai da extremidade do cigarro aceso, e da corrente principal ou primária, ou seja, o fumo inalado pelo fumador e depois exalado para o ar ambiente. Ao FAT fica sujeito não só **o fumador** como os que o rodeiam "fumadores passivos". A magnitude da exposição de um fumador passivo é difícil porque depende de vários fatores e está relacionada com o número de fumadores ativos presentes, o tipo e quantidade de cigarros consumidos e ainda do tamanho da sala e ventilação da mesma.

Consequências para a saúde da exposição ao fumo passivo?

A exposição ao FAT causa doença e morte prematura em crianças e adultos não fumadores. Algumas pessoas são mais sensíveis do que outras. As crianças e os idosos sofrem mais com esta

exposição, mas também as pessoas que apresentam, à partida, problemas de saúde, como asma, alergias, doenças pulmonares ou doenças cardíacas crónicas.

A exposição ao FAT desencadeia uma resposta inflamatória das membranas mucosas, dos olhos e trato respiratório superior.

Como resultado, os sintomas mais frequentemente referidos pelos fumadores passivos são a **irritação ocular, nasal e faríngea, rinorreia, obstrução nasal, rouquidão e tosse** por vezes acompanhada de **pieira**. Para além disso, muitos fumadores passivos queixam-se ainda de mal-estar geral, náuseas, tonturas e cefaleias.

Sessão 3 – Mitos sobre o consumo do tabaco e componentes do fumo do tabaco

Objetivos específicos

Compreender quais são os componentes do fumo do tabaco prejudiciais à saúde;
Analisar os mitos associados ao consumo de tabaco e a sua aceitabilidade social.

Estratégias Pedagógicas

A Refletir - vídeo acerca dos componentes do fumo do tabaco.
Top 10 – Mitos associados ao consumo do tabaco

Componentes do fumo do tabaco

O fumo do tabaco é um aerossol constituído por partículas sólidas e líquidas (componentes voláteis) em suspensão numa mistura gasosa. O fumo do tabaco é um verdadeiro "Cocktail" de Tóxicos (Afonso, Melo & Ramalhão, 1999), pois contém mais de quatro mil substâncias, das quais várias dezenas são conhecidas pelo seu carácter cancerígeno e muitas outras pelo seu efeito tóxico para o organismo em especial para o aparelho respiratório.

Tabela das principais substâncias presentes no fumo do tabaco:
efeitos no organismo humano e a sua utilização

Substância	Alguns efeitos imediatos	Alguns efeitos a longo prazo	Utilização
Nicotina	Tremor das mãos Aumento da frequência cardíaca	Habituação (dependência) Doenças cardíacas e vasculares	Inseticidas
Alcatrão	Irritação das vias respiratórias	Enegrecimento dos pulmões Amarelecimento dos dentes	Pavimentação de estradas
Acetona	Tonturas Desmaio com perda de consciência	Secura e fissuras da pele	Removedor de verniz de unhas
Amoníaco	Irritação das vias respiratórias Irritação ocular	Doenças respiratórias	Detergentes de limpeza
Arsénio	Irritação ocular Dificuldade respiratória	Manchas na pele Doenças dos nervos periféricos	Herbicidas e venenos Conservante de madeira e
Cádmio	Tosse Dor de garganta	Provoca cancro Diminuição da função dos rins	Baterias e pilhas
Chumbo	Tosse Irritação da garganta	Alterações no sistema nervoso Provoca cancro	Usado nas munições Protação contra raios-X
Naftalina	Fraqueza, Náuseas	Anemia	Repelente de traças
Benzeno	Tonturas Dificuldade respiratória	Provoca cancro Alterações do sistema imunitário	Constituinte do petróleo e da gasolina
Mercúrio	Dor abdominal Febre	Pneumonite Alterações da memória	Termómetros antigos Lâmpadas fluorescentes
Butano	Sonolência, asfixia, Perda de consciência	Alterações no sistema nervoso central	Gás de cozinha
Ácido acético	Sensação de queimar Irritação ocular	Dermatite Doenças pulmonares	Vinagre

Vídeo do canal youtube "Smoke tar"

https://www.youtube.com/watch?v=IMDfyF1VF6o.

A refletir...

O que te impressionou na tabela anterior? E no vídeo?

Deixa nos comentários desta sessão a tua opinião!

TOP 10 - Mitos sobre o consumo do tabaco

1. A nicotina não é uma droga.

A nicotina é uma substância psicoativa presente no tabaco com efeitos estimulantes no Sistema Nervoso Central, que causa enorme dependência. A abstinência pode provocar intranquilidade ou excitação, ansiedade ou agressividade, dificuldade de concentração, aumento do apetite, entre outros.

2. Fumar um cigarro relaxa e alivia o stress.

O tabaco não tem propriedades relaxantes porque é um estimulante. A aparente sensação de alívio que se sente ao fumar um cigarro deve-se à supressão dos sintomas de abstinência produzidos pela falta de nicotina no cérebro.

3. Quando se deixa de fumar passa-se muito mal.

É certo que quando se deixa de fumar, a dependência à nicotina provoca mal-estar, no entanto é uma sensação temporal, uma vez que os benefícios são evidentes e aparecem poucos dias após abandonar o consumo.

4. Deixar de fumar, engorda.

Este mito é usado com frequência para não deixar de fumar. O abandono do tabaco pode levar a um aumento do peso, devido à maior ansiedade provocada pela abstinência, à melhoria do paladar e do olfato que podem contribuir para um aumento do peso. Geralmente, quando a pessoa ganha mais peso, é porque está a usar a comida como escape para lidar com a abstinência. Por isso,

não te esqueças, só engordas conforme aquilo que comes. Realiza uma alimentação adequada e pratica exercício físico moderado.

5. Algumas marcas de cigarros são piores do que outras.

Qualquer tipo de marca faz mal à saúde. Existem marcas que trazem um teor menor de nicotina, alcatrão e monóxido de carbono chamados cigarros light. No entanto, os fumadores tendem a consumir uma quantidade maior desses cigarros (mecanismo de compensação) para manter o nível de nicotina no cérebro estável e garantir o mesmo nível de satisfação.

6. Fumar um ou dois cigarros por dia não faz mal.

Cada cigarro contém mais de 4.500 substâncias químicas, muitas delas cancerígenas e tóxicas. Por isso, fumar é sempre nocivo: fumar pouco ou apenas conviver com fumadores provoca danos à saúde. Por isso, os fumadores ocasionais desenvolvem igualmente problemas de saúde relacionados com o consumo de tabaco.

7. Os cigarros eletrónicos são uma boa alternativa aos cigarros tradicionais.

Existe a tendência para afirmar que o cigarro eletrónico evita a inalação das substâncias cancerígenas e nocivas à saúde, imitando a sensação de fumar e oferecendo nicotina ao fumador. No entanto, as investigações científicas mostram que o líquido utilizado na vaporização contém uma variedade de produtos químicos tóxicos e cancerígenos.

8. Quem já fuma há muitos anos não tem vantagens em deixar de fumar.

Independentemente da quantidade de cigarros consumidos, da idade com que começou fumador e de há quanto tempo o faz, os benefícios de deixar de fumar são sentidos por todos.

9. O tabaco só faz mal a quem fuma.

O tabaco é a primeira causa de morte nos países industrializados. Um em cada dois fumadores morre por questões relacionadas com o tabaco. Os fumadores passivos também estão expostos ao fumo do cigarro, sofrendo efeitos imediatos como irritação nos olhos, tosse, dores de cabeça, aumento dos problemas cardíacos e respiratórios.

10. Se fumar noutra divisão da casa ou quando estiver sozinho no carro, não prejudico ninguém.

A verdade é que o fumo se espalha para os outros locais mesmo que a porta esteja fechada. Para além disso, o fumo permanece durante muito tempo após acabarem de fumar e as substâncias tóxicas podem agarrar-se aos tapetes, cortinas, roupas, comida, mobiliário e a outros materiais podendo permanecer nessa divisão por muito tempo.

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Afonso, N., Melo, F. &, Ramalhão, C. (1999). Riscos associados ao consumo do tabaco. In Precioso, J., *et al* (Coords.) *Educação para a saúde*. Braga: Departamento de Metodologias da Educação. Universidade do Minho.

Sessão 4 – Estratégias de prevenção e resistência ao consumo de tabaco

Objetivos específicos

Planear uma estratégia para uma vida livre de fumo do tabaco.

Estratégias Pedagógicas

Estratégias para a mudança – Como parar de fumar.

***Estratégias para a mudança* – Como parar de fumar;**

GUIÃO VÍDEO (4 minutos e 28 segundos)



1. Ter determinação - O primeiro ponto é a DETERMINAÇÃO. A pessoa precisa desejar parar de fumar. A cessação do tabagismo é um processo que se inicia com a tomada da decisão de parar de fumar e se prolonga até que se alcance a abstinência. O fumador é o ator principal deste processo, é natural que ao iniciar a caminhada se sinta dividido. "Uma parte de mim quer deixar o cigarro para trás, mas a outra, que adora fumar, quer manter por perto. "Esta é uma fala frequente no início do processo de cessação
2. Motivação é o primeiro passo. Faça uma lista dos motivos que, para si, justificam a sua decisão de deixar de fumar.
3. Vai poupar dinheiro, os dentes vão ficar mais brancos, os cabelos e a pele com um ar mais saudável, vai diminuir o risco de doenças graves. Guarda a lista, quando te sentires com vontade de fumar, relê a lista. Isso irá dar-te coragem para não desistires.
4. Anuncia aos teus amigos o dia em que vais deixar de fumar. Anunciar aos outros vai reforçar o compromisso que estabeleceste contigo mesmo e vais permitir que os teus amigos se solidarizem contigo.

5. Use táticas de retardamento. – Fuma o teu primeiro cigarro do dia 15 minutos mais tarde do que o habitual e no dia 15 minutos mais tarde e assim sucessivamente.
6. Distrai-te. Quando sentires desejo de fumar, fala com alguém, bebe um copo de água, ou levanta-te e move-te.
7. Substituição por pastilhas elásticas.
8. Estabelece horários para não fumares. Em vez de acenderes um cigarro no fim de uma refeição, por exemplo, levanta-te imediatamente, escova os dentes, lava as mãos e vai dar um passeio.
9. Usa técnicas para ser difícil chegares aos cigarros. Por exemplo, deixa-os no carro, em casa, numa gaveta.
10. Muda a forma como costumas fumar. Tenta fumar com outra mão, fuma apenas metade do cigarro.
11. Mantem os registos diários. Faz um gráfico da contagem diária de cigarros que fumas para veres o progresso que estás a ter. ou também dos locais onde tens uma maior probabilidade de fumar. E tenta evitá-los.
12. Pára completamente durante um dia. Por exemplo, promete não fumar por 24 horas – estabelece uma meta, 24 horas livres de fumo de tabaco. No final dessas 24 horas tenta assumir um novo compromisso de 24 horas.
13. Passa mais tempo em locais em que não se pode fumar.
14. Vai ao dentista fazer uma limpeza dentária, e estabelece que a partir desse dia não vais fumar mais.
15. Usar uma aplicação no smartphone. Motivacional
16. Aumenta o nível de atividade física. uma decisão acertada será aumentar o nível de atividade física diária em simultâneo com o abandono do tabaco. Basta por exemplo passar a andar a pé.

E se recair?

No caso de recair, lembra-te que a recaída faz parte de qualquer processo de mudança. A Solução? É voltar a tentar.

Extra: _ Bibliografia para Aprofundamento_

- SICAD (2019) *Relatório Anual 2019 - A Situação do País em Matéria de Álcool*. Lisboa: Serviço de Intervenção nos Comportamentos Aditivos e nas dependências.
- Direção Geral da Saúde (2014). *Mais vida sem Tabaco*. Lisboa: Direção Geral da Saúde.
- Direção-Geral da Saúde. (2017*). Programa Nacional para Prevenção e Controlo do Tabagismo 2017*. Lisboa: Direção-Geral da Saúde

Avaliação do Módulo

Gostaríamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

https://forms.gle/JxTh6wKL5R8ZEoiH6

Módulo 3 - Dizer não às Drogas ilícitas e à Automedicação

Introdução

Olá!

Bem-vinda/o ao módulo 3, módulo no qual iremos abordar as questões do consumo de drogas ilícitas e medicamentos no Ensino Superior.

Uma festa académica, na qual os estudantes fumam erva enquanto ouvem música. Um jovem entediado engole uma dose de LSD. Uma festa em casa de amigos, onde se cheira umas linhas de cocaína. Uma estudante perturbada com as suas preocupações académicas e incapaz de relaxar, toma medicamentos para aliviar a sua ansiedade. Um jovem com dores de cabeça a quem é oferecido um analgésico.

Estas situações podem não se encaixar na imagem de um/a viciado/a em drogas, na qual muitos pensaríamos à partida. No entanto, as drogas são um fato na vida de cada um deles, e cada um enfrenta o risco de desenvolver um transtorno de abuso de drogas. Em nenhuma destas situações, os/as estudantes esperam perder o controlo, e acreditam que são suficientemente inteligentes para não se tornar viciados. Mas após um consumo contínuo, a necessidade de uma pessoa por uma droga pode superar tudo aquilo que anteriormente esperávamos.

Este módulo fornece informações sobre a natureza e os efeitos das drogas, o impacto das drogas nos indivíduos e na sociedade e apresenta estratégias para prevenir o consumo de drogas ilícitas em contexto académico.

Sessão 1 - Epidemiologia do consumo de drogas ilícitas

Objetivos específicos

Compreender o conceito de drogas ilícitas e os seus efeitos;

Conhecer o estado atual e as tendências evolutivas do consumo de substâncias psicoativas ilícitas.

Estratégias Pedagógicas

Campus Focus – O Consumo de drogas ilícitas no Campus.





Nenhuma substância psicoativa (ilícita ou medicamentosa) é completamente segura, todas têm vários efeitos que variam muito de pessoa para pessoa e em diferentes momentos. Por isso, é importante conhecer a forma como as drogas afetam o cérebro, o corpo e os comportamentos de modo a tomar decisões responsáveis sobre o seu uso.

As drogas podem ser classificadas, de acordo com o seu efeito principal no cérebro humano:

Drogas depressoras do sistema nervoso central

Drogas alucinogénias perturbadoras do sistema nervoso central

Drogas estimulantes do sistema nervoso central

3

O abuso de drogas pode causar diferentes tipos de perturbações:

- (danos no organismo: por exemplo, bronquite crónica causada pelo consumo de tabaco).
- (quando influenciam negativamente a relação da pessoa consigo mesma ou com o seu ambiente emocional como, por exemplo, conflitos conjugais decorrentes do abuso de álcool).
- (quando têm impacte na comunidade, como acontece com os acidentes de trânsito causados pelos condutores sob a influência de drogas).

4

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Anfetaminas	Produz um estado de hiperalerta e energia. Os consumidores sentem-se confiantes na sua capacidade de pensar com clareza e realizar qualquer tarefa excecionalmente bem. Podem ainda tornar-se paranóicos, estar convencidos de que têm pensamentos profundos, maior interesse sexual, e experienciar sensações incomuns como zumbidos nos ouvidos.	- Sentimentos de ansiedade, tensão, raiva, nervosismo ou agitação; - Aumento da frequência cardíaca, pupilas dilatadas, elevada pressão arterial, suores e calafrios, náuseas e vómitos. - Fraqueza muscular, arritmia cardíaca, dificuldade de movimentos; dor no peito; dificuldades de respirar. - Batimento cardíaco rápido ou irregular; tremores; perda de coordenação. - Doenças pulmonares e renais; - Desnutrição, doenças de pele, úlceras; insónias; depressão; perturbações cutâneas, alucinações, psicose semelhante a esquizofrenia paranoide, agressão; - Disfunção sexual e diminuição da concentração e memória.

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Cannabis (marijuana e haxixe)	Cria uma leve sensação de euforia, uma sensação de tempo lento (cinco minutos podem parecer uma hora), uma espécie de Ex sonhador. Esta sensação pode durar cerca de 3 horas. Podem ainda sofrer de ansiedade aguda e ataque de pânico.	- Aumento da frequência cardíaca; - Secura da boca e garganta; - Olhos vermelhos; - Tempos de reação lentos; - Habilidades motoras reduzidas; - Aumento do apetite; - Diminuição da memória; - Redução da capacidade de reação; - Diminuição das capacidades de raciocínio, compreensão da leitura, das habilidades verbais e matemáticas.

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Cocaína e Crack	Acelera os processos físicos e mentais, cria sensação de energia e confiança. Os consumidores sentem uma enorme capacidade física e mental, mas também ficam inquietos e ansiosos.	- Dependência ativação rapidamente; - Pupilas dilatadas; pressão sanguínea elevada ou redução; suores e calafrios; náuseas e vómitos; frequente muscular; baixa capacidade respiratória; dores no peito; - Diminui o desempenho e apetite sexual; - Provoca infertilidade; - Aumento das probabilidades de sofrer derrames ou convulsões cerebrais; - Complicações psiquiátricas e neurológicas. - Danos no fígado e pulmões (edema pulmonar); - Acelera a frequência cardíaca e aumenta repentinamente a pressão arterial; - Infeções da pele, hepatite, inflamação das artérias.

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Alucinogénios (LSD, Mescalina, ...)	Altera as perceções e produzem alucinações, pode ser estimulador ou psicotrópico.	- Aumento da temperatura corporal e frequência cardíaca; - Suores e calafrio (hipertermia), palpitações e tremores; - Pupilas dilatadas; - Má coordenação; - Atos irracionais (saltar de uma janela) e transtornos delirantes, alucinações; - A longo prazo: depressão, ansiedade, consagra e esquecimento, perturbações de sono, estados paranoides e psicóticos, arritmias e ataques cardíacos e insuficiência renal aguda, hipertensão arterial, intoxicações hepáticas, redução da resistência às infeções virais.

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Inalantes	Produz alucinações e sentimentos temporários de bem-estar e vertigem.	- Alergia os pulmões, o coração sanguíneo e outras partes do corpo muito rapidamente; - Erupções cutâneas em redor do nariz e da boca; - Olhos vermelhos e irritação da garganta, do nariz e dos pulmões; - náuseas e dores de cabeça e ossos; - Dificuldades de memória, redução abusiva, problemas de coordenação e movimentos incontroláveis.
Opiáides (ópio; morfina; heroína ou narcóticos sintéticos)	Relaxa o sistema nervoso central; alivia a dor; produz uma sensação temporária de bem-estar. Podendo sentir-se indiferentes e sonolentos, mas também com ansiedade e medo.	- Perda de peso e do apetite sexual; - Ansiedade, náuseas, insónia, hipertensão; - Mudanças e humor e comportamental, ou seja, suborno sexual seguido por apatia; - Sonolência; perda de memória e atenção; - abcessos de pele, congestionamento dos pulmões; hepatites; transmissão do HIV, cores, overdoses.

DROGAS ILÍCITAS: EFEITOS E RISCOS

Substâncias Psicoativas	O que sentem os consumidores?	Principais Riscos
Fenciclidina (PCP, angel dust, pó de anjo, krystal ou peace pill)	Produz mudanças nas perceções, incluindo alucinações e sentimentos distorcidos, incluindo delírios de grande força e invulnerabilidade.	- Comportamentos violentos e psicoses irreversíveis; - Estupor e sensação de visão ou dormência; - Aumento da frequência cardíaca e sangramento nasal, tonturas, excessiva sensibilidade ao som; dormência, diminuição da sensibilidade à dor, coordenação e falas prejudiciais; - Agressividade, impulsividade, imprevisibilidade e agitação.
Sedativos-hipnóticos e ansiolíticos	Diminui o sistema nervoso central, reduz ou alivia a tensão, induz o relaxamento, sonolência ou sono; diminui o estado de alerta.	- Reduzir ou aliviar a tensão; - Mudanças de humor e comportamental; atos sexuais agressivos e inadequados, alterações na capacidade de julgamento; - Fala arrastada, andar instável movimentos involuntários;

Drogas Ilícitas e Medicamentosas: Vias de Administração

Existem várias formas de consumo de substâncias psicoativas.

A forma mais comum de tomar um medicamento é [illegible] um comprimido, cápsula ou líquido. No entanto, os medicamentos administrados por via oral não chegam à corrente sanguínea tão rapidamente. Um medicamento tomado por via oral pode demorar cerca de 30 ou mais minutos a fazer efeito.

As drogas também podem ser consumidas através da [illegible] (como os adesivos), da [illegible] (como a cocaína) e do [illegible], por exemplo, no caso da marijuana.

Os medicamentos também podem ser [illegible] com uma seringa por via subcutânea (sob a pele, mais lenta (dentro de dez minutos)), por via intramuscular (no tecido muscular que é rico em vasos sanguíneos, moderadamente rápida (dentro de alguns minutos), ou por via intravenosa (diretamente na veia, leva a droga para a corrente sanguínea imediatamente (em segundos na maioria dos casos).

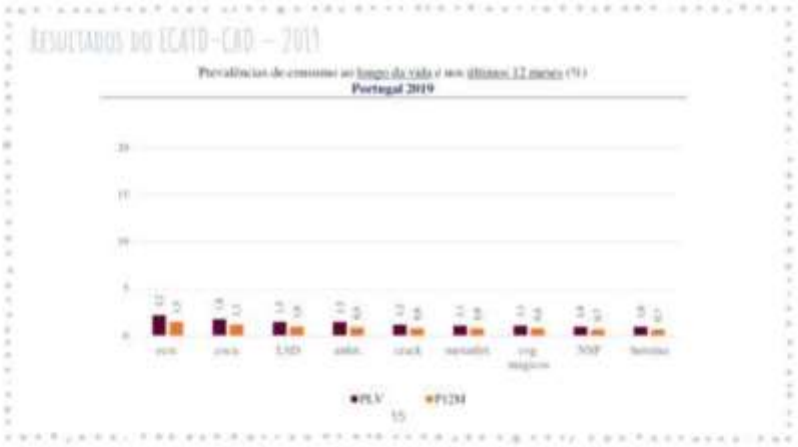
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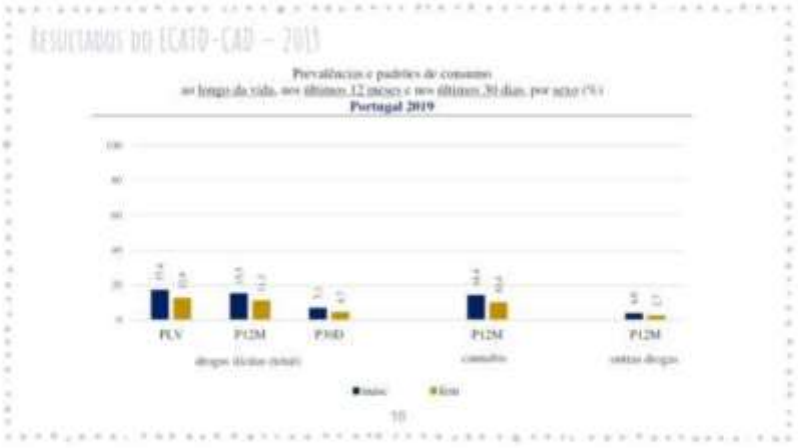
Tendências Evolutivas do Consumo de Drogas Ilícitas

Resultados do ECATD-CAD – 2019

(Alunos do ensino público com idades entre os 13 e 18 anos, em Portugal)


RESULTADOS DO ECATD-CAD – 2019
Prevalências de consumo ao longo da vida, nos últimos 12 meses e nos últimos 30 dias (%)
Portugal 2019
Consumo diário*=0,8
(entre consumidores atuais=13,7)
drogas (total)
cannabis
outras drogas (que não cannabis)
*20 ou mais ocasiões nos últimos 30 dias
PLV
P12M
P30D
14


RESULTADOS DO ECATD-CAD – 2019
Prevalências de consumo ao longo da vida e nos últimos 12 meses (%)
Portugal 2019
PLV
P12M
15


RESULTADOS DO ECATD-CAD – 2019
Prevalências e padrões de consumo
ao longo da vida, nos últimos 12 meses e nos últimos 30 dias, por sexo (%)
Portugal 2019
PLV
P12M
P30D
P12M
P12M
10


RESULTADOS DO ECATD-CAD – 2019
Prevalências de consumo ao longo da vida, nos últimos 12 meses, e nos últimos 30 dias,
total e por sexo (%)
Portugal Continental 2015-2019
PLV
P12M
P30D
17



CAMPUS TOCUS

O CONSUMO DE DROGAS ILÍCITAS NA UNIVERSO

		n	%
Consumo de drogas	Não	619	77.8
	Sim	177	22.2
Nos últimos 12 meses, quantas vezes já consumiu alguma das substâncias psicoativas listadas:			
- Marijuana (liamba, erva, cannabis, pólen, ...)	Nunca	624	78.1
	Uma ou duas Vezes	61	7.6
	Três a cinco vezes	34	4.3
	Seis a nove vezes	17	2.1
	Dez ou mais vezes	63	7.9
- Cocaína (coca, crack, ...)	Nunca	788	98.5
	Uma ou duas Vezes	6	0.8
	Três a cinco vezes	3	0.4
	Seis a nove vezes	2	0.3
	Dez ou mais vezes	1	0.1
- Alucinogénios (LSD, cogumelos, ácidos, ecstasy, ...)	Nunca	743	93.1
	Uma ou duas Vezes	8	1.0
	Três a cinco vezes	2	0.3
	Seis a nove vezes	4	0.5
	Dez ou mais vezes	1	0.1



Deixa nos comentários desta Sessão, a tua reflexão acerca dos dados apresentados nos gráficos e na tabela!

19

- Feijão, F. (2019). Estudo sobre o Consumo de Álcool, Tabaco, Droga e outros Comportamentos Aditivos e Dependências / 2019.
  http://www.sicad.pt/pt/Paginas/default.aspx?itemid=85&lista=SICAD_NOVIDADES&MAIN=SK
- Hales, D. (1999). An invitation to health : the power of prevention. Brooks-Cole.
- Pascual, C., Cavendaro, M., Moncada, S., Salvador, J., Melero, J. C., & . Pérez de Arrospide, J. A. (2003). Drogas: Más Información, Menos Riesgos. Ministerio del Interior. Delegación del Gobierno para el Plan Nacional sobre Drogas.

Sessão 2 – Epidemiologia do consumo de medicamentos

Objetivos específicos

Compreender o conceito de medicamentos de venda livre e os seus efeitos;

Conhecer o estado atual e as tendências evolutivas do consumo de medicamentos.

Estratégias Pedagógicas

Campus Focus – O Consumo de medicamentos no Campus.





MEDICAMENTOS (DE VENDA LIVRE)

Embora, a venda livre de medicamentos seja vantajosa pela maior disponibilidade, preços mais baixos e menor número de consultas médicas. Os riscos dos diagnósticos incorretos e o uso incorreto ou excessivo dos medicamentos devem ser considerados nas suas desvantagens.

Tal como as outras substâncias psicoativas, os medicamentos de venda livre podem ser usados indevidamente, muitas vezes, simplesmente pela falta de conhecimentos acerca do uso adequado.

Entre os medicamentos de venda livre com maior frequência de má utilização temos:

- **DESCONGESTIONANTES NASAIS:** Os sprays nasais aliviam a congestão, reduzindo os vasos sanguíneos do nariz. Se forem usados com muita frequência ou por muitos dias seguidos, os vasos sanguíneos dilatam em vez de contraírem e os tecidos circundantes ficam inchados, causando mais congestionamento. Daí, as pessoas ao fim de algum tempo acabarem por usar com mais frequência, podendo causar o dano permanente das membranas nasais, sangramento, infeção e a perda parcial ou completa do olfato.

3

MEDICAMENTOS (DE VENDA LIVRE)

- **LAXANTES:** Ao estimularem as contrações intestinais, muitas vezes pioram a prisão de ventre. Por isso, o uso regular não é recomendado. Uma alimentação rica em fibras e uma maior prática de exercício físico são mais seguros e eficazes para a obstipação.

- **COLÍRIOS** (medicamentos que se aplicam diretamente à conjuntiva do olho): O colírio faz os vasos sanguíneos do olho se contraírem. No entanto, como no caso dos sprays nasais, com o uso excessivo (várias vezes ao dia durante várias semanas), os vasos sanguíneos expandem-se, fazendo com que os olhos pareçam mais vermelhos do que antes.

- **"COMPRIMIDOS PARA DORMIR":** Tal como todas as outras substâncias psicoativas podem causar habituação, tolerância (e, por isso, aumento da dosagem) e dependência.

4

TENDÊNCIAS EVOLUTIVAS DO CONSUMO DE MEDICAMENTOS

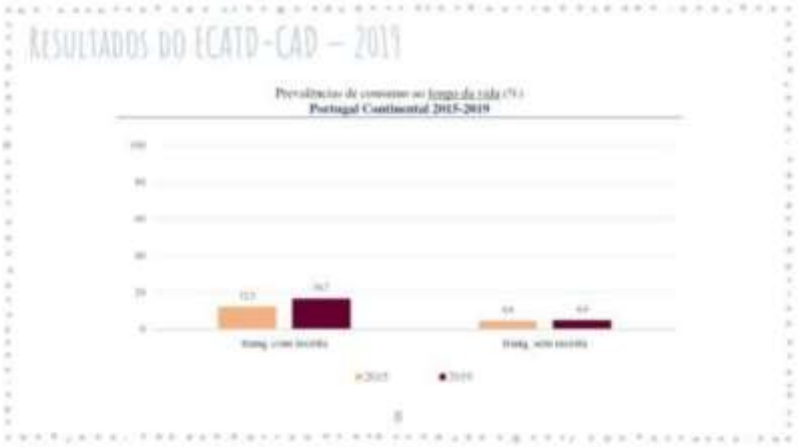
Resultados do ECATD-CAD – 2019

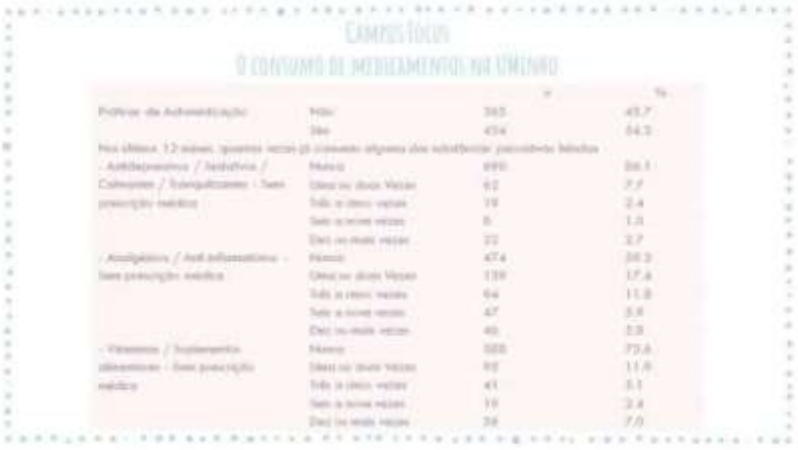
(Alunos do ensino público com idades entre os 13 e 18 anos, em Portugal)

RESULTADOS DO ECATD-CAD – 2019




RESULTADOS DO ECATD-CAD – 2019
Portugal 2019
PLV
P12M
P30D
7


RESULTADOS DO ECATD-CAD – 2019
Portugal Continental 2015-2019
8



CAMPUS FOCUS

O CONSUMO DE MEDICAMENTOS NA UNIVERSIDADE

		n	%
Prática de Automedicação	Não	365	45,7
	Sim	434	54,3
Nos últimos 12 meses, quantas vezes já consumiu alguma dos substâncias psicoativas listadas			
- Antidepressivos / Sedativos / Calmantes / Tranquilizantes - Sem prescrição médica	Nunca	690	86,1
	Uma ou duas Vezes	62	7,7
	Três a cinco vezes	19	2,4
	Seis a nove vezes	6	1,5
	Dez ou mais vezes	22	2,7
- Analgésicos / Anti-inflamatórios - Sem prescrição médica	Nunca	474	59,3
	Uma ou duas Vezes	139	17,4
	Três a cinco vezes	64	11,8
	Seis a nove vezes	47	5,9
	Dez ou mais vezes	40	5,0
- Vitaminas / Suplementos alimentares - Sem prescrição médica	Nunca	588	73,6
	Uma ou duas Vezes	93	11,6
	Três a cinco vezes	41	5,1
	Seis a nove vezes	19	2,4
	Dez ou mais vezes	58	7,0



Deixa nos comentários desta Sessão, a tua reflexão acerca dos dados apresentados nos gráficos e na tabela!

Feijão, F. (2019). Estudo sobre o Consumo de Álcool, Tabaco, Droga e outros Comportamentos Aditivos e Dependências / 2019.
http://www.sicad.pt/pt/Paginas/default.aspx?itemid=85&lista=SICAD_NOVIDADES&MAIN=SK

Hales, D. (1999). An invitation to health : the power of prevention. Brooks-Cole.

Sessão 3 – Mitos sobre o consumo de drogas ilícitas e medicamentos

Objetivos específicos

Reconhecer alguns mitos associados ao consumo de substâncias psicoativas ilícitas e fármacos;
Identificar fármacos de venda livre em função dos seus sintomas

Estratégias Pedagógicas

Top 10 – Mitos sobre as drogas ilícitas.
Top 10 – Mitos sobre os medicamentos.
Website Health – O medicamento certo
A Refletir – Caso #1 e Caso #2 – Estudantes consumidores/as de drogas ilícitas e medicamentos

Top 10 – Mitos sobre as drogas ilícitas

1. As drogas ilícitas não são tão perigosas como se diz. É sempre possível controlar o seu consumo e apenas experimentar não faz com que corra qualquer risco.

O consumo de drogas é muito imprevisível. Qualquer um pode tornar-se dependente, independentemente do estrato socioeconómico, da idade, da zona de residência, entre outros. É a partir da primeira experiência que começa o consumo de drogas. O risco que se corre advém do fato de se passar dos consumos esporádicos para os compulsivos, tornando-se assim viciado numa substância que só traz consequências negativas ao nosso organismo e para a nossa vida em geral. Por isso, evite experimentar.

2. Consumir ecstasy ocasionalmente não faz mal.

O ecstasy causa danos cerebrais irreversíveis mesmo quando consumido esporadicamente. Pode provocar inúmeros problemas como, por exemplo: uma deterioração da personalidade, ansiedade, ataques de pânico, depressão, psicose, AVC e até morte súbita por colapso cardiovascular.

3. O haxixe não provoca dependência.

O consumo de cannabis pode provocar dependência física e psicológica, embora a dependência física seja menos acentuada do que a dependência psicológica. A paragem dos consumos pode dar origem a sintomas de abstinência como: ansiedade, irritabilidade, insónias, diminuição do apetite, etc.

4. A cannabis tem efeitos terapêuticos e é natural, pelo que fazer mal fumar um "charro" de vez em quando.

Produto natural e produto inócuo não são sinónimos. O consumo de cannabis provoca alterações no normal funcionamento do cérebro. Os usos médicos da cannabis são realizados de forma controlada (por exemplo em doentes terminais) e não têm nada a ver com o seu consumo recreativo.

5. Fumar cannabis é menos prejudicial que fumar tabaco.

A cannabis contém muitos dos componentes cancerígenos existentes no tabaco e em maior quantidade (mais 50%). Além disso, a forma de consumo (fumada sem filtro e com aspirações profundas) aumenta o risco de desenvolver cancro. Tem efeito broncodilatador, o que favorece a absorção das substâncias tóxicas, e tal como no tabaco também é prejudicial para os fumadores passivos.

6. A cocaína dá energia, melhora as relações com as pessoas e ajuda a desinibir.

A cocaína tem um efeito estimulante passageiro (dura entre 30 a 60 minutos). Depois ocorre uma intensa recessão que provoca cansaço, decadência e depressão. O consumo abusivo produz irritabilidade e agressividade, pelo que, as relações sociais do consumidor deterioram-se.

7. Fumar heroína é menos arriscado porque não se usa agulhas.

A heroína é sempre perigosa, independentemente da forma como é consumida. A heroína, seja qual for a forma de consumo, produz uma forte tolerância e dependência, pelo que, o consumidor aumenta rapidamente a dose. Acabando por passar a consumi-la pela via injetável para poder obter efeitos mais intensos com a mesma quantidade.

8. As substâncias alucinogénias (LSD, cogumelos, etc.) proporcionam sensações harmoniosas e agradáveis no contato com o meio envolvente.

Os efeitos dos alucinogénios são muito imprevisíveis, podendo dar origem a experiências muito desagradáveis e até assustadoras ("Bad Trip"), com uma perda completa do controlo, desorientação, agitação, ataques de pânico, sensação de perseguição, etc.

9. As pessoas só consomem drogas porque têm problemas.

Os motivos que estão por detrás do consumo de drogas variam, de pessoa para pessoa, por exemplo: curiosidade, pressão dos amigos, desejo de viver novas experiências, desejo de questionar e transgredir as normas sociais, etc. Muitos procuram nas substâncias um efeito "mágico" que lhes proporcione lidar com a realidade sem sofrimento. A verdade é que os problemas não desaparecem, as substâncias não resolvem nada e com o consumo de algumas substâncias os indivíduos perdem a capacidade de lidar com o real.

10. Existem drogas leves e drogas pesadas.

Esta afirmação induz os indivíduos em erro. Segundo a organização Mundial da Saúde, "droga" é toda a substância, natural ou sintética, que altera o funcionamento do Sistema Nervoso Central, deprimindo-o, estimulando-o ou criando ruturas psicóticas, querendo dizer que não existem drogas leves ou pesadas. O seu consumo é que poderá ser considerado leve ou pesado, avaliando a quantidade e a frequência com que é consumida. Por isso, independentemente da droga consumida, os efeitos e consequências da utilização de drogas dependem de 3 fatores: a substância, a pessoa que a consome e o contexto em que é consumida.

Top 10 – Mitos sobre a automedicação

1. Se estou a tomar um medicamento, mas já me sinto melhor, posso parar de tomar.

O medicamento deve ser usado durante o tempo recomendado pelo médico, não interrompendo e nem prolongando o seu uso sem orientação.

2. Os medicamentos atuam sempre da mesma forma.

Embora um medicamento tenha uma mesma indicação, a resposta terapêutica pode variar de acordo com cada organismo. Isso ocorre devido à intensidade da doença, diferenças genéticas do paciente, doenças já existentes, interações com outros medicamentos, entre outros fatores. O importante é sempre consultar o médico antes de iniciar um tratamento e nunca seguir um tratamento prescrito para outra pessoa.

3. Se partir um comprimido a meio, tomarei metade da sua dosagem.

Partir um comprimido resulta na variação de peso entre as diferentes partes, podendo alterar a dosagem administrada dificultando a resposta terapêutica. Recomenda-se verificar as informações do produto antes da partição de comprimidos, como revestimento, presença de líquido ou libertação dos componentes.

4. As pessoas que se automedica têm conhecimentos suficientes.

Apesar da automedicação não ser uma atitude muito coerente, é bastante comum. Um dos fatores que facilitam essa atitude, é além da disponibilidade dos medicamentos, a enganosa sensação de conhecimento profundo sobre o assunto.

5. Alguns medicamentos não oferecem efeitos colaterais.

Muitas pessoas acreditam que os medicamentos naturais ou fitoterápicos não possuem contraindicação. No entanto, o mais correto é que antes de recorrer ao uso de medicamento, independentemente da espécie, o

indivíduo realize uma consulta com profissional qualificado, pois, a dosagem errada mesmo de medicamentos considerados naturais, poderá resultar em danos à saúde.

6. Medicamentos genéricos têm qualidade duvidosa.

Os medicamentos genéricos são confiáveis, pois possuem a mesma fórmula e princípios ativos dos de marca. Por isso, é completamente errado relacionar custo à qualidade das substâncias utilizadas no medicamento. Até porque os princípios ativos são os mesmos, o que na prática quer dizer que os resultados que são garantidos pelo produto de marca também podem ser conseguidos com o medicamento genérico.

7. Os medicamentos genéricos não podem substituir os produtos de marca.

Como explicamos acima, o que vale de verdade é o princípio ativo que é igual aos outros. Além disso, tem também a via e a dose farmacêutica que não mudam. E antes de serem vendidos, os medicamentos genéricos passam por estudos clínicos.

8. Tomar medicamentos sem orientação médica não causa prejuízos no organismo.

"Podes tomar. Funcionou comigo e é ótimo!". Por acreditarmos nesta frase, muitas pessoas acabam a tomar medicamentos sem orientação médica e prejudicando órgãos essenciais e produzindo intoxicação. Fazer o uso de medicamentos de venda livre ou de suplementos alimentares em doses inadequadas possibilita prejuízos para o organismo. Por exemplo, o fígado exerce várias funções fundamentais para o bom funcionamento do corpo humano e alguns componentes de medicações específicas são capazes de se acumular neste órgão.

9. Tomar medicamentos sem orientação médica não fortalece a resistência a bactérias.

Cada bactéria deve ser tratada com uma substância capaz de eliminá-la. Se isso não acontecer, a bactéria pode ficar cada vez mais forte, agredindo o organismo e ainda podendo piorar os sintomas.

10. O uso de paracetamol não causa qualquer problema.

As pessoas, de um modo geral, não conhecem as substâncias contidas em todos os medicamentos. Por isso, mesmo que seja um medicamento de venda livre, em dosagens erradas e o uso contínuo de alguns tipos de substâncias (como o paracetamol) podem causar hemorragia digestiva. Se o indivíduo tiver algum problema no estômago a complicação pode se tornar mais grave ainda.

Website Health

https://www.medicamentocerto.pt/pt/

A refletir...

Caso #1

Jéssica estava a limpar o seu quarto na residência universitária quando encontrou uma bolsa com marijuana dentro de uma gaveta. Naquela noite, ela confrontou a sua colega de quarto sobre manter uma substância ilegal no quarto. A resposta de Ana Margarida foi: "Ah, esqueci-me que tinha esse pedacinho de erva aí. Além disso, ninguém jamais o encontraria. Porque é que estas tão nervosa com isso?" Ao que Jéssica respondeu: "Não me importo se é só um bocadinho, a verdade é que é ilegal, e eu não quero isso aqui". De que forma resolverias esta disputa?

Caso #2

Rui Pedro tem várias vezes dores de cabeça. Por isso, faz-se acompanhar de comprimidos para as dores de cabeça, como os chama. Durante uma aula, um colega de turma diz que está com uma ligeira dor de cabeça. Por isso, prontamente, Rui Pedro oferece um dos seus comprimidos para as dores de cabeça, dizendo "Toma isto, faz ficar melhor rapidamente. Eu tomo sempre, alivia-me as dores e não me faz mal". Achas que o colega de turma deve aceitar esse comprimido? O que farias no lugar dele? Costumas aceitar ou oferecer comprimidos para as dores de cabeça?

Sessão 4 – Estratégias de prevenção do consumo de substâncias psicoativas ilícitas e da automedicação

Objetivos específicos

Planear estratégias para prevenir o consumo de drogas ilícitas;
Identificar erros comuns da (auto)medicação.

Estratégias Pedagógicas

Estratégias de prevenção – Prevenir a Tentação
Estratégias de prevenção – Dizer Não às drogas;
Estratégias de prevenção – Identificar um potencial problema de drogas
Top 10 – Maneiras para saber se um/a colega abusa de drogas

Estratégias de prevenção – Erros comuns da (auto)medicação

GUIÃO VÍDEO (4 minutos e 52 segundos)



Dor de cabeça? Tosse? Febre? Insónias?

Quem é que não tem remédio para todos os sintomas em casa? Há quem tenha. Também consigo na mochila, na bolsa ou na carteira. Mas será que estamos completamente conscientes dos riscos que a utilização destes medicamentos de venda livre pode causar?

Usamos tantas vezes estes comprimidos para aliviar as dores: é só uma dorzinha e costumamos utilizá-los com imensa frequência. Mas a verdade é que se essa dorzinha aparece com muita frequência podemos estar aqui a mascarar a algum problema de saúde, por isso, o ideal é sempre procuramos um profissional de saúde nos aconselharmos. Para além disso, ainda temos pessoas que sentem a mesma dor do vizinho e tomam a mesma medicação para ver se vai dar o mesmo efeito. Mas aí é que está os sintomas até podem ser parecidos, mas os organismos não são certamente.

Ou ainda: Quantas vezes ouvimos - fui ao médico e ele nem sequer me receitou um remédio.

Mas quando vamos ao médico costumamos perguntar:

1. Antes de sair com a receita, certifique-se de perguntar o seguinte: qual é o nome do medicamento? O que é suposto fazer? Como e quando devo tomá-lo? Quais os alimentos, bebidas e outros medicamentos ou atividades devo evitar enquanto tomo este medicamento? Há algum efeito colateral? O que eu faço se eles ocorrem? Quais informações escritas estão disponíveis sobre esse medicamento? Existem outras alternativas possivelmente mais baratas? Porque recomenda este medicamento em particular? Existem alternativas não medicamentosas, como usar um vaporizador, gargarejar com água salgada?
2. Ou informar: Se estiver a tomar um medicamento, informe o seu medico. Se estiver a planear mudar a sua dieta significativamente cortando na gordura e calorias.

Não... Até porque nós podemos confiar nos nossos médicos.

E agora vamos estudar cinco informações importantes:

1. A primeira é sobre o uso de analgésicos. Sabias que os analgésicos podem mascarar doenças sérias e também retardar o diagnóstico. Tens outro exemplo tens dores de cabeça com frequência e tomas sempre aquele remédio para aliviar sabes que Podes estar a mascarar uma doença séria Meningite, pressão alta E até temores. Sabias? Por isso, toda atenção é pouca.

2. A segunda informação. É a sobredosagem – algumas pessoas pensam que ao aumentar a dosagem da medicação o efeito será mais rápido. Poderás estar a induzir sérios problemas por exemplo: O uso incorreto de anti-inflamatórios pode gerar problemas gástricos e renais.

3. A terceira informação é sobre a mistura de medicamentos: nós, por exemplo, as mulheres costumam tomar anti contracetivos e com o uso de antibiótico alguns anti contracetivos podem perder o efeito por isso é tão importante falares com o teu médico Quais os medicamentos que estás a tomar.

4. A quarta informação refere-se aos antibióticos. Sabias que os antibióticos sem necessidade podem gerar resistência a bactérias, ou seja, se utilizas antibióticos sem indicação médica e com frequência, a probabilidade de uma bateria não ser curada é bem maior.

5. E agora a quinta e última informação. Sabias que, por exemplo, os descongestionantes nasais podem aumentar a pressão? É verdade que o objetivo destes vaporizadores é contrair os vasos sanguíneos para melhorar a respiração. No entanto, os seus efeitos não se restringem apenas a região nasal, eles podem aumentar a pressão em outros vasos presentes em outras regiões do corpo.

É mesmo importante que nós nos automediquemos.

Estratégias de prevenção - Prevenindo a Tentação

Podes adotar algumas medidas para te protegeres da tentação de usar drogas.

1. Aprende a lidar com o stress. Experimenta algumas das técnicas de enfrentamento, como exercícios de relaxamento ou meditação.

2. Fortalece a tua autoestima. Orgulha-te de ti, especialmente quando determinados contratempos prejudicam a tua confiança. Desenvolve vários interesses que te deem prazer (nadar, dançar, tocar um instrumento, fazer trabalho voluntário, fazer longas caminhadas, ...)

3. Pratique a assertividade. Cultiva a arte de falar e expressar a tua opinião, independentemente do assunto ou das circunstâncias.

Estratégias de prevenção – Dizer que NÃO às drogas

Se as pessoas te oferecem uma drogas, estão aqui algumas maneiras de dizer que NÃO:

- Deixa-os saber que não estás interessado/a. Muda de assunto. Se a pressão parecer ameaçadora, vai-te embora.
- Ter outra coisa para fazer: "Não quero, agora vou dar um passeio!"
- Prepara-te para diferentes tipos de pressão.
- Mantenha-te no simples: "Não, Obrigado!" ou "Não" ou "Nem pensar".
- Mantem uma atitude fria: Ignora-os!
- Sai com pessoas que não farão esse tipo de perguntas.

Top 10 – Maneiras para saber se um/a colega abusa de drogas

1. Uma mudança abrupta de atitude. Os indivíduos podem perder o interesse em atividades que antes gostavam ou em estar com amigos que antes valorizavam.

2. Mudanças de humor. Os jovens consumidores de drogas podem frequentemente parecer retraídos ou "fora de si", ou podem exibir crises de temperamento incomuns.

3. Diminuir o desempenho académico. Os estudantes podem começar a faltar às aulas, parar de estudar ou não concluir as tarefas; o seu desempenho académico pode diminuir.

4. Maior sensibilidade. Os indivíduos podem reagir intensamente a qualquer crítica ou ficar facilmente frustrados e irritados.

5. Sigilo. Os jovens consumidores de drogas podem fazer ligações furtivas ou exigir maior privacidade em relação aos seus pertences pessoais ou às suas saídas.

6. Mudanças físicas. Os jovens que usam drogas podem alterar o seu padrão de sono, passar mais tempo na cama ou a dormir em horários estranhos. Os hábitos alimentares também podem sofrer alterações levando a perdas de peso.

7. Problemas de dinheiro. Os jovens consumidores de drogas podem estar constantemente a pedir dinheiro emprestado, a aparecer sem dinheiro e até começar a roubar.

8. Mudanças na aparência. Ao se envolverem mais com drogas, muitas vezes perdem a consideração pela aparência pessoal.

9. Desafio de restrições. Os jovens consumidores de drogas podem ignorar ou recusar-se deliberadamente a cumprir prazos ou outros regulamentos.

10. Mudanças nos relacionamentos. Os jovens consumidores de drogas podem discutir mais frequentemente com familiares ou amigos e desenvolver novas e forte amizades com até agora desconhecidos, incluindo outros usuários de drogas.

Extra: _ Bibliografia para Aprofundamento_

- OMS (2004). *O que as pessoas pensam saber sobre a dependência de drogas?* Genebra: OMS.
- Melero, J. C. &, Arrospide, J. A. (2016). *Drogas: más información, menos riesgos.* Uruguai: Junta Nacional de Drogas.

Avaliação do Módulo

Gostaríamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

https://forms.gle/JxTh6wKL5R8ZEoiH6

Módulo 4 - Alimentação Equilibrada, Saudável e Sustentável

Introdução

Olá!

Bem-vinda/o ao módulo 4, módulo no qual iremos abordar as questões acerca da alimentação equilibrada, saudável e sustentável dos/as estudantes universitários/as!

Nós somos aquilo que comemos. Tantas vezes ouvimos esta frase e é de faco verdade, da nossa resistência ao brilho dos nossos cabelos, comer bem ajuda-nos a viver bem e a ter uma boa aparência. Vários estudos científicos demonstram a conexão existente entre aquilo que ingerimos e a nossa saúde.

Neste capitulo iras ter informações acerca desta conexão e também conselhos que te ajudem a comer bem para consequentemente te sentires melhor. Mesmo que sejam pequenas mudanças nas tuas escolhas alimentares, certamente vais sentir as recompensas dessas escolhas.

Sessão 1 - Alimentos e os seus constituintes

Objetivos específicos

Compreender a noção de dieta saudável e os seus componentes;
Definir os nutrientes necessários e a sua importância para uma alimentação equilibrada e saudável;
Descrever a pirâmide dos alimentos e explicar o seu significado para a alimentação;
Identificar a noção de porção de alimentos e conhecer a proporção com que se deve ingerir os alimentos dos vários grupos alimentares.
Conhecer o estado atual e as tendências evolutivas dos comportamentos alimentares

Estratégias Pedagógicas

Campus Focus – Os hábitos alimentares no Campus
Website Health - Composição nutricional dos Alimentos.



ALIMENTOS E OS SEUS CONSTITUINTES

De um modo muito simples, **uma alimentação saudável é aquela que providencia ao organismo os nutrientes essenciais para a manter e a melhorar a nossa saúde.** Os nutrientes são substâncias contidas nos alimentos que podem ser divididos em macronutrientes (proteínas, hidratos de carbono e lípidos) e micronutrientes (vitaminas e minerais).





ALIMENTOS E OS SEUS CONSTITUINTES

Os HIDRATOS DE CARBONO, também designados hidratos de carbono ou açúcares, são outro grupo de nutrientes que constitui a principal fonte de energia para os seres vivos, estando presente em diversos tipos de alimentos. Fornecem-nos o "combustível" que o nosso cérebro e o nosso corpo precisam para as suas atividades diárias.

Com exceção do mel, todos os HIDRATOS DE CARBONO são de origem vegetal como os cereais (arroz, trigo, aveia, etc.), as raízes e tubérculos (batata, cenoura, beterraba, etc.), as leguminosas (feijão, ervilha, soja, etc.), os frutos (banana, manga, maçã, etc.) entre tantos outros. Um grupo de glícidos mais complexo, ricos em amido, está presente, por exemplo, no pão, arroz, massas e batatas. A sacarose é o açúcar de uso comum, açúcar de mesa, encontrada na cana-de-açúcar, açúcar de beterraba, entre outros alimentos.

A Organização Mundial de Saúde recomenda um consumo, deste nutriente, entre 55% a 60% do valor energético diário.

Um grama de glícidos corresponde a 4 quilocalorias, tal como nas proteínas.

4



ALIMENTOS E OS SEUS CONSTITUINTES

Os LÍPIDOS, tal como as proteínas e os glícidos, são outro grupo de nutrientes que compõe os alimentos.

São moléculas insolúveis na água, cujos principais representantes são as gorduras e os óleos. Os LÍPIDOS são importantes no nosso organismo, pois participam na formação de algumas vitaminas e hormonas fazendo, ainda, parte da constituição das membranas celulares. Além disso, são também reserva de energia.

Os LÍPIDOS podem ser encontrados nos mais variados alimentos, quer de origem animal quer vegetal, como no leite e derivados, na gema do ovo, nas carnes, no azeite, no óleo alimentar, na manteiga, nos nabos, nos óleos vegetais, nos frutos secos, nos peixes e carnes gordas. Deve ser evitada a sua ingestão em doses elevadas.

No máximo devem representar 30% a 35% da ingestão calórica diária.

As gorduras fornecem energia sob uma forma muito concentrada: um grama de gordura corresponde a 9 quilocalorias.

5

ALIMENTOS E OS SEUS CONSTITUINTES

As VITAMINAS também são nutrientes de enorme importância, necessárias ao crescimento, à reparação dos tecidos, ao funcionamento dos órgãos e essenciais para a ocorrência de reações metabólicas específicas no meio celular. Promovem o bem-estar físico e mental. Não fornecem energia, mas devem ser ingeridas diariamente, em pequenas quantidades através da dieta, pois não são produzidas pelo nosso organismo.

As VITAMINAS podem ser divididas em dois grupos, sendo que a maior diferença entre eles é o tipo de meio em que cada um é solúvel. Assim, há vitaminas hidrossolúveis e lipossolúveis. As primeiras são solúveis na água e, por isso, no plasma, e são difíceis de armazenar, sendo eliminadas pela urina. São vitaminas hidrossolúveis as vitaminas do complexo B (B1, B2, B3, B5, B6, Biotina ou Vitamina B7, Ácido fólico e B12) e a vitamina C. As vitaminas lipossolúveis, tal como o nome indica, são solúveis em lípidos, pelo que, para chegarem a um tecido-alvo, necessitam de moléculas transportadoras como, por exemplo, o colesterol para atravessarem o plasma sanguíneo. São o grupo das vitaminas A, D, E e K.

TABELA INFORMATIVA DAS VITAMINAS - PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Vitaminas	Principais Fontes Alimentares	Principais Funções
Vitamina A (Retinol - fontes animais, Carotenoides - fontes vegetais)	Leite e derivados, óleos de fígado de peixe, fígado, gemas de ovos; vegetais de cor verde escura e amarela, frutos amarelos e alaranjados (brócolos, espinafre, couve, agrião, pêssego cereja, alperces e melões)	Contribui para a manutenção da saúde da visão, pele, cabelo, para a função reprodutora e para um crescimento saudável.
Vitamina D (Calciferol)	Gorduras vegetais, óleo de fígado de peixe, peixes de água salgada (sardinhas, arenque, salmão e sarda), leite e derivados e ovos. Exposição solar.	Facilita a utilização de cálcio e de fósforo pelo organismo. Mineraliza e repara os ossos.
Vitamina E (Tocoferol)	Óleos vegetais (amendoim, soja, palma, milho, carteno, girassol, etc.), germe de trigo, pão integral, ovos, aipo, manteiga, frutos secos (por exemplo, nozes), milho, arroz e vegetais de folha verde.	Participa na formação e funcionamento dos músculos e outros tecidos. Protege os ácidos gordos essenciais. Previne o envelhecimento precoce, problemas cardiovasculares e anemia.
Vitamina K (Bioquinona, menaquinonas)	Folhas de vegetais verdes (folhas de nabo, espinafres, brócolos, couve e alface), sementes de soja, fígado de vaca e chá verde.	É necessária para a normal coagulação sanguínea, prevenindo hemorragias internas e externas.

TABELA INFORMATIVA DAS VITAMINAS: PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Vitaminas	Principais Fontes Alimentares	Principais Funções
Ácido Fólico (Folacina)	Folhas de vegetais verdes, pão integral, laranjas, leite, queijo, fígado e rim. Verduras folhosas frescas, frutas, vísceras (p. ex., fígado); pães e cereais enriquecidos.	Previne o aparecimento de determinadas anemias. É essencial para a formação de células sanguíneas, para o ótimo funcionamento do sistema nervoso e da medula óssea e para um saudável crescimento.
Ácido Pantotênico	Fígado e rim, ovos, vegetais e legumes verdes.	É necessário para o metabolismo das proteínas, gorduras e glícidos e para a formação de algumas hormonas. Participa também na regeneração tecidular.
Vitamina B1 (Tiamina)	Cereais e pão integral, levedura e hortícolas, carnes (em especial porco e fígado), cereais enriquecidos, oleaginosas, legumes, batatas.	Participa na obtenção de energia a partir dos alimentos e no normal funcionamento dos músculos e do sistema nervoso - função celular nervosa central e periférica e função miocárdica.
Vitamina B2 (Riboflavina)	Leite e derivados, peixe, fígado e rim, hortícolas e leveduras, carnes, ovos, cereais enriquecidos.	É necessária para uma pele saudável. Participa na utilização dos glícidos, das proteínas e das gorduras pelo organismo e na libertação de energia para ser utilizada pelas células. É essencial para o crescimento.

TABELA INFORMATIVA DAS VITAMINAS: PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Vitaminas	Principais Fontes Alimentares	Principais Funções
Vitamina B6 (Piridoxina, piridoxal, piridoxamina)	Fígado e rim, ovos, vegetais verdes, tomate e carne, cereais integrais, peixe.	Essencial para uma utilização correta das proteínas. Participa na formação dos glóbulos vermelhos do sangue e no normal funcionamento do sistema nervoso. Metabolismo de ácidos gordos, lípidos e aminoácidos.
Vitamina B12 (Cianocobalamina)	Leite e derivados, produtos de origem animal (carnes, em especial bovina, do porco e vísceras, aves, ovos), cereais enriquecidos, mariscos, sobras, cavala e salmão.	Contribui para a prevenção do aparecimento de certos tipos de anemia e na formação dos glóbulos vermelhos do sangue. Suporta o funcionamento correto do sistema nervoso. É importante no metabolismo dos açúcares. Maturação dos eritrócitos, função neural, síntese de DNA, síntese e reparo de mielina.
Biotina	Gema de ovo, fígado e rim, vegetais frescos, leite, carne e levedura.	Atua no metabolismo dos açúcares, gorduras e proteínas e na produção de energia. É essencial para um crescimento saudável.

TABELA INFORMATIVA DAS VITAMINAS: PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Vitaminas	Principais Fontes Alimentares	Principais Funções
Vitamina C (Ácido Ascórbico)	Citrinos, tomate, morangos, kiwis, brócolos, acerola, hortaliças e folhas verdes	É importante na formação do colagénio e tem um papel nos mecanismos de auto - defesa do organismo contra infeções. Facilita a absorção do ferro alimentar. É fundamental na manutenção da integridade dos vasos sanguíneos. Cicatrização de ferimentos. Desempenha um importante papel antioxidante ao nível celular. Contribui para a saúde dos dentes e gengivas.
Niacina (Ácido Nicotínico)	Levedura, trigo, arroz, leite e derivados, e fígado, carne vermelha, peixe, aves, legumes, pães e cereais de grão integrais ou enriquecidos.	Participa nas reações de produção de energia pelas células. Pode intervir como vasodilatador. Reações de oxidação e redução. Metabolismo celular e de hidratos de carbono.

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ALIMENTOS E OS SEUS CONSTITUINTES

Os MINERAIS são também nutrientes de enorme importância, necessários a variadíssimas funções do nosso organismo. O corpo humano necessita, diariamente, de cerca de vinte minerais, alguns em quantidades elevadas, não é, da ordem dos gramas, como é o caso do cálcio, fósforo, magnésio, sódio, potássio, cloro e enxofre.

Outros são necessários em quantidades mais reduzidas, da ordem dos µgrama, designando-se oligoelementos e incluem o selénio, o iodo, o ferro, o zinco, o flúor, o cobre, o crómio, o manganésio e o molibdénio.

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TABELA INFORMATIVA DOS MINERAIS - PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Minerais	Principais Fontes Alimentares	Principais Funções
Cálcio	Queijo, leite, nozes, uva, cereais integrais, nabo, couve, chicória, feijão, lentilha, amendoim, castanha de caju	Atua na formação de tecidos, ossos e dentes; Age na coagulação do sangue e na oxigenação dos tecidos; Regulação da função muscular cardíaca; Combate as infeções e mantém o equilíbrio de ferro no organismo.
Fósforo	Carnes, miúdos, aves, peixes, ovo, leguminosas, queijo, cacau, cereais integrais	Atua na formação de ossos e dentes; Indispensável para o sistema nervoso e o sistema muscular; Juntamente com o cálcio e a vitamina D, combate o raquitismo; É necessário ao armazenamento de energia.
Ferro	Fígado, rim, coração, gema de ovo, leguminosas, verduras, nozes, frutos secos, aveloma	Indispensável na formação do sangue; Transporta o oxigénio às células e é um componente importante de vários sistemas enzimáticos, assim como da hemoglobina e da mioglobina.
Iodo	Agrião, alcachofra, alface, alho, cebola, cenoura, ervilha, espargo, rabanete, tomate, peixes, frutos do mar vegetais	Faz funcionar a glândula tiroide; Ativa o funcionamento cerebral; Permite que os músculos armazenem oxigénio e evita que a gordura se deposite nos tecidos; Regulação da temperatura corporal e na formação de células sanguíneas.



TABELA INFORMATIVA DOS MINERAIS - PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Minerais	Principais Fontes Alimentares	Principais Funções
Cloro	Sal, nos peixes e em produtos salgados.	Constitui os sucos gástricos e pancreáticos; Contribui para a manutenção do equilíbrio hídrico e eletrolítico.
Potássio	Azeitona verde, ameixa seca, ervilha, figo, lentilha, espinafre, banana, laranja, tomate, carnes, vinagre de maçã, arroz integral	Atua associado ao sódio, normalizando o ritmo cardíaco e o sistema muscular; Contribui para a formação as células.
Magnésio	Frutas cítricas, sementes, frutos secos, leguminosas, gema de ovo, salsinha, agrião, espinafre, cebola, tomate, mel	Atua na formação dos tecidos, ossos e dentes; Ajuda a metabolizar os hidratos de carbono; Controla a excitabilidade neuromuscular.
Manganésio	Cereais integrais, amendoim, nozes, feijão, arroz integral, banana, alface, beterraba, milho, crustáceos	importante para o crescimento, promovendo a integridade dos ossos e cartilagem; Contribui para a produção de hormonas sexuais; Intervém no aproveitamento do cálcio, fósforo e vitamina B1.
Silício	Aipo, aveia, escarola, alface, abóbora, azeitona, cebola	Age na formação dos vasos e artérias; É responsável pela sua elasticidade; Atua na formação da pele, das membranas, das unhas e dos cabelos; Combate as doenças da pele e o raquitismo.



TABELA INFORMATIVA DOS MINERAIS: PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Minerais	Principais Fontes Alimentares	Principais Funções
Flúor	Água, chá, agrião, alho, aveia, brócolos, beterraba, cebola, couve-flor, maçã, trigo integral, peixes	Forma ossos e dentes; Previne dilatação das veias; Previne as cáries dentárias e a osteoporose.
Cobre	Cereais e derivados integrais, leguminosas secas, figo seco, banana, damasco, passas, ameixa, batata, espinafre	Age na formação da hemoglobina (pigmento vermelho do sangue); Promove o bom funcionamento do sistema nervoso e das defesas do organismo.
Sódio	Sal, todos os vegetais (principalmente salsa, cenoura, agrião e cebolinho), queijo, nozes, aveia	Impede o endurecimento do cálcio e do magnésio; Previne a coagulação sanguínea; Regula os fluidos corporais, e o seu volume, bem como o pH
Enxofre	Nozes, alho, cebola, batata, rabanete, repolho, couve-flor, agrião, laranja, abacate	Facilita a digestão; É desintoxicante e participa do metabolismo das proteínas. É necessário para a cicatrização da pele e intervém na coagulação do sangue
Zinco	Carnes, fígado, peixe, marisco, ovo, leguminosas, frutos gordos (ex: amêndoas, nozes, avelãs), cereais e derivados integrais	Atua no controle cerebral dos músculos; Ajuda na respiração dos tecidos; Participa no metabolismo das proteínas, hidratos de carbono e das gorduras.



TABELA INFORMATIVA DOS MINERAIS: PRINCIPAIS FONTES ALIMENTARES E FUNÇÕES

Minerais	Principais Fontes Alimentares	Principais Funções
Selénio	Crustáceos, carne, gema de ovo, cereais integrais e em alguns hortícolas: cuma, a cebola, o tomate, o alho e os brócolos.	Tem uma ação antioxidante; Promove a inativação de substâncias com eventual ação tóxica; É fundamental para produzir a hemoglobina a partir do ferro do organismo.
Crómio	Cogumelos, ameixas secas e frutos secos	Intervém no metabolismo da glicose; Potencia a ação da insulina; Promove a estabilidade dos ácidos nucleicos.
Molibdénio	Leguminosas e nas sementes	Ação antioxidante; Intervém no metabolismo dos compostos sulfurados, das pterinas e das purinas.



A RODA DOS ALIMENTOS

Organiza-se em sete grupos (Tabela) de alimentos e ao lado de cada uma é indicado o número de doses/porções diárias de consumo de cada grupo:

(4 a 11 porções, 28%);

(3 a 5 porções, 23%);

(3 a 5 porções, 20%);

(2 a 3 porções, 18%);

(1 a 4,5 porções, 6%);

(1 a 2 porções, 4%);

(1 a 3 porções, 3%)

A [illegible] encontra-se no centro da roda e não é um grupo à parte uma vez que está presente na constituição de todos os alimentos e é essencial à vida, pelo que deve ser consumida com frequência, sendo a recomendação de consumo de um litro e meio a três litros diários.

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"A Roda dos Alimentos transmite orientações para uma alimentação saudável que deve ser:

"completa" – o que inclui ingerir diariamente alimentos de cada grupo e beber água diariamente;

"equilibrada" – ingerir uma maior quantidade de alimentos pertencentes aos grupos de maiores dimensões e uma menor quantidade dos alimentos que se encontram nos grupos de menores dimensões, de forma a ingerir o número de porções recomendado;

"variada" – variar, diariamente, semanalmente e nas diferentes épocas do ano, a ingestão dos alimentos dentro de cada grupo" (FCNAUP, 2003).

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PIRÂMIDE DA ALIMENTAÇÃO VEGETARIANA

Existe uma variedade de tipos de alimentação dentro da alimentação vegetariana: Veganos; Lacto-vegetarianos; Ovo-vegetarianos; Ovo-lacto-vegetarianos; Crudívoros; Frutívoros; Semi-vegetarianos; Pescatarianos; Macrobióticos.



→ *Observa a pirâmide da alimentação vegetariana e identifica as principais diferenças em comparação com a roda dos alimentos* ←

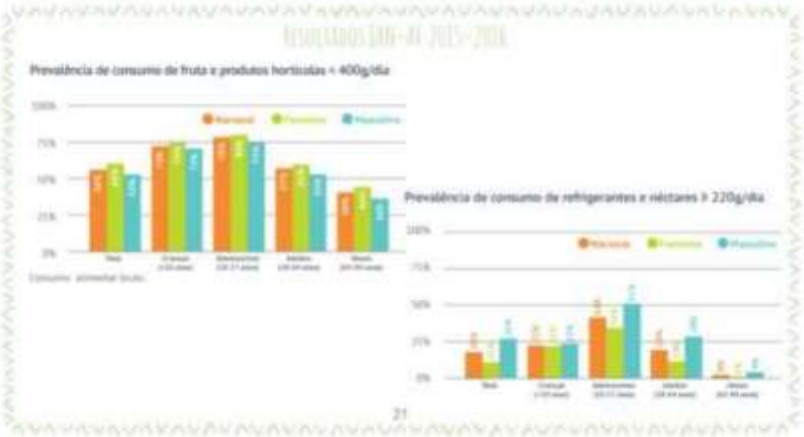
TENDÊNCIAS EVOLUTIVAS DOS HÁBITOS ALIMENTARES

Inquérito Alimentar Nacional e de Atividade Física, IAN-AF 2015-2016.

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Consumo habitual de grupos e sub-grupos de alimentos (média g/dia), por grupos etários

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Prevalência de consumo de fruta e produtos hortícolas < 400g/dia
Prevalência de consumo de refrigerantes e néctares > 220g/dia

21



CAMPUS FOCUS
HÁBITOS ALIMENTARES NA UNIVERSO

		n	%
Com que frequência lhe acontece não tomar o pequeno-almoço?	Nunca ou quase nunca	472	56.3
	Poucas vezes	153	18.2
	Algumas vezes	103	12.3
	A maioria das vezes	70	8.3
	Quase Sempre ou Sempre	41	4.9
Com que frequência lhe acontece saltar o almoço ou o jantar?	Nunca ou quase nunca	636	76.0
	Poucas vezes	129	15.4
	Algumas vezes	60	7.2
	A maioria das vezes	11	1.3
	Quase Sempre ou Sempre	1	0.1
Nos últimos 7 dias, quantas vezes comeu frutas (não inclui os sumos naturais de fruta)?	Nunca	43	5.1
	Uma a três vezes por semana	311	37.1
	Quatro a seis vezes por semana	195	23.3
	Uma ou duas vezes por dia	204	24.3
	Três ou mais vezes por dia	85	10.1



CAMPUS FOCUS
HÁBITOS ALIMENTARES NA UNIVERSO

		n	%
Nos últimos 7 dias, quantas vezes por dia comeu legumes/vegetais?	Nunca	48	5.8
	Uma a três vezes por semana	286	34.3
	Quatro a seis vezes por semana	220	26.4
	Uma ou duas vezes por dia	230	27.6
	Três ou mais vezes por dia	50	6.0
Nos últimos 7 dias, quantas vezes ingeriu alimentos com açúcar adicionado (ex. refrigerantes, doces, sobremesas, chocolates)?	Nunca	22	2.6
	Uma a três vezes por semana	351	41.9
	Quatro a seis vezes por semana	234	27.9
	Uma ou duas vezes por dia	174	20.8
	Três ou mais vezes por dia	57	6.8
Nos últimos 7 dias, quantas vezes consumiu comidas rápidas (fast food) (ex. hambúrgueres, cachorros quentes, pizzas, ...)?	Nunca	201	24.0
	Uma a três vezes por semana	575	68.8
	Quatro a seis vezes por semana	48	5.7
	Uma ou duas vezes por dia	12	1.4
	Três ou mais vezes por dia	2	0.2

Deixa nos comentários desta Sessão, a tua reflexão acerca dos dados apresentados nos gráficos e na tabela!

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WEBSITE HEALTH
TABELA DE COMPOSIÇÃO DOS ALIMENTOS

Clica na imagem, acede ao website do Instituto Nacional de Saúde Doutor Ricardo Jorge e vê a composição dos alimentos que mais consumes no teu dia-a-dia.

Sessão 2 – A segurança alimentar e a alimentação sustentável

Objetivos específicos

Explicar a importância da segurança alimentar para a saúde;
Compreender de que forma a alimentação pode contribuir para a sustentabilidade ambiental.

Estratégias Pedagógicas

Top 10 - Dicas para evitar uma intoxicação alimentar;
Estratégias para a Mudança – Como ter uma alimentação sustentável;
A Refletir – Caso #1
Website Health - Plano de Sustentabilidade Alimentar

A importância da segurança alimentar para a saúde

A segurança alimentar refere-se às práticas, desde a produção até ao consumo alimentar, que visam assegurar que os alimentos não oferecem nenhum risco de contaminação aos seus consumidores.

A Organização Mundial de Saúde definiu 5 princípios fundamentais para garantir a segurança alimentar e consequentemente, reduzir a ocorrência de doenças de origem alimentar, nomeadamente as intoxicações alimentares (como as gastroenterocolites agudas):

- **Manutenção da limpeza pessoal, de utensílios e ambiental**: principalmente das mãos, que são o principal veículo de transmissão de microrganismos de uma superfície para a outra. Uma correta higienização das mãos, utensílios e equipamentos antes de iniciar a preparação dos alimentos e durante todo o processo é fundamental para evitar a contaminação alimentar.
- **Separar os alimentos crus de alimentos cozinhados**: os alimentos crus podem conter microrganismos perigosos que podem contaminar os alimentos cozinhados, por isso é fundamental utilizar diferentes utensílios (facas, por exemplo) para alimentos crus e cozinhados, guardar os alimentos em embalagens ou recipientes fechados, para evitar que haja contacto ente os alimentos crus e cozinhados e no frigorífico é fulcral guardar os alimentos crus, a carne ou o peixe nas prateleiras inferiores e os produtos cozinhados nas prateleiras superiores;
- **Cozinhar bem os alimentos**: todos os alimentos devem ser cozinhados a uma temperatura superior a 70°C para garantir a eliminação da maioria dos microrganismos e tornar os alimentos seguros para consumo; os mariscos devem ser cozinhados até as conchas se abrirem e, depois, deixá-los ferver por mais cinco a dez minutos, para que sejam totalmente cozinhados; deixar ferver,

pelo menos, por um minuto sopas e ensopados e não guardar sobras de alimentos no frigorífico durante muito tempo e não se devem reaquecer mais do que uma vez os alimentos já cozinhados.

- **Acondicionamento dos alimentos a uma temperatura segura**: manter os alimentos abaixo dos 5°C ou acima dos 60°C permite retardar ou evitar a multiplicação dos microrganismos que se reproduzem com grande rapidez à temperatura ambiente. Deste modo, é importante arrefecer e guardar rapidamente os alimentos cozinhados, evitar que os alimentos cozinhados estejam mais de 2 horas à temperatura ambiente, manter os alimentos cozinhados a uma temperatura superior a 60°C até serem consumidos, deve proceder à descongelação de alimentos, no interior do frigorífico, não à temperatura ambiente e, caso os descongele com água, o tempo de descongelação não deve exceder as 2 horas.

- **Utilizar água e matérias-primas seguras**: os alimentos e a água podem estar contaminados com microrganismos patogénicos, sendo fundamental adotar medidas preventivas para reduzir o risco de contaminação, como: utilizar água potável, lavar frutas e vegetais, principalmente se forem consumidos crus, não utilizar alimentos com prazo de validade expirado, rejeitar latas amolgadas ou oxidadas e escolher alimentos prontos a comer, cozinhados ou perecíveis que estejam armazenados em forma correta.

Top 10 - Dicas para evitar uma intoxicação alimentar

1. Conhecer a origem dos alimentos consumidos;
2. Evitar fazer refeições em locais com higiene duvidosa, tendo atenção redobrada com a comida em buffet (verificar se os alimentos estão quentes ou refrigerados adequadamente);
3. Lavar sempre as mãos, antes das refeições ou da confeção de alimentos, os alimentos, principalmente aqueles que serão ingeridos crus e, os utensílios e superfícies onde os alimentos serão preparados;
4. Beba sempre água tratada e filtrada;
5. Não misturar alimentos de diferentes origens durante a sua confeção, como carnes e verduras na tábua de corte, nem alimentos já cozidos com aqueles que ainda estão crus;
6. Utilizar facas diferentes para diferentes alimentos;
7. Cozinhar bem os alimentos, evitando leite não pasteurizado, ovos crus e carne malpassada;

8. Verifique o prazo de validade e condições da embalagem de produtos alimentares, principalmente dos enlatados, evitando consumir aqueles que apresentem uma embalagem danificada ou amassada;
9. Ao fazer compras, armazenar adequadamente os alimentos assim que chegar em casa, armazenando as refeições ou alimentos prontos a comer numa temperatura inferior a 5°C e aqueça-os somente no momento do consumo.
10. Na dúvida, evite consumir qualquer alimento.

ALIMENTAÇÃO SUSTENTÁVEL: UM PASSO PARA SALVAR O PLANETA

As nossas escolhas alimentares, para além de interferirem diretamente na nossa saúde, têm um grande impacto no ambiente, biodiversidade e alterações climáticas.

Ao falarmos em sustentabilidade, associamos imediatamente a ações como não poluir, preservar áreas naturais, reciclar lixo, economizar água, dar preferência às fontes alternativas de energia, etc. Mas raramente lembramo-nos de relacionar com uma das nossas atividades mais básicas: a alimentação.

A nossa alimentação é cada vez mais uma preocupação para o meio ambiente. O problema não está em comer, mas no que comemos e no que é desperdiçado depois.

Segundo a definição da FAO (2015), uma alimentação sustentável é aquela que contribui para a segurança alimentar e nutricional da população e cujo impacto ambiental é diminuto. A proteção e o respeito pela biodiversidade e pelo ecossistema e a otimização dos recursos naturais e humanos estão também associados a esta definição. Para além disso, a nível nutricional é a mais adequada, segura, economicamente justa e está acessível a toda a população.



É urgente que todas as pessoas estejam consciencializadas para este assunto e que comecem a praticar, a cada dia, uma alimentação mais sustentável.

Dicas para a Mudança – Como ter uma alimentação sustentável

1. Consuma produtos sazonais e de produção local: Os alimentos da época têm características nutricionais e organoléticas (sabor, odor, cor) superiores, visto que não necessitam de tanto transporte nem métodos de conservação, que emitem gases com efeito de estufa. Tem uma contribuição positiva na promoção da economia local e na melhoria do ambiente, uma vez que utilizam cadeias de frio e menos conservantes. Os alimentos sazonais também estão, geralmente, disponíveis a um preço mais acessível.

2. Priorize produtos nacionais e com o tamanho exigido por lei

A aposta em refeições com produtos de origem vegetal, reduzem significativamente as emissões de gases com efeito de estufa.

Por sua vez, as refeições que apenas incluem alimentos de origem animal, principalmente carnes vermelhas e processadas, têm maior impacto negativo sobre o ambiente.

Neste contexto, é recomendável ocupar metade do prato com produtos de origem vegetal e em menos qualidade com produtos de origem animal.

3. Combata o desperdício alimentar

Planear antecipadamente as refeições diárias possibilita gerir de forma mais eficiente três pontos: a alimentação do dia-a-dia; os recursos utilizados; e o orçamento familiar. Desta forma, numa ida ao supermercado, é importante fazer uma lista prévia para que adquire apenas os alimentos que serão consumidos.

O aproveitamento das sobras de outras refeições e redução do desperdício na preparação e confeção de alimentos também pode fazer toda a diferença.

Para evitar que os alimentos se estraguem com facilidade, dê mais atenção à data de validade dos produtos e acondicione-os convenientemente.

4. Reduza produtos embalados

Substituta as embalagens familiares por individuais e reutilize sempre que possível. Se puder reduzir o consumo de produtos embalados melhor! Opte pelo consumo dos frescos ou quando for necessário, opte por embalagens ecológicas. Quando for às compras, leve um saco para os produtos a granel, por exemplo, para fruta e legumes.

5. Prefira uma dieta mediterrânica

É sustentável e benéfica para a saúde, esta dieta é impulsionadora da diversidade no consumo de alimentos e técnicas culinárias que priorizam a utilização de alimentos locais e sazonais. Como consequência, há uma diminuição custos energéticos, de tempo, embalagens e transporte inerentes à importação de alimentos. Este tipo de alimentação ajuda também a moderar o consumo alimentar, o que vai contribuir para a redução do desperdício alimentar.

6. Opte por uma alimentação biológica

Os produtos biológicos são melhores para a saúde, são mais saborosos e mais amigos do ambiente. A agricultura biológica não recorre a fertilização química, faz uma gestão dos solos mais adequada, tanto para manter a sua qualidade, quanto respeitando a biodiversidade. Mas há alguns senãos a ter em conta: ainda é menos produtiva do que a convencional - portanto, podemos dizer,

a qualquer momento, um singelo "não chega", na hora de comprar e consumir -, e exige mais extensões de terra para compensar essa insuficiência. O bio tem vantagens, mas deve ser encarado na perspetiva do local e sazonal. Senão, estragamos tudo.

7. Consuma menos carne, limitando o consumo de carnes vermelhas

Para além de contribuir para a diminuição de mortes de milhões de animais que são criados em condições muitas vezes precárias, a diminuição do consumo da carne vai ajudar a minimizar o impacto ambiental causado pela indústria pecuária. A produção de carne, principalmente de vaca, requer grandes áreas de terra para a criação e a alimentação do gado, além de enormes quantidades de água e de energia. Acrescente-se os gases com efeito de estufa libertados pelo estrume e a digestão do gado, e percebe-se o motivo da enorme pegada ecológica da carne de vaca. Por isso, optar por fontes de proteína vegetal como as leguminosas e frutos secos é sempre uma opção mais sustentável.

A Refletir...

Ter uma alimentação amiga do ambiente passa por: pensar como é que os alimentos foram produzidos, quantos quilómetros viajaram até chegar ao prato, se foram processados, como estão embalados.

Vídeo Health

Plano de Sustentabilidade Alimentar

https://www.youtube.com/watch?v=CwvuHe3hqA4

Sessão 3 – Relação entre a alimentação e as doenças

Objetivos específicos
Explicar os contributos de uma alimentação saudável para prevenir doenças cardiovasculares e cancros. Identificar os benefícios de determinados alimentos de acordo com os principais órgãos do corpo humano.
Estratégias Pedagógicas
Estratégias para a mudança – Dicas para uma alimentação saudável

Riscos individuais, familiares e sociais de hábitos alimentares incorretos

A alimentação, para além de ser uma necessidade fundamental do ser humano, é um dos elementos do estilo de vida mais determinante no estado de saúde das pessoas e das populações. **"Somos o que comemos"** é um velho aforismo que traduz bem este facto (Nunes e Breda, 2001). Uma dieta saudável, só por si, não dá garantias de boa saúde, mas constitui um contributo fundamental para prolongar a vida, evitar inúmeras doenças e o sofrimento humano que as acompanha (Loureiro, 1999).

Existem muitas doenças relacionadas com os comportamentos alimentares inadequados. Umas estão relacionadas com o excesso de alimentos, outras com a carência alimentar. O padrão alimentar tem vindo a refletir-se no perfil de doença da população ocidental, com o aumento da prevalência das seguintes doenças: a obesidade, a arteriosclerose e outras doenças cardiovasculares, os cancros alimentares (cólon, estômago, fígado), a diabetes *mellitus*, a hipertensão e a osteoporose, entre outras menos frequentes (WHO, 2003; Loureiro, 1999; Moreira, 1999; Carmo, 1999; Dixey *et al.*, 1999).

A **obesidade** corresponde a um aumento de reservas de lípidos armazenados no organismo sob a forma de triglicerídeos e tecido adiposo. Esta doença pode conduzir, entre outras, a desordens crónicas como a diabetes, a hipertensão, a níveis de colesterol elevados (podendo endurecer a parede interna das artérias) e a algumas formas de cancro. A Organização Mundial de Saúde (2002) assinala a obesidade – tal como os hábitos tabágicos e o abuso de álcool – como uma das dez principais doenças de risco para a saúde, porque está associada a graves doenças que podem

conduzir à morte. Reduz-se o risco de obesidade diminuindo a ingestão de calorias e aumentando a atividade física (Dixey *et al.*, 1999).

A **arteriosclerose** é o resultado da deposição de colesterol nas paredes internas das artérias, levando ao seu estreitamento ou mesmo à sua oclusão, dificultando a passagem do sangue. Como consequência ocorre uma deficiência na distribuição de nutrientes e de oxigénio às células dos órgãos afetados por esta patologia, podendo ocorrer a morte da zona que fica a jusante da parte obstruída. O desenvolvimento da arteriosclerose nas artérias do coração (coronárias) pode dar origem a doenças cardíacas, particularmente a angina de peito e o enfarte do miocárdio. A arteriosclerose nas artérias do cérebro pode provocar acidentes vasculares cerebrais (trombose e derrames, entre outros) e nos membros pode originar a necessidade da sua amputação. Esta patologia está muito relacionada com uma alimentação inadequada, rica em gorduras, particularmente saturadas e em colesterol, assim como com a deficiente ingestão de fibras.

Alguns tipos de **cancro**. Cerca de 75% dos cancros parecem estar associados a fatores relacionados com o estilo de vida, como alimentação, tabagismo e consumo de álcool. A alimentação é o maior fator de risco para os cancros do cólon, estômago e fígado (Holford, 2000). Segundo Dixey *et al.* (1999), 30% a 40% de tumores entre homens e 60% entre mulheres são atribuíveis à dieta. Há evidência robusta e consensual de que as carnes processadas, como o fiambre, o bacon, alguns enchidos, entre outros, são cancerígenos do tipo 1, ou seja, que provocam cancro em seres humanos.

A **diabetes** é um grupo de distúrbios metabólicos caracterizado pelo aumento de glicose plasmática devido a um défice de insulina ou, noutros casos, à pouca sensibilidade à insulina por parte das células. A insulina é uma hormona que possibilita a entrada de açúcar nas células. A diabetes tipo II (também conhecida como diabetes não-insulino-dependente ou diabetes do adulto) é a mais frequente, sendo responsável por 90% dos casos - entre 500 a 600 mil portugueses. Apesar de existir uma certa predisposição genética deve-se fundamentalmente a fatores alimentares (obesidade e uma alimentação industrializada) e ao sedentarismo (Fernández e Torrejón, 2000). Sendo o objetivo do tratamento manter o nível de açúcar no sangue nos valores normais e eliminar o açúcar em excesso presente no mesmo, a Direção Geral de Saúde (2000) refere ser possível atingi-lo por meio de um regime alimentar adequado, associado ou não a medicação.

A **hipertensão arterial** ocorre quando os valores da tensão arterial sistólica (TAS) são superiores a 140mm de Hg e/ou os de tensão arterial diastólica (TAD) superiores a 90mm de Hg. Várias investigações evidenciam uma correlação muito forte entre o consumo excessivo de sódio e a hipertensão arterial. Assim, as recomendações vão no sentido de não se ultrapassar o consumo de 4 a 6g de sal por dia (Garcia *et al.*, 2002). É sugerido, ainda, aos obesos que reduzam o peso, não só para reduzir a incidência de hipertensão, mas também para diminuir outros fatores de risco cardiovasculares (Garcia *et al.*, 2002).

A **osteoporose** é uma causa importante de incapacidade numa fase da vida mais avançada. A infância e a adolescência são ocasiões únicas para desenvolver ossos fortes e densos, tornando deste modo remota a possibilidade do seu aparecimento através de uma dieta rica em cálcio e da prática de atividade física. Em contraste, uma dieta rica em proteínas e em sal aumenta as possibilidades de perda de densidade óssea numa fase adulta e na velhice (Dixey *et al.*, 1999).

Vantagens de uma alimentação saudável

Uma boa alimentação é importante em todas as fases do ciclo de vida dos seres humanos, quer tenham ou não excesso de peso ou problemas de saúde derivados dos hábitos alimentares. A Organização Mundial de Saúde (WHO, 1998) reconhece a importância de uma boa alimentação na promoção da saúde e na proteção contra infeções e outras doenças. Vários estudos epidemiológicos demonstram que a alimentação é relevante para o estado de saúde, destacando-se vários argumentos que justificam a necessidade de uma alimentação saudável.

- Uma alimentação saudável ajuda as crianças a atingirem todo o seu potencial para a aprendizagem, pois a nutrição afeta o seu desenvolvimento intelectual e consequentemente a sua capacidade para aprender. A desnutrição debilita o desenvolvimento cognitivo e afeta negativamente as aptidões escolares, em crianças, pela diminuição da capacidade de concentração e de atenção. Além disso, a desnutrição prejudica o desenvolvimento físico das crianças e, em situações extremas, pode conduzir à morte.
- Fortalecimento do sistema imunitário. Uma boa nutrição permite que a população, em geral, e as crianças, em particular, tenham menor probabilidade de adoecer, já que fortalece o

sistema imunitário e, por isso, aumenta a resistência a doenças, particularmente as infeciosas.

- Uma alimentação correta na infância, para além de promover um desenvolvimento físico harmonioso, contribui para diminuir os problemas de saúde futuros. Se as crianças tiverem acesso a todos os nutrientes indispensáveis ao seu desenvolvimento físico, este será pleno e apenas a genética o poderá influenciar.
- Uma boa nutrição, desde o início da vida, contribui para uma vida adulta e velhice saudáveis. Em pessoas com uma alimentação adequada, as doenças agudas e crónicas tendem a ser menos frequentes, menos severas e de duração mais curta.
- A associação entre um maior rendimento desportivo a uma dieta equilibrada**.** A alimentação adequada otimiza o desempenho atlético porque reduz a fadiga, o que permite treinar por mais tempo ou ter uma recuperação mais rápida entre as sessões de exercícios. Por outro lado, permite, igualmente, reparar rapidamente lesões e pode reduzir as possibilidades de doença, o que pode interferir nos períodos de treino ou mesmo na redução da carreira do atleta (Wolinsky e Hickson, 2002).
- Uma alimentação saudável favorece a imagem corporal, melhorando a aparência e por isso o bem-estar físico, o que é de extrema importância para uma autoestima positiva e promove o bem-estar psicológico e social ao longo da vida, podendo, inclusive, reduzir os riscos de doenças relacionadas com o comportamento alimentar, tais como a bulimia e a anorexia, que podem conduzir à morte.
- As mulheres beneficiam particularmente da adoção de padrões alimentares corretos pois muitos dos problemas associados ao parto, tais como hemorragias e infeções, e à amamentação podem ser reduzidos significativamente por uma alimentação adequada no início da vida.
- Uma boa alimentação favorece a economia individual, familiar e social, uma vez que crianças bem nutridas tornar-se-ão adultos mais saudáveis e, por isso, poderão ser claramente mais produtivas e capazes de assumir com mais facilidade as suas responsabilidades como cidadãos. Por conseguinte, melhoram a sua própria economia e a das suas famílias contribuindo também para a economia nacional.

Semelhanças entre alimentos e órgãos

Todos nós sabemos que determinados alimentos são importantes para o nosso organismo. Se consumidos com alguma regularidade trazem benefícios para o nosso corpo, como **macro e micronutrientes essenciais,** mas se analisarmos mais profundamente conseguimos perceber que há alimentos mais específicos para determinados órgãos do corpo humano e a sua semelhança com estes é notória.

Não é por acaso que desde pequenos que ouvimos dizer:

"Come cenoura que faz bem aos olhos"

"Tens de comer espinafres para ficares forte como o popeye"

Todas estas frases têm uma razão de ser e não são apenas ditados populares. Muitas destas semelhanças baseiam-se na cor, textura, forma, aroma e mesmo na forma como são cultivadas. Estas semelhanças podem parecer coincidência, mas baseiam-se numa sabedoria antiga: ***A doutrina das Assinaturas*** afirma que todas as frutas, vegetais e plantas têm um certo padrão que se assemelha com um órgão do corpo, e que esse padrão é como se fosse um sinal ou uma assinatura que a fruta, vegetal ou planta é benéfico para nós. Esta doutrina tornou-se popular devido a um médico suiço, alquimista e filósofo, considerado o pai da medicina moderna chamado de **Paracelso** (1493-1541).

CENOURA E O OLHO



Uma fatia de **cenoura** tem uma semelhança notória com a **íris do olho**. As cenouras são ricas em vitaminas e antioxidantes como o betacaroteno. Este reduz o risco do desenvolvimento de cataratas, protege contra a degeneração macular e fortalece a irrigação sanguínea necessária para o normal funcionamento desta região.

TOMATE E O CORAÇÃO



O **tomate** para além da sua cor, tem camaras no seu interior assemelhando-se em muito com o **coração**. É rico num antioxidante o licopeno que reduz o risco de doenças cardiovasculares. Este se for consumido com uma gordura saudável aumenta a sua capacidade de absorção (por isso é que é tão comum juntar ao azeite cru ao tomate).

BATATA DOCE VS PÂNCREAS



Outro alimento que se assemelha muito é a **batata doce** com o **pâncreas**. Sabe-se que a batata doce é rica num antioxidante o betacaroteno que ajuda a proteger todos os tecidos do corpo, especialmente o do pâncreas, prevenindo a sua degeneração. O pâncreas tem um papel fundamental na digestão, pois produz enzimas que ajudam nesse processo. Por outro lado, produz a hormona insulina e o glucagon que desempenham um papel fundamental na regulação dos níveis de açúcar no sangue. A batata doce ajuda o pâncreas a desempenhar essa função. Libertando açucares gradualmente, diminuindo a resistência à insulina, sendo considerado um alimento ideal para diabéticos.

ABACATE E ÚTERO



A forma do **abacate** assemelha-se à forma do **útero** e na realidade ajuda na sua saúde reprodutiva. O abacate é uma boa fonte de ácido fólico. Estudos indicam que o folato reduz o risco displasia cervical que é uma condição pré-cancerígena e ajuda a regular as hormonas femininas

pois regula os níveis de estrogénio e ajuda na gestação. Um dado curioso é que um abacate demora exatamente 9 meses a formar-se (desenvolvimento, crescimento e maturação).

FEIJÕES E RINS



Os **feijões** têm o formato idêntico aos **rins** e de facto estes ajudam a manter uma boa função renal e a regular a pressão arterial. Os rins são de extrema importância no nosso corpo pois ajudam excretar as substâncias tóxicas do nosso organismo.

AIPO E OS OSSOS



O **Aipo** é extremamente parecido com os **ossos** do corpo humano. Ambos são compostos por 23% de sódio. O Aipo é também composto por um mineral silício que faz parte da estrutura molecular dos ossos. Este fortalece e dá resistência.

BANANA E O SORRISO



Coincidências ou talvez não, mas o formato da **banana** assemelha-se em muito ao nosso **sorriso.** Sabe-se que a banana é constituída por um aminoácido o Triptofano que juntamente com a vitamina B3, a niacina e o magnésio ajuda a sintetizar a serotonina. Este neurotransmissor é importante nos processos bioquímicos do sono e do humor, logo contribui para a sensação de bem-estar e de felicidade.

NOZES E O CÉREBRO



Não é por acaso que se diz que as **nozes** fazem bem ao **cérebro**, a sua semelhança é incrível. Este alimento é rico em ácidos gordos essenciais omega-3. Ajudam na formação de neurotransmissores necessários para o funcionamento do cérebro. Há estudos que indicam que pode ajudar a prevenir casos de demência e outros recentes que mostram que uma dieta que inclui nozes pode ter um efeito benéfico em reduzir o risco, atrasando o início e retardando a progressão da Doença de Alzheimer.

CEBOLA E CÉLULAS



Uma **cebola** é composta por camadas e assemelha-se a uma **célula humana**. Estudos comprovam que a cebola ajuda a limpar os materiais excedentes das células do corpo, têm propriedades anti-inflamatórias e anticancerígenas. Para além disso produz lágrimas que ajudam a limpar a capada epitelial dos olhos.

GENGIBRE E O ESTÔMAGO



A raiz de **gengibre** apresenta muitas vezes o formato do **estômago**. Um dos principais benefícios do gengibre é ajudar na digestão. A medicina chinesa usa o gengibre como tónico e calmante do estômago para casos de enjoo e vómitos. A verdade é que esta raiz é rica em fitoquímicos extremamente benéficos para este órgão.

FIGOS E OS TESTÍCULOS/ESPERMATOZÓIDES



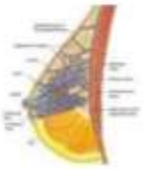
Quando os **figos** crescem ficam pendurados aos pares, e assemelham-se a **dois testículos**. Eles apresentam no seu interior estames e pistilos semelhantes aos **espermatozoides**. Sabe-se que os constituintes deste fruto têm a capacidade de aumentar a mobilidade e o número do esperma masculino, bem como prevenir a infertilidade.

COGUMELO E A ORELHA



Outro alimento curioso é o **cogumelo**. Quando cortado a meio assemelha-se ao **ouvido humano**. De facto, o consumo deste vegetal pode melhorar a audição. Isto porque o cogumelo é rico em vitamina D. Esta vitamina ajuda a fortalecer os ossos, mesmo os mais pequenos presentes nos ouvidos e que ajudam a transmitir o som ao cérebro.

LARANJA/TORANJA E AS GLÂNDULAS MAMÁRIAS



Uma **laranja** fatiada tem uma semelhança incrível com as **glândulas mamárias**. De fato a laranja ajuda no movimento da linfa dentro das mamas. A **toranja e a laranja** apresentam substâncias chamadas limonóides que ajudam a inibir o desenvolvimento de células cancerígenas.

VINHO TINTO E O SANGUE



O **vinho tinto** é rico em antioxidantes e polifenóis que para além da sua cor semelhante à do **sangue** ele ajuda a reduzir o colesterol LDL, combatendo doenças cardiovasculares. O vinho também tem componentes anticoagulantes que ajudam a reduzir os coágulos sanguíneos prevenindo AVC e doenças cardíacas.

Claro que todos os alimentos que a natureza nos dá desempenham funções importantes no nosso organismo, por essa razão é preferível que a nossa alimentação seja composta por 80% de alimentos vindos diretamente da natureza.

Estratégias para mudar – Dicas para uma alimentação saudável

- ✓ **Planear as refeições e repensar as tuas escolhas alimentares:** socorre-te da roda dos alimentos ou da pirâmide alimentar para planeares diariamente as tuas refeições.
- ✓ **Fazer refeições ligeiras ao longo do dia:** não passar longos períodos de tempo sem comer, mais do que 3h/3h30 sem comer durante o dia, isto irá impedir períodos de hipoglicémia (taxa de açúcar baixa no sangue);
- ✓ **Comer uma grande variedade de comida:** escolher diferentes tipos de comida todos os dias ajuda-nos a assegurar todos os nutrientes de que necessitamos.
- ✓ **Manter um peso ideal ou saudável:** o excesso de peso pode aumentar o risco de doenças cardiovasculares.
- ✓ **Escolher uma dieta baixa em gorduras, gorduras saturadas e colesterol:** a gordura contém mais que o dobro das calorias de uma quantidade igual de proteínas ou hidratos de carbono e aumenta o risco de doenças cardíacas e certos tipos de cancro. Por isso, opta por guisados e grelhados em vez dos fritos e assados, evita consumir produtos processados, como fiambre, presunto ou mortadelas; opta por lacticínios com baixo teor de gordura e retira a pele das carnes das aves e não ingiras toda a gordura visível das carnes;
- ✓ **Escolher uma alimentação com bastantes vegetais, frutas e cereais:** esses alimentos fornecem vitaminas, minerais, fibras e hidratos de carbono complexos.
  - Come sopa ao almoço e ao jantar, isto irá permitir que ingiras uma boa dose de vegetais;
  - Acompanha os teus pratos com vegetais ou legumes salteados, para tal tenta ter sempre legumes no frigorífico ou congelador;
  - Levar sempre uma peça de fruta ou frutos secos na mochila ou carteira, às quais possas recorrer se tiveres fome;
  - Come frutas como sobremesa ou ao lanche. Ou adiciona frutas aos teus cozinhados, por exemplo, nas saladas;
  - Se precisas de aumentar o consumo de cereais, opta por pães ou massas integrais e adiciona arroz integral ou cevada cozida na sopa;

- ✓ **Usar açúcar apenas com moderação:** fornecem pouco nutrientes e para contribuir para o aparecimento de caries dentárias. Lembra-te que as bolachas, refrigerantes e molhos (maionese, ketchup, etc.) são ricos em açúcares;
- ✓ **Usar sal apenas com moderação:** o seu uso excessivo pode contribuir para aumentar a hipertensão e as doenças vasculares. Substitui o sal por ervas aromáticas e especiarias.
- ✓ **Beber água ao longo do dia:** faz pausas regulares para beber água e mantem a garrafa de água sempre perto de ti.
- ✓ **Ler os rótulos dos alimentos:** verifica cuidadosamente os rótulos dos alimentos antes de comprares ou consumires.

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Sessão 4 – Rótulos dos alimentos e plano nutricional

Objetivos específicos

Explicar as recomendações atuais de uma alimentação saudável;
Usar a informação nutricional presente nos rótulos dos alimentos para fazer escolhas saudáveis.
Desenvolver um plano nutricional equilibrada e saudável

Estratégias Pedagógicas

Website Health - Plataforma de informação alimentar em Portugal
App Health – Fat Secret

Como ler rótulos de alimentos para fazer escolhas mais saudáveis

GUIÃO VÍDEO (3 minutos e 27 segundos)



Tu costumas ler os rótulos dos alimentos quando vais fazer as tuas compras?

Senão também não te preocupes porque não és o único a não ter esse esse hábito. Portanto vamos ter algumas dicas para quem diz não a ler os rótulos dos alimentos.

Para começar: É importante sabermos o que é obrigatório constar nos rótulos dos alimentos. A primeira coisa seria a data de validade; depois teríamos os ingredientes; as gramas e também a informação nutricional do produto.

Então nós vamos começar com um alimento que é consumido por muitas pessoas: o pão.

Portanto, vamos aqui pegar no pão e vamos ver todos as informações que constam neste pão. Primeiro, temos: a data de validade, todos os ingredientes que compõem, as gramas que contém este produto.

Porque é que as gramas do produto, é importante? É importante por causa da informação nutricional porque a informação nutricional é medida em gramas e, por isso, é importante nós sabemos qual é a gramagem, as doses. Porque na informação nutricional aparece por quantidade

de produto. Por exemplo, um iogurte normalmente tenho a informação nutricional para 100 gramas, no entanto, o iogurte tem mais ou menos 125 gramas, ou seja, quando não estamos a ler informação nutricional de um iogurte não corresponde exatamente a quantidade que presente, é mais um pouco. Assim, muitas vezes olhamos a informação nutricional e pensamos que estamos ali a informação nutricional relativamente ao produto como um todo e não é verdade.

Em segundo lugar, é importante não olharmos para os ingredientes. Muitas vezes, os rótulos dos alimentos dizem que é natural, que que não tem conservantes, que não tem corantes. No entanto, quando observarmos a lista de ingredientes e há uma série de ingredientes que nós nem sequer sabemos quais são e até temos dificuldades em ler o nome deles. Quando vamos comprar um alimento e se ele tiver na lista de ingredientes nomes que nós não conhecemos, que não sabemos o que é que significa, quer dizer que é um alimento bastante processado e, por si só, é um alimento que nós devemos evitar. Por isso, aqui a regra: é quanto menos ingredientes melhor é o produto. Por exemplo, para fazermos pão apenas precisamos de farinha, água e sal e, no limite, levedura. Neste sentido, também é importante ver a quantidade de sal que tenho no produto, principalmente aquelas pessoas que são hipertensas, por exemplo.

Espero que este vídeo te tenha ajudado a entender a importância de ler os rótulos dos alimentos quando nós vamos ao supermercado. Portanto, fiquem atentos e comecem realmente a ganhar o hábito de ler os rótulos. É mesmo muito importante

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Website Health

Através da PLATAFORMA DE INFORMAÇÃO ALIMENTAR EM PORTUGAL, elabora um plano alimentar personalizado equilibrado e saudável

http://portfir.insa.pt/

App Health

É uma plataforma, na qual também podes descarregar a uma aplicação que te ajudam a controlar o número de calorias que ingeres e a teres um plano alimentar saudável.

Neste website também poderás encontrar o valor nutricional de vários alimentos e marcas correspondentes.

https://www.fatsecret.pt/Default.aspx

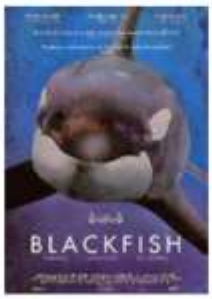
Sugestão de documentários



1 | Earthlings ou Terráqueos é um documentário de 2005 e que fala sobre uso dos animais para proveito humano. Aviso que é um documentário extremamente **explicito, mas real**. O documentário aborda 5 temas principais: **Animais de estimação, Alimentação, Indústria do vestuário, Diversão e Desenvolvimento científico.**



2 | A carne é fraca é um documentário de 2005 e fala sobre os impactos ambientais no consumo e produção da carne e mostra toda a trajetória dessa produção. O objetivo é levar à reflexão sobre as consequências do seu consumo, tanto para o ambiente, para a saúde, como os direitos dos animais.



3 | Blackfish é um documentário norte-americano de 2013 e centra-se na história de Tilikum (uma Orca macho capturada nas águas do Atlântico Norte em 1983) e que foi vendida a um dos maiores parques aquáticos do mundo o SeaWorld. A história de Tilikum é mundialmente conhecida após matar uma das suas treinadoras durante um espetáculo. Ao longo do documentário vamos conhecendo toda a história documentada e comentada pelos ex treinadores.



4 | Forks over Knives é um documentário de 2011 e aborda um dos grandes problemas da alimentação moderna, o consumo excessivo de produtos de origem animal. O documentário mostra pesquisas realizadas ao longo de vários anos sobre o cancro, diabetes e doenças coronárias.



5 | Food Matters é um documentário de 2008 e que fala essencialmente sobre saúde e alimentação, ao mostrar que grande parte das doenças modernas estão intimamente ligadas à forma como nos alimentamos, ao tipo de agricultura excessiva, aos solos e à forma como o alimento chega à nossa mesa.



6| Cowspiracy é um documentário de 2014 e examina os impactos da pecuária e da pesca na natureza, e investiga como as organizações ambientais lidam com a questão.



7| Super size me é um documentário de 2004 e documenta o efeito drástico do consumo de fast food no bem-estar físico e psicológico e explora a influência corporativa da indústria de fast food, incluindo como ela encoraja a má nutrição para o seu próprio lucro.



8| What the Health é um documentário de 2017 que critica o impacto do consumo de carne, peixe, ovos e laticínios na saúde e questiona as práticas das principais organizações de saúde e farmacêuticas.



9| Fed Up é um documentário de 2014 onde o tema central é a alimentação, o açúcar, a gordura e toda a estrutura que está por detrás destes vícios alimentares.



10| Food Choices é um documentário de 2016 onde se explora o impacto que a escolha dos alimentos tem na saúde das pessoas, na saúde de nosso planeta e na vida das outras espécies.



3º Alimentos processados

- Alimentos in natura com adição de sal, açúcar, outra substância de uso culinário como vinagre ou alguma gordura.
- Devem ser consumidos em pequenas quantidades.
- Exemplo: pães artesanais, queijo, enlatados, entre outros.

4º Alimentos ultraprocessados

- Alimentos transformados pela indústria e constituídos por ingredientes como aditivos, óleos e gorduras, açúcares refinados e substâncias sintetizadas em laboratório. Têm uma percentagem mínima de alimentos naturais ou integrais na sua composição.
- Estes alimentos devem ser evitados ou o seu consumo reduzido.
- Costumam ter um prazo de validade longo.
- Exemplo: bolachas, batatas fritas de pacote, refrigerantes, massas instantâneas, gelados, refeições pré-feitas e muitos outros (a grande maioria dos alimentos que encontramos no supermercado).

3

- **Denominação do alimento**
- **Conteúdo líquido**
- **Origem**
- **Identificação do lote**
- **Informação nutricional (valor energético, lípidos, ácidos gordos saturados, hidratos de carbono, açúcares, proteínas, e a quantidade de sal)**
- **Lista de ingredientes completa do alimento (incluindo alergénios e vestígios de outros produtos)**
- **Prazo de validade.**

Com exceção dos alimentos comprados avulso (como frutas, legumes, verduras, carne, peixe, pães de padaria, bolos de padaria, entre outros) nestes apenas é obrigatória a designação da sua origem.

4

EMBALAGEM DE UM PRODUTO ALIMENTAR

- ***Parte da frente***
  - Geralmente composta por:
    - Nome do produto
    - Uma imagem ou imagens representativas do produto
    - Quantidade líquida contida na embalagem (volume: l, cl ou ml) e (massa: kg ou g)
    - Algumas frases como: integral, natural, light, energético, cantável, fonte de vitaminas e minerais, sem glúten, entre outras.
- ***Validade***
- ***Informação/tabela nutricional***
- ***Lista de ingredientes***



5

INFORMAÇÃO/TABELA NUTRICIONAL

Calorias: proteínas + hidratos de carbono + gorduras

Lipidos (Gorduras) - 1 g de lipidos = 9 kcal(calorias)

Hidratos de carbono - 1g de hidratos de carbono = 4 calorias

Fibra - Alimentos ricos em fibras deveram ter por cada 100g pelo menos 6 g de fibra.

- Segundo a Organização Mundial de Saúde, as **Mulheres** devem consumir cerca de **25 g de fibra por dia** e os **Homens** cerca de **30 g por dia.**



6


INFORMAÇÃO/TABELA NUTRICIONAL
Proteína - 1g de proteína = 4 calorias
- Fonte de proteínas – no mínimo 6g por porção
- Alto teor de proteína – no mínimo 12g por porção
- Uma pessoa sedentária 0.8 g de proteína para cada kilo do seu peso e uma pessoa ativa 1.4 g de proteína por cada kilo do seu peso.
Sal = (Cloreto + Sódio) - 1g de sal = 400 mg de sódio
- Segundo a OMS, menos de 1500mg de sódio numa dieta de 1500 calorias. Máximo 2300mg por dia. O que equivale ao máximo 5 g de sal por dia.
- Rácio do limite de sal – deverá ser 1:1 por cada 100 gramas o limite de sal deverá ser 1g ou inferior.
1 - Porção
2 - calorias
3 - gordura
4 - Hidratos (açúcar)
5 - fibra
6 - proteínas
7 - Sal e sódio


INFORMAÇÃO/TABELA NUTRICIONAL
Verificar a tabela nutricional sem cálculos: alimentos com baixo teor de gordura têm até 3g por porção de produto:
- exemplo da imagem – em 100g de produto temos 20g de gordura, das quais 14g são saturadas (proveniente da gordura de palma)
- Na lista de ingredientes – é o 2º ingrediente (gordura vegetal de palma)
- Segundo a Organização Mundial de Saúde, o consumo de açúcar adicionado não deve ser superior a 10% da calorias totais consumidas, o que corresponde a 50g por dia.
Nota: analisar o alimento apenas pela tabela nutricional não é suficiente para perceber se o alimento é saudável ou não.
1 - Porção
2 - calorias
3 - gordura
4 - Hidratos (açúcar)
5 - fibra
6 - proteínas
7 - Sal e sódio

INFORMAÇÃO / TABELA NUTRICIONAL

- Como saber se um alimento é rico em açúcar?
- Fazendo a comparação entre os valores dos hidratos de carbono totais com o açúcar.
- 125g de iogurte natural açucarado correspondem a 14.4g de hidratos de carbono do quais 14.4g são açúcar. (todos os hidratos equivalem a açúcar).
- 4 g de açúcar equivalem a 1 colher de chá de açúcar o que significa 14.4g de açúcar que equivale a 3,5 colheres de chá de açúcar adicionado.

INFORMAÇÃO NUTRICIONAL MÉDIA	POR 100 g DE PRODUTO	POR PORÇÃO (125 g)	%DR*	DR*
ENERGIA	319 kJ 76 kcal	400 kJ 95 kcal	4,8	2000 kcal
LÍPIDOS	2 g	2,5 g	3,6	70 g
DOS QUAIS ÁCIDOS GORDOS SATURADOS	1,3 g	1,6 g	8,1	20 g
HIDRATOS DE CARBONO	11,5 g	14,4 g	5,5	260 g
DOS QUAIS AÇÚCARES	11,5 g	14,4 g	16,0	90 g
PROTEÍNAS	3,0 g	3,8 g	7,5	50 g
SAL	0,1 g	0,1 g	2,1	6 g

LISTA DE INGREDIENTES

O ideal:



- *Alimentos com apenas 1 ingrediente* (Alimentos minimamente processados e com apenas o ingrediente real (o alimento in natura ou refrigerado, ou congelado, ou seco, ou moído ou fermentado), esta deveria ser a base da nossa alimentação. Se o alimento vier numa embalagem a sua lista de ingredientes deve conter 1 ou 2 ingredientes no máximo)
- *Lista de ingredientes curta* (Regra geral um alimento que tenha uma longa lista de ingredientes é quase de certeza um produto ultraprocessado. Quanto mais curta a lista de ingredientes melhor deverá ser o produto mas claro confirmar sempre o conteúdo da lista, **isto não é uma regra**)
- Ingredientes conhecidos (Os alimentos que queremos consumir e alimentar o nosso corpo devem ter nomes conhecidos e que usamos habitualmente na cozinha, ingredientes com nomes, letras e números estranhos ou que sejam difíceis de pronunciar, regra geral tais aditivos e fazem parte dos alimentos ultraprocessados)
- Ingredientes reais (Devemos preferir alimentos que tenham o alimento real em vez de, a base de, extracto de, isolados de, modificado ou alterados)


O ideal:
Alimentos com apenas 1 ingrediente
Lista de ingredientes curta
Ingredientes conhecidos
Ingredientes reais
Ingredientes a evitar:
Aditivos alimentares:
Corantes (E100 até E180)
Conservantes (E200 até E252)
Antioxidantes (E3...)
Emulsionantes, espessantes e estabilizantes (E4...)
Intensificadores de sabor (E620 até E635)
Edulcorantes artificiais (E950 até E969)
Açúcar (Açúcar, High fructose corn syrup ou xarope concentrado de milho, Xarope de glucose, xarope de glucose-frutose, Glucose, Maltose, Sucrose, Dextrose, Maltodextrina, Açúcar invertido)
Gorduras (gordura hidrogenada, gordura parcialmente hidrogenada, gordura vegetal hidrogenada, óleos vegetais refinados)
Cereais refinados (farinhas (que não mencione integral ou grão), farinhas enriquecidas)


Informações nutricionais
Ingredientes
Com cereais integrais
Farinha de cereais 51,2% [trigo integral (31,1%), arroz (20,1%)], açúcar, xarope de glucose, xarope de açúcar invertido, extrato de malte de cevada, óleo de palma, humidificante (glicerol), morangos (4%), xarope de açúcar amarelo parcialmente invertido, sal, aromatizante [aroma de morango], emulsionante (lecitina de girassol), reguladores de acidez (fosfato trissódico, ácido cítrico), antioxidante (tocoferois).
Vitaminas e Minerais: Niacina, ácido pantoténico, riboflavina (B2), ácido fólico (folacina), cálcio e f
Pode conter vestígios de leite e de soja.
Fitness



- Compara as listas de ingredientes e os rótulos nutricionais, identifica a barra de cereais que apresenta características nutricionais mais saudáveis. Serão os barras de cereais de supermercado um snack saudável?

- Verificar sempre as porções do que realmente vamos consumir.
- Mais do que ver se o alimento é rico em gordura é importante verificar a fonte de gordura (lista de ingredientes).
- A quantidade de açúcar deve ser sempre verificada. Retenha-se a comparação entre a quantidade de açúcar para a quantidade total de hidratos de carbono. Ter em mente 5g de açúcar equivalem a 1 colher de sopa de chá. O máximo de açúcar adicionado que devemos comer por dia são 30g.
- Quanto maior a quantidade de fibra, melhor.
- O Sal é um dos pontos mais importantes da tabela nutricional e deve ser SEMPRE verificado. Por cada 100grs de produto o limite de sal deverá ser 1g ou inferior. A quantidade máxima de sal que devemos consumir por dia será de 5g.
- A lista de ingredientes, deve ser SEMPRE verificada.
- A quantidade de ingredientes usada encontra-se de forma decrescente na lista (da maior quantidade para menor quantidade).
- A lista de ingredientes deverá ser curta (depende do tipo de alimento), com ingredientes conhecidos e deverá ter uma grande percentagem do alimento real.
- Os primeiros ingredientes deverão ser os do tipo de alimento que estamos a comprar.
- Evitar (sempre que possível) alimentos com aditivos alimentares (com especial atenção aos corantes, conservantes, intensificadores de sabor e adoçantes artificiais).
- Mesmo que na embalagem venha descrito (sem açúcar, sem gordura, integral, sem glúten, sem ovo ou sem aquilo) devemos sempre verificar na Lista de ingredientes.



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Avaliação do Módulo

Gostaríamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

https://forms.gle/JxTh6wKL5R8ZEoiH6

Módulo 5 – Move-te

Introdução

Olá!

Bem-vinda/o ao módulo 5, módulo no qual iremos abordar as questões da prática de exercício físico e promover a sua prática quotidianamente em contexto académico!

Não fiques sentado, Move-te! Esta é a mensagem que te quero passar neste módulo!

Que diminuias o tempo que passas sentado em frente à televisão ou computador. Não precisas de equipamentos sofisticados, de roupas especiais ou de *personal trainer*. Apenas optar por andar a pé, em vez de utilizar o carro; optar por subir escadas, em vez de usar o elevador.

A população portuguesa é sedentária e os estudantes universitários não são exceção. Apesar de todos termos conhecimentos das doenças associadas ao sedentarismo.

Para protegeres a tua saúde não precisas de ser um/a atleta de alta performance nem de ser um/a fanático/a por exercício físico. Tudo o que precisas é tornar-te mais ativo/a.

Neste módulo, irei apresentar as recomendações atuais acerca da prática de exercício físico, explorar as barreiras comuns a essa pratica e fornecer diretrizes para entrares em forma e te exercitares com segurança.

Sessão 1 – Epidemiologia da atividade física

Objetivos específicos

Explicar os componentes da aptidão física;
Analisar a pirâmide da atividade física;
Identificar os indicadores do nível de atividade física;
Explicar os benefícios do exercício físico enquanto estratégia de prevenção de saúde;
Conhecer o estado atual e as tendências evolutivas dos comportamentos sedentários e de prática de exercício físico.

Estratégias Pedagógicas

Campus Focus – Comportamentos sedentários e prática de exercício físico no Campus
Top 10 – Benefícios físicos da prática de exercício físico
Top 10 – Benefícios psicológicos da prática de exercício físico



APTIDÃO FÍSICA

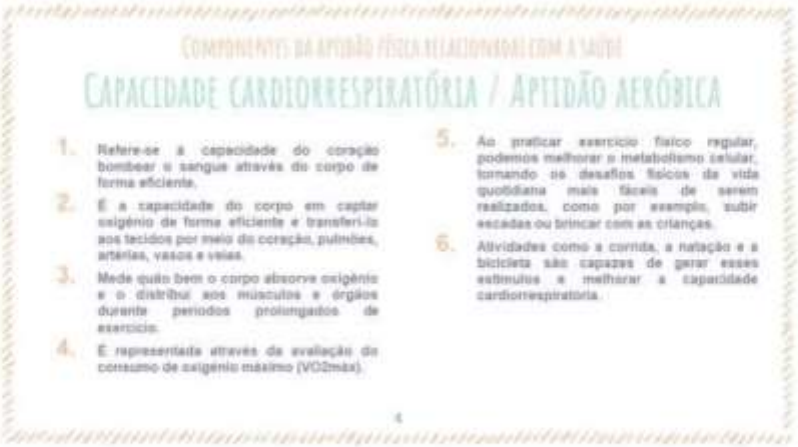
- capacidade para responder a atividades físicas rotineiras com energia suficiente.
- conjunto de atributos que decorrem da interação entre o património genético e a prática de atividades físicas e desportivas.

2

COMPONENTES DA APTIDÃO FÍSICA

- Capacidade Cardiorrespiratória;
- Composição corporal;
- Aptidão Musculoesquelética:
  - Força Muscular;
  - Flexibilidade;
  - Resistência Muscular

Agilidade;
Potência;
Equilíbrio;
Coordenação;
Tempo de Reação;

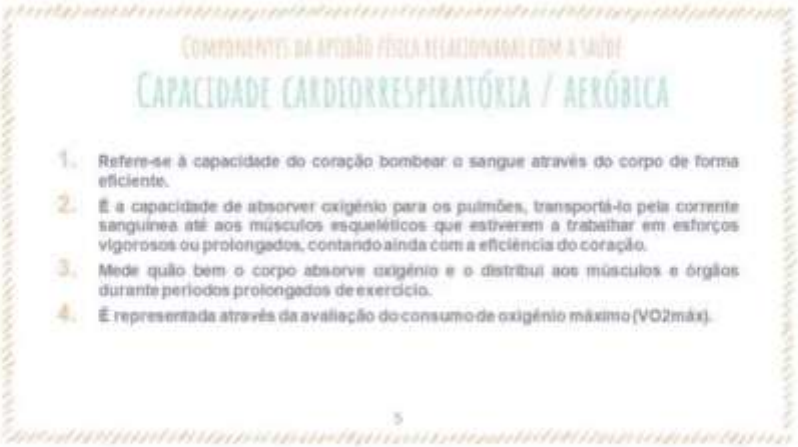


COMPONENTES DA APTIDÃO FÍSICA RELACIONADAS COM A SAÚDE

CAPACIDADE CARDIORRESPIRATÓRIA / APTIDÃO AERÓBICA

1. Refere-se à capacidade do coração bombear o sangue através do corpo de forma eficiente.
2. É a capacidade do corpo em captar oxigénio de forma eficiente e transferi-lo aos tecidos por meio do coração, pulmões, artérias, vasos e veias.
3. Mede quão bem o corpo absorve oxigénio e o distribui aos músculos e órgãos durante períodos prolongados de exercício.
4. É representada através da avaliação do consumo de oxigénio máximo (VO2máx).
5. Ao praticar exercício físico regular, podemos melhorar o metabolismo celular, tornando os desafios físicos da vida quotidiana mais fáceis de serem realizados, como por exemplo, subir escadas ou brincar com as crianças.
6. Atividades como a corrida, a natação e a bicicleta são capazes de gerar esses estímulos e melhorar a capacidade cardiorrespiratória.

4


COMPONENTES DA APTIDÃO FÍSICA RELACIONADAS COM A SAÚDE
CAPACIDADE CARDIORRESPIRATÓRIA / AERÓBICA
1. Refere-se à capacidade do coração bombear o sangue através do corpo de forma eficiente.
2. É a capacidade de absorver oxigénio para os pulmões, transportá-lo pela corrente sanguínea até aos músculos esqueléticos que estiverem a trabalhar em esforços vigorosos ou prolongados, contando ainda com a eficiência do coração.
3. Mede quão bem o corpo absorve oxigénio e o distribui aos músculos e órgãos durante períodos prolongados de exercício.
4. É representada através da avaliação do consumo de oxigénio máximo (VO2máx).
5


COMPONENTES DA APTIDÃO FÍSICA RELACIONADAS COM A SAÚDE
CAPACIDADE CARDIORRESPIRATÓRIA / AERÓBICA
BENEFÍCIOS DE UMA BOA CAPACIDADE CARDIORRESPIRATÓRIA
Uma boa aptidão aeróbia está associada à redução de fatores de risco clínicos para o desenvolvimento de doenças cardiovasculares e de síndrome metabólica. Ou seja, quanto maior for a capacidade cardiorrespiratória, menor será o risco de desenvolver uma variedade de doenças.
– O nível de aptidão cardiovascular está ligado ao risco de insuficiência cardíaca e à probabilidade de hospitalização por insuficiência cardíaca no futuro.
– Um nível baixo de aptidão cardiovascular é um forte indicador de risco de acidente vascular cerebral.
– Otimizar a aptidão cardiorrespiratória antes de intervenções cirúrgicas pode aumentar as chances de sucesso do procedimento, já que diminui o risco cirúrgico e da mortalidade, além de melhorar a capacidade de recuperação pós-cirúrgica.
– Prevenção de doenças degenerativas e do sistema venoso;
– Fortalecimento do sistema imunológico;
– Otimização da capacidade psíquica e de recuperação;
– Redução do stress e estados depressivos;
– Aumenta a capacidade de concentração e memorização;
– Melhora a circulação sanguínea cerebral.
6

COMPONENTES DA APTIDÃO FÍSICA RELACIONADAS COM A SAÚDE

COMPOSIÇÃO CORPORAL

1. O peso corporal pode ser dividido em diferentes compartimentos relacionados com a sua composição, que incluem: massa gorda e massa magra.
2. A massa corporal magra é composta por músculos, pele, órgãos e ossos. Uma composição corporal saudável reduz de forma significativa os riscos de desenvolver várias doenças, entre elas as cardiovasculares.
3. O cuidado com a gordura corporal não deve ser visto como uma preocupação relacionada à estética, mas sim à saúde.

7

COMPONENTES DA APTIDÃO FÍSICA RELACIONADAS COM A SAÚDE

COMPOSIÇÃO CORPORAL

BENEFÍCIOS DE UMA COMPOSIÇÃO CORPORAL SAUDÁVEL

Uma adiposidade em excesso está associada a níveis mais elevados de alguns fatores de risco para doenças cardiovasculares e a um maior risco para o desenvolvimento de diabetes tipo 2 em crianças e adolescentes:

- Crianças obesas têm uma elevada probabilidade de serem adolescentes obesos, existindo ainda uma probabilidade moderada de serem adultos obesos;
- Crianças obesas têm uma maior probabilidade de ter doença arterial coronária, hipertensão, colesterol alto e diabetes tipo 2 na idade adulta;
- Um aumento adequado da densidade mineral óssea durante a juventude diminui o risco de osteoporose em idades mais avançadas.
- Estudos recentes demonstram uma associação entre a adiposidade nas crianças e a presença de fatores de risco para insuficiência cardíaca;

8

Aptidão Musculoesquelética: Força Muscular

1. Refere-se à capacidade de um músculo ou grupo muscular exercer força;
2. Refere-se à quantidade de força que um grupo muscular pode produzir em um esforço total.
3. A força muscular é específica do grupo muscular trabalhado e é por isso que um programa de treinamento de força bem equilibrado deve trabalhar todos os principais grupos musculares.
4. Com o passar dos anos, vamos perdendo massa muscular e isso condiciona diretamente a na nossa capacidade de locomoção e equilíbrio.
5. Exercícios como a musculação e o CrossFit podem auxiliar a aumentar a força muscular.

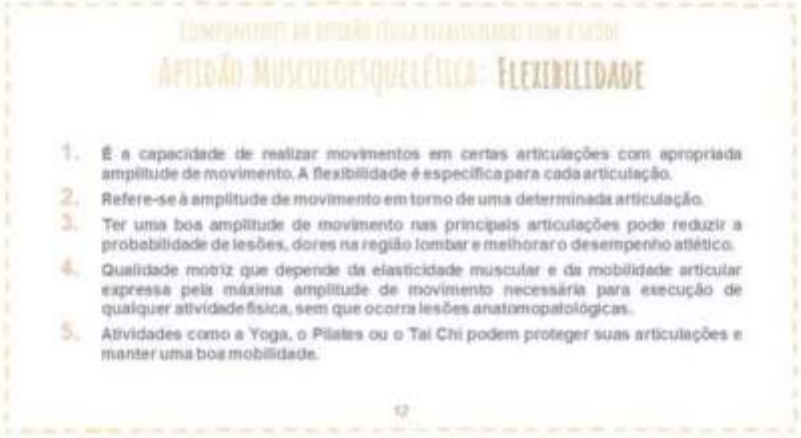
9

Aptidão Musculoesquelética: Resistência Muscular

1. É a capacidade de um músculo ou grupo muscular resistir à fadiga ao exercer determinada força externa durante algum tempo, ou durante um determinado número de repetições;
2. É a capacidade dos músculos realizarem contrações repetitivas por um período de tempo, com várias repetições.
3. É a capacidade de um grupo muscular de se contrair continuamente contra uma determinada resistência. Ter músculos resistentes é de extrema importância para manter uma boa postura por longos períodos do dia. Isso porque nossos músculos paravertebrais são responsáveis por sustentar a nossa coluna e manter uma postura adequada.

10


COMPONENTES DA APTIDÃO FÍSICA RELACIONADOS COM A SAÚDE
APTIDÃO MUSCULOESQUELÉTICA
BENEFÍCIOS DE TER ELEVADOS NÍVEIS DE FORÇA E DE RESISTÊNCIA MUSCULAR
A força e a resistência muscular também são essenciais para permitirem que os indivíduos realizem atividade quotidianas com conforto e segurança
— Prevenção do desenvolvimento de astrose e osteoporose, principalmente em idosos;
— Manutenção e autonomia em idades avançadas (profilaxia de quedas);
— Em crianças, a aptidão muscular está associada com melhor autoestima, saúde óssea, risco reduzido de doença cardiovascular e fatores de risco metabólicos.
— Melhor perfil cardiovascular;
— Perfil de composição corporal mais saudável e melhor controlo do peso;
— Fortalecimento dos ossos, tendões e ligamentos e uma consequente menor propensão a lesões;
— Desenvolvimento de competências motoras e aumento do desempenho desportivo;
— Prevenção e tratamento de disfunções posturais, articulares e de lesões musculoesqueléticas;
— Regulação hormonal.
11


COMPONENTES DA APTIDÃO FÍSICA RELACIONADOS COM A SAÚDE
APTIDÃO MUSCULOESQUELÉTICA - FLEXIBILIDADE
1. É a capacidade de realizar movimentos em certas articulações com apropriada amplitude de movimento. A flexibilidade é específica para cada articulação.
2. Refere-se à amplitude de movimento em torno de uma determinada articulação.
3. Ter uma boa amplitude de movimento nas principais articulações pode reduzir a probabilidade de lesões, dores na região lombar e melhorar o desempenho atlético.
4. Qualidade motriz que depende da elasticidade muscular e da mobilidade articular expressa pela máxima amplitude de movimento necessária para execução de qualquer atividade física, sem que ocorra lesões anatomopatológicas.
5. Atividades como a Yoga, o Pilates ou o Tai Chi podem proteger suas articulações e manter uma boa mobilidade.
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COMPONENTES DA APTIDÃO FÍSICA RELACIONADA COM A SAÚDE

APTIDÃO MUSCULOESQUELÉTICA: FLEXIBILIDADE

BENEFÍCIOS DE TER ELEVADOS NÍVEIS DE FLEXIBILIDADE

O estilo de vida pouco ativo e a falta de exercícios de alongamento denotam drasticamente os níveis d flexibilidade das pessoas, principalmente com o passar dos anos

- Maior capacidade para realizar atividades do dia-a-dia;
- Maiores níveis de mobilidade e de independência funcional em idades mais avançadas;
- Estudos recentes associam elevados níveis de flexibilidade a uma menor rigidez arterial.

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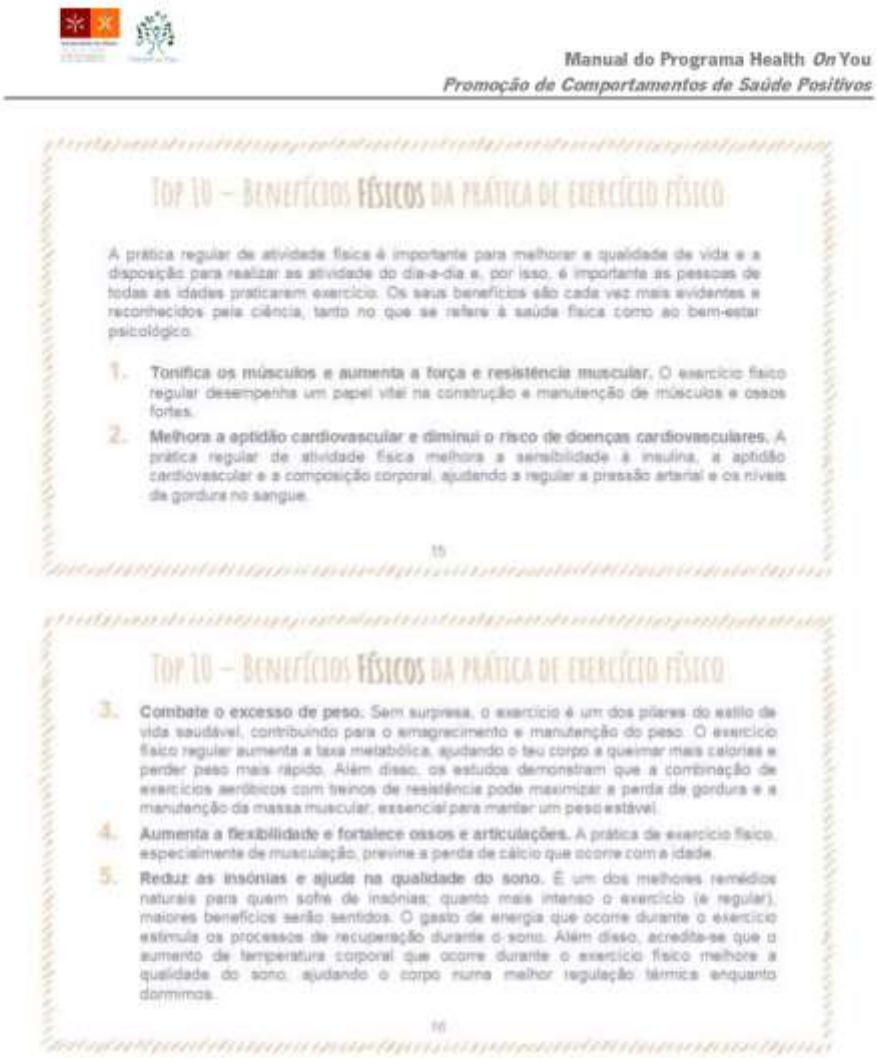


PIRÂMIDE DA ATIVIDADE FÍSICA

A Pirâmide da Atividade Física facilita a visualização da melhor maneira de dividir os exercícios durante a semana e para manter níveis de atividade física adequados para manutenção da saúde e qualidade de vida.

Na base da pirâmide estão indicadas as atividades que devem ser adotadas diariamente. Ao subir, são indicadas outras atividades e a sua respetiva frequência semanal. No topo destacam-se as atividades que devem deve preencher uma pequena parte do dia.

THE ACTIVITY PYRAMID



TOP 10 – BENEFÍCIOS FÍSICOS DA PRÁTICA DE EXERCÍCIO FÍSICO

A prática regular de atividade física é importante para melhorar a qualidade de vida e a disposição para realizar as atividade do dia-a-dia e, por isso, é importante as pessoas de todas as idades praticarem exercício. Os seus benefícios são cada vez mais evidentes e reconhecidos pela ciência, tanto no que se refere à saúde física como ao bem-estar psicológico.

1. **Tonifica os músculos e aumenta a força e resistência muscular.** O exercício físico regular desempenha um papel vital na construção e manutenção de músculos e ossos fortes.
2. **Melhora a aptidão cardiovascular e diminui o risco de doenças cardiovasculares.** A prática regular de atividade física melhora a sensibilidade à insulina, a aptidão cardiovascular e a composição corporal, ajudando a regular a pressão arterial e os níveis de gordura no sangue.

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TOP 10 – BENEFÍCIOS FÍSICOS DA PRÁTICA DE EXERCÍCIO FÍSICO

3. **Combate o excesso de peso.** Sem surpresa, o exercício é um dos pilares do estilo de vida saudável, contribuindo para o emagrecimento e manutenção do peso. O exercício físico regular aumenta a taxa metabólica, ajudando o teu corpo a queimar mais calorias e perder peso mais rápido. Além disso, os estudos demonstram que a combinação de exercícios aeróbicos com treinos de resistência pode maximizar a perda de gordura e a manutenção da massa muscular, essencial para manter um peso estável.
4. **Aumenta a flexibilidade e fortalece ossos e articulações.** A prática de exercício físico, especialmente de musculação, previne a perda de cálcio que ocorre com a idade.
5. **Reduz as insónias e ajuda na qualidade do sono.** É um dos melhores remédios naturais para quem sofre de insónias; quanto mais intenso o exercício (e regular), maiores benefícios serão sentidos. O gasto de energia que ocorre durante o exercício estimula os processos de recuperação durante o sono. Além disso, acredita-se que o aumento de temperatura corporal que ocorre durante o exercício físico melhora a qualidade do sono, ajudando o corpo numa melhor regulação térmica enquanto dormimos.

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Top 10 – Benefícios Físicos da Prática de Exercício Físico

6. **Diminui as dores físicas e melhora a postura corporal.** A dor crónica pode ser debilitante, mas os exercícios físicos realmente podem ajudar a reduzi-la.
7. **Aumenta a longevidade.** O exercício acrescenta anos de vida pelos inúmeros benefícios de saúde que lhe traz. A Associação Americana de Cardiologia afirma que por cada 1 hora de exercício, são acrescentadas 2 horas de vida.
8. **Reduz o colesterol.** Ajuda a reduzir o colesterol "mau" (colesterol LDL) e a aumentar para níveis saudáveis o colesterol "bom" (colesterol HDL), tornando-se vital para a saúde cardiovascular.
9. **Previne doenças cancerígenas.** Associado à redução de cancro, nomeadamente do cólon, mama e pulmão. Acresce que mesmo em doentes oncológicos, é um poderoso agente melhorador da qualidade de vida.
10. **Melhora a saúde da pele.** O exercício físico melhora o fluxo sanguíneo e pode induzir adaptações das células da pele, ajudando a retardar o aparecimento de rugas e manchas.

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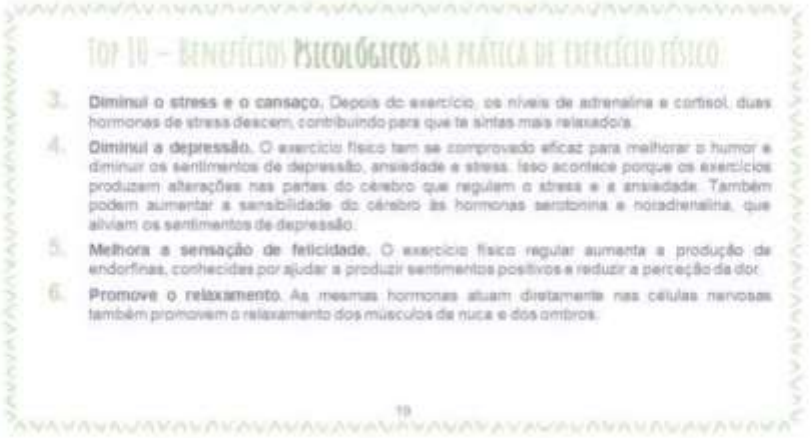
Top 10 – Benefícios Psicológicos da Prática de Exercício Físico

1. **Melhora a autoestima e promove a sensação de bem-estar.** O exercício físico e os desafios inerentes farão com que te sintas bem contigo e com o teu corpo.
2. **Melhora o desempenho e a produtividade escolar e académica.** Vários estudos são unanimes ao afirmar que a prática regular de uma atividade física contribui para uma maior produtividade e melhor desempenho no trabalho.

BENEFÍCIOS DO EXERCÍCIO FÍSICO PARA O CÉREBRO



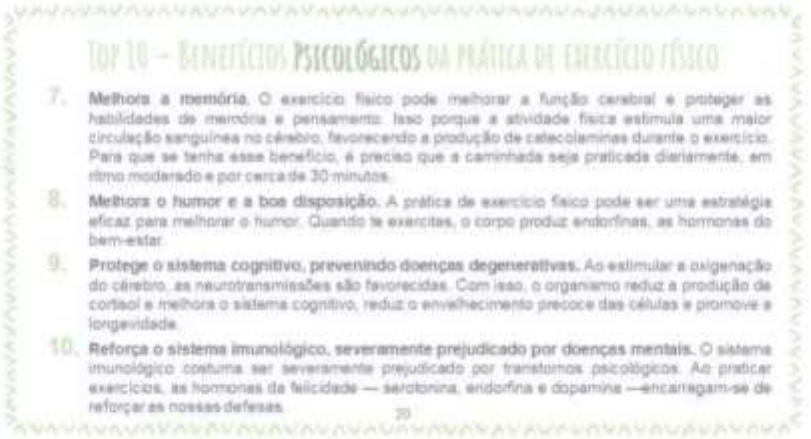
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TOP 10 – BENEFÍCIOS PSICOLÓGICOS DA PRÁTICA DE EXERCÍCIO FÍSICO

3. **Diminui o stress e o cansaço.** Depois do exercício, os níveis de adrenalina e cortisol, duas hormonas de stress descem, contribuindo para que te sintas mais relaxado/a.
4. **Diminui a depressão.** O exercício físico tem se comprovado eficaz para melhorar o humor e diminuir os sentimentos de depressão, ansiedade e stress. Isso acontece porque os exercícios produzem alterações nas partes do cérebro que regulam o stress e a ansiedade. Também podem aumentar a sensibilidade do cérebro às hormonas serotonina e noradrenalina, que aliviam os sentimentos de depressão.
5. **Melhora a sensação de felicidade.** O exercício físico regular aumenta a produção de endorfinas, conhecidas por ajudar a produzir sentimentos positivos e reduzir a perceção da dor.
6. **Promove o relaxamento.** As mesmas hormonas atuam diretamente nas células nervosas também promovem o relaxamento dos músculos da nuca e dos ombros.

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TOP 10 – BENEFÍCIOS PSICOLÓGICOS DA PRÁTICA DE EXERCÍCIO FÍSICO

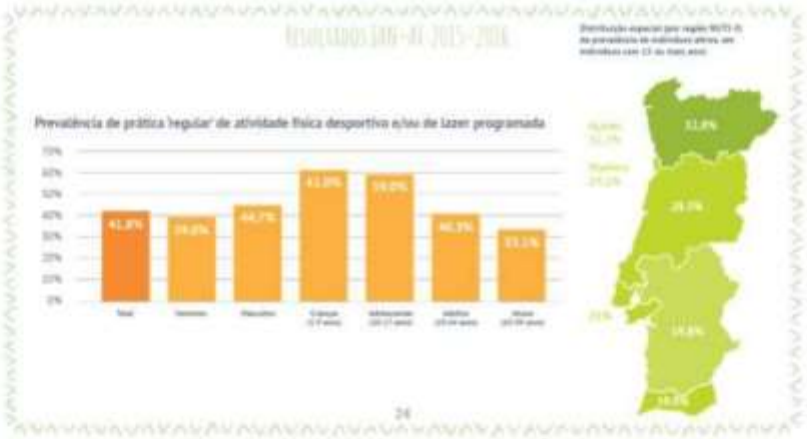
7. **Melhora a memória.** O exercício físico pode melhorar a função cerebral e proteger as habilidades de memória e pensamento. Isso porque a atividade física estimula uma maior circulação sanguínea no cérebro, favorecendo a produção de catecolaminas durante o exercício. Para que se tenha esse benefício, é preciso que a caminhada seja praticada diariamente, em ritmo moderado e por cerca de 30 minutos.
8. **Melhora o humor e a boa disposição.** A prática de exercício físico pode ser uma estratégia eficaz para melhorar o humor. Quando te exercitas, o corpo produz endorfinas, as hormonas do bem-estar.
9. **Protege o sistema cognitivo, prevenindo doenças degenerativas.** Ao estimular a oxigenação do cérebro, as neurotransmissões são favorecidas. Com isso, o organismo reduz a produção de cortisol e melhora o sistema cognitivo, reduz o envelhecimento precoce das células e promove a longevidade.
10. **Reforça o sistema imunológico, severamente prejudicado por doenças mentais.** O sistema imunológico costuma ser severamente prejudicado por transtornos psicológicos. Ao praticar exercícios, as hormonas da felicidade — serotonina, endorfina e dopamina —encarregam-se de reforçar as nossas defesas.

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MALEFÍCIOS DO SEDENTARISMO
1. Falta de força muscular por não estimular todos os músculos;
2. Dor nas articulações devido ao excesso de peso;
3. Acumulação de gordura abdominal e no interior das artérias;
4. Aumento excessivo do peso e até mesmo obesidade;
5. Aumento do colesterol e triglicerídeos;
6. Doenças cardiovasculares, como enfarte ou AVC;
7. Aumento do risco de Diabetes tipo 2 devido a resistência à insulina;
8. Ressonar e apneia do sono.
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TENDÊNCIAS EVOLUTIVAS DOS COMPORTAMENTOS SEDENTÁRIOS E DE PRÁTICA DE EXERCÍCIO FÍSICO
Inquérito Alimentar Nacional e de Atividade Física, IAN-AF 2015-2016,
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Prevalência de indivíduos ativos e moderadamente ativos em jovens, adultos e idosos
Prevalência de sedentarismo em jovens, adultos e idosos
23


Prevalência de prática 'regular' de atividade física desportiva e/ou de lazer programada
24


Num dia normal, os/as estudantes universitários/as passam, em média, 7,44 horas sentados/as.
Moderadamente Ativos
Sedentários
Ativos
25


Deixa nos comentários desta Sessão, a tua reflexão acerca dos dados apresentados nos gráficos e na tabela!
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Sessão 2 – Índice de massa corporal e manutenção do peso ideal

Objetivos específicos

Descrever métodos antropométricos diferentes para determinar a composição corporal;
Explicar a noção de índice de massa corporal;
Compreender como se calcular o peso ideal e o número de calorias diárias necessárias.

Estratégias Pedagógicas

Website Health – Calcular o índice de massa corporal e as calorias diárias necessárias
Estratégias para a mudança – Dicas para praticar exercício físico.

Métodos de avaliação da composição corporal

Métodos antropométricos

A antropometria utiliza métodos de relativa simplicidade (como, estatura, perímetros, diâmetros ósseos e espessura de pregas cutâneas) e de baixos custos.

A maioria dos métodos antropométricos usados para determinar a composição são baseados num modelo que divide o corpo em dois compartimentos, a **massa gorda** (tecido adiposo/gordura) e a **massa magra** (massa livre de gordura - água, ossos e músculos).

- **O Peso**

O peso é o dado antropométrico mais comum e equivale ao tecido adiposo, músculos esqueléticos, ossos, sangue e elementos residuais (órgãos, vísceras, etc.). O tecido adiposo inclui as células adiposas, os vasos sanguíneos e elementos estruturais, sendo o local principal para o armazenamento dos lípidos. Está situado nos compartimentos subcutâneos e internos ou viscerais; a sua distribuição é regulada por controle genético e hormonal.

- **Índices antropométricos**

Muitos índices diferentes, como a relação cintura-anca, foram desenvolvidos, mas o mais difundido é o **índice de massa corporal (IMC)**. O IMC, índice de Quetelet, é um instrumento bastante útil do ponto de vista clínico para o diagnóstico de obesidade, uma vez que tem uma boa correlação com a massa gorda. Além disso, este índice apresenta resultados satisfatórios para avaliações

populacionais, no entanto, para a avaliação clínica individual não se revela satisfatório, já que não leva em consideração as quantidades proporcionais dos diferentes componentes corporais. Segundo Ross (1997), o IMC é a razão mais famosa em biologia humana, sendo expresso como massa em quilograma (kg) dividida pela estrutura em metros quadrados (m2):

$$IMC = \frac{\text{Massa Corporal em kg}}{\text{Estatura em metros}^2}$$

Segundo a Organização Mundial de Saúde (OMS), **um IMC entre 18,5 e 24,9 é sinónimo de normalidade; abaixo de 18,4 é considerado magreza; valores de IMC entre 25 e 29,9 revelam um excesso ponderal; valores acima de 30 configuram um diagnóstico de obesidade.**

Comparação corporal por IMC



Algumas pessoas são pesadas porque tem músculos muito desenvolvidos ou uma estrutura óssea muito pesada, mas nem por isso são gordas. Por outro lado, muitas pessoas estão no "peso ideal" e são obesas!

- **Pregas Cutâneas**

A segunda técnica antropométrica mais usada para a determinação da **massa gorda corporal** é baseada na medição de **pregas cutâneas**. Este método baseia-se no facto de, aproximadamente, metade do conteúdo da gordura corporal estar localizada no compartimento subcutâneo. A medição de reservas de gordura pelas pregas cutâneas não requer grande espaço, não implica material muito dispendioso e dá resultados imediatos.

São utilizados para o efeito adipómetro.



As **pregas cutâneas** mais utilizadas são: **a prega cutânea tricipital, a bicipital, a subescapular e a suprailíaca** (de entre a vasta gama de 93 locais anatómicos existentes para a medida das pregas cutâneas).

Bicipital



Subescapular



Suprailíaca



Tricipital



A medida de espessura das pregas cutâneas pode ser utilizada em valores absolutos ou por equações de regressão para o cálculo de densidade corporal ou de percentagem de gordura corporal. O seu valor individual permite a verificação da topografia do tecido adiposo subcutâneo, ou seja, permite concluir em que local o individuo apresenta maior acumulação de gordura. As pregas cutâneas utilizadas como somatório permitem a análise da quantidade de gordura como um todo, por ter em conta um maior número de pontos anatómicos.

A considerar:

- Não realizar logo após uma atividade física;

- Realizar as medições do lado direito;
- Colocar o adipómetro perpendicular ao eixo da dobra;
- Não apertar o tecido muscular;
- Deverá fazer as medições no máximo a 1 cm dos dedos;

- **Perímetros da anca (PA) e da cintura (PC)**

Com o reconhecimento da distribuição da gordura como um indicador de risco, as medições de perímetro tornam-se importantes. A relação entre o perímetro da cintura e o da anca é um método simples e de baixo custo, usado para descrever a distribuição do tecido adiposo subcutâneo e intra-abdominal.

Uma desvantagem deste índice é que as medidas de circunferência incluem, para além de massa gorda, outros tecidos como os músculos, ossos e órgãos. Apesar desta desvantagem este método merece destaque pela alta associação existente entre a acumulação de gordura, na região central do corpo, e doenças crónico-degenerativas.

O **perímetro da anca (PA)** mede-se posicionando a fita métrica na máxima circunferência, passando pelo ápice das nádegas, com a fita num plano horizontal, tocando a pele, mas não a pressionando demasiado. O **perímetro da cintura (PC)** mede-se após localizado o bordo inferior das costelas e feita a palpação da crista ilíaca na linha média axilar.

A relação entre estes dois parâmetros pode dar-nos uma indicação clara quanto ao risco de desenvolvimento de patologias associadas ao padrão de deposição adiposa. **Para a interpretação deste índice, o valor referencial para os homens é considerado um valor de risco uma relação PC/PA > 1,0. Para as mulheres esse valor é PC/PA > 0,8.**

Alguns autores consideram que o PC poderá ser, isoladamente, melhor indicador de risco do que a relação entre cintura e anca, definido como limiar de risco, **valores maiores ou iguais a 88 cm para as mulheres e 102 cm para os homens**.



A considerar:

- Os indivíduos devem ser medidos, preferencialmente, de manhã em jejum e sem roupa, para se assegurar que a fita métrica está bem posicionada.
- Durante a medição os indivíduos devem permanecer de pé, com o abdómen relaxado, braços ao longo do corpo e com o seu peso equitativamente distribuído pelos dois pés.

Website & App Health

YAZIO

https://www.yazio.com/pt

Neste website poderás calcular o teu IMC automaticamente, o teu Peso Ideal, o número de Calorias Diárias e o teu Gasto Calórico. Para além disso, poderás descarregar para o teu smartphone ou Tablet uma aplicação que te permitirá monitorizar os teus hábitos alimentares, mas também a prática de exercício físico.

FITescola

é uma plataforma online, gratuita, que tem como objetivo a promoção de estilos de vida saudáveis educando os jovens para serem fisicamente ativos. Permite também a avaliação da aptidão física e da atividade física de crianças e adolescentes através da aplicação de uma bateria de testes selecionados para o efeito.

https://fitescola.dge.mec.pt/home.aspx

Estratégias para a mudança – Dicas para praticar exercício físico

- Desloca-te a pé ou de bicicleta em vez de conduzires ou apanhares um autocarro.
- Sobe e desce pelas escadas quando e onde puderes, em vez de usares o elevador.
- Enquanto vês televisão, faz ginástica, levanta pesos livremente ou anda numa bicicleta ergonómica.
- Combina caminhadas, passeios ao ar livre ou jogar futebol ou outra modalidade com os teus amigos.

- Dança enquanto ouves música.
- Estabelece metas. Perder peso, reduzir a hipertensão arterial, conseguir correr 10 km. Quando estabelecemos metas, temos uma maior probabilidade de seguir um plano de treino.
- Estabelece um tempo. Os ganhos decorrentes da prática de exercício físico ocorrem nas primeiras 6 a 12 semanas de um programa de treinos. Se conseguires persistir durante esse tempo, é mais provável que continues a praticar exercício físico após esse tempo.
- Procura atividades físicas alternativas. Se não gostas de correr ou de ir ao ginásio, procura uma atividade física alternativa. Isso irá ajudar-te a quebrar a monotonia e também permitirá trabalhar outros músculos.
- Mantem um registo. Tenta registar o teu humor e a tua energia nos dias que praticas exercício físico e nos que não praticas, provavelmente verás alguma recompensa emocional na prática de exercício físico.
- Se não tiveres vontade de praticar exercício físico, fá-lo apenas por 10 minutos. Possivelmente depois não te importarás de continuar, o mais difícil é sempre começar.
- Recompensa-te. Estabelece um número de treinos semanais ou mensais e se conseguires cumprir, oferece-te algo, vais jantar fora.

Sessão 3 – Recomendações acerca da prática de exercício físico

Objetivos específicos

Conhecer as recomendações (inter)nacionais para a prática de exercício físico;
Comparar e contrastar exercícios aeróbicos e exercícios de fortalecimento muscular e flexibilidade

Recomendações (inter)nacionais para a prática de exercício físico

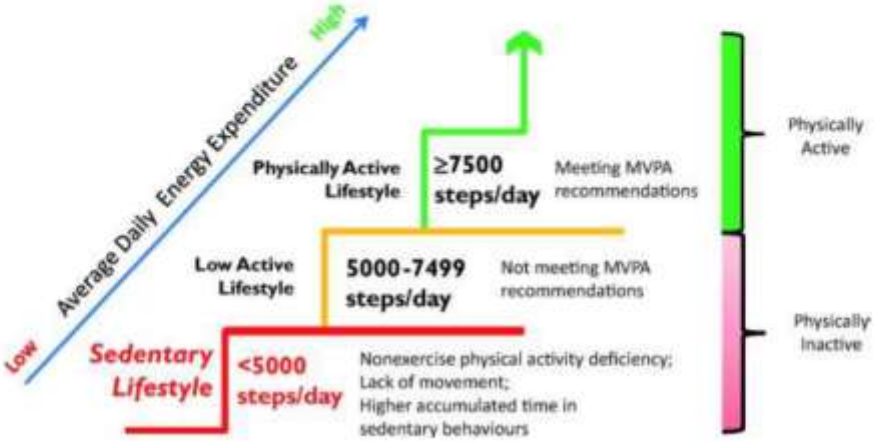
A Organização Mundial de Saúde recomenda que os adultos pratiquem, pelo menos, **150 minutos por semana de atividade física de intensidade moderada**, ou **75 minutos de atividades vigorosas** (ou uma combinação equivalente). Adicionalmente, devem praticar atividades que contribuam para melhorar ou manter a força e resistência musculares, pelo menos, duas vezes por semana. As recomendações devem ser entendidas como uma meta a atingir e não como um rigido critério de diagnóstico ("ativo" / "não ativo").



Qualquer atividade física pode ser classificada num nível de intensidade – desde '**leve**', até '**moderada**', ou ainda '**vigorosa**' ou '**muito vigorosa**' – de acordo com o esforço que requer aos sistemas muscular, respiratório e cardiovascular (entre outros). Regra geral, **uma atividade ou exercício moderado** faz elevar a taxa respiratória e a frequência cardíaca de forma sensível e acima do normal (repouso) e costuma provocar algum aquecimento corporal. Habitualmente, uma pessoa consegue ainda manter uma conversa, mas já não conseguiria cantar, quando envolvida numa atividade moderada.

Há benefícios para a saúde associados a todas as intensidade e tipos de atividade física e por isso se recomenda que **QUALQUER ATIVIDADE FÍSICA É MELHOR QUE NENHUMA**. Por exemplo, mesmo atividades leves, se repetidas frequentemente ou se interromperem períodos

longos de sedentarismo, contribuem para o dispêndio energético ao longo dia (positivo para prevenir a obesidade) e ajudam os músculos a manter um metabolismo mais saudável (positivo para prevenir a diabetes tipo II).



Principais tipos de exercícios físicos

Aeróbicos

São exercícios de longa duração, que implicam resistência e com grande consumo de oxigénio pelos músculos para produzir energia. Este tipo de exercício aprimora a capacidade respiratória, tonifica os músculos e queima muitas calorias.

A **corrida**, a **natação** e o **ciclismo** são exemplos deste tipo de exercícios.

Anaeróbicos

Os exercícios anaeróbicos exigem grande esforço muscular num curto espaço de tempo. São, portanto, atividades físicas muito intensas. Além de proporcionarem a hipertrofia dos músculos e o aumento da força física, também beneficiam os sistemas cardiovascular e respiratório.

Musculação, halterofilismo e **corrida de 100 metros** são exemplos clássicos de exercícios anaeróbicos.

Funcionais

Consistem em movimentos naturais e, até certo ponto, triviais do nosso quotidiano, como baixar, saltar, empurrar, puxar etc. Eles trabalham vários grupos musculares conjuntamente e aprimoram o equilíbrio e a consciência corporal. Grande parte dos exercícios funcionais é realizada sem o auxílio de nenhum equipamento, usando apenas o peso do próprio corpo. É o que ocorre nos **agachamentos** e nas **flexões de braço**, por exemplo.

Crossfit

É uma modalidade de treino funcional que ganhou muita popularidade nos últimos anos. Um dos seus principais diferenciais é a **grande variedade de exercícios,** o que afasta qualquer possibilidade de monotonia. Quem pratica *Crossfit* não somente aprimora a condição física, mas também ganha força, agilidade e resistência.

Flexibilidade

Os exercícios de flexibilidade têm como objetivo proporcionar maior mobilidade na execução dos movimentos do dia-a-dia e dos realizados durante a prática de outras atividades físicas. Eles alongam e fortalecem os músculos, ajudam a corrigir a postura e previnem lesões.
Os mais comuns são o **pilates** e o **alongamento**.
Pilates é um conjunto de exercícios realizados em solo ou com equipamentos próprios. Além de fortalecer os músculos, tratar dores musculares e desvios posturais, o pilates também trabalha a união do corpo e mente.

Qual o melhor exercício físico para mim?

Qualquer tipo de atividade física só produzirá resultados positivos, principalmente se for praticado regularmente. Por isso, é muito importante que seja agradável e apresente novos desafios constantemente. O recomendável é experimentar vários tipos de exercícios físicos diferentes e escolher aquele ou aqueles que faça mais sentido e que possas manter por mais tempo, mediante a tua disponibilidade temporal, personalidade e objetivos. É importante não esquecer de respeitar os limites do corpo e garantir um intervalo de descanso suficiente para repor as energias.

Referências Bibliográficas

Tudor-Locke, C. et al. (2013). A step-defined sedentary lifestyle index: <5000 steps?day. Appl. Physiol. Nutr. Metab. 38: 100-114.

Sessão 4 – Estratégias motivacionais para a prática de exercício físico

Objetivos específicos

Planear um programa de exercício físico;

Listar e conhecer estratégias motivacionais para a manutenção de exercício físico.

Estratégias Pedagógicas

A Refletir – Caso #1 e Caso #2

Estratégias motivacionais para a manutenção de exercício físico

GUIÃO VÍDEO (3 minutos e 47 segundos)



Olá novamente! Hoje estou aqui para vos ajudar a escolher o exercício físico ideal!

De facto, todos os dias ouvimos falar sobre a importância de praticar exercício físico, no entanto, muitas vezes temos dúvidas sobre que tipo de atividade física praticar ou qual é a atividade física/ o exercício físico ideal para nós, seja corrida, dança, musculação, zumba ou yoga. Existe uma infinidade de exercícios físicos que nós podemos fazer para termos uma vida mais ativa, para sermos mais ativos.

E a pergunta é sempre saber qual o melhor exercício físico. No entanto essa pergunta é mesmo muito difícil porque irá depender de fatores externos e do perfil de cada pessoa. Por isso, aqui o primeiro ponto é que de facto atividade física ideal para ti é aquela que vais conseguir manter com alguma regularidade, com a maior regularidade possível. Depois não devemos esquecer que atividade física que escolhermos para nós deverá respeitar sempre o limite do nosso corpo. E acima de tudo tem que nos trazer prazer, tem que me trazer vontade de praticar exercício físico.

Para de ficar mais simples e eu vou fazer aqui uma comparação o exercício físico é igual a uma caixinha de ferramentas onde para cada parafuso existe uma ferramenta ideal.

Por exemplo, para uma pessoa que está ligeiramente ou que está acima do peso ou que não tem tanta massa muscular, atividade física ideal é uma atividade física de baixo impacto: como por exemplo a umas caminhadas ou andar de bicicleta. Estes exercícios físicos primeiramente irão ajudar a melhorar a tua condição física e a fortalecer os músculos, melhorar o teu sistema cardiovascular e respiratório, e não causa grande impacto nas articulações.

Já para as pessoas que treinam há muito tempo, um novo desafio poderá ser uma boa opção. Por exemplo, os exercícios hiit, chamados Exercícios de alta performance ou CrossFit.

Mas o ideal é mesmo que encontres uma atividade física que tu gostes e que consigas executar sem grandes sacrifícios.

Na verdade, a paciência é sempre a chave do sucesso, como tudo na vida é construído aos poucos.

No entanto, quando o assunto é atividade física toda a gente quer resultados rápidos e milagrosos E, esses, infelizmente, não existem.

Hoje temos mesmo muitas opções e, às vezes, podemos sentir-nos confusos, mas segue estas dicas e eu tenho a certeza que vais conseguir encontrar um exercício que te dê prazer e que realmente consigas manter uma vida fisicamente ativa.

Por isso, começa por testar: Escolhe um lugar que tenha uma variedade de atividades seja um ginásio, que tenha sala de musculação, que tenha diversas aulas de grupo, hidroginástica ou natação. Também podes experimentar atividades ao ar livre: correr ou caminhar.

Por outro lado, lembra-te que é sempre importante que procures uma avaliação médica. O médico deve realmente dizer que tu dispões de todas as condições físicas para a prática de exercício físico.

E, também não adianta querer ir com muita sede ao pote (como se costuma dizer), ou seja, começar a praticar todos os dias da semana ou 5 dias por semana, se já não praticas exercício físico há muito tempo pode fazer com que te aborreças facilmente. Começa com alguma regularidade, uma regularidade que consigas manter por mais tempo, por exemplo, três vezes por semana. E, então, ir aumentando, lembrando-te sempre que temos que respeitar os limites do nosso corpo e que o nosso corpo também precisa de descansar.

Espero que este vídeo tenha sido útil e que possas a partir deste momento ter alguma motivação para deixar de ser uma pessoa sedentária e passar a ser uma pessoa fisicamente ativa. Até breve!

A Refletir...

Caso #1

"Alguns investigadores defendem a obrigatoriedade da prática de exercício físico em contexto académico, tal como a disciplina de Educação Física é obrigatória no Ensino Básico e Secundário. **Qual é a tua opinião: as Instituições do Ensino Superior incluir o desenvolvimento das aptidões físicas enquanto parte significativa do percurso académico? Ou achas que o teu percurso escolar já te deu todas as informações de que precisas para ser fisicamente ativo ao longo da tua vida? "**

Caso #2

"A Joana sabe que a prática de exercício físico é boa para a saúde, mas acha que pode manter um peso ideal e uma boa saúde fazendo uma alimentação saudável. **O que dirias à Joana?"**

Extra: _ Bibliografia para Aprofundamento_

- Mendes, R., Sousa, N. &, Barata, J. L. (2011). Actividade Física e Saúde Pública. Recomendações para a Prescrição de Exercício. Acta Med Port, 24: 1025-1030.

Avaliação do Módulo

Gostariamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

https://forms.gle/JxTh6wKL5R8ZEoiH6

Módulo 6 - Previne-te de Infeções Sexualmente Transmissíveis

Introdução

Olá!

Bem-vinda/o ao módulo 6, módulo no qual iremos abordar aspetos relativos às práticas sexuais de risco, nomeadamente a prevenção de infeções sexualmente transmissíveis.

A sexualidade é parte integrante de quem somos, como nos vemos e como nos relacionamos com os outros. Embora a expressão e as experiências sexuais possam proporcionar uma alegria intensa, também pode desenvolver uma grande turbulência emocional.

Em última análise, tu és responsável pela tua saúde e pelas tuas práticas sexuais. No entanto, grande parte da atividade sexual poderá envolver outra pessoa. Portanto, as tuas decisões sobre a prática sexual – mais do que aquelas acerca dos temas face à alimentação ou à pratica de exercício físico, tem efeitos importantes sobre outras pessoas. Reconheceres isto é um aspeto chave para uma sexualidade responsável.

Uma sexualidade responsável significa aprenderes sobre o teu corpo, o corpo do teu parceiro ou parceira e os riscos para a saúde associados à atividade sexual.

Este módulo fornece informações sobre como tomar decisões e ter comportamentos sexualmente responsáveis.

Sessão 1 – Epidemiologia das Infeções Sexualmente Transmissíveis (ISTs) e VIH/SIDA

Objetivos específicos

Explicar as diferentes ISTs, os seus sintomas e tratamentos;
Definir VIH/SIDA e descrever os seus sintomas e tratamento;
Conhecer o estado atual e as tendências evolutivas das ISTs e VIH/SIDA.

Estratégias Pedagógicas

Campus Focus – Comportamentos sexuais de risco no Campus





IST'S: CLAMÍDIA

Como se trata?	O tratamento da infeção por clamídia é simples e eficaz, mas para tal deves procurar um/a médico/a. O tratamento é realizado com recurso a antibióticos, tanto nos homens como nas mulheres. É aconselhado que não tenhas relações sexuais durante a toma da medicação e que o tratamento seja extensivo ao/à parceiro/a sexual, caso contrário a infeção tenderá a repetir-se e a perpetuar-se.
Como se prevenir?	A principal medida de prevenção é o USO REGULAR E CORRETO DO PRESERVATIVO (externo-masculino e interno-feminino) ou dental dam (barra de látex-sexo oral à mulher) em todas as relações sexuais (sexo vaginal, oral e anal). A prevenção da clamídia requer um rastreio laboratorial anual para todas as pessoas que têm parceiros/as ocasionais ou vários/as parceiros/as, mesmo que não apresentem sintomas.

IST'S: GONORREIA (BLENDERAGIA)

O que é?	A gonorreia é uma infeção sexualmente transmissível provocada por uma bactéria designada Neisseria gonorrhoeae (Ng), que pode infetar o epitélio da uretra, o colo do útero, o ânus e a orofaringe.
Como se transmite?	A gonorreia transmite-se principalmente pelas relações sexuais desprotegidas (sexo vaginal, oral e anal) com uma pessoa infetada, tanto homens como mulheres. O principal fator de risco são as relações sexuais desprotegidas (sexo vaginal, oral e anal), independentemente da orientação sexual. Para além disso, ter uma novo/a parceiro/a sexual, múltiplos parceiros/as sexuais ou parceiros ocasionais aumenta também o risco de se infetares. E ter outra infeção sexualmente transmissível potencia o risco de aquisição da gonorreia.
Como se manifesta?	As mulheres são maioritariamente assintomáticas. Quando existem sintomas, estes podem ser: Corrimento vaginal, por vezes abundante, de cor diferente do habitual e com algum cheiro; Dor e ardência ao urinar; Sangramento fora dos períodos menstruais; Dor nas relações sexuais. Nos casos mais graves a doença pode causar complicações severas como endometrite, salpingite, doença inflamatória pélvica (DIP), infertilidade e gravidez ectópica. Nos homens os sintomas são mais comuns e a infeção manifesta-se por uretrite: Corrimento uretral, amarelo esverdeado, por vezes abundante e com cheiro; Dor e ardência ao urinar; Dor nos testículos. As complicações nos homens são infeção da próstata (prostatite) ou do epidídimo (epididimite). Quando a infeção gonocócica se localiza no ânus pode haver sinais de proctite: dor ao evacuar e/ou fezes com sangue ou pus.



IST'S: GONORREIA (BLENORRAGIA)

Como se trata?	Deves procurar uma médica/o se tiveres comportamentos sexuais de risco, mesmo que não tenhas sintomas. A gonorreia trata-se com antibióticos, que devem ser receitados pelo médico. É aconselhado que não tenhas relações sexuais durante o tomo da medicação e que o tratamento seja extensivo aos/às parceiros/as sexuais, caso contrário poderás ser novamente infetado. Por vezes, o/a médico/a faz em simultâneo o tratamento da Chlamydia trachomatis, dada a grande frequência das coinfecções clamídia/gonorreia.
Como se previne?	O USO DE PRESERVATIVO é uma forma eficaz de prevenir a infeção por gonorreia. Assim, se tiveres relações sexuais utiliza sempre um método de barreira. Deves usar de forma sistemática e correta o preservativo (masculino, feminino) ou dental dam (barra de látex - sexo oral à mulher) em todas as práticas sexuais (sexo vaginal, oral e anal) e deves colocar um novo preservativo se repetires a relação sexual.



IST'S: SÍFILIS

O que é?	A Sífilis é uma infeção sexualmente transmissível (IST) provocada por uma bactéria, chamada Treponema pallidum (Tp), que se adquire durante as relações sexuais com parceiro infetado/a.
Como se transmite?	Qualquer pessoa que pratique sexo não protegido (vaginal, oral ou anal) com uma pessoa infetada com o Tp pode adquirir a infeção. O Treponema pallidum passa das pessoas infetadas para os/as seus/suas parceiros/as sexuais durante a prática de sexo vaginal, anal ou oral. O contacto com uma lesão de sífilis ("ferida") permite a passagem da bactéria para a pele ou mucosas da área genital, boca ou ânus da pessoa não infetada. O Tp penetra no organismo e, através da corrente sanguínea, atinge os vários órgãos onde pode permanecer muitos anos (10, 20 ou mesmo 30) sem provocar sinais ou sintomas de doença, pode, no entanto, entrar em atividade em qualquer altura, provocando doença no coração, sistema nervoso central ou na pele. Sem tratamento adequado a infeção não se cura. Se tiveres relações sexuais sem preservativo, trocares de parceiro/a sexual ou manteres relações com mais de uma pessoa, deves procurar fazer testes de rastreio das IST, o que inclui o teste da sífilis.



IST's: Sífilis

Como se manifesta?

Só realizando o teste de rastreio para a sífilis poderás saber se estás ou não infetado/a com o Treponema pallidum.
Os primeiros sinais podem surgir entre uma semana a três meses após o contacto sexual com a pessoa infetada. Na grande maioria dos casos o/a doente não valoriza as manifestações, que em geral não são grande incómodo e podem ser semelhantes às de outras doenças.
Entre os períodos de atividade a infeção permanece silenciosa, sem sinais nem sintomas, e designa-se Sífilis latente recente ou tardia consoante a infeção pelo Treponema tenha 2 ou mais anos de evolução.
Fases ativas da Sífilis:

- Sífilis primária- 1 semana a 3 meses após a infeção surge uma pequena ferida, que não dói, na zona genital, na boca (sexo oral) ou no ânus (sexo anal). A ferida cicatriza ao fim 3 a 6 semanas, mesmo sem tratamento, mas a infeção permanece no organismo e pode ser transmitida aos/às parceiros/as sexuais. Sem tratamento não há cura.
- Sífilis secundária – após um período sem sintomas (Sífilis latente recente), entre 1 a 6 meses depois, podem surgir manchas vermelhas no corpo, palmas das mãos, plantas dos pés e região ano-genital, por vezes com febre, dores de garganta, caroços no pescoço e axilas, mialgias e queda de cabelo. Os sintomas desaparecem cerca de 4 semanas a 3 meses depois, mesmo que não seja feito tratamento, e a infeção volta a ficar adormecida, mas pode ser transmitida aos/às parceiros/as sexuais até 2 anos após a infeção. Entra-se então na fase de Sífilis latente tardia, durante a qual pode surgir a terceira fase de doença ativa, 10, 20 ou mais anos depois da infeção.
- Sífilis terciária – nesta fase as manifestações são mais graves, com lesões por vezes irreversíveis do: coração, do cérebro e outros órgãos. O tratamento é mais complexo do que nas fases anteriores, cura a infeção, mas podem ficar sequelas.

IST's: Sífilis

Como se trata?

O tratamento é feito com um antibiótico (em geral injeções de penicilina). A dose depende da situação da pessoa e da fase da doença em que aquela se encontra.
As pessoas que são tratadas para a sífilis devem abster-se de relações sexuais durante o período de tempo indicado pelo/a médico/a, e devem informar os/as parceiros/as sexuais para que estes/as possam fazer análises e receber também tratamento adequado.

Não esquecer que o período de contágio é longo (mais ou menos 2 anos) pelo que devem ser referenciados/as parceiros/as sexuais anteriores e não apenas os/as atuais.

Após o tratamento o/a doente deve comparecer às consultas de controlo, pois é necessário a repetição das análises (aos meses 1, 3, 6, 12...) para avaliação da resposta da infeção à terapêutica.

Como se previne?

Não ter relações sexuais
Ter um único/a parceiro/a sexual, que, por sua vez, não tem outro/a parceiro/as (relação mutuamente monogâmica), tendo ambos análises da sífilis não reativas.
UTILIZAR DE FORMA CORRETA E CONSISTENTE O PRESERVATIVO EM CADA CONTACTO SEXUAL REDUZ O RISCO DE INFEÇÃO.



IST'S: HERPES GENITAL

O que é?	O herpes genital é uma infeção sexualmente transmissível que se localiza à área genital (pele e mucosas), e que é causada pelo vírus Herpes simplex (VHS). Existem dois tipos de vírus Herpes simplex o tipo1 (VHS-1) e o tipo 2 (VHS-2). O vírus herpes simplex do tipo 1 é o principal responsável pelo herpes labial e provoca lesões na região oral, nasal e, mais raramente, nos olhos. O vírus herpes simplex do tipo 2 é responsável pelo herpes genital e causa lesões nos genitais e ânus. No entanto ambos os tipos podem infetar os órgãos genitais, e pernas, a área anal e as mãos e podem ser transmitidos a outras partes do corpo.
Como se transmite?	O herpes genital transmite-se durante a relação sexual (sexo vaginal, oral ou anal) com alguém que tenha a infeção, pelo contacto com a pele ou mucosas infetadas pelo vírus. A transmissão pode ocorrer mesmo quando não existem lesões visíveis (bolhas ou vesículas), porque o vírus é libertado pelas terminações nervosas da zona infetada, antes do aparecimento das lesões, até à sua cicatrização completa.
Como se manifesta?	Na maioria das vezes, o herpes não causa sintomas. Noutros casos provoca episódios mais ou menos frequentes de lesões, que em cada surto se localizam na mesma área genital. O intervalo entre os episódios de lesões é muito variável e imprevisível. Os sintomas começam com ligeiro ardor, prurido ou formigueiro, segue-se o aparecimento de pequenas manchas vermelhas, sobre estas formam-se pequenas bolhas ou vesículas agrupadas, que rebentam ocasionando feridas que se cobrem de crostas e por fim cicatrizam. Toda este processo é muito doloroso, sobretudo no episódio inicial da infeção, designado primoinfeção. O surto de primoinfeção é mais doloroso e prolongado, com mais lesões do que os seguintes (recidivas), podendo ocorrer febre e mal-estar geral.



IST'S: HERPES GENITAL

Como se trata?	Não existe uma cura definitiva para o herpes, mas existem medicamentos antivíricos que tratam as lesões e encurtam o tempo do episódio. O tratamento com antivirais específicos para o HSV deve ser iniciado logo no início dos sintomas, tanto na primoinfeção como nas recidivas.
Como se previne?	A melhor forma de prevenção é não ter relações sexuais durante um surto de herpes, pois é quando o vírus se transmite mais facilmente. A utilização regular do preservativo diminui a probabilidade de ficar infetados. No entanto como o preservativo não cobre toda a área de pele/mucosa infetada pode haver transmissão.



IST's: Hepatite B

O que é?	A Hepatite B é uma infeção viral que ataca o fígado e pode causar doença aguda ou crónica. O Vírus da Hepatite B (VHB) é extremamente contagioso, sendo as suas principais vias de transmissão: os fluidos genitais (esperma e secreções vaginais), fluidos corporais (sangue, urina e saliva), e o leite materno. É a mais perigosa de todas as hepatites, pois o risco de morte por cirrose ou cancro do fígado é muito elevado.
Como se transmite?	São considerados comportamentos de risco: • Relações sexuais vaginais sem preservativo masculino ou feminino; • Sexo oral /anal não protegido; • Partilha de seringas; • Partilha de objetos pessoais como escovas de dentes ou lâminas de barbear; • Manuseamento de agulhas infetadas em contexto hospitalar. O vírus pode sobreviver fora do organismo pelo menos 7 dias. Durante este período, o vírus pode provocar infeção se entrar na corrente sanguínea de uma pessoa que não esteja protegida pela vacina.
Como se manifesta?	Em 90% dos casos a Hepatite B é assintomática, ou seja, a pessoa não apresenta sintomas. Também na fase aguda da infeção, a maior parte das pessoas não apresenta sintomas. No entanto, algumas têm doença aguda com sintomas que duram várias semanas, incluindo: febre, fadiga extrema, náuseas, vómitos, dor abdominal, dores nas articulações, erupções na pele e posteriormente icterícia (pele e olhos amarelados), urina escura e fezes claras. Em algumas pessoas, a Hepatite B pode causar doença crónica no fígado, que pode desenvolver mais tarde cirrose ou cancro no fígado.

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IST's: Hepatite B

Como se trata?	Não há medicação para combater diretamente o agente da doença. Tratam-se os sintomas e as complicações. No entanto, se a pessoa for exposta recentemente ao vírus da Hepatite B, deve recorrer de imediato a uma consulta médica, pois uma intervenção precoce poderá ser fundamental para evitar o contágio.
Como se previne?	A vacina para a Hepatite B é o meio mais seguro e eficaz de prevenção. É composta por três doses e tem uma taxa de eficácia de 95%. Em Portugal, esta vacina passou a integrar o Programa Nacional de Vacinação para todos os adolescentes, desde 1995 e, a partir de 2000, passou a ser administrada a todos os recém nascidos. Esta vacina é também administrada gratuitamente a todos os grupos de risco.

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IST's: TRICOMONÍASE

O que é?	Esta é uma das infeções sexualmente transmissíveis mais comuns. É causada por um parasita denominado Trichomonas vaginalis e transmite-se pelo contacto sexual. A pessoa pode estar infetada e não apresentar sintomas.
Como se transmite?	A transmissão ocorre por meio das relações sexuais ou contato íntimo com secreções de uma pessoa contaminada. Pode ser transmitida entre mulher/homem e mulher/mulher. Em geral, afeta mais as mulheres.
Como se manifesta?	Os sintomas que frequentemente estão associados são: No mulher • Corrimento com odor intenso e cor alterada; • Pequenas hemorragias durante ou após a relação sexual; • Prurido ou comichão à volta da vagina; • Inchaço das vinthas; • Necessidade de urinar com frequência e ardor ao urinar. No homem • Corrimento proveniente da uretra; • Necessidade de urinar mais do que o habitual, associada a dor ou ardor; • Irritação no pénis.

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IST's: TRICOMONÍASE

Como se trata?	Esta infeção tem cura. Os sintomas surgem cerca de 5 a 28 dias após a pessoa ter sido infetada, sendo habitualmente prescritos antibióticos no tratamento da Tricomoníase. Os parceiros sexuais devem ser tratados ao mesmo tempo e só devem voltar a ter relações após o tratamento e quando já não houver manifestação de sintomas.
Como se previne?	A UTILIZAÇÃO DO PRESERVATIVO, masculino ou feminino, é o único método contraceptivo que diminui o risco de contágio.

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IST's: Pediculose Púbica

O que é?	Resulta da infeção por um parasita, o Phthirus pubis ("chatos"), que infeta os pelos do púbis e axilas, podendo atingir outros pelos do corpo como os das axilas, tronco, barba ou mesmo pestanas. Embora seja da família dos piolhos que infetam os cabelos (Pediculus humanus capitis) nunca vai para o couro cabeludo.
Como se transmite?	A pediculose pubiana é considerada uma infeção sexualmente transmitida, cujo contágio resulta do contacto direto dos pelos públicos dos/as parceiros/as, durante as relações sexuais. Pode haver transmissão não sexual, pela partilha de roupas contaminadas – toalhas, lençóis ou roupa de uso pessoal.
Como se manifesta?	O principal sintoma é o prurido (comichão) intenso nas áreas atingidas, sobretudo durante a noite. Por vezes observam-se pequenas manchas vermelhas e lesões de coceira, ou mesmo feridas que podem infetar. Os piolhos são difíceis de ver mas, quando estão cheios de sangue, depois de se alimentarem, tornam-se visíveis. Nas infeções mais prolongadas pode ver-se pontos arroxeados por reação da pele aos piolhos.
Como se trata?	Os "chatos" tratam-se com medicamentos tópicos inseticidas, loções ou cremes, próprios. Deve aplicar-se em todas as zonas afetadas, com a pele humida, e retira-se após 10 minutos, enxaguando abundantemente. As lêndeas devem ser retiradas, com um pente fino ou à mão e o tratamento repetido cerca de 10 dias depois. O prurido pode persistir alguns dias. A roupa de vestir, toalhas e lençóis têm de ser lavados em água bem quente (60º), limpos a seco ou colocados dentro de um saco de plástico bem fechado cerca de 2 semanas.
Como se previne?	Evitar os contactos sexuais até o tratamento estar completo. Os/As parceiros/as sexuais dos últimos 3 meses devem ser observados e tratados. O uso do preservativo não previne esta infeção.

IST's: Escabiose

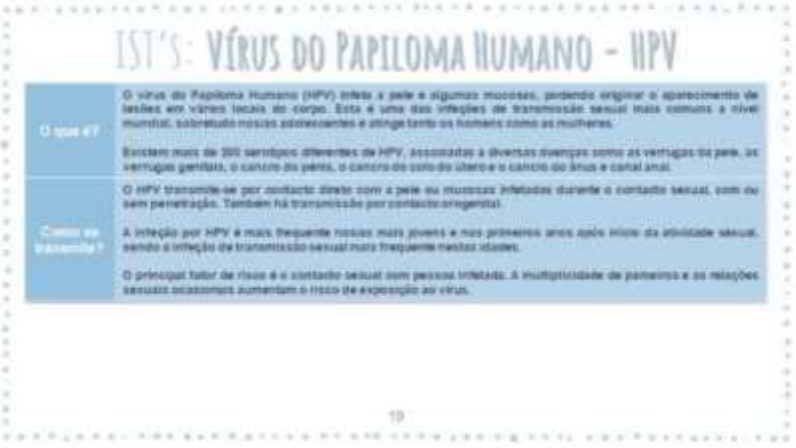
O que é?	A escabiose, mais conhecida como sarna, é causada por um parasita microscópio mais concretamente um ácaro, chamado Sarcoptes scabiei var. hominis, que vive na pele humana.
Como se transmite?	A escabiose (sarna) transmite-se através do contacto direto: • Com a pessoa infetada, contacto com a pele lesada durante as relações sexuais; • Com as roupas infetados - vestuário, toalhas, lençóis (o ácaro pode permanecer 1 a 2 dias nestes materiais)
Como se manifesta?	Os sintomas são habitualmente intensos e, sem tratamento, podem prolongar-se durante várias semanas. A doença manifesta-se com pequenas borbulhas (pápulas), pele vermelha e arranhada. Por vezes são visíveis pequenas linhas elevadas desenhadas na pele (galerias onde se desloca o parasita). As lesões localizam-se em qualquer parte do corpo, mas nos adultos são mais frequentes entre os dedos das mãos, punhos, mamas, nádegas e pénis. O principal sintoma da doença é o prurido intenso de predomínio noturno, sendo frequente a formação de escoriações (pele arranhada) nas zonas de pele com lesões. Na escabiose não tratada pode ocorrer uma infeção secundária das lesões, por bactérias, o que complica a doença.

IST's: ESCABIOSE

Como se trata?	O tratamento é realizado de acordo com a indicação médica, com a aplicação na pele de loções ou cremes inseticidas, próprios para matar o parasita. Os/As parceiros/as sexuais e os membros do agregado familiar devem ser observados/as e tratados/as em simultâneo, mesmo que não apresentem sintomas.
Como se previne?	• Lavar toda a roupa usada com água a 2 60°C de temperatura. Se a roupa não puder ser lavada a esta temperatura, deve ser lavada, secada ao sol e colocada num saco de plástico fechado pelo menos duas semanas. • Mudar os lençóis após efetuar o primeiro tratamento. • Após o tratamento a pele pode ficar irritada, devendo por isso ser hidratada diariamente. Se os sintomas se mantiverem após 2 semanas, é importante ir novamente à/à médico/a. Evitar o contacto direto com pessoa que tenha escabiose e com objetos ou materiais possivelmente infestados (roupa, toalhas, lençóis). O USO DO PRESERVATIVO NÃO PREVINE A TRANSMISSÃO DESTA INFEÇÃO.

IST's: MOLUSCO CONTAGIOSO

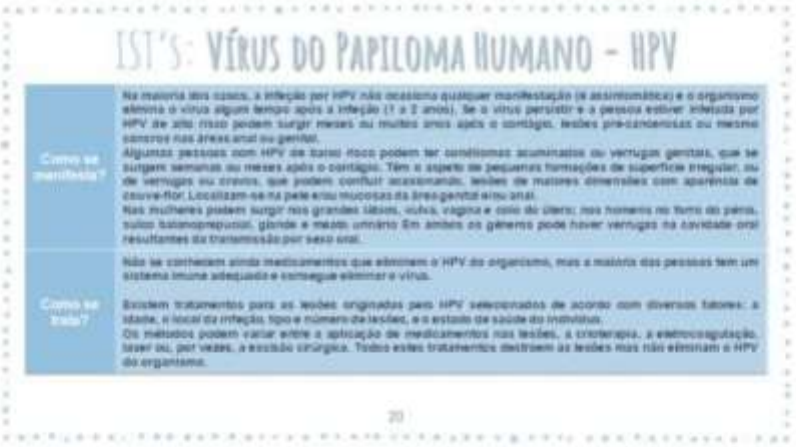
O que é?	O Molusco contagioso (Molluscum contagiosum) é uma infeção viral cutânea causada pelo vírus Poxvirus, comum e frequente nas crianças, embora também possa aparecer em adultos. Nos adultos é na maioria dos casos uma infeção sexualmente transmissível (IST).
Como se transmite?	A transmissão ocorre por contacto pele com pele, durante as relações sexuais. O atrito provoca a rotura das lesões de molusco com libertação dos vírus que estão no seu interior e consequente contágio da pele à volta e dos parceiros sexuais. Pode, muito raramente, ocorrer transmissão através de objetos ou roupa (toalhas) em ambientes húmidos (saunas, piscinas).
Como se manifesta?	Manifesta-se pelo aparecimento na pele de pequenas pápulas/vesículas, de cor branca ou rosada de centro deprimido. Podem atingir qualquer parte do corpo, dependendo do local de contágio mas nos adultos localizam-se no púbis e áreas genital, incluindo o períneo. As lesões são geralmente assintomáticas, mas pode existir comichão ou inflamação (por coceira).
Como se trata?	Não há um tratamento específico para o molusco contagioso. As opções terapêuticas são: aplicação de agentes tópicos que destroem as lesões, ou destruição mecânica com rotura das vesículas. Com o tratamento pretende-se evitar que a infeção se espalhe a outras áreas do corpo.
Como se previne?	A prevenção desta infeção incide em evitar: • Contacto direto com pele contaminada; • Barbear ou depilar áreas com lesões; • Ter relações sexuais se tiver lesões na zona genital; • Partilhar roupa interior, toalhas ou objetos íntimos (ex. esponjas, lâminas de barbear). O USO DO PRESERVATIVO NÃO PREVINE A TRANSMISSÃO DESTA INFEÇÃO.



IST's: Vírus do Papiloma Humano - HPV

O que é?	O vírus do Papiloma Humano (HPV) infeta a pele e algumas mucosas, podendo originar o aparecimento de lesões em vários locais do corpo. Esta é uma das infeções de transmissão sexual mais comuns a nível mundial, sobretudo nos adolescentes e atinge tanto os homens como as mulheres. Existem mais de 200 serotipos diferentes de HPV, associados a diversas doenças como as verrugas da pele, as verrugas genitais, o cancro do pénis, o cancro do colo do útero e o cancro do ânus e canal anal.
Como se transmite?	O HPV transmite-se por contacto direto com a pele ou mucosas infetadas durante o contacto sexual, com ou sem penetração. Também há transmissão por contacto oro-genital. A infeção por HPV é mais frequente nos/as mais jovens e nos primeiros anos após início da atividade sexual, sendo a infeção de transmissão sexual mais frequente nestas idades. O principal fator de risco é o contacto sexual com pessoas infetadas. A multiplicidade de parceiros e as relações sexuais ocasionais aumentam o risco de exposição ao vírus.

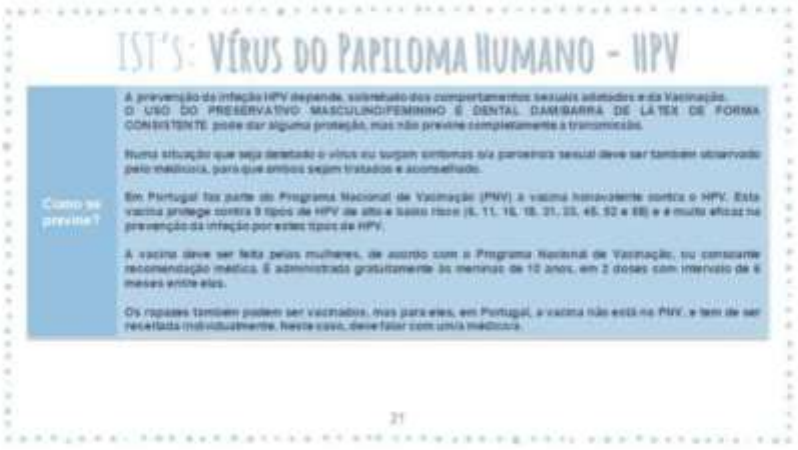
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IST's: Vírus do Papiloma Humano - HPV

Como se manifesta?	Na maioria dos casos, a infeção por HPV não ocasiona qualquer manifestação (é assintomática) e o organismo elimina o vírus algum tempo após a infeção (1 a 2 anos). Se o vírus persistir e a pessoa estiver infetada por HPV de alto risco podem surgir meses ou muitos anos após o contágio, lesões pré-cancerosas ou mesmo cancros nas áreas anal ou genital. Algumas pessoas com HPV de baixo risco podem ter condilomas acuminados ou verrugas genitais, que se surgem semanas ou meses após o contágio. Têm o aspeto de pequenas formações de superfície irregular, ou de verrugas ou cravos, que podem confluir acastanhado, lesões de maiores dimensões com aparência de couve-flor. Localizam-se na pele e/ou mucosas da área genital e/ou anal. Nas mulheres podem surgir nos grandes lábios, vulva, vagina e colo do útero; nos homens no fuste do pénis, sulco balanoprepucial, glande e meato urinário. Em ambos os géneros pode haver verrugas na cavidade oral resultantes da transmissão por sexo oral.
Como se trata?	Não se conhecem ainda medicamentos que eliminem o HPV do organismo, mas a maioria das pessoas tem um sistema imune adequado e consegue eliminar o vírus. Existem tratamentos para as lesões originadas pelo HPV selecionados de acordo com diversos fatores: a idade, o local da infeção, tipo e número de lesões, e o estado de saúde do indivíduo. Os métodos podem variar entre a aplicação de medicamentos nas lesões, a crioterapia, a eletrocoagulação, laser ou, por vezes, a excisão cirúrgica. Todos estes tratamentos destroem as lesões mas não eliminam o HPV do organismo.

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IST's: Vírus do Papiloma Humano - HPV

Como se previne?

A prevenção da infeção HPV depende, sobretudo dos comportamentos sexuais adotados e da Vacinação. O USO DO PRESERVATIVO MASCULINO/FEMININO E DENTAL DAM/BARRA DE LÁTEX DE FORMA CONSISTENTE pode dar alguma proteção, mas não previne completamente a transmissão.

Numa situação que seja detetado o vírus ou surjam sintomas o/a parceiro/a sexual deve ser também observado pelo médico/a, para que ambos sejam tratados e aconselhado.

Em Portugal faz parte do Programa Nacional de Vacinação (PNV) a vacina bivalente contra o HPV. Esta vacina protege contra 9 tipos de HPV de alto e baixo risco (6, 11, 16, 18, 31, 33, 45, 52 e 58) e é muito eficaz na prevenção da infeção por estes tipos de HPV.

A vacina deve ser feita pelas mulheres, de acordo com o Programa Nacional de Vacinação, ou consoante recomendação médica. É administrada gratuitamente às meninas de 10 anos, em 2 doses com intervalo de 6 meses entre elas.

Os rapazes também podem ser vacinados, mas para eles, em Portugal, a vacina não está no PNV, e tem de ser receitada individualmente. Neste caso, deve falar com um/a médico/a.

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VIH/SIDA

O VIH (Vírus da Imunodeficiência Humana) **é um vírus que destrói o sistema imunitário da pessoa infetada, isto é, destrói os mecanismos de defesa que nos protegem das doenças.**

Após o contágio, o VIH penetra nas células Linfócitos T Auxiliares (CD4+), que fazem parte do nosso sistema imunitário, multiplicando-se e provocando a destruição daquelas células, cuja função é proteger nos de vários tipos de infeções (por vírus, bactérias, parasitas e fungos) e de alguns tipos de cancros.

Inicialmente, o nosso organismo consegue repor as células destruídas, e o sistema imunitário fabrica anticorpos contra o VIH, que permanece no organismo sem se manifestar, como se o vírus estivesse "adormecido". Durante esta fase, que pode durar meses ou anos, não há sinais e/ou sintomas de qualquer doença: as pessoas infetadas com o VIH, são chamadas seropositivas, mas podem infetar outras pessoas se tiverem comportamentos sexuais de risco.

Progressivamente o sistema imunitário vai enfraquecendo, o organismo fica incapaz de repor as células destruídas, torna-se débil, frágil, podendo contrair infeções muito variadas e/ou desenvolver determinados tipos de cancro – esta é a fase da Síndrome da Imunodeficiência Adquirida ou SIDA.

Atualmente existe medicação que ajuda a retardar a evolução para SIDA, permitindo uma vida longa e com qualidade. Os medicamentos diminuem a multiplicação do VIH o que leva à redução do número de vírus nos fluídos corporais - diminuição da carga viral.

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VIH/SIDA

Como se transmite o VIH?

O vírus VIH encontra-se principalmente no **sangue**, no **sémen**, no **líquido pré-ejaculatório**, nos **fluidos vaginais de pessoas infetadas** e também no leite materno. Assim, a transmissão do vírus ocorre quando estes fluidos corporais entram diretamente em contacto com o corpo de outra pessoa pela via sexual e/ou sanguínea, ou, no caso do leite materno, durante a amamentação.

Formas de transmissão do VIH:

- **Sangue**: A principal transmissão ocorre através da partilha de agulhas, seringas e outros materiais utilizados no consumo de drogas, que estejam infetados com sangue contaminado. Outros objetos que contenham sangue não devem ser partilhados! É o caso das lâminas de barbear, piercings, instrumentos de tatuagem e de fazer as unhas e alguns utensílios de manicura e/ou pedicura.

  Atualmente, todo o sangue usado nas transfusões de sangue é testado antes de ser utilizado, pelo que não se deve ter receio. Dar sangue também não tem perigo porque todo o material utilizado é esterilizado e descartável. Este tipo de material, descartável e esterilizado, é também utilizado em todos os atos médicos e/ou cirúrgicos, como dar injeções, fazer biopsias, colher sangue, no exame ginecológico etc.

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VIH/SIDA

Formas de transmissão do VIH:

- **Relações sexuais e secreções sexuais** (líquido pré-ejaculatório, esperma e secreções vaginais).
  As secreções sexuais de uma pessoa infetada, mesmo que aparentemente saudável e com "bom aspeto", podem transmitir o VIH sempre que exista um contacto sexual (vaginal, oral ou anal) sem proteção. Muitas vezes, basta uma relação sexual não protegida para podermos ser infetados/as. Por isso, protege-te sempre!
- **Gravidez**
  O VIH pode ser transmitido da mãe para o filho durante a gravidez, o parto e/ou o aleitamento. Por isso, é importante que faças o teste do VIH se pretendes engravidar ou se estás grávida. Quando a mãe é seropositiva, ou seja, é portadora do VIH, as terapêuticas antirretrovirais ministradas durante a gravidez reduzem consideravelmente a probabilidade do bebé nascer infetado. Estes tratamentos são também feitos durante o parto para que não haja transmissão da infeção ao recém-nascido. Como o vírus está presente no leite materno está contra indicada a amamentação pelas mulheres seropositivas para o VIH.

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VIH/SIDA

COMO NÃO SE TRANSMITE?

- Pelos contactos sociais: aperto de mão, toque, abraço, beijo social;
- Alimentos ou água;
- Espirros ou tosse;
- Picadas de insetos;
- Piscinas ou casas-de-banho.

O QUE É SER SEROPOSITIVO/A?

Quando uma pessoa é infetada com o VIH, torna-se seropositiva e pode infetar outras pessoas se tiver comportamentos de risco. Ser seropositivo/a não significa ter SIDA (Síndrome da Imunodeficiência Adquirida), mas sim que ke é portadora do vírus.

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VIH/SIDA

COMO PREVENIR O CONTÁGIO DO VIH?

- **UTILIZANDO O PRESERVATIVO**: masculino (externo) ou feminino (interno) em todas as práticas sexuais, que impliquem a passagem de fluidos corporais de uma pessoa para outra.
  Na prática de sexo oral feito à mulher (cunnilingus) poderá ser utilizada a banda de latex (Dental Dam), que deverá ser colocada sobre a zona vulvar, evitando assim a passagem de fluidos corporais de uma para a outra. Outra opção é utilizar o preservativo masculino (externo) ou feminino (interno) que depois de desenrolado é cortado longitudinalmente, de forma a obter um rectângulo de latex que se coloca sobre a vulva.
- **Não partilhando objetos que possam estar contaminados com sangue**, nomeadamente, agulhas e seringas (bem como todo o material envolvido na preparação da injeção de substâncias por via endovenosa), lâminas de barbear, escovas de dentes;
- O risco de contágio de uma mãe seropositiva para o seu bebé pode ser drasticamente significativamente reduzindo terapêutica adequada durante a gravidez e o parto e evitando o aleitamento materno do bebé.

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VIH/SIDA

QUEM É QUE PODE SER INFETADO/A PELO VIH? COMO SABER SE ESTÁ INFETADO/A?

O contágio por VIH/SIDA não é restrito aos chamados "grupos de risco".
Os dados mostram que **TODOS/AS TÊM DE SE PREVENIR**: homens e mulheres, casados ou solteiros, jovens e idosos, bissexuais, independente da cor, raça, situação económica ou orientação sexual, ou seja, todas as pessoas que tenham comportamentos sexuais de risco:

- Práticas sexuais desprotegidas;
- Partilha de objetos que possam conter sangue (agulhas e seringas, lâminas, entre outros).

COMO SEI SE ESTOU INFETADO/A PELO VIH?

Para saberes se estás infetado/a pelo VIH tens de fazer análises de sangue específicas, designadas genericamente Testes do VIH. Podes ir ao/à teu/tua médico/a, a um centro de aconselhamento e deteção do VIH (CAD) ou a uma organização não governamental (ONG) ou de base comunitária, que trabalhe na prevenção e rastreio do VIH, e pedir para fazer o teste.

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VIH/SIDA

O QUE É O TESTE VIH?

Há 2 testes diferentes, mas complementares, para o diagnóstico da infeção VIH: os **testes de rastreio** e os **testes de confirmação**, estes só serão feitos se o teste de rastreio for reativo.
Primeiro é feito o teste de rastreio. Atualmente os mais utilizados são os testes rápidos, assim chamados porque dão uma resposta, reativo ou não reativo, em 15 a 30 minutos. É apenas necessária uma gota de sangue e são muito seguros e fiáveis nos resultados.

Se o teste de rastreio for reativo há fortes probabilidades do indivíduo estar infetado pelo VIH e deve ser referenciado a um serviço hospitalar, onde será feito um teste de confirmação. Este será muito provavelmente positivo confirmando-se a seropositividade para o VIH.

Se o teste de rastreio for não reativo temos de considerar 3 hipóteses.

- O comportamento de risco foi há 1 mês, então é necessário fazer novo teste após 3 meses, para certeza da ausência de infeção VIH.
- Se o comportamento de risco foi há menos de 1 mês, tens de esperar até completar 1 mês para fazer o primeiro teste, e, se for não reativo, tens de repetir aos 3 meses.
- Se foi há 3 meses ou mais, e o resultado for não reativo não necessitas repetir o teste – és seronegativo, ou seja não tens VIH.

Porquê estes intervalos de tempo?
Após a entrada do vírus no corpo este demora algum tempo a fabricar anticorpos contra o VIH em quantidade suficiente para serem detetados pelas análises. Este espaço de tempo é designado "período de janela" e vai de 1 a 3 meses.



VIH/SIDA

O QUE É A SIDA?

A SIDA (Síndrome da Imunodeficiência Adquirida) **é uma doença que resulta da infeção causada pelo VIH** (Vírus da Imunodeficiência Humana) e **está relacionada com a degradação progressiva do sistema imunitário, podendo surgir anos após a infeção.**
Uma vez instalado, o vírus invade e destrói um certo tipo de células do sangue (os Linfócitos CD4+), que são responsáveis pela defesa do nosso organismo contra as infeções e alguns tipos de cancros. Na fase da SIDA surgem infeções que não se manifestam quando a imunidade está mantida (infeções oportunistas), as infeções vulgares revestem formas muito graves e difíceis de tratar e surgem alguns cancros (sarcoma de Kaposi, linfomas e cancros pelo vírus do papiloma humano, HPV).

– Refere-se ao grupo de sintomas que coletivamente caracterizam uma doença. No caso da SIDA, pode incluir o desenvolvimento de determinadas infeções e tumores tal como a diminuição de determinadas células do sistema imunitário (de defesa).

– quer dizer que a doença é caracterizada pelo enfraquecimento do sistema imunitário.

– quer dizer que a doença não é hereditária e que se desenvolve após o contacto com um agente infecioso (o VIH).

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VIH/SIDA

TRATAMENTO Apesar de não existir cura para a infeção pelo VIH (erradicação definitiva do VIH do organismo) existem medicamentos antiretrovirais que conseguem baixar a quantidade de vírus para valores mínimos e atrasar a evolução da doença, proporcionando assim aos seropositivos(as) uma vida mais longa e com qualidade.

O QUE É A PROFILAXIA PÓS-EXPOSIÇÃO?

É um tratamento com medicamentos antiretrovirais que são iniciados imediatamente após a exposição a situações de risco (nas primeiras 72 horas), de forma a prevenir a infeção pelo VIH. O objetivo é evitar que o VIH entre no sistema imunitário, se instale e se multiplique. Esta terapêutica está disponível nos serviços de urgência dos hospitais públicos e privados e está dependente da avaliação dada médicola face ao risco de contágio.
Importa referir que apenas protege as pessoas de contraírem a infeção por VIH e não confere proteção em relação a outras infeções de transmissão sexual, pelo que o uso consistente do preservativo feminino ou masculino continua a ser a principal medida de prevenção.

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VIH/SIDA

O QUE É A PROFILAXIA PRÉ-EXPOSIÇÃO?

É um tratamento com medicamentos que são tomados antes da ocorrência de um comportamento de risco e que impede o vírus de se replicar no organismo. Para tal é necessário realizar uma consulta, na qual será avaliada a situação de acordo com uma norma de orientação clínica da Direção Geral da Saúde.
Este tratamento é disponibilizado a pessoas seronegativas para o VIH, ou seja, não infetadas por VIH, de forma a impedir que se infetem.

Importa referir que apenas protege as pessoas da infeção pelo VIH e não confere proteção em relação a outras infeções sexualmente transmissíveis, pelo que **o uso consistente do preservativo feminino ou masculino** continua a ser a principal medida de prevenção.

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VIH/SIDA

QUAIS OS SINTOMAS MAIS EVIDENTES DA INFEÇÃO?

São vários e não são específicos da SIDA, isto é, podem ser comuns a outras doenças:
- Febre;
- Manchas avermelhadas, com relevo dispersas pela pele ou na cavidade oral;
- Gânglios inchados na zona lateral do pescoço e axilas;
- Dores musculares e/ou nas articulações;
- Dor de garganta e/ou amígdalas inchadas;
- Cansaço;
- Perda de peso.

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VIH/SIDA

ONDE PODEM OBTER MAIS INFORMAÇÕES?

Atualmente existem diversos serviços de rastreio do VIH (anónimos, confidenciais e gratuitos) que prestam aconselhamento e informação sobre a infeção VIH e efetuam a análise sem necessidade de se identificarem ou apresentarem qualquer tipo de documento ou relatório médico - os Centros de Aconselhamento e Deteção Precoce do VIH - CAD.
Para mais informações, telefone para a Sexualidade em Linha (800 222 663).

PODEM FAZER O TESTE AO VIH SENDO MENOR DE IDADE?

Alguns Centros de Aconselhamento e Deteção Precoce do VIH (CAD) realizam testes ao VIH a jovens menores de idade. Na realidade estes centros não pedem identificação, mas estes profissionais de saúde podem recusar-se a fazer o teste sem autorização do pai, da mãe ou de um representante legal. Por outro lado, existem outros/as profissionais de saúde que durante o aconselhamento irão pedir verificam se a realização do teste ao VIH é pertinente e podem realizá-lo.

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TENDÊNCIAS EVOLUTIVAS DOS COMPORTAMENTOS SEXUAIS DE RISCO

Em Portugal, a prevalência de Infeções Sexualmente Transmissíveis (ISTs) tem **aumentado**, verificando-se taxas de **Gonorreia e Clamídia genital e Sífilis** cada vez maiores, particularmente em adolescentes.

Cerca de um terço dos infetados com o VIH/SIDA tem menos de 30 anos e cerca de 16% tem entre 15 e 24 anos de idade.

Nos **jovens universitários** dos 18 aos 35 anos, verificou-se um aumento, entre 2010 e 2016, nos seguintes comportamentos de risco: engravidar sem desejar (4,1% para 6%), ter tido uma infeção sexualmente transmissível (3,3% para 5,2%) e ter realizado uma interrupção voluntária de gravidez (3,2% para 4,5%).

A percentagem de jovens que refere ter tido **relações sexuais associadas ao consumo de álcool ou drogas** (39,2%).

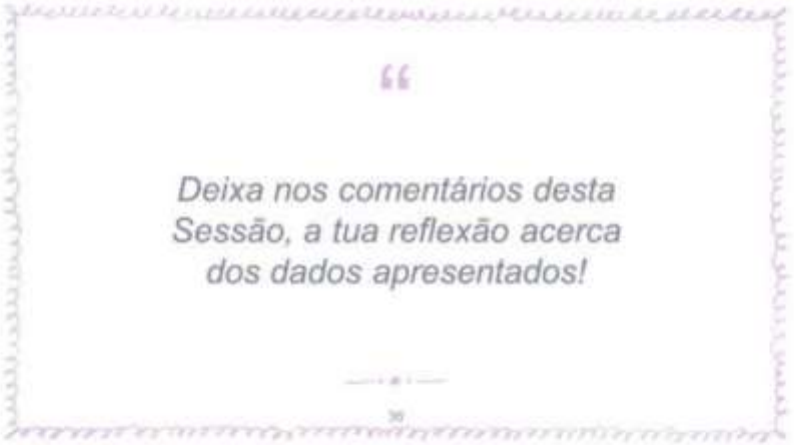
Os estudos científico sugerem haver uma tendência para os riscos sexuais aumentarem à medida que aumenta a idade.

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CAMPOS FOCAIS
COMPORTAMENTOS SEXUAIS DE RISCO NA ADOLESCÊNCIA

		n	%
Idade de Experimentação Sexual	16 anos ou menos	213	39.5
	17 anos ou mais	326	60.5
Ter 2 ou mais parceiros sexuais nos últimos 12 meses	Não	447	81.3
	Sim	103	18.7
Não ter usado sempre ou quase sempre preservativo nos últimos 12 meses	Não	218	39.9
	Sim	329	60.1
Ter tido relações sexuais após consumir álcool ou substâncias psicoativas ilícitas	Não	371	67.7
	Sim	177	32.3



"

Deixa nos comentários desta Sessão, a tua reflexão acerca dos dados apresentados!

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Sessão 2 – Métodos contracetivos

Objetivos específicos

Identificar meios de prevenção e transmissão de ISTs e VIH/SIDA.

Estratégias Pedagógicas

Top 10 –Como evitar uma gravidez indesejada e/ou não planeada;
Estratégias de prevenção - Reduzir o risco de exposição às ISTs e ao VIH/SIDA

MÉTODOS CONTRACETIVOS HORMONAIS

Pílulas Contracetivas



Os contracetivos orais combinados (pílula) são um método contracetivo eficaz quando corretamente utilizados. As hormonas (estrogénios e um progestativo) libertadas fazem com que os ovários fiquem em repouso e, por isso, inibem as ovulações. Assim, a mulher que toma a pílula não tem período fértil, pelo que não engravida. É importante, antes de mais, aconselhar-se com um profissional de saúde, para perceber se este método é adequado e qual a pílula a tomar.

1. Quando se inicia ou muda de pílula, começa-se a embalagem no primeiro dia da menstruação. Depois a toma da pílula faz-se 1 comprimido por dia, durante 21 dias seguidos e pára-se 7 dias (é neste intervalo que aparece a menstruação), recomendando-se ao 8º dia (mesmo que ainda se esteja menstruada).
2. A melhor forma de tomar a pílula sem esquecer é associar este hábito a um hábito diário que já exista. Por exemplo, tendo o hábito de escovar os dentes à noite, pode-se colocar a embalagem da pílula num copo com a escova e a pasta de dentes. A toma à noite tem a vantagem que na manhã seguinte ainda tem uma nova hipótese de se voltar a lembrar, quando voltar a escovar os dentes. Um alarme no telemóvel também pode ser outra ideia.
3. Se esqueceu de tomar a pílula fora da hora habitual, mas ainda durante as 12 horas seguintes, deve-se tomar nessa altura a pílula esquecida e a seguinte na hora habitual. Mesmo que isto

corresponda a tomar 2 pílulas no mesmo dia. Neste caso não é preciso mais nenhum cuidado.

4. Se o esquecimento ultrapassar as 12 horas, deve-se continuar a tomar a embalagem normalmente. Porém, durante os 7 dias seguintes (sem novos esquecimentos) tem de utilizar outro método contracetivo, por exemplo, o preservativo.
5. Se o esquecimento foi logo no início da embalagem e já teve relações sexuais, deve ser feita contraceção de emergência, a chamada pílula do dia seguinte.
6. Quando se inicia a primeira embalagem no primeiro dia da menstruação, a inibição da ovulação fica assegurada logo nessa embalagem. Ou seja, a mulher não necessita de utilizar outro "cuidado contracetivo" na primeira embalagem, se tiver respeitado a regra de começar imediatamente no primeiro dia de menstruação.
7. No entanto, esquecer-se de tomar, nem que seja um comprimido; tomar simultaneamente antibióticos; vomitar ou ter diarreia; tomar outros medicamentos, como por exemplo, os antiepiléticos, pode diminuir a eficácia deste método contracetivo hormonal.
8. Durante os três primeiros meses de utilização da pílula, é frequente aparecerem pequenas hemorragias, fora dos dias de pausa. Estas hemorragias, geralmente de pouca intensidade, são chamadas de "spotting" e, normalmente, desaparecem espontaneamente. Significa apenas que o organismo se está a adaptar. A eficácia da pílula é mantida. Se continuar com "spotting" para além dos 3 meses, é aconselhável recorrer a um profissional de saúde, pois pode ser necessário mudar a marca de pílula. No entanto, não pare a toma da pílula enquanto aguarda a consulta.

Anel Vaginal

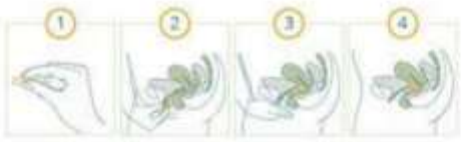


É um método contracetivo feminino, constituído por um anel flexível com um diâmetro de 54 mm e 4 mm de espessura que liberta hormonas acabando, portanto, por ser um método hormonal. O

anel contracetivo liberta diariamente hormonas que entram na circulação sanguínea através da parede da vagina, e com isso impedem a libertação do óvulo e, portanto, a gravidez.

É colocado no fundo da vagina durante três semanas, havendo uma semana de intervalo até à colocação do novo anel. É mais caro que a pílula e é necessário um bom conhecimento do corpo por parte da mulher que o utilize.

1. O anel introduz-se na vagina de forma semelhante a um tampão, permanecendo colocado durante 3 semanas.
2. Retira-se no início da 4ª semana (altura em que se menstrua) e reinicia-se um novo anel após a pausa de 1 semana.
3. Na primeira utilização, se pretende obter o efeito contracetivo logo na primeira embalagem, deve começar-se no primeiro dia da menstruação. Depois mantém-se o método do ponto 2.



O anel não "cai", assim como não caem os tampões. A vagina está envolvida por músculos que mantêm a tensão e impedem que isso aconteça.

Durante as relações sexuais não é necessário retirar o anel. Habitualmente os parceiros referem não sentir o anel e que não interfere com o normal desenrolar do ato sexual, mesmo que em alguns momentos se possam aperceber da sua presença. No entanto, pode ser retirado da vagina durante 3 horas sem diminuir a sua eficácia. Contudo, não é aconselhável fazê-lo pelo risco de esquecimento. Se for recolocado mais de 3 horas depois, será necessário tomar medidas contracetivas adicionais nos 7 dias seguintes.

Adesivo Contracetivo



É um método contracetivo constituído por um fino adesivo quadrado com 4,5x 4,5 cm, que se aplica sobre a pele, um por semana durante três semanas com uma semana de intervalo. Ou seja, um ciclo completo é formado por 3 adesivos semanais e uma semana em que não se coloca nenhum adesivo e durante a qual surge uma hemorragia, mais ou menos igual à menstruação. Ao fim dessa semana recomeça-se uma nova embalagem.

1. Na primeira vez deve ser aplicado no primeiro dia da menstruação. Desta forma, a contraceção é eficaz desde o primeiro dia.
2. Depois a colocação segue o esquema semanal descrito. No dia de mudança do adesivo a troca pode ser feita a qualquer hora, contudo, é aconselhável manter uma rotina para evitar esquecimentos.
3. Durante a semana de uso o adesivo nunca deve ser retirado, nem mesmo durante o banho. Se se verificar que está parcialmente descolado, deve ser retirado e colocado um novo.
4. Cola-se o adesivo em pele seca, bem limpa e sem cremes. Não deve ser usado sobre a pele irritada ou com lesões. Pode ser aplicado nos braços, costas, abdómen ou nas nádegas, nunca sobre o peito. Para evitar reações alérgicas, deve-se alternar semanalmente o local.

Neste método, as hormonas que inibem a libertação do óvulo são absorvidas pela pele em vez de o serem pelo sistema digestivo como acontece com a pílula.

Implante



É um pequeno tubo de plástico, de cerca de 40 mm de comprimento por 2 mm de largura (o tamanho de um pequeno gancho do cabelo), contendo um progestativo (uma hormona) e que é colocado facilmente por um médico. Tem a vantagem de ter três anos de duração, tempo ao fim do qual é necessário retirá-lo, fazendo uma pequena incisão na pele. É um método seguro e discreto em que as hormonas são libertadas para o organismo da mulher ao longo do tempo.

1. O implante é colocado, preferencialmente, até 5 dias após o início da sua menstruação (para garantir que não há gravidez) e é eficaz logo após a colocação.
2. É colocado na parte interna do seu braço, debaixo da pele. Depois de desinfetada a pele, é-lhe administrada uma pequena injeção de anestesia local.
3. O implante, que vem num aparelho próprio, é colocado sob a sua pele, como se fosse uma injeção.
4. Depois da colocação faz-se um pequeno curativo e a cicatrização ocorre como se tivesse havido um pequeno corte na pele. Pode ocorrer alguma dor, algum inchaço ou uma nódoa negra no local da colocação, mas passa rapidamente.
5. O implante é removido 3 anos após a sua inserção, ou antes, se a pedido. Para a remoção do implante, a parte superior do seu braço será desinfetada e anestesiada, tal como aquando da sua colocação. Por baixo da extremidade do implante será realizado um pequeno corte, por onde este será empurrado e removido com uma pinça. Por vezes, o implante fica envolvido num tecido duro que pode ter de ser cortado antes de o remover. Será depois necessário fechar o corte com um penso ou, eventualmente, com alguns pontos.

Injeção Contracetiva



A contraceção progestativa injetável disponível no mercado em Portugal é constituída por um progestativo (o acetato de medroxiprogesterona) na dose de 150 mg intramuscular. O progestativo é libertado lenta e progressiva no sangue, inibe a ovulação e altera o muco cervical. É administrado de 12 em 12 semanas, pelo que cada injeção tem efeito contracetivo durante 3 meses.

1. Apenas um médico pode aconselhar qual o método mais adequado para cada mulher ou casal em particular. Assim, deves consultar um médico antes de iniciar a utilização de qualquer método contracetivo hormonal.
2. A administração da injeção contracetiva deve ser realizada por um profissional de saúde, via intramuscular.
3. Caso esteja a usar a injeção pela primeira vez, deves receber a injeção até ao 5º dia do ciclo menstrual, que equivale ao 5º dia após o primeiro dia da menstruação. Nestes casos, deve-se usar preservativo durante as primeiras duas semanas, de forma a evitar uma gravidez não desejada.

MÉTODOS CONTRACETIVOS DE BARREIRA

Preservativo Masculino e Feminino



É um método contracetivo bastante eficaz e é o **ÚNICO** método que **impede a transmissão de infeções sexualmente transmissíveis**, portanto o seu uso é imprescindível quer haja ou não a utilização de outro método contracetivo.

Utilização do preservativo masculino

1. Verifica a data de validade impressa na embalagem ou na caixa.
2. Remove cuidadosamente o preservativo da embalagem (na abertura do invólucro, não utilizar objetos cortantes ou os dentes, e ter também cuidado com as unhas ou anéis) e verificar para que lado se desenrola. A borda do preservativo deve formar um círculo ao redor da cúpula. Se a borda estiver do lado de dentro da cúpula, o preservativo estará do avesso e não desenrolará corretamente.
3. Coloca o preservativo antes de qualquer contato com a boca ou a área genital da outra pessoa (vulva, vagina, ânus, nádegas e coxas).
4. Coloca o preservativo sobre o pénis ereto, mantendo pressionada a zona do reservatório para evitar a acumulação de ar na extremidade coletora e desenrolar até à sua base.
5. Assegura-te de que ele permanece colocado durante o ato sexual. Se sair, coloque um outro preservativo.
6. Após a ejaculação, segura a borda do preservativo enquanto puxa o pénis para fora do corpo da outra pessoa. Retira cuidadosamente o preservativo.
7. Coloca o preservativo usado no caixote do lixo e não na sanita.
8. Os preservativos não são reutilizáveis.



Utilização do preservativo feminino

O preservativo feminino pode ser inserido na vagina até oito horas antes de ter relações sexuais. A maioria dos modelos possui um anel flexível nas duas extremidades—um anel interno para segurar o preservativo dentro da vagina e um anel externo para impedir que o preservativo seja empurrado para dentro da vagina.

O preservativo feminino não requer uma ereção para ser usado, ao contrário do preservativo masculino.

1. Retira o preservativo da embalagem e desenrole-o. Aperte o anel interno de forma que fique junto.
2. Insere o anel o mais profundo possível no teu canal vaginal. É semelhante a inserir um tampão ou um copo menstrual. Usa o dedo para verificar e garantir que o preservativo está bem profundo na vagina.
3. Retira o dedo. A borda da abertura do preservativo deve ficar do lado de fora da abertura vaginal.
4. Após teres relações sexuais, o preservativo feminino não precisa ser removido imediatamente, mas se o teu parceiro tiver ejaculado, é melhor remover o preservativo feminino estando deitada.
5. Segura o anel externo do preservativo e gira-o algumas vezes para selar qualquer fluido ejaculado e assim ter um processo de retirada do preservativo mais rápido e fácil.



Diafragma





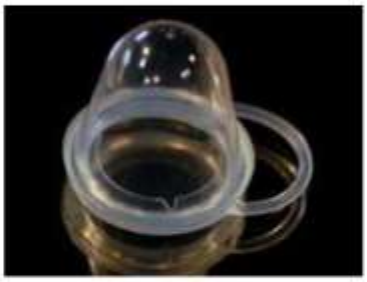
O diafragma é um dispositivo de borracha com um aro flexível que se introduz na vagina. Quando corretamente introduzido previne o contacto do esperma com o colo do útero, funcionando como meio eficaz de contraceção.

O diafragma é bastante simples de colocar e deve ser colocado cerca de 15 a 30 minutos antes da relação sexual.

1. Antes de colocar o diafragma, verifica o seu estado de conservação.
2. Deves segurar o diafragma com uma das mãos, estreitando o aro com os dedos indicador e polegar. Com a outra mão, mantém afastados os pequenos lábios enquanto introduz o diafragma na vagina.
3. O diafragma é empurrado ao longo da parede posterior da vagina, de modo a que a sua extremidade anterior (ao nível do orifício vulvar) fique de encontro à parede posterior da sínfise púbica. O aro do diafragma deve tocar as paredes da vagina. O diafragma deve cobrir o cérvix e não deve causar qualquer incómodo.
4. Aconselha-se a associação de um espermicida que é colocado no interior e à volta do aro do diafragma, antes de cada utilização.
5. Não retirar o diafragma antes de 6 a 8 horas após a relação sexual, nem efetuar irrigações vaginais nesse período.
6. Após cada utilização, deverá ser lavado com água fria e sabão neutro, secado naturalmente e guardado na sua embalagem, podendo ser reutilizado por cerca de 2 a 3 anos.
7. O diafragma só poderá permanecer colocado até ao máximo de 24 horas devido à possibilidade de ocorrência de infeções.



Cervical Cap (Cápsula Cervical)



Tal como o diafragma, a cápsula cervical, serve como uma barreira física que bloqueia o "caminho" dos espermatozóides até ao útero. É menor e mais espesso que o diafragma e assemelha-se a um dedal grande que se ajusta perfeitamente ao redor do colo do útero.

Como existem cápsulas de diferentes tamanhos, o médico deve verificar o diâmetro do colo do útero, de modo a determinar consoante cada caso, a capsula que proporciona um efeito de vácuo que permita, depois de ser aplicada, a sua correta manutenção.

Embora, a cápsula desempenhe o mesmo papel que o diafragma, a sua utilização está recomendada para as mulheres que não podem utilizar este último dispositivo devido à presença de defeitos anatómicos do útero, como por exemplo a retroversão ou um prolapso, que dificultem a retenção do mesmo. Em relação à eficácia contracetiva, é semelhante em ambos os métodos.

Esponjas Contracetivas



A esponja contracetiva é um pequeno disco de látex que contém espermicida e que é colocado encostado ao colo do útero para prevenir uma gravidez e deve ser inserida na vagina antes da relação sexual. Ao pode ser deixada na vagina durante até 24 horas, tornando-a perfeita para situações de relações sexuais espontâneas. Este método tem sido atualizado e reintroduzido. As esponjas atuais são pequenas (poliuretano) de espuma e contém uma espécie de espermicida. A esponja cria uma barreira física entre o sémen e o colo do útero, retendo o esperma na esponja. Também atua como barreira química através da libertação do espermicida. Três esponjas contracetivas estão atualmente disponíveis em alguns países para a contraceção.

1. Para utilizares este método, lava as mãos e humedece a esponja com água da torneira. Este é um passo importante, pois ativa a libertação do espermicida.
2. De seguida, com a face côncava virada para cima, dobra a esponja ao meio e insere-a o máximo que conseguires, até cobrir o teu colo do útero. Confirma se as margens estão devidamente encaixadas, e já está.
3. Depois da relação sexual, deixa-a colocada durante pelo menos seis horas. Subsequentemente, puxa a argola para a retirar e deita-a para o lixo. É importante retirar a esponja num prazo de 24 horas, porque em alguns casos poderá aumentar o risco de síndrome do choque tóxico.

Espermicidas



Os espermicidas são agentes químicos utilizados para desativar os espermatozoides presentes na vagina antes que penetrem no útero, sendo comercializados sob várias formas farmacêuticas e com vários tipos de aplicação: gel ou creme colocado com a ajuda de um aplicador presente na embalagem, aerossóis ou espumas, cuja embalagem é igualmente constituída por um aplicador, e óvulos vaginais, supositórios ou comprimidos de consistência sólida, que devem ser diretamente introduzidos na vagina com um dedo, unindo-se no seu interior.

Os espermicidas são frequentemente usados como método temporário enquanto se espera por um método de longo prazo ou por casais que têm relações sexuais com pouca frequência. Quando utilizados isoladamente, os espermicidas proporcionam alguma proteção contracetiva, mas são melhores quando associados com um método de barreira para prevenir a gravidez.

1. O produto espermicida, qualquer que seja a sua variedade, deve ser sempre colocado antes de cada coito, seguindo-se as instruções indicadas na embalagem.
2. A colocação na vagina é simples, independentemente de ser com um dedo, em caso de comprimidos e supositórios vaginais, ou como acontece com o cremes e gel, com a ajuda de um aplicador. Os espermicidas devem ser colocados com uma certa antecedência do coito, variável em cada caso. Por exemplo, os supositórios e os comprimidos levam entre 5 a 10 minutos para se derreterem.
3. Cada produto tem um período de tempo limitado, de meia hora a duas horas, tendo-se que proceder a uma nova aplicação, caso o coito não seja efetuado dentro desse período de tempo.

Dispositivo Intrauterino



O DIU é um pequeno dispositivo constituído por finas hastes, que é introduzido na cavidade uterina com o objetivo de evitar uma gravidez. É frequente ouvir chamar "aparelho" ou "mola" (expressão usada em alguns Países de expressão portuguesa). Funciona pela libertação de substâncias – cobre ou hormona – que têm como efeitos, entre outros: impedir a progressão dos espermatozoides e, portanto, a fecundação do óvulo; e, tornar a parede uterina pouco propícia à implantação do ovo.

É um método bastante eficaz, muito seguro e reversível, ou seja, quando é retirado a mulher pode, se desejar, voltar a engravidar. É um método "invisível" e que tem uma longa duração de ação, ou seja, dependendo do DIU utilizado, pode variar entre 3 e 10 anos.

Pode ser usado por mulheres que nunca engravidaram (há alguns anos não era hábito colocar DIU em mulheres que nunca tinham engravidado).

A sua colocação é um procedimento simples, que é realizado em consulta. Há atualmente dois tipos de DIU:

- DIU com cobre, tem como vantagem ser um método não hormonal. Os ciclos menstruais mantêm-se com os intervalos habituais. As perdas de sangue e as dores menstruais podem aumentar ligeiramente.

- DIU medicado com hormona (progestativo), pelo contrário, as perdas de sangue e as dores durante a menstruação tendem a diminuir. Nos primeiros meses podem existir perdas de sangue irregulares, que tendem a desaparecer. Ao fim de um ano mais de metade das mulheres podem estar sem menstruar. Estas alterações são próprias deste DIU, não provocam problema, desaparecendo quando ele é retirado.

ESTERILIZAÇÃO

Esterilização feminina

A esterilização feminina, também chamada de oclusão ou laqueação tubária é um método contracetivo permanente para as mulheres que não querem ter mais filhos. O método requer um procedimento cirúrgico simples. As abordagens de esterilização feminina mais comuns são: a Laqueação Tubária Bilateral (exige intervenção cirúrgica, em bloco operatório, sob anestesia, não exigindo internamento prolongado) e Oclusão Tubar (histeroscopia - que não requer cuidados anestésicos; Essure – consiste na introdução de um micro-implante flexível em cada trompa, através do útero, promovendo uma reação de corpo estranho e uma resposta inflamatória local, ocorrendo oclusão das trompas, irreversível, em 3 meses; Adiana - utiliza um cateter com radiofrequência que provoca uma destruição superficial e oclusão da entrada da trompa).

Esterilização masculina (vasectomia)

A esterilização masculina é um método contracetivo permanente para homens. É um procedimento cirúrgico simples e rápido, realizado sob anestesia local, que implica a laqueação dos canais deferentes, que ligam os testículos (local onde são produzidos os espermatozoides) à uretra.

A esterilização masculina não é castração, não afeta os testículos.

Após a vasectomia, os homens ejaculam quase a mesma quantidade de sémen, mas sem espermatozoides, que são indispensáveis à fertilização do óvulo. Não afeta a capacidade sexual do homem, nem causa qualquer alteração no seu desejo sexual.

MÉTODOS BASEADOS NO CICLO MENSTURAL ou "MÉTODOS "NATURAIS

Implicam que a mulher aprenda a identificar o período fértil, conhecendo as modificações fisiológicas ao longo do ciclo menstrual. Estes métodos podem requerer um longo período de abstinência. Geralmente são necessários 3 a 6 ciclos para aprender a identificar o período fértil, sendo difíceis de utilizar quando em presença de ciclos irregulares.

Coito interrompido ("coitus interruptus")

Não é propriamente um método contracetivo. O homem retira o pénis da vagina antes de ejacular. É pouco eficaz porque, antes da ejaculação, pode existir uma saída de espermatozoides.

Método Ogino-Knauss (método do calendário)

Limita a realização do ato sexual ao ciclo menstrual feminino, durante o qual o risco de conceção é menor. Comporta abstinência sexual durante cerca de 10 dias em cada ciclo.

O período fértil é calculado da seguinte maneira:

- A mulher tem uma ovulação por mês, 14 dias antes da menstruação seguinte;
- O óvulo é viável cerca de 2 dias após a ovulação e o espermatozoide pode ser fecundante 3 a 5 dias após ejaculação.

Considerando a duração dos ciclos menstruais anteriores (pelo menos 6 ciclos), calcula-se o período fértil subtraindo 10 dias ao número de dias do ciclo mais longo e 20 dias ao número de dias do ciclo mais curto.

Método da Temperatura basal

Tem como fundamento o aumento da temperatura basal (pelo menos 0,5°C) após a ovulação. A relação sexual desprotegida é aconselhada após 3 dias da elevação da temperatura. A avaliação da temperatura poderá ser vaginal, oral ou retal (após 6 horas de sono).

Método do muco cervical

As características do muco cervical variam ao longo do ciclo:

- Na pré-ovulação é mais claro, mais abundante e com maior elasticidade (filância);
- Após ovulação, é mais viscoso, opaco e menos abundante.

O período fértil inicia-se no primeiro dia em que o muco se torna filante e transparente, prolongando-se pelo menos 3 dias após a filância máxima. Neste período a mulher não deverá ter relações sexuais desprotegidas.

Método Sintotérmico

A mulher identifica os dias férteis e inférteis, relacionando os métodos da temperatura basal e do muco cervical. O período fértil inicia-se logo que sejam avaliadas secreções vaginais, terminando no quarto dia após a filância máxima do muco cervical e depois de ultrapassado o 3.° dia de subida de temperatura basal.

CONTRACEÇÃO DE EMERGÊNCIA

Pílula do Dia Seguinte



É um contracetivo de emergência a ser usado exclusivamente em caso de haver uma relação sexual imprevista e desprotegida ou falência do método como, por exemplo, a rutura do preservativo. Não deve ser utilizado sistematicamente ou frequentemente porque a dose hormonal que contem é elevada o que pode provocar efeitos secundários como náuseas, cefaleias, e até mesmo complicações como casos de trombose venosa periférica.

Não é necessária receita médica, podendo por isso ser adquirida diretamente numa farmácia. Os centros de saúde, urgências de ginecologia e centros de atendimento a jovens dispõem de pílulas do dia seguinte para fornecer gratuitamente.

1. Deve ser tomada nos primeiros 5 dias após as relações desprotegidas, sabendo-se que quanto mais cedo for tomada, maior a sua eficácia.
2. Cada embalagem contem apenas 1 comprimido, que deve ser tomado com alimentos para diminuir a ocorrência de náuseas.
3. Se vomitar nas 2-3 horas após tomar o comprimido, deve ser repetida a toma.
4. Depois de tomar a pílula do dia seguinte, a menstruação vem habitualmente na altura esperada. Em algumas mulheres, pode vir antes da altura esperada. Nesse caso, e se a menstruação tiver as características habituais, não é preciso ficar preocupada.

Prevenção de ISTs

As formas mais eficazes de prevenir uma IST são:

1. Abstinência sexual: se não houver contactos sexuais, não há possibilidade de transmitir ou adquirir qualquer infeção;

2. Ter apenas um/a parceiro/a sexual que concorde em adotar a mesma prática (monogamia);
3. Conversar acerca das ISTs com o/a parceiro/a e de como continuar seguro antes de iniciar atividade sexual;
4. **UTILIZAÇÃO REGULAR DO PRESERVATIVO**;
5. Vacinação;
6. Realização de rastreios periódicos.

Prevenção do HIV

Via sexual. Para prevenir a transmissão do HIV durante as relações sexuais é necessário UTILIZAR PRESERVATIVO, em particular durante a penetração, desde o início até ao final da mesma. Existem preservativos masculinos, femininos e barreiras de látex para o sexo oral.

Via vertical. Se estiver grávida (ou estiver a pensar em engravidar) e for HIV positiva, é importante saber que os tratamentos para o HIV permitem melhorar a saúde materna e, em simultâneo, reduzir eficazmente o risco de transmissão do vírus ao seu futuro filho ou filha durante a gravidez e o parto. No caso do leite materno, a amamentação não é recomendada.

Via sanguínea. Evitar a partilha de objetos pessoais que possam ter estado em contacto com sangue com o HIV, tais como escovas de dentes, objetos perfurantes, seringas, agulhas, etc. É importante esterilizar o material utilizado para piercings e tatuagens.

Top 10 –Como evitar uma gravidez indesejada e/ou não planeada

1. **Abstenção.** A única forma 100% segura e eficaz de evitar uma gravidez indesejada é não se envolver em relações sexuais heterossexuais.
2. **Limita a atividade sexual.** Ou seja, podes envolver-te em atividades sexuais, como beijos, abraços, toques e massagens, sexo oral.
3. **Comunica com o/a teu/tua parceiro**. É importante conversares sobre os métodos contracetivos.
4. **Informa-te para não acreditares em mitos amplamente difundidos**. Existem muitos conceitos erróneos sobre as maneiras de evitar uma gravidez, como ter relações sexuais de pé ou durante a menstruação.

5. **Conversa com um/a profissional de saúde**. Pede informações e conselhos a pessoas que realmente têm conhecimentos, tendo cuidado com aquilo que lês na internet.
6. **Escolhe um método contracetivo que se ajusta aos teus hábitos e preferências**. Por exemplo, se te esqueces com facilidade, talvez a escolha da pílula não seja adequada para ti.
7. **Considera as implicações de longo prazo**. Pondera a reversibilidade de vários métodos e os possíveis efeitos na fertilidade futura.
8. **Não pratiques sexo sem proteção**. Não te enganes com o "é só desta vez". A gravidez pode ocorrer apenas dessa vez.
9. **Usa métodos de back up**. Se houver a possibilidade de um método contracetivo não oferecer a proteção adequada, usa uma forma adicional de proteção. Por exemplo, usar o preservativo e tomar a pílula.
10. **Informa-te sobre a contraceção de emergência**. Por exemplo, no caso do preservativo romper ou do diafragma escorregar.

O preservativo é altamente eficaz na prevenção de infeções sexualmente transmissíveis e da gravidez não desejada.

Sessão 3 – Mitos acerca das infeções sexualmente transmissíveis

Objetivos específicos
Compreender os principais mitos acerca da prevenção e transmissão de ISTs e VIH/SIDA.
Estratégias Pedagógicas
Estratégias para a mudança – Como dizer "não ao sexo". *Top 10 – Regras da etiqueta sexual;* *A Refletir - #Caso 1*

Mitos acerca das infeções sexualmente transmissíveis

1. Só as pessoas com mais do que um/a parceiro/a sexual correm risco de contrair ISTs

As ISTs podem ser transmitidas entre parceiros/as através da prática sexual desprotegida (sem preservativo) oral, anal, vaginal ou através da partilha de brinquedos sexuais, independentemente de ter tido relações sexuais uma ou 100 vezes.

2. É fácil perceber se o/a parceiro/a contraiu uma IST.

Não é assim tão óbvio perceber se o/a parceiro/a sexual contraiu realmente uma IST. De facto, a maioria pensa nos sintomas mais óbvios, como borbulhas, inchaço, erupções cutâneas ou vermelhidão. Mas, a maior parte das ISTs não apresenta estes sintomas – pelo menos nas primeiras semanas – levando a que o/a portador/a da infeção não saiba sequer que está infetado/a. A melhor forma de evitar estas situações é de te submeter imediatamente a exames médicos caso tenhas tido relações sexuais sem proteção.

3. Não é preciso ficar preocupado/a com as ISTs porque os tratamentos de hoje em dia são muito mais eficazes.

Na verdade, a medicina tem feito vários avanços e os tratamentos para das ISTs estão mais eficazes. No entanto, são necessárias todas as precauções no que concerne às infeções sexualmente transmissíveis, visto que alguns vírus, como o herpes genital e o HIV/Sida, podem ser tratados mas não desaparecem do nosso organismo, enquanto a gonorreia está a tornar-se cada vez mais resistente aos antibióticos.

4. É possível contrair ISTs através das sanitas.

Para que isso acontecesse, a secreção corporal teria de estar no local há pouco tempo, pois os vírus e bactérias transmissores das ISTs não duram muito fora do organismo. Há ainda a possibilidade de contrair outros problemas, como infeção urinária e candidíase. Por isso, é melhor não correr riscos e tomar precauções.

5. Usar a mesma piscina que alguém portador de alguma ISTs pode te contaminar.

Como referido anteriormente, os vírus precisam se manter em contato com as células humanas para permanecer vivos. Existem várias maneiras de contrair ISTs, mas nadar numa piscina na qual tenha estado uma pessoa com alguma ISTs não é uma delas.

6. Ter relações sexuais dentro de água, na banheira ou na piscina não transmite ISTs.

Ao contrário do que as pessoas imaginam, o cloro não mata vírus e bactérias, nem impede a transmissão de infeções. Há um grande mito de que o cloro funciona como um desinfetante que mata bactérias ou vírus que causam infeções e, por isso, fazer sexo em ambientes que envolvam água é mais seguro. No entanto, o cloro não vai matar o esperma e muito menos te previne contra ISTs. Se o casal deseja ter relações sexuais dentro de água, é necessário tomar as devidas precauções.

7. Os métodos de contraceção hormonal (como a pílula ou o anel) protegem contra as ISTs.

Os métodos de contraceção hormonais apenas são eficazes na prevenção da gravidez, mas eles não protegem contra ISTs. **Os preservativos femininos e masculinos** são os únicos métodos contracetivos que ajudam a prevenir a transmissão de ISTs durante as relações sexuais.

8. Não é possível contrair ISTs através do sexo oral.

Embora as probabilidades de contrair este tipo de infeções, através do sexo oral, sejam mais reduzidas, o risco continua lá e não deve, por isso, ser desprezado ou ignorado. O risco é ainda maior quando quem está fazendo tem cortes ou arranhões na boca, muitas vezes quase imperceptíveis e que podem ser causados pela própria escova de dentes. Além disso, o risco de infeção aumenta se houver sangue menstrual.

Para diminuir os riscos e evitar preocupações, o uso de preservativos é sempre indicado. Para os homens, existem preservativos com sabor – o que deixa a experiência mais agradável para algumas pessoas. No caso das mulheres, o preservativo feminino poderá ser uma boa opção, tal como cortar um preservativo masculino e colocá-lo sobre as zonas genitais das mulheres ou usar um Dental dam (uma película de látex).



O herpes genital, a gonorreia, a sífilis, o HPV e a clamídia são exemplos de infeções sexualmente transmissíveis que podem ser contraídas através do sexo oral desprotegido. Além disso, a transmissão do HIV por meio do sexo oral, apesar de difícil, não é impossível. Lesões na mucosa na boca podem favorecer o contágio, tornando o uso do preservativo imprescindível.

9. Os testes para as ISTs são extremamente dolorosos.

Quer para os homens, quer para as mulheres, os testes podem assumir várias formas: análises sanguíneas ou da urina, exames simples para despistar possíveis sinais de infeção ou com recurso a um cotonete apropriado para o efeito que, embora seja desconfortável, não é doloroso.

10. Só os homossexuais e os toxicodependentes é que contraem o HIV.

O vírus HIV pode ser transmitido e contraído por todas as pessoas, independentemente da orientação sexual ou da identidade de género. Apesar dos toxicodependentes serem um grupo de risco, devido à partilha de seringas, por exemplo, todas as pessoas que não tomem precauções correm risco de contrair o vírus.

11. As IST desaparecem por si só.

É pouco provável que tal aconteça. Se adiar o tratamento, só vai atrasar o processo e piorar a sua saúde, já para não referir que é um grande risco na medida em que pode transmitir a infeção.

12. Se já tive uma IST não a posso ter outra vez.

É possível contrair a mesma Infeção Sexualmente Transmissível mais do que uma vez. Vírus como o herpes genital ou o HIV continuam no corpo – mesmo depois do tratamento – na medida em que são incuráveis.

13. Se o pénis é retirado antes da ejaculação não há risco de contágio.

Tanto o sémen quanto o sangue são fluidos que podem facilitar a transmissão de ISTs. No entanto, a troca de secreções e o contato de pele já são suficientes para que ocorra a transmissão, por exemplo, do herpes ou da sífilis. Por outras palavras, os agentes causadores das principais ISTs estão, sim, mais presentes no esperma, mas outras secreções podem transmitir doenças – o líquido que o homem expele antes mesmo de ejacular e a secreção vaginal também são transmissores.

14. O coito interrompido é uma forma de impedir gravidez.

O método do coito interrompido consiste em retirar o pénis de dentro da vagina antes que a ejaculação aconteça. Na verdade, quando há ereção, e antes de haver ejaculação, ocorre a produção de um líquido proveniente das vesículas seminais que pode conter alguns espermatozoides. Por isso mesmo pode haver gravidez sem ejaculação. Também por este motivo o coito interrompido não é um método contracetivo eficaz. Para evitar uma gravidez indesejada é importante o uso correto do preservativo, que deve ser colocado sempre antes de haver penetração do pénis ereto na vagina, ou o uso de outro método contracetivo eficaz.

15. O preservativo protege de todas as ISTs.

Quando se usa preservativo, existem em regiões que não ficam cobertas, podendo existir a transmissão de algumas ISTs mesmo usando preservativo, como o HPV. Mas JAMAIS dispenses o uso do preservativo, pois continua a ser o método mais eficaz de evitar ISTs.

16. Se tiver relações sexuais sem usar preservativo e depois desconfiar posso ter contraído HIV, só me resta lamentar e esperar até poder fazer o teste de despiste.

Atualmente, temos a PEP (profilaxia pós-exposição). Uma pessoa neste tipo de situação, pode procurar a PEP (tratamento preventivo de emergência que deve ser iniciado até 72 horas após a relação sexual desprotegida).

17. Só é necessário utilizar preservativo nas relações sexuais anais e vaginais.

No sexo oral, apesar de a transmissão de HIV ser mais difícil – porque têm de existir lesões na mucosa da boca do indivíduo exposto –, é possível. Porém, existem outras infeções sexualmente transmissíveis, como o herpes, a clamídia ou a gonorreia que também podem ser transmitidas através do sexo oral desprotegido.

18. Os preservativos podem ser colocados imediatamente antes da ejaculação.

O preservativo masculino ou feminino deverá ser colocado no início do envolvimento sexual para a prevenção da gravidez e de ISTs. Visto que, antes da ejaculação existem a libertação de líquido que contém espermatozoides e o contacto com outros fluidos além do líquido seminal podem transmitir ISTs.

19. O preservativo rompe-se com frequência.

O risco de um preservativo se romper é tanto menor quanto mais cuidadoso for o seu uso. Deve evitar-se abrir os pacotes ou colocar o preservativo no pénis com as unhas ou os dentes. Deve ser desenrolado cuidadosamente no pénis ereto, apertando-se a ponta para evitar que fique ar no reservatório. Se não deslizar, é porque foi colocado ao contrário e deve ser substituído por outro. Também é importante em relações longas, excedendo os 30 minutos, que o preservativo seja substituído. Se estes cuidados forem cumpridos, dificilmente o preservativo se romperá.

20. A vaselina é um bom lubrificante.

Os preservativos já são lubrificados, mas se houver a necessidade de utilizar lubrificação acessória esta não deve ser à base de óleos ou de vaselina porque as substâncias oleosas (e também os componentes dos batons) danificam o látex e o poliisopreno, pelo que o preservativo pode ficar ressequido e romper-se. Portanto, lubrificantes sim – mas à base de água.

21. Tem-se menos prazer quando se usa preservativo.

Este mito é comum, sobretudo nos homens. Existem preservativos de diferentes tamanhos, espessuras e até texturas para que cada pessoa procure o que mais lhe agradar. E porque não fazer do momento de colocação do preservativo uma parte do jogo de preliminares feito a dois para que não seja um aborrecimento? As cores, sabores e feitios dos preservativos poderão tornar uma relação com preservativo mais atrativa e até divertida. Cabe a cada um, em função das suas necessidades e da sua maneira de ser, encontrar a melhor forma para ambos.

22. A proteção é maior se usar dois preservativos.

O uso de preservativos sobrepostos leva habitualmente a um maior atrito e, consequentemente a uma maior probabilidade de romperem. Essa probabilidade é igual para o uso do preservativo masculino e feminino ao mesmo tempo. Por isso, não é aconselhável usar dois preservativos ao mesmo tempo.

23. Os preservativos podem ser guardados no bolso das calças.

Os preservativos devem ser guardados num local seco e sem exposição ao sol sob pena de se degradarem. Assim, não é aconselhável deixá-los no porta-luvas do carro nem nos bolsos das calças, nos quais existe muita fricção. Evita dobrá-los, amassá-los ou mantê-los por muitos dias dentro da carteira ou do bolso.

24. O preservativo não tem prazo de validade.

Os preservativos têm data de validade inscrita nos pacotes. Tal como para qualquer outro produto, a data de validade de ser tida em conta. Caso o preservativo esteja fora de prazo, este pode não estar nas melhores condições, perdendo a sua eficácia e rompendo com maior facilidade.

25. Produtos com sabor, textura ou cores diferentes não são tão eficazes.

Características como textura, sabor ou cor não afetam a eficácia do preservativo. O mais importante é escolheres marcas confiáveis.

26. Se o preservativo ficar preso dentro da vagina não tenho de me preocupar, ele acabará por sair.

Se o preservativo sair durante a relação e não for possível retirá-lo com os dedos, é necessário procurar ajuda médica o quanto antes para que seja retirado com segurança. Deixar o preservativo dentro da vagina por muito tempo pode causar alergias e até mesmo infeções. Para prevenir o problema, é importante que o preservativo usado não seja maior que o tamanho adequado.

27. Não é possível transmitir ISTs através de beijos na boca.

Qualquer contato com a mucosa e secreções de alguém contaminado pode transmitir infeções como o herpes. Apesar do risco ser mínimo, existe.

28. A depilação íntima pode reduzir os riscos de contrair infeções sexualmente transmissíveis.

Os pelos funcionam como proteção contra infeções, por isso, quando nos depilamos, retiramos essa proteção e ficamos mais vulneráveis.

29. Urinar após as relações sexuais diminui o risco de contrair ISTs.

Esta afirmação é totalmente falsa, a urina não retira nenhum tipo de vírus do organismo.

30. Lavar o pénis ou a vagina após ter relações sexuais reduz o risco de contrair ISTs.

A higiene íntima é importante e constitui uma boa prática. Porém, não há dados que comprovem que lavar os genitais evita ISTs.

31. É melhor não escovar os dentes antes do sexo oral.

Há quem acredite que seja recomendável não escovar os dentes antes do sexo oral, para que eventualmente não se produzam feridas na boca, reduzindo risco de contágio de ISTs. No entanto, esta é uma afirmação sem fundamento. O que é recomendável é usar preservativo durante o sexo oral.

32. Relação sexual entre duas mulheres não é capaz de transmitir ISTs.

Independentemente do sexo do/a parceiro/a, sempre será necessária alguma forma de proteção. Algumas infeções podem ser mais dificeis de serem transmitidas quando não há um órgão sexual para fazer a penetração, porém infeções como a sífilis podem ser transmitidas pelo contato da língua com a mucosa vaginal ou pelo contato dos dedos ou outro objeto que eventualmente entre em contato com uma pessoa contaminada e logo em seguida com as mucosas da outra pessoa.

33. Uma pessoa com HIV tem obrigação de contar aos/às seus/suas parceiros/as que tem o vírus.

A pessoa com HIV tem direito à sua privacidade, já que revelar a sua condição pode trazer consequências negativas em termos de discriminação e perda de emprego, por exemplo. No entanto, é da responsabilidade de cada um/a usar métodos de proteção, especialmente, o preservativo.

34. Fazer tatuagens ou manicure podem transmitir HIV.

O HIV rapidamente morre fora do organismo. Para além disso, o risco de transmissão é influenciado pela quantidade de sangue: tatuagem e piercing poderão envolver mais sangue, enquanto que os alicates das unhas dificilmente implicariam sangue em quantidades suficientes para que houvesse transmissão do HIV. De qualquer forma, recomenda-se a utilização de agulhas e tintas descartáveis, no caso de tatuagem e piercing, e de instrumentos individuais ou esterilizados corretamente, no caso de manicure.

35. Os métodos contracetivos de emergência (pílula do dia seguinte) são 100% seguros para prevenir a gravidez.

Não é 100% segura, embora tenha um grau de eficácia bastante elevado se for tomada precocemente, após a relação sexual desprotegida. A pílula deve ser tomada o mais cedo possível e nunca após mais de 72 horas. Deves de preferência recorrer ao teu Centro de Saúde, onde a podes receber gratuitamente e ser aconselhada quanto à forma correta de a tomar. No caso de não ser possível poderás recorrer a uma farmácia onde a podes comprar e onde, à partida, te serão dadas as instruções de uso corretas.

Estratégias para a mudança – Como dizer "não ao sexo"

1. Em primeiro lugar, **reconhece os teus próprios valores e sentimentos**. Por exemplo, se acreditas que apenas deves ter relações sexuais com alguém por quem te encontras envolvido/a afetivamente, mantem-te fiel às tuas crenças.
2. Se não quiseres ter relações sexuais, um **NÃO QUERO TEM DE SER SUFICIENTE**!
3. Se te estiveres a sentir pressionado/a, diz de imediato que estás **a sentir essa pressão** e que te está a **deixar desconfortável**. Sê simples e direto/a!
4. Se o/a teu/tua parceiro/ disser: "Se realmente gostasses de mim, querias fazer amor comigo". Responde da seguinte forma: "**Gosto muito de ti, mas sexo não é algo que eu faça para provar que gosto de alguém**" ou "**Se tu gostasses de mim, não tentaria forçar algo que eu não quero fazer**".
5. Não deves esquecer que é mais fácil dizer que **não queres ir para determinados sítios** (por exemplo, casa do/a teu/tua parceiro/a), do que depois "lutares" contra avanços indesejados.
6. É muito importante que **comuniques os teus sentimentos**.
7. Lembra-te que se o teu relacionamento ficar melindrado com este tipo de questões ou terminar, **este não é/era um relacionamento**.

Top 10 – Regras da etiqueta sexual

1. **Certifica-te de que as relações sexuais são consensuais**. A coerção pode assumir várias formas: física, emocional e verbal. Todas causam danos psicológicos e enfraquecem a confiança e o respeito.
2. **Não significa não**. Em qualquer momento do relacionamento, sejam namorados ou casados, qualquer um dos indivíduos tem direito a dizer que NÃO.
3. **Pensa no futuro**. Por razões de segurança, pensa nos potenciais perigos – estacionar numa área isolada, entrar num quarto com alguém que mal conhece e esquecer de proteção.

4. **É importante estares ciente da ingestão de álcool ou consumo de drogas**, tua e do/a teu/tua parceiro/a. O uso de tais substâncias prejudica o julgamento e reduz a capacidade de dizer que não. Enquanto estás sob o efeito de álcool ou drogas, poderás ter comportamentos sexuais dos quais te arrependerás.
5. **Estar preparado/a.** Se houver alguma possibilidade de teres relações sexuais, certifica-te que tens os meios para te protegeres de uma gravidez indesejada ou de Infeções Sexualmente Transmissíveis.
6. **Comunica abertamente**. Os/as parceiros/as sexuais devem falar aberta e honestamente sobre os métodos contracetivos. Nunca deixes de expor o teu ponto de vista.
7. **Compartilha responsabilidade**. Ambos os/as parceiros/as sexuais devem estar comprometidos em proteger-se de Infeções Sexualmente Transmissíveis.
8. **Respeita a privacidade sexual do/a teu/tua parceiro**.
9. **Não assedies sexualmente outras pessoas**. Comentários ou piadas sexuais ou gestos sugestivos são ofensivos e desrespeitosos.
10. **Sê atencioso/a.**

A refletir...

CASO #1

"João garantiu a Anita, sua namorada, que nunca teve nenhum comportamento sexual de risco. No entanto, Anita sugeriu que ambos fizessem exames médicos de despiste de ISTs e João ficou furioso e recusou fazê-lo. Agora Anita não sabe no que acreditar. Será que João fala a verdade ou está a mentir? Ela não quer correr nenhum risco, mas também não quer perdê-lo. "

O que aconselharias a Anita?

Sessão 4 – Estratégias de prevenção de ISTs

Objetivos específicos

Descrever métodos para prevenir ISTs e VIH/SIDA;
Encorajar a realização do teste de despistagem do VIH/SIDA.

Estratégias Pedagógicas

Estratégias de prevenção - Como dizer ao/à parceiro/a que temos uma IST.
Top 10 – Maneiras para prevenir uma IST.
Estratégias para a mudança – O que fazer se tiver uma IST.
Estratégias de prevenção – O que fazer quando um/a amigo/a tem VIH/SIDA?
Website Health – Programa Cuida-te

Estratégias de prevenção de ISTs

GUIÃO VÍDEO (2 minutos e 42 segundos)



Este vídeo é para falarmos sobre algumas estratégias de prevenção de infeções sexualmente transmissíveis.

Uma das questões que muitas vezes está na cabeça das pessoas é se de facto tem que existir penetração para ser transmitido o HIV. Isso não é de todo verdade: a simples libertação de fluidos que ocorre ainda nos preliminares pode transmitir o vírus. Outra questão que é muitas vezes algo de dúvidas, é se é possível transmitir o HIV apenas com a prática de sexo oral. De facto, existe sim esse risco. Por isso, recomenda-se também uso do preservativo na prática de sexo oral. A verdade é que realmente a prevenção mais eficaz de todas é o uso do preservativo. Com uso de preservativo vais-te prevenir Não apenas do vírus do HIV, mas também de qualquer outra infeção sexualmente transmissível. Por isso, nunca te esqueças de usar preservativo.

Lembra-te: todas as pessoas que realmente não utilizam preservativo durante as práticas sexuais correm o risco realmente transmissão de infeções sexualmente transmissíveis. Até mesmo que

não tenham sexo com muitas pessoas diferentes porque sabemos que o facto de ter relações sexuais com pessoas com um maior número de parceiros aumenta o risco de infeções sexualmente transmissíveis. No entanto mesmo que as pessoas tenham práticas com um número reduzido de parceiros, isso não quer dizer que não corra o risco de serem infetadas. Por isso, é importante de facto o uso de preservativo.

Top 10 – Maneiras para prevenir uma IST

1. **Abstém-te de ter relações sexuais**. Não precisas de te abster de toda a atividade sexual. Mas deves lembrar-te que as infeções sexualmente transmissíveis não se transmitem apenas através da penetração. Pensa, por exemplo, no herpes.
2. **Não te precipites.** Toma especial atenção às relações sexuais ocasionais, este é um dos principais fatores de risco para a transmissão de ISTs.
3. **Faz exames de rotina.** Mesmo que não tenhas sintomas, algumas ISTs são silenciosas, por isso, é importante fazeres exames regularmente, tanto pela tua saúde como pela saúde das pessoas com quem te relacionadas.
4. **Mantem uma relação sexual mutuamente fiel.** Uma relação sexual apenas com um/a parceiro/a sexual diminui as probabilidades de ISTs.
5. **USA SEMPRE PRESERVATIVO.** O uso do preservativo é a forma mais eficaz de prevenires ISTs, no entanto, lembra-te que existem ISTs das quais o uso do preservativo não protege.
6. **Não tenhas múltiplos/as parceiros/as sexuais.** O risco de ISTs aumenta com o aumento do número de parceiros/as sexuais. E evita também ter relações sexuais com um/a parceiro/a que tenha relações sexuais múltiplas.
7. **Observa os teus órgãos genitais e toma atenção aos órgãos genitais do teu parceiro.** Algumas ISTs manifestam-se através de lesões nas zonas genitais.
8. **Mantém uma boa higiene intima.**
9. **Tem especial atenção a parceiros/as que consomem drogas**, principalmente as injetáveis. Quer seja heroína ou esteroides anabolizantes, os consumidores de substâncias psicoativas injetáveis correm maior risco de contraírem ISTs, incluindo HIV.
10. **Lembra-te que és tu quem decide**. Por isso, não tenhas relações sexuais após consumires álcool ou drogas, visto que estas podem afetar o teu julgamento.

Estratégias de prevenção - Como dizer ao/à parceiro/a que temos uma IST

- ∇ **Fala antes de terem relações sexuais**. Se tiveres uma IST, avisa o/a teu/tua parceiro/a antes de se envolverem sexualmente.
- ∇ **Enfatiza as formas como podem prevenir a sua transmissão.**
- ∇ **Sê honesto/a.** Se sabes ou suspeitas que tens uma IST, partilha essa desconfiança ou confirmação com o/a teu/tua parceiro.
- ∇ **Não acuses.** Se suspeitas que o/a teu/tua parceiro/a te transmitiu uma IST, é compreensível que estejas indignado/a ou com raiva. No entanto, há pouco a ganhar se o/a culpares. Informa-o/a dessa situação e convence-o/a a procurar aconselhamento médico.
- ∇ **Tenta ficar calmo/a.** Se agires com culpa, medo ou raiva, o mais provável é que o/a teu/tua parceiro/a reaja da mesma forma emocional.
- ∇ **Sê sensível.** Em vez de ficares na defensiva, se o/a teu/tua parceiro/a estiver com raiva ou ressentido/a, mostra que estás disposto/a a ouvi-lo/a e que te importas com ele/a.

Estratégias para a mudança – O que fazer se tiver uma IST

- ∇ **Se suspeitas que tens uma IST, não te sintas constrangido/a em pedir ajuda.** Procura aconselhamento médico, pois o tratamento alivia o desconforto, evita complicações e interrompe a propagação da IST.
- ∇ **Após o diagnóstico,** toma toda a medicação exatamente como te foi prescrita.
- ∇ **Tenta descobrir de que forma te foi transmitida**. Certifica-te de informar os/as teus/tuas parceiros/as sexuais, pois essas pessoas podem não saber que têm um IST.
- ∇ **Nunca enganes o/a teu/tua parceiro/a sexual**. Diz a verdade de forma simples e clara. Certifica-te de que o/a teu/tua parceiro/a compreende exatamente qual é a IST que tens e como se podem proteger dos riscos de transmissão.

Estratégias para a mudança – O que fazer quando um/a amigo/a tem VIH/SIDA?

Possivelmente conhecerás alguém em risco ou infetado com VIH. E embora te possas sentir perdido quando um/a amigo/a fica infetado/a, deverás sempre oferecer-lhe conforto:

- **Toca no/a teu/tua amigo/a.** Um simples aperto de mão ou um abraço, pode fazer a diferença. Pode fazer com que ele/ela perceba que te preocupas.
- **Responda às emoções do/a teu/tuas amigo/a.** Chora com o/a teu/tuas amigo/a quando ele/a chorar. Ri quando o/a teu/tua amigo/a rir. É saudável compartilhar essas experiências.
- **Verifica se o/a teu/tuas amigo/a precisa de algum cuidado** e voluntaria-te para o/a ajudar.
- **Não há problema em perguntar sobre a doença**, mas fica atento/a para saber o/a teu/tua amigo/a a quer discutir. Podes perguntar: "Gostarias de falar sobre como te estás a sentir?" mas não pressione o/a teu/tua amigo/a se a resposta for não.

Website Health

PROGRAMA CUIDA-TE

É um programa a pensar na tua saúde. Oferece-te aconselhamento, informação e competências na área do bem-estar, permitindo-te aproveitar a vida de forma saudável.

https://programas.juventude.gov.pt/cuidate

Extra: _ Bibliografia para Aprofundamento_

- Direção Geral da Saúde. (2015). Atitudes e comportamentos da população portuguesa face ao VIH. Programa Nacional para a Infeção VIH/SIDA. Lisboa: Direção Geral da Saúde.
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Avaliação do Módulo

Gostaríamos que avaliasses o módulo que acabaste de completar. Para tal, clique no link abaixo e dá-nos a tua opinião!

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Para Terminar...

Avaliação do Curso

Apenas umas questões rápidas para me ajudares a entender se este curso te ajudou a alcançar os teus objetivos. Lembraste de quando começaste este curso?! Agora que chegaste ao final, **consideras que este curso te deu as ferramentas necessárias para adotares comportamentos de saúde positivos?**

Gostaríamos que avaliasses o curso que acabaste de terminar. Para tal, clica no link abaixo e dá-nos a tua opinião!

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Iniciaste este curso a preencher o questionário que visa analisar os conhecimentos, as atitudes e os comportamentos de saúde dos/as estudantes do Ensino Superior. Por isso, gostaríamos de te convidar a responder novamente! De modo a compreendermos o impacto do curso que acabaste de terminar!

Já sabes: Todas as informações recolhidas serão anónimas e confidenciais, pelo que solicitamos que as tuas respostas sejam tão próximas da realidade quanto possível. Os dados recolhidos serão utilizados exclusivamente para fins de investigação científica, sendo posteriormente codificados e analisados de forma agregada. Nenhuma informação fará parte do arquivo académico institucional.

Aceda ao link disponibilizado abaixo!

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Parabéns!

Este curso chegou ao fim, espero que este te tenha trazido muito conhecimento, reflexões e, mais importante, mudanças. Não se sintam pressionados/as para mudar tudo de uma vez, para serem perfeitos/as. Devemos fazer as coisas ao nosso ritmo e alinhados com as responsabilidades da nossa vida académica, no entanto, lembra-te a riqueza da vida é mesmo aprendermos, termos contacto com outras perspetivas, com outras pessoas e realidades!

Obrigada por estares aqui!!

Desejo-te uma vida saudável e feliz!!