

PROCEEDINGS

I INTERNATIONAL CONFERENCE ON SMOKING PREVENTION AND TREATMENT

**SMOKING:**  
**PREVENTION**  
**TREATMENT**  
**AND**  
**PROTECTION**

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## INTRODUCTION

Smoking remains one of the most serious public health problems, globally, nationally or locally.

The **I International Conference on Smoking Prevention and Treatment** was a place where professionals linked to the smoking field, from several countries, met to share experiences and knowledge, aiming to make more effective the fighting against the smoking epidemic. This Conference was attended by Doctors, Nurses, Psychologists, Teachers, Educators, Students, Graduate and Masters and many other professionals working in the control of this public health problem.

As a result, was the emergence of the thought that the smoking epidemic is serious and is growing, especially among females and younger people, but is also a vulnerable and changeable problem.

Since the origin and evolution of the tobacco epidemic is multifactorial, tobacco control should be a task of all. It should be attacked on all its strands and it is necessary to renew efforts in prevention and treatment of smokers and in the protection of the non-smokers.

In the Proceedings of the **I International Conference on Smoking Prevention and Treatment**, Participants and those interested can find ideas and inspiration to be able to guide their actions and direct the fight against this epidemic.

The important thing now is to think and act above!

# CONFERENCES



Elisardo Becoña PhD

## **RISK FACTORS FOR THE CONSUMPTION OF TOBACCO**

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The consumption of tobacco was the first problem of public health of the developed countries. The people beginning to smoke in the adolescence and consolidates the consumption in these years or in the first years of the adult life. Once consolidated the dependence of the tobacco stop smoking can become an important problem for the individual.

The investigation has left showing that as much for the beginning as for the consolidation of the consumption of tobacco there are several risk and protective factors related with arriving or not to be a smoker of cigarettes. These factors can be grouped in individuals, family, peers, school and community risk and protective factors. Next to the analysis of the different factors that contain the previous ones we will present the results of a study carried out in young people from 14 to 21 years in those that we analyze the risk factors related with tobacco consumption. The results of the study confirm that several of these factors they are related clearly with the more probability to smoking cigarettes. For example, the variables that explain tobacco consumption at some time are: consumption of legal drugs in their friends, to go out in the night with the friends, models of deviated behaviour, to be woman, to have bigger age, sensation seeking, and aggressiveness. For their importance and the weight in the research of the past years we analyze specifically the paper of the impulsiveness and the sensation seeking to explain the major probability of tobacco consumption and the participation in other risk behaviours.

Finally, we propose new roads for the prevention and the treatment based on the knowledge that we have at this moment on the risk and protective factor to the tobacco consumption.



Professor Doutor Ramón Mendoza

## THE PREVENTION OF TOBACCO CONSUMPTION IN SPAIN

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This paper intends to summarize the evolution of smoking prevention in Spain in the last decades (focusing on the present situation) and to identify its most relevant achievements and some of its weaknesses, and also to help identify the factors that may have determined this evolution. The analysis of the Spanish experience on this subject may be useful both to consolidate smoking prevention in this country and to draw “lessons” which might be applied in countries with socio-cultural contexts not very different from the Spanish case.

Spain is at present a highly complex country regarding its political organization, with seventeen autonomous communities with their respective governments and parliaments, two autonomous cities, a government of the whole State and a national parliament, among other elements. In the last decades of the 20<sup>th</sup> century almost all competences on public health, as well as the educational competences and others from different sectors of the Administration, were transferred from the central government to the autonomous communities. In addition, there are also numerous scientific societies and associations that, in one way or another, perform activities relating to smoking prevention. As a result, any attempt to summarize the complex reality of the prevention of tobacco consumption in Spain will necessarily have important gaps. For space reasons, this summary in particular does not provide details of the most relevant achievements in this field by any of the autonomous communities.

As in other South-European countries, the tobacco epidemic in Spain affected almost exclusively male subjects during the first two thirds of the 20<sup>th</sup> century. The prevalence of the problem among men started growing during the first half of the century and in 1955 it already exceeded 50%. In contrast, the rate of female smokers was so small during those two thirds of the century that it was not until 1970 that it reached 5%.

However, during the 1970s a clear increase in the prevalence of smoking among women was first observed, within a social context with a strong presence of tobacco advertisements, cigarette low prices, increase in points of sale and numerous scenes in films which associated women's social success with smoking.

Since the 1990s a highly consistent drop in the prevalence of smoking among men has been stated in the subsequent national health surveys, even more noticeable among those with a higher educational level. With regard to women, the 20<sup>th</sup> century has finished with a general rising trend in the prevalence of tobacco consumption, especially stressed among women with lower educational and professional status. However, the data from 2006 show a decrease in the rates of female smokers in all socio-economic levels.

As regards smoking prevention, there is only evidence of some occasional actions by the Health Ministry during the 1960s and 1970s (such as the printing of some information posters on certain risks of tobacco consumption).

In the 1980s, within a context of reform of the Primary Health Care system (inspired in the conclusions of the WHO conference held in Alma Atá) and also of reform of the educational system, health education reached a new height in most autonomous communities. For this purpose, technical support units were created, guidelines were drawn for health education in school, and awareness was raised among thousands of base professionals (in the health and education sectors) on the importance of their role as health promotion agents. Subsequently, the Ministries of Education and Health decided jointly to promote health education in schools as a "cross-curricular topic", rather than as a specific subject. This same approach had been adopted earlier by some autonomous communities. Also in the 1980s (in 1986), the Spanish participation in the WHO study "HBSC" started, which for the first time provided information on school children life styles with a nationwide sample. Its results were widely spread. In turn, a European Ministerial Conference on "tobacco policies", organized by the WHO, the EC and the Health Ministry, was held in Madrid in 1988. In that same year, a decree was approved which laid down the obligation to introduce sanitary warnings in cigarette boxes, the prohibition of selling cigarettes in health and school centres, the prohibition of selling cigarettes to under 16s, and certain restrictions on tobacco consumption in working places.



Within this context, school-based smoking prevention started gaining strength during the 1980s, with a wide variety of initiatives led by motivated teachers in schools across the country. Following this effort, a significant decrease in the tobacco consumption prevalence among school children of both sexes was observed in the last 1980s, according to the HBSC study in Spain.

In the 1990s this decrease in smoking among school children held only among 11-year-old school children and among 13-year-old males. Among girls this age, a significant increase was stated between 1994 and 2002. Regarding 15-year-old school children, who in 1990 showed relatively low rates similar in both sexes, a sustained increase in the rate of smoking girls between 1990 and 2002 was observed. Something similar happened in relation with 17-year-old girls for the period 1994-2002. As a whole, these trends show a clear feminization of adolescent smoking in Spain. The situation in 2002 is particularly worrying, with 54% of female daily smokers among 18-year-old school girls (as opposed to 33% of boys that age), 9% of female occasional smokers and only 37% of non-smoking girls within that age segment.

The lack of periodical studies to assess the real establishment of health education in schools across the country makes it impossible to assure that the increase in tobacco consumption among school girls is related with a progressive loss of interest by educators to keep health education –a cross-curricular topic, let it be remembered– alive in schools. It might have been so. Keeping health education as a daily practice among base professionals (educators, sanitary staff, social workers and others) requires a continuous institutional support and social encouragement and maybe this has not been the case in all the autonomous communities.

In contrast, in 1994 a group of Spanish participants at the World Conference on Tobacco and Health held in Paris took the initiative of promoting the creation of the National Committee for Smoking Prevention. Scientific societies were invited to join the initiative, which was welcomed, and the Committee was created in 1995 as a coalition of scientific societies with the aim of promoting the prevention of this relevant public health problem. Since then, a growing number of scientific societies have attached to this organization.

Ten years later, in 2005, the Spanish Parliament passed a law which laid down, among other aspects, important restrictions in smoking in a variety of public centres, spaces or

establishments (but not a total ban on smoking in bars and restaurants). This law also widens the ban on selling cigarettes to under 18s and sets up a generalized ban on smoking publicity and the promotion of events by the tobacco industry.

Subsequently, a certain decrease in smoking among school children of both sexes and, as stated before, a dropping prevalence of tobacco consumption among adults, have been observed.

The paper provides a more detailed analysis of the historical evolution of prevention in this field, the present situation and those aspects which may be improved.



Melissa Stigler, PhD

## WHAT CAN SCHOOLS DO TO PREVENT THE CONSUMPTION OF TOBACCO AMONG ADOLESCENTS?

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Cigarette smoking begins primarily during adolescence. Almost all first use occurs before high school graduation, or the age of 18 (USDHHS, in preparation). Across Europe, an average of 58% (range, 24%-80%) of students between the ages of 15 and 16 report having ever smoked a cigarette in their lifetime, while 29% (range, 7%-45%) report having smoked in the last 30 days and, therefore, would be considered a current smoker (Hibell et al., 2009). In many countries, the rates of lifetime and current cigarette smoking for girls exceed that of boys in Europe (Hibell et al., 2009). Across Europe, 36% (range, 15%-58%) of students report first experimenting with smoking before the age of 13, while 7% (range, 2%-14%) start to smoke daily prior to the age of 13 (Hibell et al., 2009). These rates of cigarette smoking among adolescents in Europe exceed that of the United States at present, across all of these measures (Hibell et al., 2009; USDHHS, in preparation). Although rates in Europe and the United States have declined over time, from 1995 to 2007 (Hibell et al., 2009; USDHHS, in preparation), they remain distressingly high and so demonstrate a clear need to intervene at an early age in one's life course, during adolescence.

Schools are an ideal setting to consider for intervention, as most youth attend school. Today, our schools are being tasked with more than providing for their academic growth. Increasingly, schools are being asked to contribute to their social and emotional development, too (Payton et al., 2008). Interventions to prevent smoking among adolescents fall within this new charge. Three types of school-based interventions will be considered in this presentation: school-based programs; school policies; and youth empowerment programs. Primary (elementary/middle) and secondary (high) schools should both be considered as venues, as studies show the most

effective interventions begin early in life and are sustained over time (USDHHS, in preparation).

In recent years, many researchers and practitioners have come to the conclusion that school-based tobacco prevention programs do not work (e.g., Glantz & Mandel, 2005; Weiss et al., 2005). A more accurate conclusion would be that some school-based curricula do work (i.e., produce short- and/or long-term effects), while others do not (Flay, 2007). Simply put, all school-based programs are not created equally. Comprehensive reviews and meta-analyses confirm that certain characteristics of school-based curricula surely contribute to their success. The most effective programs: (a) are interactive (e.g., Cuijpers, 2002; Tobler, 2000); (b) engage similar-age peers as facilitators (Cuijpers, 2002; Tobler, 2000); (c) involve other segments of the community (e.g., parents) (Flay, 2000); (d) are based on the “social influences” model (e.g., Hwang et al., 2004); (e) are conducted across multiple sessions and multiple years, in early to mid adolescence (Flay, 2007); and (f) can provide adequate training and support (Glynn, 1989).

School policies that prohibit cigarette smoking among students and staff, while in school, are recommended as important components of a comprehensive approach to preventing tobacco use among adolescents (Barnett et al., 2007; CDC, 1989). Studies show that the most effective no smoking policies are those that are enforced (Wakefield et al., 2000). Students’ perception of this enforcement is critical to their success (Murnaghan et al., 2008), as is a proactive (versus a punitive) approach to their implementation, so as to prevent infractions (Kumar et al., 2005).

Most schools today have policies against smoking on their campus, and many also implement prevention curricula, too. Increasingly, youth empowerment programs are being employed, as well. These programs endeavor to engage youth to become active participants in the planning and implementation of relevant program and policy efforts within their schools and community specific to tobacco (Holden et al., 2004). When provided with real opportunities for leadership, studies show that youth can become effective agents of change in tobacco control (Holden et al., 2004). Adequate training and resources are required for the success of such efforts (Ribisl et al., 2004), as is

sustained adult support (Pittman et al., 2007). This integrated model of risk reduction (e.g., preventing tobacco use) and positive youth development (e.g., enhancing skills) may offer the best chance for success, although research here is limited (Catalano et al., 2002).

Dr. Stigler's presentation will explore all three of these types of school-based interventions in detail, reviewing the state-of-the-science, to provide examples of what works, how, and why. These examples will include interventions that have primarily been implemented in the West, in developed countries of Europe and the United States, for example, as well as approaches that have been implemented in the East and South, in developing countries like India and China, too.

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Jiménez Ruiz, PhD



# DOCUMENTO DE CONSENSO EN DIAGNÓSTICO Y TRATAMIENTO DEL TABAQUISMO

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## **Introducción**

El principal objetivo de este documento es definir un grupo de parámetros clínicos y analíticos que deban analizarse obligatoriamente en cada fumador, por cuanto que su conocimiento influirá directamente no sólo en la actitud terapéutica ante el mismo, sino también en su pronóstico. Se establecerá, pues, a lo largo del mismo lo que hemos dado en llamar: conjunto mínimo de datos diagnósticos del fumador, que deberán ser de obligada referencia en la historia clínica de todo fumador. Con posterioridad, y teniendo en cuenta los resultados obtenidos en el estudio del conjunto mínimo de datos diagnósticos, se establecerán unas recomendaciones terapéuticas.

## **1.-Conjunto Mínimo de Datos Diagnósticos en el Fumador. (CMDF).**

Para la valoración de estos datos debemos tener en cuenta los siguientes parámetros:

### **1.1.-Cantidad de tabaco consumido**

Para determinar esta cifra se realiza una sencilla operación: se multiplica el número de cigarrillos consumidos al día por el fumador por el número de años que lleva consumiendo esa cantidad de tabaco y su resultado se divide por 20. De tal manera que un fumador de 20 cigarrillos diarios durante 20 años, consumirá un total de 20 paquetes año.

Aunque no existe un umbral de seguridad para el consumo del tabaco y tan perjudicial es consumir 20 paquetes año como 3, también es cierto, que, en la mayor parte de los estudios realizados que analizan la relación entre el consumo del tabaco y el

padecimiento de un buen número de enfermedades, se observa una relación dosis/respuesta. De esta manera, la posibilidad de desarrollar enfermedades relacionadas con el consumo del tabaco es más alta en los fumadores de un mayor número de cigarrillos diarios que en los que consumen una menor cantidad, sin que sea posible señalar un determinado umbral de seguridad.

#### 1.2.-Fase de abandono

Es fundamental que ante todo fumador se investigue la fase de abandono en la que se encuentra, pues la actitud terapéutica que se tenga con él, viene determinada por esta fase. El conocimiento de la fase de abandono permite instaurar el tratamiento más adecuado para cada fumador.

#### 1.3.- Motivación para el abandono del tabaco

Estrechamente relacionado con las fases de abandono del tabaco está el grado de motivación para intentarlo.

#### 1.4.- Test de Fagerström.

El test de Fagerström es el instrumento más útil, de los que se dispone en el momento actual para medir el grado de dependencia física que los fumadores tienen por la nicotina. Se trata de un test de seis preguntas con respuestas múltiples. Dependiendo de la respuesta que cada fumador dé a cada una de las preguntas se obtiene una determinada puntuación. Al sumar los puntos ganados en cada una de las preguntas se obtiene una puntuación total que oscila entre 0 y 10 puntos. Si el sujeto tiene entre 0 y 3 puntos se dice que su grado de dependencia es leve, si tiene entre 4 y 6 su grado es moderado y si tiene 7 ó más su grado es intenso. En general, el conocimiento de la puntuación del test de Fagerström sirve para determinar el grado de dependencia, para indicar el mejor tipo de tratamiento farmacológico a realizar y para valorar el riesgo de desarrollar un determinado tipo de trastorno o enfermedad por parte de ese fumador.

#### 1.5.- Intentos previos de abandono y motivos de recaídas

La existencia de intentos fallidos de abandono del tabaco puede ser un índice de la dependencia que dicho fumador presenta al tabaco por lo que el análisis de los motivos de recaída puede ser de gran importancia para programar un plan terapéutico con mayores probabilidades de éxito.

#### 1.6.- Medición de los niveles de monóxido de carbono en el aire espirado.

La cooximetría es una exploración que permite conocer la cantidad de monóxido de carbono(CO) que un sujeto tiene en el aire que espira. Esta cantidad esta en relación con su hábito como fumador. Para la medición de este parámetro se utiliza el cooxímetro, que es un aparato que mediante una maniobra sencilla e incruenta permite determinar los niveles de CO en el aire espirado por el sujeto.

#### 1.7.- Propuesta de abordaje diagnóstico del tabaquismo

A continuación se expone como debe abordarse la búsqueda de los datos diagnósticos mínimos en cada fumador. Se establece un protocolo que proporciona la mayor información en el menor tiempo posible. Ante todo fumador debe seguirse el siguiente protocolo:

##### 1.- Número de cigarrillos consumidos al día

\*Menos de 10

\*Entre 10 y 20

\*De 21 a 30.

\*Más de 30

##### 2.- Número de años que el individuo lleva fumando

\*Menos de 5

\*Entre 5 y 10

\*Entre 11 y 20

\*Más de 20

##### 3.- Intentos previos de abandono del tabaco

\*Si existiesen indagar sobre las causas de las recaídas

4.- Tiempo que transcurre desde que el fumador se levanta hasta que consume el primer cigarrillo del día.

\*Menos de 30 minutos.

\*Más de 30 minutos.

5.- Determinación de cuál es el cigarrillo que más necesita

\*El primero del día

\*Cualquier otro

6.- Establecimiento de si quiere hacer un serio intento de abandono del tabaco

\*No.----- fase de precontemplación.

\*Sí: en este caso debe pasarse a la pregunta 7.

7.- Determinando si está dispuesto a realizar un serio intento en el próximo mes

\*Si. ----- fase de preparación.

\*No: en este caso debe pasarse a la pregunta 8.

8.- Determinando si está dispuesto a realizar un serio intento en los próximos seis meses

\*Si.----- fase de contemplación.

\*No.----- fase de precontemplación.

9.-Realización de una cooximetría

Después de realizar este protocolo puede diagnosticarse al fumador desde tres puntos de vista: a) grado de tabaquismo (basado en el número de cigarrillos fumados al día, en el número de años de fumador y en los niveles de CO de su aire espirado),b) fase de abandono en la que se encuentra el fumador y c)grado de adicción física por la nicotina. Conviene destacar que la cumplimentación completa de este protocolo por parte de un profesional mínimamente entrenado no lleva más de cinco minutos. La gran cantidad de datos que se obtienen con su realización y el escaso consumo de tiempo que conlleva hacen muy útil y recomendable la puesta en marcha de este protocolo en cualquiera de los niveles asistenciales y por cualquier tipo de profesional sanitario.

## **2.-Abordaje terapéutico del tabaquismo**

A continuación, y a modo de orientación, se expone cual debe ser el abordaje terapéutico de cada fumador de acuerdo con sus características diagnósticas.

a) Si es fumador está en fase de pre contemplación o contemplación debe considerarse como de bajo o alto riesgo dependiendo de la presencia o no de otros factores de riesgo y del propio grado de tabaquismo del fumador. Así, fumadores de 5 ó menos paquetes año, con menos de 15 ppm de CO en el aire espirado, sin enfermedad relacionada con el consumo del tabaco y sin otros factores de riesgo deben considerarse como fumadores en fase de pre contemplación o contemplación de bajo riesgo. Fumadores de más de 5 paquete año, con 15 ó más ppm de CO, con una enfermedad relacionada con el consumo del tabaco y/o con otros factores de riesgo deben considerarse como fumadores en pre contemplación o contemplación de alto riesgo.

### **I. Fumadores en fase de pre contemplación o contemplación de bajo riesgo.**

Este grupo de fumadores debe recibir el consejo de abandonar de consumo de tabaco (intervención mínima). Este consejo ha de ser breve de no más de 3 minutos de duración. Si todo esto se acompaña de la entrega de documentación de apoyo por escrito y de apoyo psicológico esta actuación se engloba dentro del concepto de intervención mínima en tabaquismo (grado de evidencia A).

### **II. Fumadores en fase de pre contemplación o contemplación de alto riesgo**

En estos fumadores, como en el caso anterior, está especialmente indicada la intervención mínima con todos sus elementos: consejo médico, documentación escrita, apoyo psicológico y seguimiento. El profesional sanitario se ofrecerá al paciente para ayudarle en la realización de un serio intento de abandono y debe citarle en un periodo de 4 a 6 semanas para controlar si ha habido algún cambio en su actitud para dejar de fumar. ( grado de evidencia A)

b) Fumadores en fase de preparación.

Este grupo de fumadores debe recibir tratamiento para dejar de fumar. El tratamiento de estos fumadores siempre debe aglutinar dos aspectos. Por un lado, el apoyo psicológico y por otro, el tratamiento farmacológico (grado de evidencia A)

El apoyo psicológico ha de prestarse a lo largo de las visitas de seguimiento y tratará de dar consejos al paciente para que se prepare para dejar de fumar y para que se mantenga sin fumar. Ha de ir acompañado de la entrega de material bibliográfico en el que el fumador encuentre por escrito todo tipo de consejos para mantenerse sin fumar. ( grado de evidencia A)

El tratamiento farmacológico siempre debería contemplarse, en algunas situaciones como tratamiento de base y en otras como un refuerzo puntual a la intervención mínima sistematizada, cuando ésta, de forma aislada, no fuera suficiente para el correcto abordaje de cada fumador. Este abordaje ha de ser personalizado y adecuado a las características de cada individuo, para así aumentar las posibilidades de éxito terapéutico.

I. Los fumadores de menos de 5 paquetes año que consumen su primer cigarrillo después de 30 minutos de levantarse y con menos de 15 ppm de CO en su aire espirado se corresponden con una dependencia a la nicotina baja y un consumo de cigarrillos bajo-moderado. En estos casos debe recomendarse la utilización de chicles de nicotina de 2 mg cada 90 ó 120 minutos durante 6 a 8 semanas, reduciendo progresivamente la dosis a partir de la sexta semana. Otras posibilidades son la utilización de parches de nicotina de 24 horas, a dosis de 21 mg/día durante 6 semanas, después de 14 mg/día durante 2 semanas y después de 7 mg/día durante una semana. También parches de nicotina de 16 horas a dosis de 15 mg/día durante 6 semanas, después de 10 mg/día durante 2 semanas y después de 5 mg/día durante una semana ó bupropión a dosis de 150 mg dos veces al día durante 7 semanas. ( grado de evidencia A). Otra posibilidad es la utilización de vareniclina a dosis de 1 mg cada 12 horas durante un periodo de 12 semanas.

II. Los fumadores de más de 5 paquetes año que consumen su primer cigarrillo en los primeros 30 minutos después de levantarse y que tienen más de 15 ppm de CO en su aire espirado, tienen un consumo moderado-alto de cigarrillos y una alta dependencia nicotínica. En estos debe recomendarse la utilización de chicles de 4 mg de nicotina, a dosis de una pieza cada 60-90 minutos durante 12 semanas, reduciendo progresivamente a partir de la 10ª semana. Otras posibilidades son la utilización de parches de nicotina de 24 horas, a dosis de 21 mg/día durante 6-8 semanas, después de 14 mg/día durante 2 semanas y después de 7 mg/día durante 1 semana. También, parches de nicotina de 16 horas, a dosis de 25 mg/día durante 6-8 semanas, después de 15 mg/día durante 2 semanas y después de 10 mg/día durante dos semanas. O bupropión, 150 mg dos veces al día durante 9 semanas. Otra posibilidad es la utilización de varenclina a dosis de 1 mg cada 12 horas durante un periodo de 12 semanas. En aquellos casos de pacientes muy dependientes se podrá prolongar el tratamiento hasta completar 24 semanas.

En algunos de estos pacientes, sobre todo en los que tienen un mayor grado de dependencia, estaría recomendada la utilización de un spray nasal con nicotina, a dosis de 2 a 3 mg cada hora, mientras que el sujeto esté despierto durante un periodo de 3 meses, reduciendo progresivamente la dosis, durante tres meses más, a razón de un 25% de reducción mensual. No conviene superar la dosis de 5 mg a la hora o más de 40 mg al día, ni utilizar esta medicación más allá de seis meses. Otra pauta terapéutica recomendada para estos pacientes es la combinación de parches y chicles de nicotina a las mismas dosis antes comentadas o la combinación de parches y spray nasal a las dosis recomendadas. Debe considerarse también el uso combinado de la terapia sustitutiva de nicotina y bupropión. (grado A de evidencia).



Carles Ariza, PhD



# DIAGNOSIS AND TREATMENT OF SMOKING IN ADOLESCENTS

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## **Introduction**

### **About the diagnosis**

In last years a great amount of neuropharmacologic evidences has allowed to know that nicotine dependence in the adolescence can be established precociously. In less than one month of having started to smoke the teenager or the youngster tries to give up deciding by himself how much and how to smoke. The experience of relaxation with the inhalation of the first cigarette is a strong predictor of the presence of symptoms of nicotine dependence (DiFranza, 2002, 2007). O'Loughlin and her team elaborated a set of 12 milestones in the process that brings from the first puff until the process of addiction (De Gervais, 2006) and other 10 are completed since the lack of confidence is perceived on giving up smoking until he achieves this aim himself completely (O'Loughlin and cols, 2009). O'Loughlin and DiFranza (2002) examined the psychometric properties of several instruments for measuring the symptoms of nicotine dependence in the adolescence. Besides some one-dimensional ones, they tested also two multidimensional ones: the HONC ("Hooked where Nicotine Checklist") test (Wheeler, 2004) and the ICD-10 test or indicator of nicotine dependence (O'Loughlin,2003). The HONC test and the ICD-10 test work better in teenagers with *low dependence*. Moreover also the test of Fagerström used in adults has been adapted to the teenagers (Prokhorov,1996). There is a controversy in the scientific literature about the sensitivity of this test. It seems to work better in those that have *middle or high dependence*, which is usually infrequent at inexperienced ages.

On the other hand, the genetic variability has been related with nicotine dependence. Genes responsible of components of dopamine pathways and in routes related with acetylcholine nicotinic receptors, beside genetic problems tied to nicotine metabolism

are involved. Since this genetic vulnerability, phenotypes related with subjective experiences of smoking experimentation can explain the establishment of the dependence in the adolescence (Sherva,2008).

Consequently, and from all these advances, a series of recommendations about cessation and precocious treatment are derived:

1. The 12 milestones described for De Gervais (2006) are a good instrument for therapists in the follow-up of the addicted individual. It helps to give information to him about in which moment of the process he is in every instant and establishes a personal trajectory towards the dependence, which it is possible to intervene in.
2. The experimentation increases the risk to progress to the addiction, because it supposes the exposure to the substance for individuals with genetic vulnerability on components of nicotinic receptors of dopamine and acetylcholine pathways.

### **About the treatment or cessation of the consumption**

Approximately 54% of young smokers (14-20 years) show intention of giving smoking. Of these, 9% has intention of making it in the next 30 days, 17% in the next 6 months and 28% in the future (Keller, 2003). Messer and Pierce (2008) found in a representative sample of American youngsters (18-24 years) more serious attempts to give up smoking than in the group from 35 to 64 years (84% vs 66%,  $p>0,01$ ). Among who gave up for 6 months or more, also the rate was greater among youngsters (8,5%) than among seniors (5,0%) ( $p>0,01$ ).

The main used methods are group therapy, interactive Internet-based programs, pharmacological interventions, individual advice, quit lines, peer-leader interventions, self-help materials and the strategies based on competition and incentives.

Sussman (2009) reviewed interventions carried out from 1990 until December of 2007 in this area. In this review he included studies of the eight revisions carried out by their own team during this period. Until then, it was accepted that the average cessation rate (CR) is 12 % in 3-12 months, in front 7% in the control group, and it rises to 19% if there is strengthening of motivation (Sussman, 2002). This CR of 19% is the one attributed to the group therapy, being the most effective strategy of the ones used until now with youngsters.

In the most recent review of Sussman (2009) interventions including control group, as example of the advance produced in the last 10 years, were only accepted. From the 64 programs included in the study, a difference of absolute risk (RD) of 4,26% was found, result of subtracting the proportion of cessation in the set of interventions: 11,79%, the proportion of cessation in the control group: 7,53%. This supposes a reduction in 57% of risk in favour of the intervened collectives. Other data of this review were:

- 1) The clearly most effective methodologies are those based in social influences (RD=4,34%), techniques of cognitive-behavioural face up (RD=5,32%) and promotion of the motivation (RD=3,97). The programs combining the three methods are the more effective.

- 2) The scenario where the most effective interventions are found is the school environment (RD=4,21-6,30).

- 3) The effectiveness of programs increases when the number of sessions increases until 8 in the interventions (RD=6,24), but it decreases if the interventions are longest (9 or more: RD=4,20).

- 4) Until 8 studies include a year follow-up or more (RD=6,78).

- 5) Only 6 studies used Internet in the review of Sussman (2009) and only 2 could be included among the 64 finally analyzed, due to the lack of control group. It is considered that the use of Internet can be promising if they spent more time of the one used in these studies.

Among his conclusions, Sussman and cols. (2009) pointed out that programs have to include at least 5 sessions, be placed in the school environment, with cognitive-behavioural components, considering social influences and reinforcement of the motivation and combining all these with the interactive possibilities of computers and Internet. They also pointed out that the two programs best evaluated and accepted and disposable for their use are the NOT program (Dino et cols, 2001) and the EX4 program (Sussman, 2007).

During 2004 and 2005, Spain and Portugal participated in the European project "Adolescent Smoking Cessation", implementing the first and pioneering intervention about smoking cessation in youngsters. In the case of Spain, the project was

implemented in five cities, meaning the precursor of the interventions carried out in this field until now (Ariza et cols., 2005).

On the other hand, lately, the need to combine cessation therapies for tobacco and cannabis consumption has emerged. Cannabis consumption increased suddenly in the end of school ages and the beginning of adult life, but, besides, the association of cannabis and tobacco consumption is especially frequent. Another factor that still advises to joint preventive strategies is the fact that the more frequent way of cannabis consumption in our context is the joint, it is, a combination of tobacco and cannabis. Once it is well established that both drugs are “journey colleagues”, several authors studied how cannabis consumption can hamper smoking cessation and, in the inverse one, how smoking can conceal the first problems with cannabis consumption. In the Spanish context, in this line, a semipresencial intervention has been promoted with the support of a computer application to a cognitive-behavioural-based programme “Paso de Fumar”, designed during 2007 and 2008 (Salvador T and Ariza C, 2008).



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# **PREVENTION AND CONTROL OF THE HEALTH CONSEQUENCES OF ENVIRONMENTAL TOBACCO SMOKE (ETS) (SECONDHAND SMOKE)**

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## **Introduction**

Environmental Tobacco Smoke (ETS) is the major indoor air contaminant. Exposure is widespread. Despite claims that it plays a minor role in indoor air contamination, its health consequences are well established, significant and can totally be prevented.

## **Objectives**

- To revise the available scientific knowledge on indoor air quality and health risks, including children, exposed workers and the general population.
- To characterize current control practices in Portugal and compare with international prevention and control recommendations.

## **Conclusions**

ETS cannot be controlled to “acceptable levels” of carcinogens in the air by dilution, ventilation or air cleaning. According to IARC, ETS is a “Group 1” carcinogen. Effective health policy, based on sound scientific knowledge, cannot be achieved exclusively by laws. Health professionals, educators and community organizations should contribute actively for the necessary culture and behavioural change.

**Key words:** *Secondhand smoking, ETS, Health Risks*



Tribute to the personality of the year in the fight against smoking in Portugal  
Doctor Manuel Macedo

# FREE COMMUNICATIONS



**SMOKING CESSATION ATTITUDES, CLINICAL PRACTICES, TRAINING  
PROGRAMS AND NEEDS: A CROSS SECTIONAL STUDY IN A  
PORTUGUESE HOSPITAL**

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**Abstract**

**Introduction**

Systematic and effective counselling of health professionals (HP) on smoking cessation is a major tool in tobacco control and smoking prevention.

**Objectives**

To evaluate among hospital staff: (1) smoking counselling attitudes and practices, (2) smoking prevention training programs, and (3) training needs.

**Methodology**

A survey of smoking behaviour and attitudes among hospital staff was conducted in a Portuguese teaching hospital in November 2007. The survey was based on a self-administered questionnaire, a tailored version of the European Network of Smoke-Free Hospitals. An additional questionnaire for the HP subsample (n=468) evaluated: (1) attitudes and clinical practices towards smoking cessation counselling; (2) record-keeping procedures; (3) self-reported training programs attendance and needs, and (4) self-reported confidence to intervene in smoking prevention.

**Results**

Positive attitudes towards proactive counselling were reported by all HP categories: doctors (94.6%); nurses (95.9%) and other health professionals (OHP) (91.4%). Positive

attitudes to being role models were reported by doctors and OHP (100%), and nurses (96.4%).

Results for 2As counselling practices. Systematically ask: doctors (50.0%), nurses (25.8%) and OHP (8.8%). Systematically advise: doctors (60.0%), nurses (34.1%) and OHP (14.7%) ( $p < 0,001$ ).

Results for systematic record-keeping. Ask: outpatients (10.6%); inpatients (15.0%). Advise: outpatients (10.6%); inpatients (15.0%). Tobacco use diagnosis (6.0%) both out and inpatients.

Undergraduate training program attendance was reported by 27.0% of doctors, 32.9% of nurses, 9.0% of OHP ( $p < 0.05$ ). Graduate training program attendance was reported by 13.5% of doctors; 8.0% of nurses; 0% of OHP. Training needs were reported by 41.7% of doctors, 36.5% of nurses and 35.3% of OHP. Self-confidence to intervene was reported by 59.5% of doctors, 70.8% of nurses and 50.0% of OHP ( $p < 0.05$ ).

## **Conclusion**

All HPs had positive attitudes towards proactive smoking counselling and more positive attitudes to being role models.

Low systematic 2As questioning was observed among all HP. The highest scores were nevertheless found among doctors ( $p < 0.05$ ).

The great majority of HPs did not systematically record either smoking cessation practices or tobacco use diagnosis.

Most HPs had not attended undergraduate or graduate training programs and considered they did not need further training. Nevertheless, the majority was self-confidence to intervene.

Training program awareness and development must be given higher priority in smoking prevention and tobacco control policies in Portuguese hospitals. Automatic electronic systems should be mandatory in health care as they promote smoking cessation and systematic record-keeping.

**PORTUGUESE QUITLINE (LINHA SOS – DEIXAR DE FUMAR (808 20 88 88))**  
**MISSION, SERVICE AND CALLERS**

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**Abstract**

**Introduction**

The World Health Organization classifies Smoking as the single main cause of morbidity and mortality in the developed world. Tobacco smoke causes about 5 million deaths every year worldwide. In Portugal tobacco kills more than 8.000 people, half of them in middle age. To prevent smoking and to treat tobacco use and dependence are two relevant objectives for health management. Quitlines are recognized as effective resources to assist and treat smokers and may also have an important role in smoking prevention. Among Quitlines advantages we would like to emphasize the easy and universal access, the low cost of the service and the position of intermediary between smokers and the smoking clinics which allows a unique work of motivation for smokers that are not yet prepared to ask for assistance.

**Objectives**

To present the Portuguese Quitline (SOS Deixar de Fumar – 808 20 88 88). This presentation will be outlined in three areas: Mission, Service and Callers.

**Methodology**

Mission and service will be presented with the support of documents produced by the Portuguese Quitline and by the European Network of Quitlines. Callers presentation will use data from the call registration form and from the evaluation done at national level by the Portuguese Quitline and at international level by the ESCHER Project (European Smoking Cessation Helplines Evaluation Research).

## **Results**

The mission of the Portuguese Quitline is based in three pillars: Information (for general population), counselling and support (for smokers who wish to quit or for others seeking help for smokers or advice on environmental smoking problems). The main level of the mission is treatment, but in any of the three pillars there are possibilities for delivering prevention services.

The Portuguese Quitline receives about 1000 calls per year. Results of the evaluations conducted by the Portuguese Quitline and by the ESCHER project are better than the average of results published.

## **Conclusion**

First, the Portuguese Quitline has an important role in a national system of services to treat the use and the dependence of tobacco. Second, the Portuguese Quitline provides also a service of information and prevention. In the treatment level of the service, the results of the evaluations are good.

**A MISSÃO, O SERVIÇO E OS UTENTES**  
**DA LINHA SOS – DEIXAR DE FUMAR (808 20 88 88)**

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**Resumo**

**Introdução**

O tabagismo é classificado pela Organização Mundial da Saúde como o factor evitável que, só por si, mais contribui para a morbilidade e mortalidade no mundo ocidental. Morrem actualmente cerca de 5 milhões de pessoas por ano por causa do tabaco. Em Portugal estima-se que morrem cerca de 8.100 pessoas por causa do tabaco, das quais cerca de 50% na meia idade. Prevenir o tabagismo e tratar o uso e a dependência do tabaco são dois objectivos de grande relevância para a saúde. As linhas de apoio aos fumadores têm efectividade demonstrada no tratamento e podem desempenhar também um papel importante na prevenção. Entre as características deste tipo de serviços destacam-se o acesso fácil e universal, o baixo custo e a posição intermediária entre os utentes e as consultas mais diferenciadas que permite desenvolver um trabalho de motivação para fumadores que ainda não estão preparados para recorrer a consultas.

**Objectivos**

Apresentar a Linha SOS – Deixar de Fumar (808 20 88 88) em função de três áreas fundamentais: A missão, o serviço e os utentes

**Metodologia**

A apresentação da missão e do serviço baseiam-se no projecto da Linha SOS – Deixar de Fumar (808 20 88 88) e nos documentos de enquadramento da Rede Europeia de Quitlines da qual a linha é membro desde 2002. A apresentação dos utentes baseia-se nos dados da ficha de atendimento de chamada, na avaliação dos resultados da Linha e nos resultados do Projecto ESCHER (European Smoking Cessation Helplines Evaluation Research).

## **Resultados**

A missão da Linha assenta em três pilares: Informação (população em geral), aconselhamento e apoio (pessoas que querem deixar de fumar, pessoas que querem ajudar alguém a deixar de fumar e pessoas que procuram resolver situações de exposição a fumo passivo). A missão da Linha é em primeiro lugar na área do tratamento, mas em qualquer dos pilares da sua missão, com destaque para o primeiro, há lugar também para uma acção preventiva.

Ligam para a Linha cerca de 1000 pessoas por ano. Os resultados das avaliações realizadas pela Linha e no quadro do Projecto ESCHER são superiores aos indicadores de referência na área.

## **Conclusão**

Primeiro, a linha SOS Deixar de Fumar (808 20 88 88) desempenha um papel importante no tratamento do uso e da dependência do tabaco. Segundo, a Linha desempenha também um serviço de informação e prevenção. Na área do tratamento os resultados das avaliações realizadas são bons.

# HEALTH SMOKING DEHABITUATION CONSULTATION EFFICIENCY IN THE HEALTH CENTERS OF SOUTHERN DISTRICT OF AVEIRO (FORMER SOUTHERN SUB-REGION OF HEALTH OF AVEIRO)

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## Abstract

### Introduction

According to Prahbat, Chaloupka, Hopkins, et al., investing in smoking cessation proves to be the most effective method to obtain/gain in a short and medium term, an improvement morbidity and mortality figures related with smoking. Thus it becomes necessary to put into practice, support strategies (programs) that create an incentive for those who pretend to quit smoking, while simultaneously implementing measures regarding the creation of smoking free areas and promote the adoption of healthy life styles (Nunes et al, 2008). The DGS (2004) equally recommends reinforcement in matters of smoking dehabituaton, as it is known to be the only way to lower the mortality rates in the next 10 to 15 years.

### Objectives

Assess the efficiency of the dehabituaton consultations and other kinds of commonly used therapies. Study the the natural history and development of smoking as a disease and the therapeutical process (efficiency), as way to identify factors that might interfere in the success of the smoking dehabituaton the Framework of smoking dehabituaton consultation.

### Methodology

It pretends to be a descriptive-correlational tracer study? As well as cohort study of the individuals that attend smoking dehabituaton consultation in the health centres that make up southern region (health centres of “Águeda”, “Albergaria-a-Velha”, “Anadia”, “Aveiro”, “Estarreja”, “Ílhavo”, “Mealhada”, “Murtosa”, “Oliveira do Bairro”, “Ovar”, “Sever do Vouga” and “Vagos”).

In what concerns the cohort, it was sected by randomized systematic sampling of every 4 (constant considered) files of the smoking dehabituaton consultations in the Health centres, independently of the kind of file organization held by each health centre. The sample is made up of 395 individuals who attended smoking dehabituaton consultation from the year 2004 until January 2009.

It should be pointed out that, because of the data collection having being done through research of clinical files, this study shows the limitations related to this kind of strategy like the omission of certain kinds of data and some differences in record keeping in the several health centres.

## Results

The results obtained allow us to conclude that significant statistical differences were found among the following variables:

- The age and success of dehabituación at 3 ( $p=0,001$ ) and six months ( $p=0,008$ ) being that the ranking average translates that those who remain without smoking present a higher ranking average for their age.
- The family atmosphere and the success of smoking dehabituación at 3 months ( $p=0,004$ ) and 6 months ( $p=0,002$ ), being verifiable that those who do not have a good family atmosphere are those who have more success in smoking dehabituación at 3 (47%) and 6 months (40%).
- The kind of pharmacological treatment and the success of smoking dehabituación at time of the last consultation, at 3 and 6 months ( $p=0.000$ ) In this sense, it can be concluded that a major part of those who did not undergo specific smoking dehabituación treatment do not attain success in smoking dehabituación. On the contrary, those who have undergone specific treatment with varenicline, bupropion and nicotine, in a descending order, show higher levels of success.
- The amount of cigarettes smoked at the first consultancy and the success of dehabituación at 3 ( $p=0,005$ ) and six months ( $p=0,016$ ), being that the ranking average shows that those who smoke more were those who achieved less success in smoking dehabituación.
- The amount of cigarettes the patient was able to reduce without a major effort and the success of smoking dehabituación in the last consultation ( $p=0,0025$ ) and at 3 months ( $p=0,005$ ) being it that those who reveal being able to smoke less are those who show less success in smoking dehabituación.
- The time spent without smoking in previous attempts to quit smoking and the success of dehabituación for more than 3 ( $p=0,004$ ) and six months ( $p=0,024$ ), the ranking average shows that those who spent more time without smoking in previous attempts to quit smoking (highest ranking average) were those who achieved more success in smoking dehabituación.
- The level of smoking dependency and the success of smoking dehabituación, independently of the time of the last consultancy, those who in average smoke a smaller number of cigarettes reveal more success in smoking dehabituación ( $p=0,026$ ). This situation does not occur at 3 and 6 months, which tells us that the amount smoked is an important factor, but is not sustainable in time.
- It is also verifiable that the fact of people smoking during a period of illness is a factor that contributes for making the smoking dehabituación process unsuccessful in the medium term, this is at 3 ( $p=0,013$ ) and 6 months ( $p=0,012$ ).
- In what concerns total smoking dehabituación, it is verifiable that the smaller the smoking dependency is the more possibilities of success in smoking dehabituación at 3 months ( $p=0.018$ ).
- The total amount of smoking dehabituación and the success of dehabituación at 3 and 6 months ( $p=0,000$ ), where the ranking average shows that those who attended more consultancies, were those who achieved more success in smoking dehabituación.
- The number of cigarettes smoked in each of the consultancies and the success of dehabituación at 3 and 6 months. The smoking of cigarettes during the 2nd, 3rd, 4th, 5th, 6th and 7th consultancies interfere statistically in a significant way with



the success of smoking dehabituatation at 3 and 6 months of following in consultancies. The subjects that smoke in average more cigarettes are those who are less successful in smoking dehabituatation at 3 and 6 months ( $p \leq 0,004$ ).

# **EFICÁCIA DAS CONSULTAS DE DESABITUAÇÃO TABÁGICA DOS CENTROS DE SAÚDE DA REGIÃO SUL DO DISTRITO DE AVEIRO (REGIÃO SUL DA ANTIGA SUB-REGIÃO DE SAÚDE DE AVEIRO)**

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## **Introdução**

Segundo Prahbat, Chaloupka e Hopkins *et al.*, o investimento na cessação tabágica constitui a via mais efectiva para a obtenção, a curto e a médio prazo de melhorias nos indicadores de morbidade e mortalidade relacionados com o consumo de tabaco, pelo que se torna necessário pôr em prática e reforçar as estratégias de apoio aos fumadores que desejem parar de fumar, em simultâneo com a implementação de medidas que visem a criação de ambientes livres de fumo de tabaco e que facilitem a adopção de estilos de vida promotores de saúde (Nunes, et al., 2008).

Também a DGS (2004) recomenda o reforço na intervenção em matéria de desabitação tabágica, visto que esta representa a única via para a diminuição da mortalidade e morbidade nos próximos 10 a 15 anos.

## **Objectivos**

Avaliar a eficácia da Consulta de Desabitação Tabágica e tipos de terapêutica mais utilizados e também estudar a história natural e o desenrolar do tabagismo como doença e do processo terapêutico (eficácia e eficiência), no sentido de identificar factores que possam interferir no sucesso da desabitação tabágica em contexto de consulta de Desabitação Tabágica.

## **Metodologia**

Trata-se de estudo de investigação descritivo-correlacional retrospectivo e de coorte dos indivíduos que frequentam as consultas de desabitação tabágica, dos Centros de Saúde que compõem a Região Sul da antiga Sub-Região de Saúde de Aveiro (Centros de

Saúde de Águeda, Albergaria-a-Velha, Anadia, Aveiro, Estarreja, Ílhavo, Mealhada, Murtosa, Oliveira do Bairro, Ovar, Sever do Vouga e Vagos).

Relativamente à coorte, esta foi seleccionada por amostragem aleatória sistemática de 4 em 4 (constante considerada aleatoriamente) dos ficheiros das consultas de desabitação tabágica dos Centros de Saúde, independentemente da organização do ficheiro clínico dos utentes das consultas de desabitação tabágica de cada Centro de Saúde. A amostra é constituída por 395 indivíduos que frequentaram as consultas de desabitação tabágica desde o ano 2004 até 2008.

É de salientar que, como a colheita de dados foi feita através da pesquisa de arquivo dos processos clínicos, este estudo apresenta as limitações inerentes a esta estratégia como o não registo de determinados dados e alguma diferença de registos de Centro de Saúde para Centro de Saúde.

## **Resultados**

Os resultados obtidos permitem-nos concluir que se verificaram diferenças estatisticamente significativas entre as seguintes variáveis:

- **Sucesso da desabitação há mais de três meses e a idade** ( $p=0,001$ ), sendo que a média dos rankings traduz que os que estão sem fumar apresentam uma média dos rankings superior para a idade. O mesmo aconteceu entre o sucesso na desabitação tabágica há mais de seis meses e a idade ( $p=0,008$ );
- **Sucesso da desabitação há mais de três meses e o bom ambiente familiar** ( $p=0,004$ ), sendo que os que referiram melhor ambiente familiar foram os que não tiveram sucesso na desabitação tabágica aos três meses.
- **Sucesso da desabitação há mais de três e seis meses e o tipo de tratamento** ( $p<0,001$ ), sendo que os que não fizeram qualquer medicação tiveram mais insucesso na desabitação tabágica.
- **Sucesso da desabitação há mais de três e seis meses e nº de cigarros consumidos na 1ª consulta** ( $p=0,005$  e  $p=0,016$  respectivamente para os 3 e 6 meses), sendo que a média dos rankings traduz que os que consomem mais cigarros foram os que não tiveram tanto sucesso na desabitação tabágica.

- **Sucesso da desabituação há mais de três e seis meses e o n° de cigarros que dizem conseguir reduzir na 1ª consulta** ( $p=0,002$  e  $p=0,015$  respectivamente para os 3 e 6 meses), sendo que a média dos rankings traduz que os que verbalizam reduzir um maior número de cigarros foram os que tiveram mais insucesso na desabituação tabágica.

- **Sucesso da desabituação há mais de três e seis meses e tempo que estiveram sem fumar em tentativas anteriores de cessação tabágica** ( $p=0,004$  e  $p=0,024$  respectivamente para os 3 e 6 meses), sendo que a média dos rankings traduz que os que estiveram mais tempo sem fumar em tentativas anteriores de cessação tabágica (maior média nos rankings) foram os que tiveram mais sucesso na desabituação tabágica.

- **Sucesso da desabituação há mais de três meses e o grau de dependência tabágica** ( $p=0,018$ ), sendo que a média dos ranking traduz que os que apresentam maior dependência (Fageström) foram os que não tiveram tanto sucesso na desabituação tabágica.

- **Sucesso da desabituação há mais de três e seis meses e n° total de consultas de desabituação tabágica** ( $p<0,001$ ), sendo que a média dos rankings traduz que os que frequentaram mais consultas foram os que tiveram mais sucesso na desabituação tabágica.

- **Sucesso da desabituação há mais de três e seis meses e n° de cigarros consumidos em cada uma das consultas.** Como se pode verificar no quadro que se segue quanto maior é o número de cigarros consumidos em cada uma das consultas mais difícil se torna a desabituação tabágica.

É de referir ainda que dos 395 elementos da amostra, apenas 136 (34,4%) estavam abstinentes aquando da última consulta, destes apenas 69 (17,5%) indivíduos estão abstinentes há mais de 3 meses e finalmente destes, apenas 51 (12,9%) estão abstinentes há mais de 6 meses, o que traduz as dificuldades que as pessoas sentem quando querem deixar de fumar e simultaneamente as experiências de insucesso que têm de passar até finalmente conseguirem.

**Quadro 1 - Sucesso da desabitação há mais de três e seis meses e nº de cigarros consumidos em cada uma das consultas**

Consumo de cigarros	Sucesso há mais de três meses				Sucesso há mais de seis meses			
	N	p	Sucesso (X rankings)	Sem sucesso (X rankings)	N	p	Sucesso (X rankings)	Sem sucesso (X rankings)
1ª consulta	395	0,013	168,33	204,28	-	-	-	-
2ª consulta	298	<0,001	116,26	159,52	298	0,002	115,27	156,57
3ª consulta	226	<0,001	85,96	125,61	226	0,002	89,66	120,45
4ª consulta	164	<0,001	96,80	60,72	164	<0,001	59,30	92,39
5ª consulta	114	<0,001	44,98	69,59	114	<0,001	42,93	67,72
6ª consulta	84	<0,001	32,41	55,31	84	<0,001	30,96	54,04
7ª consulta	61	<0,001	23,05	46,14	61	<0,001	22,26	42,77
8ª consulta	41	<0,001	17,22	30,13	41	<0,001	16,00	28,06
9ª consulta	25	0,035	12,13	16,50	-	-	-	-
10ª consulta	22	0,001	10,03	18,13	22	0,014	10,09	15,25
11ª consulta	16	0,023	7,62	12,33	-	-	-	-

## Conclusão

Este estudo permitiu reforçar o que já é referido na literatura nesta área do conhecimento, no que se refere a taxas de sucesso e na identificação de alguns factores promotores e outros de risco no processo de desabitação tabágica, para que as intervenções na área da desabitação tabágica se tornem mais efectivas e eficientes, de forma a minimizar este problema de saúde pública.

Por tudo isto, é necessário que nos interessemos não só pelo acto de deixar de fumar, mas também pela manutenção duradoura da abstinência.

# **PATTERNS OF PERSONALITY AND DAILY CONSUMPTION OF TOBACCO IN ADOLESCENTS**

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## **Abstract**

### **Introduction**

The analysis of the relationship between personality disorders and consumption of drugs is a topic of interest. In the case of tobacco consumption few studies have analyzed this relationship and much less in the case of adolescents. To know if there is a relationship between certain personality traits and daily tobacco consumption in adolescents, it is a relevant topic to be able to prevent the tobacco consumption, and therefore the later consumption of other drugs.

### **Objectives**

The aim of the present study is to analyze if there is a relationship between daily consumption of tobacco and the presence of certain patterns of personality in adolescents.

### **Methodology**

The sample is formed for adolescents between 14 and 17 years old. We use the MACI for analyze patterns of personality and we assess the frequency of tobacco consumption in the current moment.

### **Results**

The results indicate that it is more probable than youths with daily tobacco consumption they have a high punctuation in unruly, forceful, rude, oppositional or borderline tendency patterns of personality. In the case of youths without daily tobacco consumption or that they don't use tobacco, it is more probable than they have a high punctuation in submissive and conforming prototypes.

## **Conclusion**

In conclusion, it is more probable than youths that smoke daily they have some patterns of personality different to youths that don't consume tobacco daily.

# PROTOTIPOS DE PERSONALIDAD Y CONSUMO DIARIO DE TABACO EN ADOLESCENTES

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## Resumen

### Introducción

El consumo de tabaco es uno de los principales factores de riesgo para la salud que puede ser evitable. Empezar a consumir en edades tempranas está relacionado con una mayor probabilidad de llegar a ser dependiente del tabaco y por lo tanto, de tener más dificultades a la hora de abandonar su consumo. Además, tener un consumo de tabaco diario también está relacionado con ser dependiente del mismo y de mayores consecuencias negativas para la salud.

El análisis de la relación entre trastornos de personalidad y consumo de drogas es un tema de interés en la actualidad, pero en el caso del consumo de tabaco apenas hay estudios que analicen esta relación y mucho menos en el caso de los adolescentes. Conocer si hay relación entre determinados rasgos de personalidad y el consumo de tabaco diario en adolescentes es un tema relevante para poder prevenir el consumo de tabaco, y por lo tanto el posterior consumo de otras drogas, en los adolescentes diseñando los programas preventivos de una forma más adecuada.

### Objetivos

El objetivo del presente estudio es analizar si hay relación entre el consumo diario de tabaco y la presencia de determinados patrones de personalidad en adolescentes. La muestra está formada por jóvenes de entre 14 y 17 años que residen en las siete principales ciudades de la Comunidad de Galicia (España).



## **Método**

Utilizamos como instrumento de evaluación el Inventario Clínico para Adolescentes de Millon (MACI; Millon, Millon, Davis y Grossman, 1997) y también evaluamos la frecuencia de consumo de tabaco en el momento actual.

## **Resultados**

Los resultados que hemos obtenido son los siguientes: es más probable que los jóvenes que realizan un consumo de tabaco diario tengan una puntuación alta en los prototipos de personalidad rebelde, rudo, opositorista o en tendencia límite. En caso de los jóvenes que no realizan un consumo de tabaco diario o que no consumen tabaco, es más probable que tengan una puntuación alta en los prototipos de sumiso y conformista.

## **Conclusión**

Por lo tanto, podemos concluir que es más probable que los jóvenes que fuman diariamente tengan unos prototipos de personalidad diferentes a los de los jóvenes que no consumen tabaco diariamente.

# COMPARATIVE ANALYSIS OF TOBACCO ADDICTION IN TEXTBOOKS FROM 16 COUNTRIES INVOLVED IN THE EUROPEAN PROJECT BIOHEAD-CITIZEN

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## Abstract

Tobacco is a serious social problem that affects physical, psychological, social and economic areas. The textbook is strongly rooted in school education and works like a "screen" that links the space between the pupil and the external reality. It provides pupils with handy information, well structured and systematized contents, in order to facilitate them to build their own learning.

In this context, a comparative analysis of the information conveyed by textbooks from the 16 countries involved in the European project BIOHEAD-CITIZEN was carried out. The countries differ in their geographical distribution and their historical, political and socio-cultural development: 12 European countries (Germany, Cyprus, Estonia, Finland, France, Hungary, Italy, Lithuania, Malta, Poland, Portugal and Romania), 3 African (Morocco, Mozambique and Senegal) and 1 of Near East (Lebanon).

A specific part of the Health Education grid developed in the European project was used for analysing the following indicators: (i) physical effects, (ii) psychological effects, (iii) social effects, (iv) smoking prevention campaigns, and (v) environment contexts for tobacco production and consumption.

Results showed that Morocco is the only country in which textbooks do not address the smoking issue. Of the 15 countries referring to this issue, only 11 countries present the three dimensions of tobacco consumption (physical, psychological and social consequences), some omit the psychological dimension, others the social one and others both. On the whole, the present study indicates that the Finnish textbook is the one which presents the smoking issue in a rather balanced way. The results show differences in political, cultural and curriculum with regard to the way textbooks of different countries explore the tobacco problematic.

**Keywords:** textbooks, health education, smoking prevention; cultural diversity.

## Introduction

Epidemiological studies have confirmed the association between smoke consumption and several diseases such as those of the digestive, urinary, cardiac and respiratory tract as well as oncologic and psychosocial diseases. It is in such a high proportion that today tobacco consumption is the leading cause of illness and avoidable deaths, reducing life expectancy by about ten years.

Several international institutions like World Health Organization (WHO), UNICEF, UNESCO, Centers for Disease Control and Prevention in the United States (CDC), International Union for Health Promotion and Health Education (IUHPE) consider political and educational action to be the most powerful instrument for the prevention of smoking abuse prevention (IUHPE, 2008). Being an essential link between the scientific knowledge selected for teaching (external didactic transposition) and the knowledge effectively taught in the classroom (internal didactic transposition) (Clément, 2006), the textbook works as a teaching instrument transferring cultural references to the school as it reflects the educational policies and the social interests. It is a cultural object that talks about the society in which it is included.

Although new ways of thinking and modern pedagogy criticize the intellectual bookish/encyclopedic pupils, the fact is that the textbook is considered by teachers, pupils, parents and governmental institutions as a fundamental and structuring instrument of the educational process and so, the most used pedagogical resource at school. Therefore the textbook is still strongly rooted in school education and plays the role of a "screen" that links the space between the pupil and the external reality, therefore becoming the centre of formal knowledge (Giordan, 1999). This gives the teacher an important role as he/she must assign an appropriate position contextualized with the teaching-learning process where the book should provide pupils with handy information, and well structured and systematized contents, in order to facilitate them to build their own learning (Perrenaud, 2005).

Accordingly, and particularly in the problem of tobacco addiction, the textbook can assume the role of a memorandum coordinator of facts and ideas built interactively over a lifetime and during classes, in order to complement the acquired knowledge as well as to provide useful reading and suggestive images. In this way, the textbook can contribute for the prevention of tobacco consumption, as smoking is a serious physical, psychological and social problem of modern society, particularly for children and young people who are more vulnerable (Negreiros, 2000; Precioso, 1999; 2004).

In this context, a comparative analysis of the information conveyed by textbooks from the 16 countries involved in the European project BIOHEAD-CITIZEN (Carvalho, 2004; Carvalho & Clément, 2007) was carried out, assuming that, overall, they convey the concepts and ideas of the national Health Education programmes (Gonçalves, 2008).

The 16 countries involved in this project differ not only for its geographical distribution, but also and mainly by their historical, political and socio-cultural development: 12 European countries (Germany, Cyprus, Estonia, Finland, France, Hungary, Italy, Lithuania, Malta, Poland, Portugal and Romania), 3 African (Morocco, Mozambique and Senegal) and 1 of Near East (Lebanon).

## **Objectives**

To establish whether there are different approaches to the problem of smoking addiction and determine if physical, psychological and social dimensions have identical treatment in textbooks of different countries, the following question was formulated:

*Are there significant differences among the textbooks of the 16 countries regarding the way they address the tobacco problem?*

## **Methodology**

For the analysis of textbooks we used the specific part for tobacco of the Health Education grid (Table 2), developed in the FP6 STREP European project BIOHEAD CITIZEN (Carvalho, 2004). The following indicators were analysed: (i) physical effects, (ii) psychological effects, and (iii) social effects, (iv) anti-smoking campaigns and (iv) environment (Table 1).

These indicators were applied to a total of 76 textbooks in primary and secondary school in the 16 countries involved in the project, distributed as follows: 3 from Cyprus (CY); 5 from Germany (DE); 2 from Estonia (EE) ; 1 from Finland (FI); 6 from France (FR); 5 from Hungary (HU); 11 from Italy (IT); 14 from Lebanon (LB); 2 from Lithuania (LT); 2 from Malta (MT); 7 from Morocco (MO); 2 from Mozambique (MZ); 1 from Poland (PO); 12 from Portugal (PT); 1 from Romania (RO) and 2 from Senegal (SN).

The number of occurrences in relation to physical, psychological and social effects associated to the consumption of tobacco was used as the main variable. Two separated analysis were conducted, one on the textual occurrences and the second on the images.

For each country, the data are the means of the occurrences of each group found (physical, psychological or social effects) in the totality of the analysed textbooks of the country, for either text references or images.

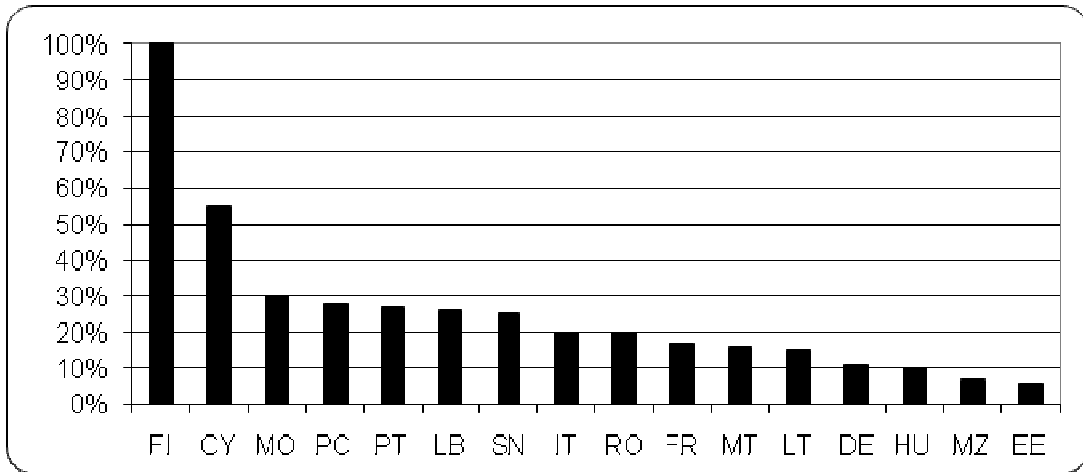
**Table 1 - Grid with indicators for the data collection on Tobacco**

<b>3.1 SMOKING</b>				
<b>Conceptions</b>	<b>INDICATORS</b>	<b>IMAGES</b> No. occurrences	<b>TEXT</b> No. occurrences	<b>ANNEX</b> HE-3.2.n
<b>3.1. SMOKING ABUSE</b>	Unhealthy components of tobacco			
	Physical effects in the body: - Respiratory tract - Circulatory system - Nervous system - Fetus disorders (of smoking mother) - Lung cancer - Other diseases			
	Psychological and behavioral effects: - Anxiety - Addiction (dependence) - Others (specify)			
	family disturbance: overspending, children's illness - Passive smoking - Mortality rates - Others (specify)			
	Anti-smoking campaign - Information - Educational action - Legal rules - Promotion of healthy habits - Fear contents - Possible assistance (phone number, website ...)			
	Environmental (and social) approach: - Tobacco factories - Identifying images - Notion of pleasure during			

## Results

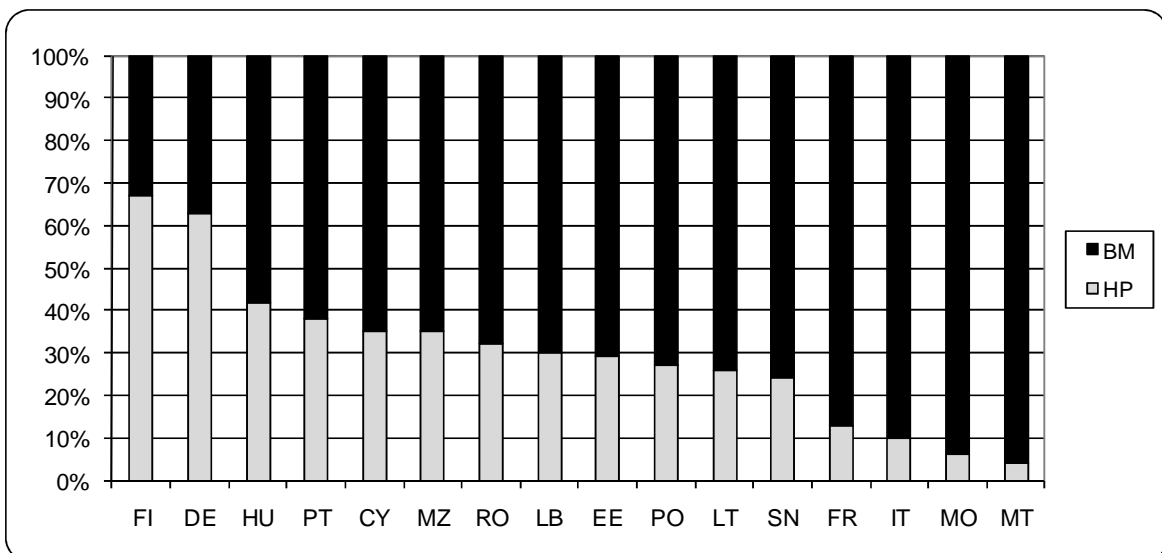
### Health Education in textbooks of 16 countries: Biomedical model (BM) and Health Promotion (HP) approach

Finland is the only country where Health Education is a separate curricular subject, therefore all pages (100%) of the analysed Finnish textbooks were devoted to this issue. About 55% of the Cypriot textbooks were devoted to Health Education whereas in the textbooks of the remaining 14 countries, this topic was below 30%.



**Figure 1- Proportion of the number of pages devoted to health in school textbooks of the 16 countries**

In what concerns tobacco addiction, the biomedical model (BM) of health (characterised by pathological, curative and preventive dimensions) prevails over the Health Promotion (HP) approach (characterized by healthy life, empowerment, environment issues) in both textual and iconic elements of textbooks in 14 of the 16 participating countries (Figure 2). In fact, only textbooks books from Finland and Germany are the ones having more occurrences of HP than BM: 67% HP and 33% BM in Finish books and 63% HP and 37% BM in German ones (Figure 2).



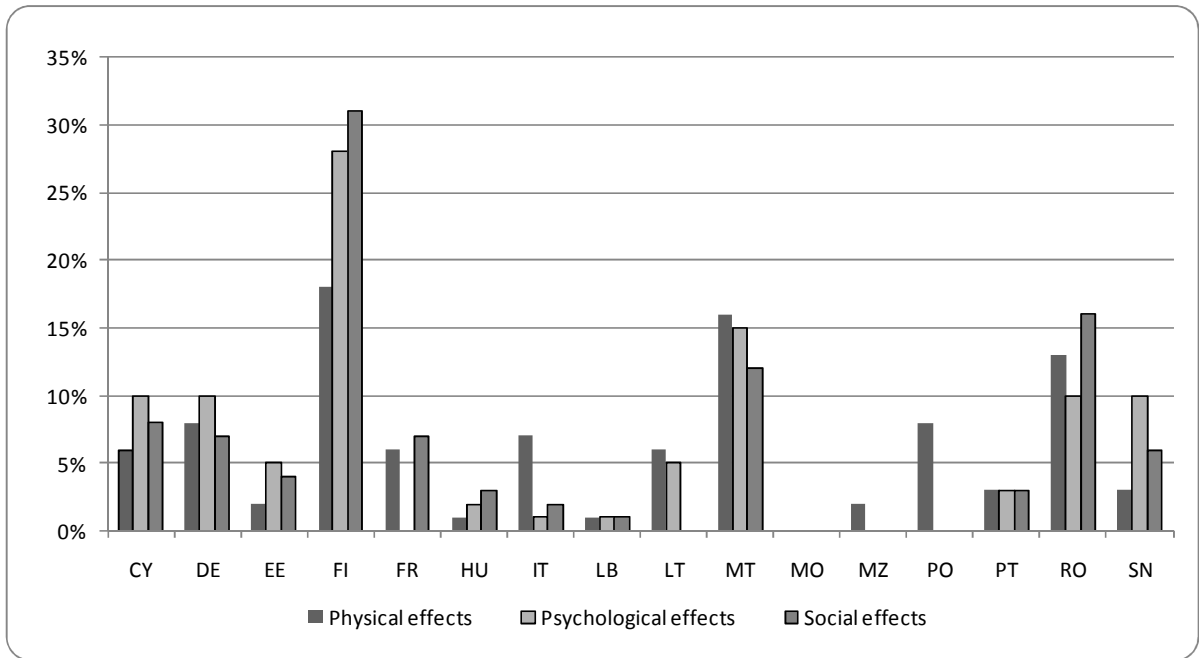
**Figure 2- Biomedical Model (BM) versus Health Promotion (HP) in textbooks of the 16 countries**

## **Physical, psychological and social effects of tobacco in textbooks of 16 countries**

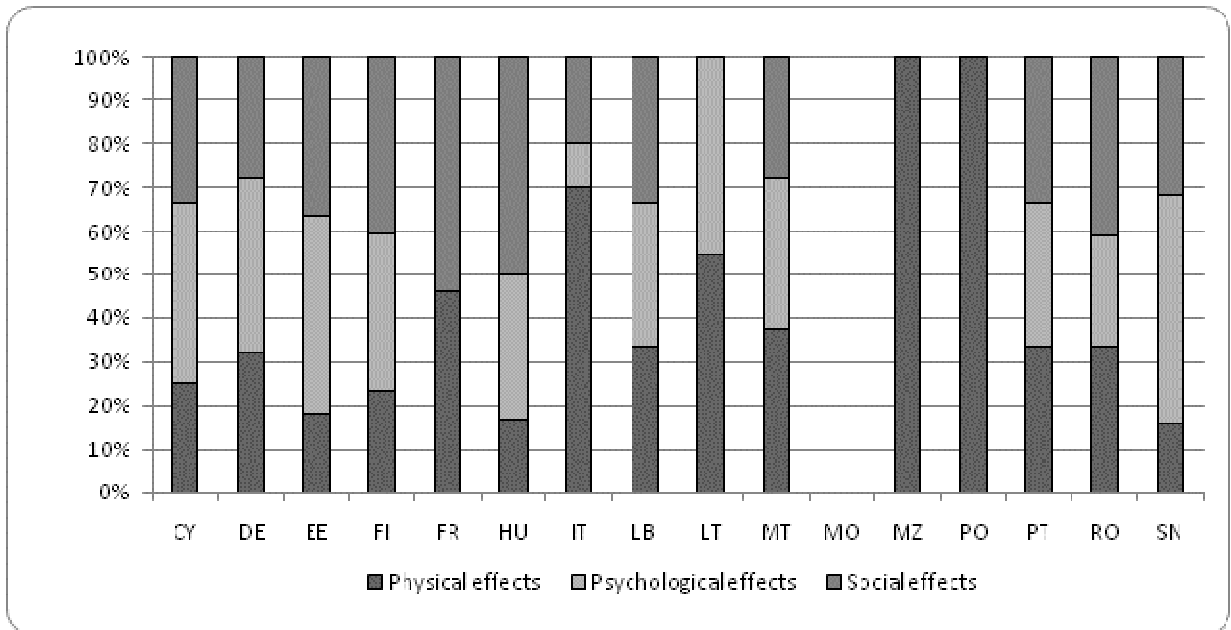
### ***Text analysis***

Finland stands out as the country whose textbooks present more text mentioning physical, psychological and social effects of tobacco (Figure 3). The physical effects of tobacco are the most frequently discussed in the text of all countries textbooks, followed by psychological and social ones (Figures 3 and 4).

Only 11 countries explore the three dimensions of the tobacco problem. The following 6 countries textbooks leave out one, two or the three dimensions of tobacco effects: French textbooks omit the psychological dimension and Lithuanian books the social dimension; Poland and Mozambique do not mention psychological and social dimensions while Moroccan textbooks do not mention any of the three dimensions (Figure 3 and 4).



**Figure 3- Contribution of each country for the total number of text occurrences of physical, psychological or social effects of tobacco.**



**Figure 4- Proportion of text references of physical, psychological and social effects of tobacco in textbooks of each country.**

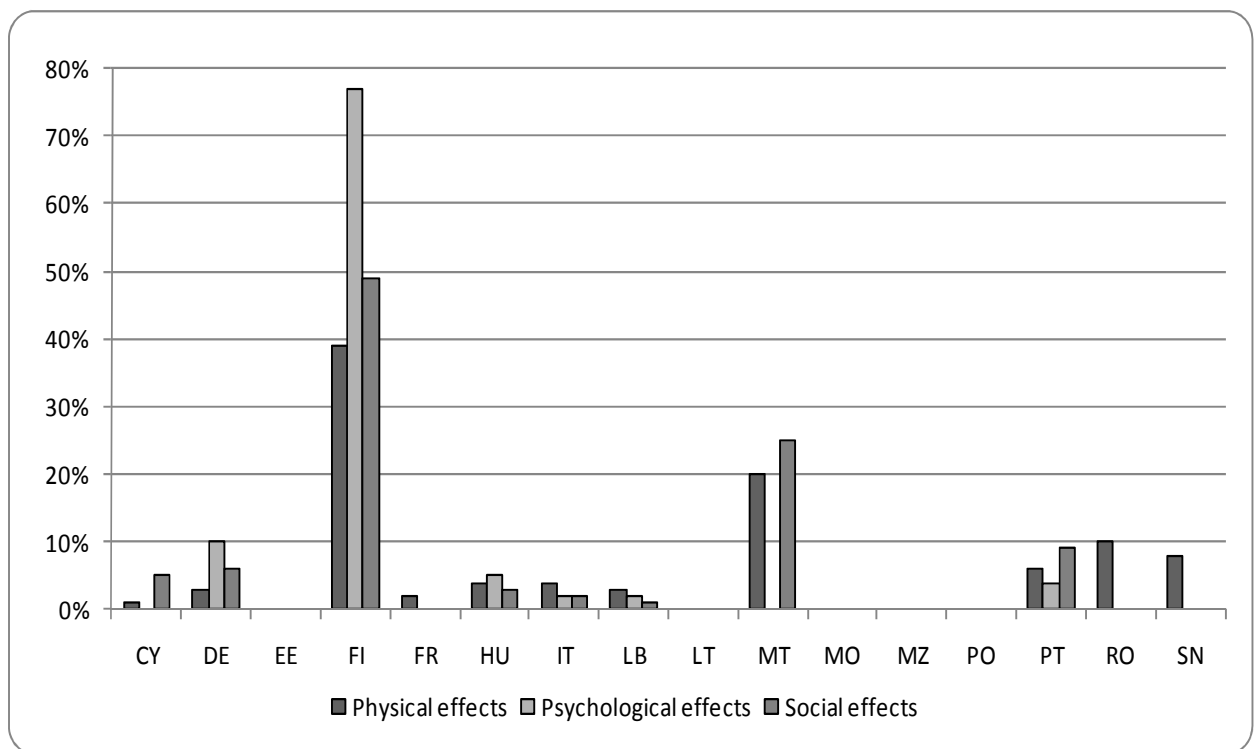


### *Images analysis*

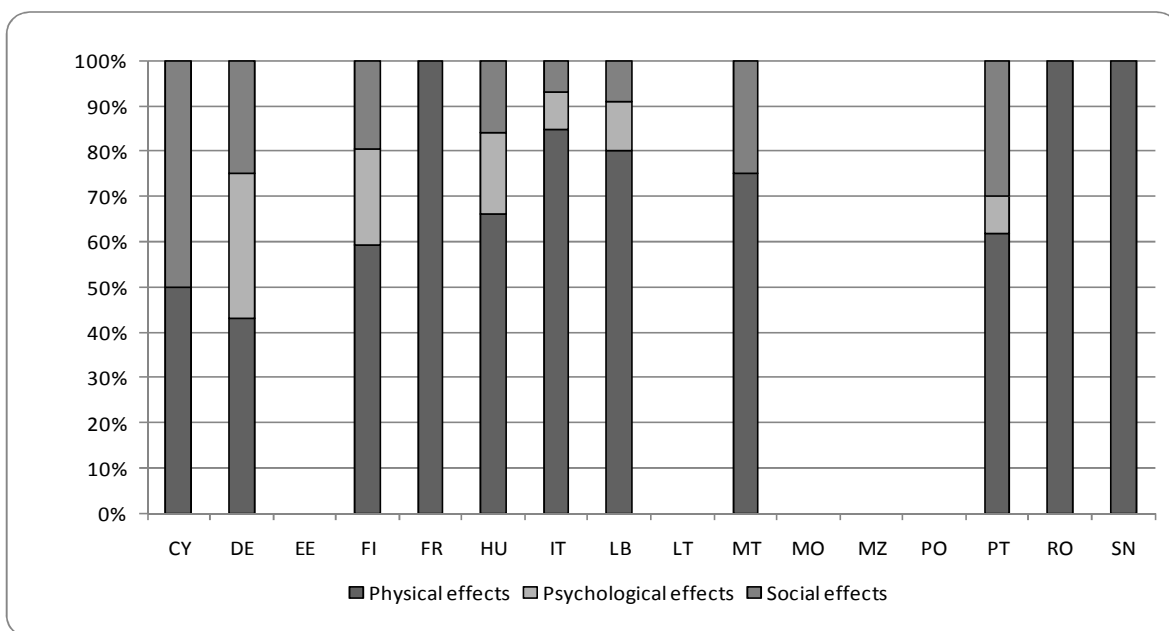
Five of the 16 countries participating in this study (Estonia, Lithuania, Morocco, Mozambique and Poland) do not present images related to physical, psychological or social effects of tobacco and only 6 (Finland, Portugal, Germany, Hungary, Italy and Lebanon) explore the three dimensions of tobacco problem by images (Figure 5). Once again, the Finnish textbook is the one presenting more images related to physical, psychological and social consequences of tobacco consumption (Figure 5).

Despite the large discrepancy in values obtained for the images of physical, psychological or social impact, school textbooks in Germany, Finland and Portugal stand out as those with a better balance between the three dimensions (Figure 5 and 6).

In the case of the Estonian, French, Romanian and Senegalese textbooks, only the physical dimension of tobacco is shown in images (Figures 5 and 6).



**Figure 5- Contribution of each country for the total number of images of physical, psychological or social effects of tobacco**

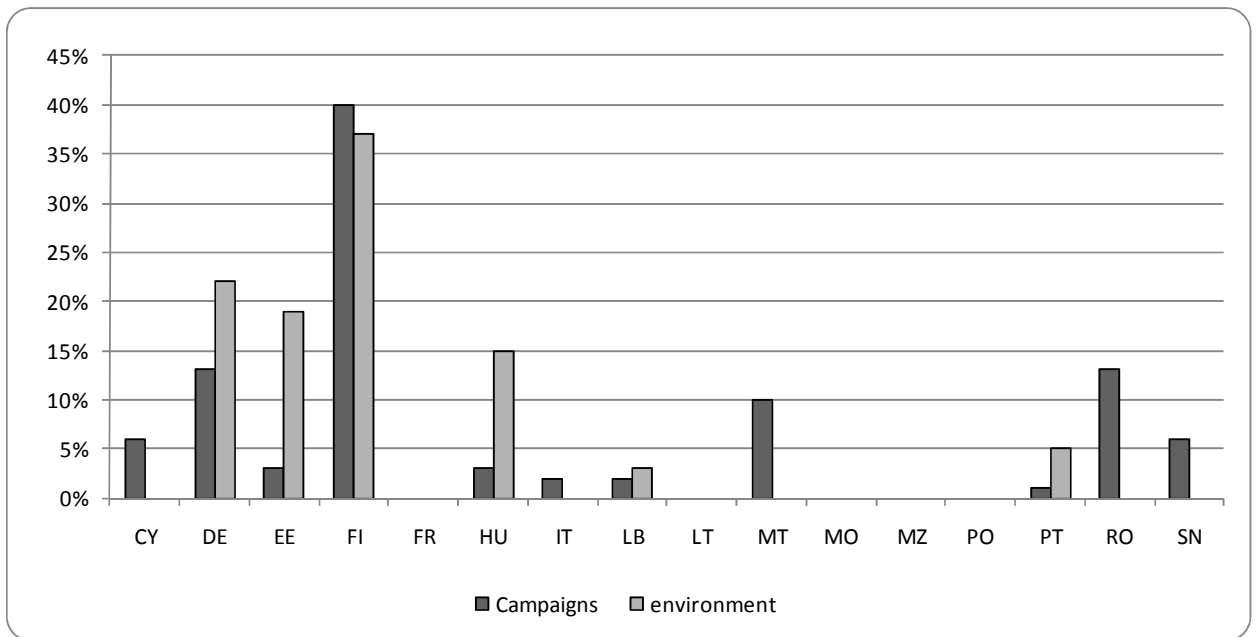


**Figure 6- Proportion of images of physical, psychological and social effects of tobacco in textbooks of each country**

### **Anti-smoking campaigns and environment contexts in textbooks of 16 countries**

Only six countries (Germany, Estonia, Finland, Hungary, Lebanon and Portugal) mention in their textbooks anti-smoking campaigns and refer some smoking environment contexts (Figure 7), such as smoking pleasure, smoking groups, tobacco production, tobacco factories, trade legislation, consumption legislation or associations for smoking dependents. Once again the Finnish textbook is the one that presents about 40% of total references to prevention campaigns and 37% of total environment contexts. As for the environments, the texts with more references are the ones from Germany (22%), Estonia (18%), Hungary (15%) and Portugal (5%).

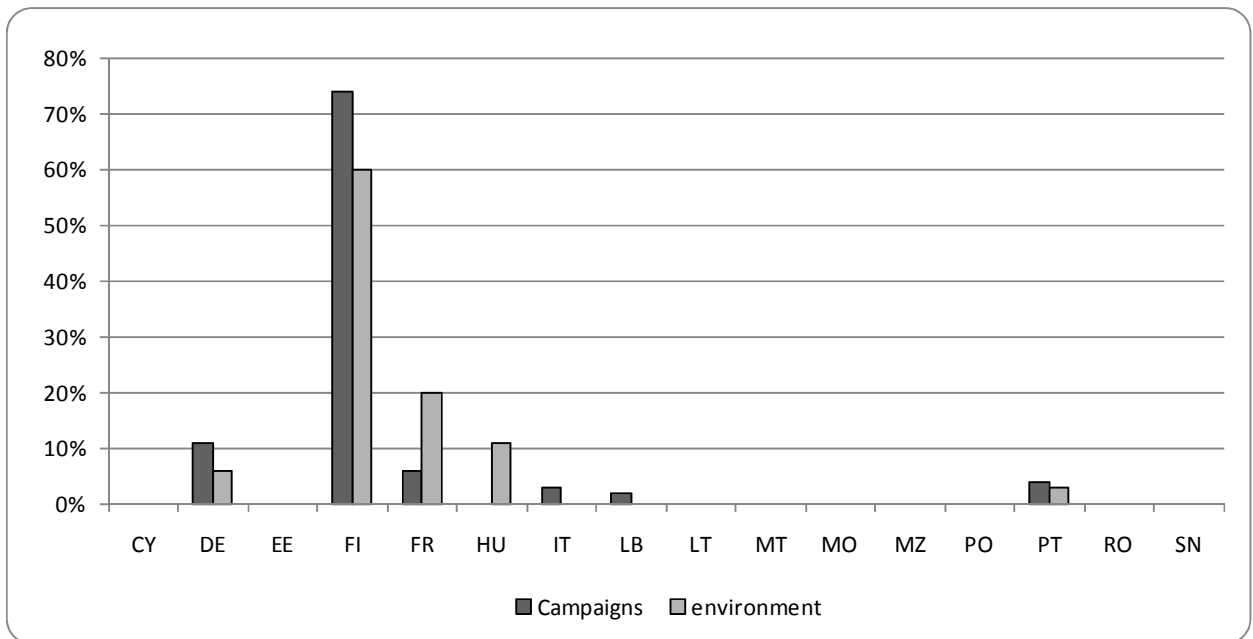
In contrast, the analysed textbooks from France, Lithuania, Morocco, Mozambique and Poland do not incorporate textual references about prevention campaigns nor about the environment related to smoking. Romania, Malta, Cyprus, Senegal and Italy address only the topic of prevention campaigns (Figure 7).



**Figure 7- Contribution of each country to the total number of text occurrences of anti-smoking campaigns and environment contexts**

Textbooks from Germany, Finland, France and Portugal present images about anti-smoking campaigns and smoking environment contexts (Figure 8). The Finnish textbook is once more the one with more images from both campaigns (73%) and environments (60%) followed by the Germany textbook for the first issue (11%), France (6%) and Portugal (4%), and for environments the ones from France (20%), Hungary (11%), Germany (6%) and Portugal (3%).

In contrast nine other countries (Cyprus, Estonia, Lithuania, Malta, Morocco, Mozambique, Poland, Romania and Senegal) do not show images concerning both issues (Figure 3.8). Italian (3%) and Lebanese (2%) textbooks refer only to anti-smoking campaigns while the Hungarian textbooks include only images of smoking environments (12%).



**Figure 8- Contribution of each country for the total number of images of anti-smoking campaigns and environment contexts**

## Conclusion

Of all countries involved in this study, Finland is the only one having a separate curricular subject of Health Education and so the textbook devotes 100% of its content to this subject. The majority of the Finnish book as well as the German book (66% and 63%, respectively) express explicitly or implicitly the contemporary Health Promotion view whereas the other countries textbooks are mainly within the classical Biomedical Model. In addition the Finnish textbook is the only one exploring the smoking issue in a rather balanced approach with regard not only to the three health dimensions (physical, psychological and social dimensions) but also to the emphasis given to anti-smoking campaigns and smoking environment contexts.

Morocco is the only country in which textbooks do not address the smoking issue. This may be due to the fact that smoking is a rather common and well accepted male habit in the country.

Of the 15 countries referring to this issue, only 11 countries present the three dimensions of tobacco consumption (physical, psychological and social consequences), some omit the psychological one while others the social one and others both.

In all countries the physical, psychological and social effects of smoking are treated in more detail than the anti-smoking campaigns and smoking environment contexts, in both space (text and image occurrences) and depth of analysis.

In the universe of analysed textbooks only few mention the existence of institutions to help smokers stop smoking. This seems to be a serious gap, since for many pupils the textbook may be the most important source of information they have access to.

The data among the 16 countries indicate that there are different cultural and educational policies in the approach to smoking addiction either in the field of prevention of starting smoking and in the combat for stopping smoking.

On the whole, the present study indicates that the Finnish textbook is the one which presents the smoking issue in a rather balanced way. This study is mainly a quantitative approach therefore a qualitative analysis should be carried out in more detail in order to evaluate whether this Finnish textbook could be taken as an example of good practices regarding the approach to the smoking issue. Therefore it might be considered a model to other countries textbooks, with some adaptations to their specific socio-cultural background.

## **ACKNOWLEDGEMENTS**

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**SPORTS PRACTICE, TOBACCO USE AND PERCEIVED HEALTH...  
WHICH RELATIONSHIP? A STUDY OF ADOLESCENTS IN THE 3<sup>rd</sup> CYCLE  
OF BASIC EDUCATION**

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**Abstract**

Health is one of the biggest "features" of humanity and is increasingly, in large part, dependent on lifestyle/conduct. Therefore, from the diagnostic levels of sporting activity held off school, smoking and self-assessment of health status of adolescents, we sought in this study to analyze the association between these variables.

Since it was found a negative association between sports practice and regular tobacco use, suggesting a deepening of this analysis because, perhaps, is not tap the full potential of sport to promote good habits and healthy lifestyles. Moreover, despite the overall positive assessment that the young men of their health, many people had risk behaviors (in this case, infrequently in sports and regular smoking) and, therefore, becomes of paramount importance to inclusion of these issues in initial and continuing training of teachers in general, and physical education teachers, particularly those involving the deepening of different methods of intervention.

These results thus reinforce the need to work early, with young people, concepts of health and its determinants, risk behaviors and protective of health, co-responsibility among young people for their own health.

# PRÁTICA DESPORTIVA, CONSUMO DE TABACO E SAÚDE PERCEBIDA...QUE RELAÇÃO? UM ESTUDO REALIZADO EM ADOLESCENTS DO 3.º CICLO DO ENSINO BÁSICO

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## Resumo

### Introdução

A saúde é um dos maiores “recursos” da humanidade e está cada vez mais, em grande parte, dependente do estilo de vida/comportamentos adoptados.

A multiplicidade de contextos sociais e interpessoais em que os adolescentes se movem, aliados às variações na existência e no ritmo das relações, promove uma grande diversidade de comportamentos que representam factores de risco ou de protecção da saúde dos jovens (Matos et. al., 1998).

### Objectivos

Assim, partindo do diagnóstico dos níveis de prática desportiva realizada fora da escola, do consumo de tabaco e da auto-avaliação do estado de saúde dos adolescentes, procurámos, neste estudo, analisar qual a associação existente entre estas variáveis.

### Metodologia

Participaram 4879 jovens (52% ♀ e 48% ♂), com uma média de idades de 14,3±1,36 anos que se encontravam a frequentar o 3º Ciclo do Ensino Básico em escolas de Portugal Continental entre os anos de 2005 e 2007.

Para a recolha de dados foi utilizado o “inventário de comportamentos relacionados com a saúde dos adolescentes” desenvolvido por Corte-Real, Balaguer e Fonseca (2004).

### Resultados

Uma vez que não foi encontrada uma associação negativa entre a prática desportiva regular e o consumo de tabaco, sugere-se um aprofundamento desta análise uma vez que, talvez, não se esteja a aproveitar todo o potencial da prática desportiva na promoção de bons hábitos e estilos de vida saudáveis. Por outro lado, não obstante a avaliação positiva generalizada que os jovens faziam da sua saúde, muitos jovens apresentavam comportamentos de risco (neste caso, pouca regularidade na prática desportiva e consumo regular de tabaco), pelo que se torna de máxima importância a inclusão destas temáticas na formação inicial e contínua dos professores, em



geral, e dos professores de educação física, em particular, que impliquem o aprofundamento de diferentes metodologias de intervenção.

### **Conclusão**

Estes resultados vêm assim reforçar a necessidade de se trabalhar, precocemente, junto dos jovens, os conceitos de saúde, comportamentos de risco e protectores da saúde, co-responsabilizando os jovens pela sua própria saúde.

### **Introduction**

Teens play an important role in the future of humanity and our intervention close to them depends on their own future. In this context home and school appear as special places. School assumes a prominent role because teenagers spend most of their time there.

Adolescence is defined as a stage of human development, which involves from the passage of the dependent stage of childhood to the stage of social inclusion and the formation of values that defines the adult age (Sampaio, 1994). It is a period of quick physical, psychological, sociocultural and cognitive changes, which are characterized by the effort to confront and overcome the challenges. In this stage it is important to establish an identity and autonomy, which infers the change of the relationship between the individual and the multiple levels of the context in which the youth stands (Sprinthall and Collins 2003).

The multiplicity of social and interpersonal contexts in which youth moves combined with the variations in pace and the existence of relations promotes a wide range of behaviors that represent risky or protective factors in the health of young people (Matos *et al.* 1998). Concerning essentially the risky behaviors it is known that nowadays a high rate of morbidity and mortality among youth is due to social, environmental and behavioral agents in which physical inactivity, substance abuse and eating disorders are pointed out (WHO, 2004).

Knowing that each person understands his health differently and that these differences can result from different positions, we believe that it would also be important to analyze the perceived health of adolescents in this study, in addition to the objective analysis of their behavior. Although this is a simple measure for assessing the health of the population, which usually makes use of a typical single question, such as "how do you

appreciate your health" ... good, fair, poor... it has been proved that it has an high analogy with tangled measures, and thus it is recommended its use by the WHO and the National Health Plan 2004-2010 (Ministry of Health, 2004).

Regarding the objective analysis of all behaviors related to the health, we have chosen sport practice and smoking for our research.

While health behavior promoter, sport practice is universally accepted as something essential to human beings. By the force of evolution physical activity, which was essential for our survival in the past, has increasingly become unnecessary and it has achieved the exaggeration of a sedentary lifestyle in modern life. This inactivity has been gradual and it is increasingly associated with a wide range of conditions, especially the so-called chronic degenerative diseases such as cardiovascular, locomotors, respiratory diseases, obesity and diabetes. Despite the lack of a clearly identifiable etiology, the available data suggests that physical inactivity strongly affects not only the coming out but also the intensity of how these diseases are displayed (CDC, 2006a and WHO, 2007).

Moreover, tobacco consumption, while a risky behavior for teen's health, arises from the fact that this is today the leading cause of preventable illness and death in the developed countries. It is responsible for about 14% of the total deaths recorded each year (CDC, 2006b and WHO, 2002). Tobacco consumption is the direct cause or the most likely cause of the various forms of cancer, it affects the cardiovascular system, respiratory system, digestive system and urinary system, it affects children (fetuses and children), it pollutes the environment and causes several accidents (fire, driving, etc.). There is also the social impact of these problems, such as the direct and indirect high economic costs (health costs, absenteeism and early inability) and affective of diseases caused by tobacco use (WHO, 2002).

Thus, we had as main aims: i) to analyze, by sex and age, the level of sporting activity, tobacco use and perceived health among the students of seventh, eighth and ninth grades ii) to check the relationship between the perceived health in sports and tobacco consumption by sex and age in this population.

## **Methodology**

### *SAMPLE*

Took part in this study 4879 young people (52%♀ and 48%♂), with a mean age of 14.3±1.4 years old who were attending the 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> grades in the compulsory Portuguese school between 2005 to 2007. We formed the young people in three age groups: 12 to 13 years (31%), 14 to 15 years (49%) and 16 to 17 years (20%).

### *PROCEDURES*

For the collection of the data it was used the "inventory of behaviors related to adolescent health" developed by Corte-Real, Balaguer and Fonseca (2004), designed specifically for adolescents.

For the analysis of the data it was used descriptive statistics with the presentation of frequencies and percentages for nominal variables, mean and standard deviation for continuous variables. It was also used the Chi-square test (study of the distribution of nominal variables) with the analysis of residuals adjusted (to locate significant figures). The level of significance was 0.05, represented in the tables in bold type, with residual values set equal to or greater than 1.9 in each cell.

### *VARIABLES*

In this study, the variables that were considered, as it has already been mentioned, were sport practice, the consumption of tobacco and perceived health.

Concerning sport, it was only considered the sport held outside the school, both competitive and as a hobby. After that we formed six groups: non-existent, sporadic (performed less than once a week), competitive or as a non-regular hobby (performed up to 2 to 3 times per week), competitive or as a regular hobby (held over 2 to 3 times per week).

Regarding to smoking the frequency of consumption has been examined by forming young people in three groups: non-smokers, reduced consumption (weekly), regular use (daily).

Concerning the perceived health, the young people's assessment on their health was analyzed as bad/insufficient, sufficient and good or very good.

## Results

### *SPORTS PRACTICE*

By analyzing the sports practice, through the general sample, we have found that just over one third of young people in the sample had a regular sports practice. We noted also that a quarter of young people had a non-existent or sporadic sports practice.

In a more detailed analysis by age and gender, we find that in all those age groups, girls had a less regular sports practice rather than boys and that these differences were statistically significant. The data also suggest a trend towards a slight decrease in sports practice in both sexes. On the other hand, with the progress of ages the difference was not statistically significant ( $\text{♂} - \chi^2_{(10)}=11,231$ ,  $p=0,340$  and  $\text{♀} - \chi^2_{(10)}=9,897$ ,  $p=0,450$ ).

Regarding the type of sports practice it was showed a higher prevalence of young males in competitive sport compared to young females in all age groups.

Despite the different methodologies found in the studies reviewed (CDC, 1992, Corte-Real, 2006, Matos *et al.*, 2006 and WHO, 2004), we verified the existence of trends that confirm our results. In all studies, we found low levels of sport practice of the youth in both sexes, with higher prevalence in women and a tendency to decrease in sports practice in age. These data are an indicator that the problem of low regularity of sport practice is not a local problem, but a problem to be resolved.

### *TOBACCO USE*

Regarding to tobacco and considering the overall sample, we found that 15% of the youth had low spending or regular use.

By analyzing in terms of age groups and genders, we found that consumption was similar in both sexes, and there was no significant difference, statistically significant, in any age group.

We also found that the consumption of tobacco was increased with age in both sexes.

The difference was statistically significant ( $\text{♂} - \chi^2_{(4)}=106,786$ ,  $p<0,001$  and  $\text{♀} - \chi^2_{(4)}=194,110$ ,  $p<0,001$ ).

In the case of tobacco use have also found significant convergence between our results and the results of other studies. Thus, the results indicate that consumption increases

with age and there is no significant difference in consumption among women (CDC, 2006b, Corte-Real, 2006, Matos et. al. 2006, WHO, 2004).

### *PERCEIVED HEALTH*

With regard to perceived health, we found that three in four young people rated their health positively (Good/Very Good).

Through the analysis of age groups and genders, we observed a statistically significant difference only in the age group of 16/17 years, with the young women's own health assessment as less positive than young men. It is here also enhanced the fact that health assessment evolves negatively as age increased in both sexes, with higher prevalence in young women, here the difference is statistically significant ( $\text{♀} - \chi^2_{(4)}=12,031, p=0,017$  e  $\text{♂} - \chi^2_{(4)}= 49,179, p<0,001$ ).

The data collected allowed us to conclude that, in general, young people did a very positive assessment on their health, that girls are less positive and that the evaluation became worse with the evolution of the age. We found similar results in studies of Corte-Real (2006), Matos *et al.* (2003) and WHO (2004).

These results may be related to the fact that young people have what might be called a "health" and therefore have no reason to make a negative assessment of it. Moreover, the results of their behavior will only influence their health from the medium to long term (Corte-Real, 2006).

Leaving for another analysis, we investigated the relationship between behavior and perceived health.

### *PRACTICE SPORTS AND TOBACCO USE. WHICH RELATIONSHIP?*

Analyzing the relationship between the sport practice of young people and their consumption of tobacco, by gender, we found that there was no statistically significant difference in tobacco use among different groups of sports practicing (see Table 1).

Table 1 - The sports and tobacco consumption of youth by gender.

Sport	Tobacco ♀ (%)			Tobacco ♂ (%)		
	None	Low	Regular	None	Low	Regular
None	89	6	5	92	3	5
Sporadic	85	9	6	86	5	<b>9</b>
Recreational Reduced	87	8	5	87	8	5
Low competitive	88	8	4	81	11	8
Recreational Regular	83	10	7	84	10	6
Competitive Regular	89	6	5	85	9	6
(g.l.= 10)	$\chi^2=8,238$ p=0.606			$\chi^2=17,650$ p=0.061		

These results contradict the negative correlation between tobacco consumption and sport/physical activity stated in studies, such as Bañuelos (1996), Balaguer and Castillo (2002) and Matos *et al.* (2003). However, the same results had already been found by Corte-Real (2006).

#### *SPORTS PRACTICE AND PERCEIVED HEALTH. WHICH RELATIONSHIP?*

By relating sports practice and perceived health in gender, we found that in both sexes, young people with more regular sports practice, in general, rated more positively to their health (good/very good). On the other hand, young people of both sexes with little or no sports practice rated their health as less positive one. However, it should be noticed that the percentage of young men and women who rated their health as poor/insufficient was very similar to any of the groups of sports practice (see Table 2).

We can also notice that those youth of both sexes who had competitive, reduced or regular sports practice evaluated their own health positively, by showing a positive association between competitive sports practice and positive health assessment.

Table 2 - The perceived health and sports practice by gender.

Sports	Health Assessment ♀ (%)			Health Assessment ♂ (%)		
	Bad/ Insuf.	Suf.	Good/ Very good	Bad/ Insuf.	Suf.	Good/ Very good
None	<b>7</b>	<b>29</b>	64	<b>8</b>	<b>31</b>	61
Sporadic	3	<b>28</b>	69	4	<b>28</b>	68
Recreational Reduced	3	25	72	2	<b>24</b>	74
Low competitive	2	17	<b>81</b>	3	15	<b>82</b>
Recreational Regular	3	19	<b>78</b>	2	21	77
Competitive Regular	4	11	<b>85</b>	2	13	<b>85</b>
(g.l.= 10)	$\chi^2=49,855$	p<0.001		$\chi^2=57,853$	p<0.001	

*TOBACCO USE AND PERCEIVED HEALTH. WHICH RELATIONSHIP?*

By analyzing the relationship between tobacco use and perceived health by gender, we found that young people of both sexes, who are non-smokers assessed more positively to their health. On the other hand, young people who were regular smokers over rated their health as being poor/inadequate (see Table 3).

You can also see that the fact that being a regular smoker influence mostly the assessment of the health of young females rather than males.

Table 3 - The perceived health and smoking by gender.

	Health Assessment ♀ (%)			Health Assessment ♂ (%)		
	Bad/ Insuf.	Suf.	Good/ Very good	Bad/ Insuf.	Suf.	Good/ Very good
None	3	21	<b>76</b>	2	18	<b>80</b>
Reduced	<b>7</b>	<b>31</b>	62	<b>5</b>	24	71
Regular	<b>10</b>	<b>43</b>	47	<b>6</b>	<b>33</b>	61
(g.l.= 4)	$\chi^2=79,417$	p<0.001		$\chi^2=35,600$	p<0.001	

These data, of both sexes, suggest a great awareness of the dangers of smoking with the increasing of the age. Similarly, another result emerges: the girls seem to consider the consumption of tobacco a higher risky behavior for physical inactivity. In the studies we consulted, Corte-Real (2006) refers to a clear positive association between sports and non-smoking and positive assessment of Health. To sum up, Balaguer and Castillo (2002), in their survey of youth in Valencian community, state that both girls and boys who had a more positive assessment of their health, had higher sports practice and a lower consumption of tobacco. Finally, the study of Bañuelos (1996) revealed the existence of a positive association between regular physical exercise and positive assessment of their health. On the opposite side, there was also a strong negative association between tobacco use and positive perception of health.

Since it was not found a negative association between regular sports practice and tobacco use, we suggest a deep analysis of it, because, perhaps, we are not taking it advantage of the full potential of sport to promote good habits and healthy lifestyles.

On the other hand, despite the overall positive assessment of the youth's own health, many young people had risky behaviors (in this case, they didn't practice sport regularly and smoked regularly), therefore, it is very important to include such topics while training teachers in general and physical education teachers in particularly so that the deepen of different methodologies of intervention can be involved.



## **Conclusion**

Through this study we tried not to restrict our analysis to the diagnosis of the level of sporting activity and tobacco use among young people, or the perception that they had of their health, but mainly to perceive the relationship between their behavior and their perceived health.

As far as the diagnosis, it was possible to perceive the existence of a significant percentage of young people with healthy risky behavior and that those behaviors increase with age forcing us to reflect on the effectiveness of programs to promote health policies in wider communities and schools in particular.

On the other hand, we found a negative association between regular sports practice and smoking. Thus, both young athletes and non athletes showed similar tobacco consume, leading us to believe that the potential of sports practice by promoting good habits and lifestyles is not being fully tapped.

We conclude that, if it is true that young people with more protective health behaviors (ie sports practice and no tobacco consumption) had a very positive assessment of their health, it is equally true that only a small percentage of young people with risky behavior (ie non- sports practice and regular smoking), assessed negatively on their health.

These results lead us to reflect on the importance of not only promoting the health among young people with the fortuitous measures, such as lectures and seminars but also working very early with them the concepts of health, risky behaviors and protectors of health, co-blaming them for their own health

On the other hand, developing and implementing programs for health promotion should be based on results of investigations carried out in each situation rather than national averages in order to distinguish possible differences between means as coastal/inland, north/south, rural/urban or economically favored partner/disadvantaged, adjusting, so the intervention locally.

As for the multiplicity of social and interpersonal contexts in which teenagers move, from where several influences arise, it is also of vital importance to study the influence of family and friends in their behavior.

It seems also important to include these issues in the training of physical education teachers, so that the dimension of sport develops as a promoter of healthy lifestyles.

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## 2 ANOS DE TRATAMENTO COM VARENICLINA – A NOSSA EXPERIÊNCIA

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### Resumo

#### Introdução

As terapêuticas de cessação tabágica são das intervenções mais custo-efectivas na prevenção da doença. A vareniclina, um agonista parcial dos receptores  $\alpha_4\beta_2$ , é o primeiro fármaco não nicotínico desenvolvido para a cessação tabágica sendo comercializado em Portugal desde Março de 2007. Mostrando taxas de abstinências mais elevadas no final do período standard de tratamento, surgem evidências do que essas diferenças também se possam verificar ao fim das 52 semanas de seguimento.

#### Objectivos

Caracterizar a população da consulta de cessação tabágica do Centro Hospitalar Gaia/Espinho, EPE a quem foi prescrita vareniclina entre Maio/2007 e Maio/2009. Avaliar a taxa de abstinência até ao ano de seguimento, adesão ao tratamento prescrito, taxa de abandono e incidência de efeitos secundários.

#### Metodologia

Estudo retrospectivo dos processos clínicos dos doentes a quem foi prescrita vareniclina desde Maio 07 a Maio/2009.

#### Resultados

Foi proposta terapêutica com vareniclina a 93 doentes da consulta de cessação tabágica, 61 do sexo masculino e 34 do sexo feminino com média de idades de 48 ( $\pm 9.6$ ) anos. 40 doentes apresentavam patologia respiratória, sendo a DPOC a mais prevalente (57%). A

carga tabágica média foi 22 UMA ( $\pm 8.6$ ), sendo registada uma motivação média de 8.4 ( $\pm 1.25$ ) e uma dependência média de 4.97 ( $\pm 2.22$ ). 5 doentes (5.3%) a quem foi prescrito vareniclina, não efectuaram a compra. Dos 88 que iniciaram a terapêutica prescrita, 11 abandonaram a consulta antes de poder ser avaliada a adesão. Dos 77 doentes em questão, 34 (44%) auto-suspenderam a medicação antes das 12 semanas, 85% atribuindo a auto-suspensão à presença efeitos secundários. Em 7 doentes a dose foi reduzida para metade para controlo dos efeitos laterais. Estes surgiram em 57% dos doentes. A presença de efeitos secundários esteve associada a maior risco de auto-interrupção da terapêutica: OR 7.8 (IC 95%: 2.68-23.119). A taxa de abstinência à 1 (n=88), 4 (n=88), 12 (n=81), 26 (n=75) e 52 (n=66) semanas de tratamento, foi de 53%, 64%, 61%, 47% e 38% respectivamente. A taxa de abandono da consulta ao ano foi 39%, com 4% dos doentes a faltarem à 1ª avaliação pós-início da terapêutica.

### **Conclusão**

Os resultados relativos à taxa de abstinência são coincidentes com os da literatura, apresentando mesmo um valor ligeiramente superior ao referido nalguns estudos. Para esse valor poderá ter contribuído a motivação dos pacientes da nossa amostra. É de salientar a frequência de efeitos secundários responsável pela auto-suspensão da medicação, sem parecer médico prévio.

## DOCTORS AND TOBACCO

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### Abstract

#### Introduction

*Health Care Professionals and Tobacco Control* – This was the WHO leading theme for 2005.

#### Objectives

To contribute to smoking cessation. To assess the prevalence of current smokers among doctors and the reasons why they smoke.

#### Methodology

Individually responded questionnaire. Random sample.

#### Results

Inquired (1000); Replied (327) in mainland and Islands (45,26% Men; 54,74% Women);  $p < 0,001$ . *Ever-Smoker* 11,01 % (6,73%M; 4,28%W); *Ex-Smoker* 40,06% (24,46%M; 15,60%W) *Non-Smoker* 48,93% (23,55%M; 25,38%W)  $p < 0,05$ . **Mean age of Initiation:** *Ever-Smoker and Ex-Smoker* 16,23 (SD  $\pm$  3,61); **Influences for Initiation:** Colleagues (37,26%M; 35,38%W); Self-influence (40,20%M; 49,,23%W); Others (22,54%M; 15,39%W). **Influences for Cessation:** *Ex-Smoker* – Volunteer Cessation 35,88% (19,08%M; 16,80%W); Family Influence 10,69% (6,11%M; 4,58%W); Health Reasons 19,85% (15,27%M; 4,58%W); No Answer 26,71% (14,50%M; 12,21%W); Colleagues 6,87% (6,11%W; 0,76%W).

**Reasons for Smoking:** Search for tranquillity 61,11%; Social Reasons 27,78%; “No Answer or Unknown” 11,11%. No significant differences between men and women  $p > 0,05$ .

## **Conclusion**

In this sample, doctors are abandoning the tobacco. There are more ever-smoker men than ever-smoker women and women have more difficulty in ceasing smoking than men have. Cessation of tobacco consumption mainly depends on the capacity of self-control.

**Recommendations:** Professionals should intervene from pre-adolescence on.

**Keywords:** Doctors; Ever-Smoker; Ex-Smoker; Never-Smoker; Initiation; Cessation.

# OS MÉDICOS E O TABACO

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## Resumo

### Introdução

Os Profissionais de Saúde e o Controlo do Tabaco – Tema da OMS em 2005

### Objectivos

Contribuir para a cessação tabágica.

Avaliar a prevalência entre os médicos e os motivos porque fumam.

### Metodologia

Questionário auto-respondido. Amostra aleatória.

### Resultados

Inquiridos **327** médicos do Continente e Ilhas; 45,26% Homens e 54,74% Mulheres;  $p < 0,001$ . Fumadores 11,01 % (6,73% H; 4,28% M); Ex-Fumadores 40,06% (24,46% H; 15,60% M); Não-Fumadores 48,93% (23,55% H; 25,38% M)  $p < 0,05$ .

**FUMADORES e Ex-FUMADORES:** Iniciação  $16,23 \pm 3,61$  anos; Influências: por “moto próprio” 40,20% H; 49,23% M; Colegas 37,26% H; 35,38% M; Outras 22,54% H; 15,39% M.

**Ex-FUMADORES:** Cessação voluntária 35,88% (19,08% H; 16,80% M); Influência de Familiares 10,69% (6,11% H; 4,58% M); Motivos de saúde 19,85% (15,27% H; 4,58% M); Não-Responderam 26,71% (14,50% H; 12,21% M); Colegas 6,87% (6,11% H; 0,76% M).

**Razões para fumar:** Procura de tranquilidade 61,11%; Razões Sociais 27,78%; “Não Resposta ou Desconhecimento” 11,11%. As diferenças entre Homens e Mulheres não são significativas  $p > 0,05$ .



## **Conclusão**

Nesta amostra os Médicos estão a abandonar o tabaco. Há mais fumadores masculinos do que femininos mas, adquirido o hábito, as mulheres têm mais dificuldade em cessar. A cessação tabágica passa fundamentalmente pelo domínio da vontade do próprio.

**Recomendações:** Os profissionais devem intervir de forma incisiva desde a pré-adolescência.

**Palavras-chave:** Médicos; Fumadores; Ex-Fumadores; Não-Fumadores; Iniciação; Cessação.

# DETERMINANTS OF SMOKING BEHAVIOUR CHANGE

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## Abstract

### Introduction

The World Health Organization considers smoking as the prime avoidable cause of premature death or disease especially on developed countries (Precioso & Macedo, 2004). In the last few decades researchers have tried to develop more effective measures to help people stop smoking.

Smoking is a serious public health problem that can create physical and psychological dependence due to the nicotine in the tobacco plant (Nunes, 2003; Becoña, 2001).

Data from last Health Inquiry (INS, 2005/2006) showed that 89.4% of smokers of both sex and between 10 and more than 85 years old smoke daily. Women smoke more than men. This data also report the great number of deaths related to tobacco (11.7%).

Taking in consideration the scope of the problem, further investigation on smoking behaviour is required due to its consequences on health and public economy on the Portuguese population.

### Objectives

To investigate important variables on smoking cessation such as: partner support, nicotinic dependence and psychological morbidity (depression).

### Methodology

**Sample:** 106 smokers (65,1% male and 34,9% female) and 68 abstainers (for at least 3 months) (41,2% male and 58,8% female) participated in the study. Data was recruited at S. Marcos Hospital and at an enterprise in Braga, Portugal. The instruments were: Beck Depression Inventory (Beck, Mendelsohm & Mock, 1961); Partner Interaction Questionnaire (Mermelstein, Lichtenstein & McIntyre, 1983); Fagerström Test Nicotine Dependence (Heatherton, Kozlowski, Frecker & Fagerstrom, 1991).

## **Results**

A positive relationship between partner support and nicotinic dependence was found in smokers indicating the importance of partner support on the contemplation stage to stop smoking behaviour. Smokers also related more depressive symptoms than abstainers.

Abstainers showed higher partner support than smokers indicating they received more partner support to stop smoking when compared to smokers (they had more than 3 trials to stop smoking).

When the subjects have a partner that does not smoke, regardless of being a smoker or abstainer, they received more partner support to stop smoking when compared to a smoking partner. Both groups showed significant differences on partner support, where there is a non-smoking partner. For smokers, emotional representation is the best predictor of partner support. In abstainers Smoking Consequences was the best predictor of partner support.

**Key-words:** smoking cessation, partner support, psychological morbidity

# DETERMINANTES NA MUDANÇA DO COMPORTAMENTO TABÁGICO

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## Resumo

### Introdução

A Organização Mundial de Saúde (OMS) continua a considerar o consumo de tabaco como a principal causa evitável de doença e morte prematura, sobretudo nos países desenvolvidos (Precioso & Macedo, 2004), o qual tem vindo a ser estudado ao longo das últimas décadas com vista a uma medida de acção mais eficaz de ajudar pessoas a deixar de fumar. Fumar é um grave problema de saúde que se vai incrementando, a pouco e pouco, desde que se provam os primeiros cigarros, na infância e adolescência, até à juventude ou idades mais tardias (Becoña, 2002). Dados do último INS (2005/2006) revelam que cerca de 89.4% de sujeitos de ambos os sexos, com idades compreendidas entre os 10 e mais de 85 anos fumam diariamente, dos quais se salienta um número sensivelmente maior de mulheres fumadoras face aos homens. Estes dados apontam para um número significativo de mortes associadas ao tabaco (11.7%). Dada a dimensão actual do problema do tabagismo torna-se importante o estudo aprofundado, na população portuguesa, do comportamento tabágico dadas as consequências directas ao nível da saúde do indivíduo e da economia pública.

### Objectivos

Este estudo pretende avaliar alguns determinantes presentes na cessação tabágica, nomeadamente, suporte do parceiro, dependência nicotínica e comorbilidade psicológica (depressão).

### Metodologia

**Amostra:** A amostra é constituída por 68 abstinentes e 106 fumadores. Os dados foram recolhidos junto do Hospital de S. Marcos e da empresa Blaupunkt, Braga, 2007-2008.

Os dados foram recolhidos nos locais acima descritos sob a forma de caderno de questionários. Após descrição dos objectivos do estudo, procedeu-se ao consentimento

informado, e ao preenchimento dos questionários. Os dados foram depois analisados estatisticamente.

## **Resultados**

No grupo dos fumadores encontrou-se uma correlação entre o suporte do parceiro e a dependência nicotínica, indicando que o suporte do parceiro é importante na fase de contemplação á cessação tabágica. Também se verificaram mais sintomas depressivos relacionados com o seu consumo tabágico.

No grupo dos abstinentes, verificaram-se diferenças significativas ao nível do Suporte do Parceiro significando que os abstinentes receberam mais apoio do parceiro para deixar de fumar quando comparados com os fumadores (mais que 3 tentativas para deixar de fumar). Nos dois grupos verificam-se diferenças significativas ao nível suporte do parceiro, de quem tem um parceiro que não fuma. Para o suporte do parceiro, nos fumadores, representação emocional face ao tabagismo é um bom preditor; junto dos abstinentes evidencia-se a variável consequências relacionadas com o tabaco.

**Palavras-chave:** cessação tabágica, suporte do parceiro, comorbilidade psicológica

# TOBACCO SMOKING CESSATION CONSULTATION IN A UNITY HEALTH CARE

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## Abstract

### Introduction

In Portugal, it is estimated that 20 to 26% of population smokes. According to WHO, smoking cessation is the only effective measure to achieve, the short and medium term, improvements in indicators of morbidity and mortality related to tobacco consumption.

### Objectives

Determine smoking profile of a smoking cessation consultation (gender, age, education, age at onset, degree of nicotine dependence, motivation, associated pathology and previous attempts) in a Unity Health Care; check how many users stopped smoking in the defined period of time and related success in Consultation with the profile variables.

### Methodology

Quantitative, descriptive – correlational cross-sectional and observational Study, involving users of smoking cessation consultation of the UCSP. Unit Study: smokers who attended smoking cessation between June 2008 and June 2009 in the Unity. Sampling for convenience. Sample: 74 smokers. Data collection: outpatient clinical processes (paper and computer). Processing of data: SPSS 16.0. Used test Qui<sup>2</sup>.

### Results

Included in smoking cessation consultation 87 smokers, having attended the consultation only 74. Of these, 68% were male and 32% female. The most frequent age group was the 33-59 years. Most men had the 4th grade and women had the 9th grade. The age of smoking initiation was more frequent between 13 and 15 years. The consultation users, 92% had associated pathology, the most frequent were psychiatric disorders and cardiovascular disease. In the smokers, 34 had stopped smoking (46%). Was found dependent relationship statistically significant ( $p < 0.05$ ) between nicotine dependence and previous attempts with success in the consultation.

### Conclusion

Although the drugs available and the current knowledge about smoking cessation, the success rate of consultations around 20 to 35%. The data obtained from outpatient cessation of their Unity was 46%. Tobacco use is a major cause of preventable death, although the success rate has been higher than the national, best results could still be obtained.

# UMA CONSULTA DE CESSAÇÃO TABÁGICA A EXPERIÊNCIA DE UMA UNIDADE

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## Resumo

### Introdução

Em Portugal, estima-se que 20 a 26% da população fuma. Segundo a OMS, a cessação tabágica é a única medida efectiva para a obtenção, a curto e a médio prazo, de melhorias nos indicadores de morbi-mortalidade relacionados com o consumo de tabaco.

### Objectivos

Determinar o perfil do fumador da Consulta de Cessação Tabágica (sexo, idade, escolaridade, idade de início, grau de dependência à nicotina, estado de motivação, patologia associada e tentativas prévias) da Unidade de Cuidados de Saúde Personalizados (UCSP); verificar quantos utentes deixaram de fumar no período de tempo definido e relacionar o sucesso na consulta com as variáveis do perfil.

### Metodologia

Estudo quantitativo, descritivo - correlacional, transversal e observacional, envolvendo os utentes utilizadores da consulta de cessação tabágica da UCSP. Unidade de Estudo: fumadores que tiveram consulta de cessação tabágica entre Junho 2008 e Junho 2009 na Unidade. Técnica de amostragem por conveniência. Amostra: 74 fumadores. Colheita de dados: consulta de processos clínicos (suporte papel e informático) e ficha da consulta de cessação tabágica. Processamento dos dados: SPSS 16.0. Usado o teste Qui<sup>2</sup>.

### Resultados

Foram inscritos na Consulta de Cessação Tabágica 87 Fumadores, tendo frequentado a consulta apenas 74. Destes, 68% eram do sexo masculino e 32% do feminino. O grupo etário mais frequente foi dos 55-59 anos. A maioria dos homens apresentava o 4º ano de escolaridade e das mulheres apresentava o 9º ano. A idade de início do tabagismo mais frequente foi entre os 13 e os 15 anos. Dos frequentadores da consulta, 92% tinham patologia associada, as mais frequentes foram a patologia psiquiátrica e cardiovascular. Dos frequentadores da consulta, 34 deixaram de fumar (46%). Foi encontrada relação de dependência estatisticamente significativa ( $p < 0,05$ ) entre a dependência à nicotina e as tentativas prévias com o sucesso na consulta.

### Conclusão

Apesar dos fármacos disponíveis e dos conhecimentos actuais sobre a cessação tabágica, a taxa de sucesso das consultas ronda os 20 a 35%. Os dados obtidos da consulta de cessação tabágica da respectiva unidade foi de 46%. Sendo o

tabagismo uma das principais causas de morte evitável, embora a taxa de sucesso tenha sido superior à nacional, melhores resultados poderão ainda ser obtidos.

## **Introdução**

O tabagismo é actualmente a principal causa de morte evitável nos países desenvolvidos, sendo responsável por 4,9 milhões de mortes por ano (1). Na União Europeia é responsável por 500 000 mortes por ano e em Portugal 8 500 mortes por ano. Em Portugal, estima-se que 20 a 26% da população fuma. Prevê-se que entre 2020 e 2030 o tabagismo seja responsável por 10 milhões de mortes por ano.

A substância que provoca a dependência é a nicotina. Os processos são semelhantes ao álcool, cocaína e heroína, sendo que as características das substâncias aditivas são o seu uso compulsivo, os efeitos psicoactivos e o comportamento reforçado, a tolerância e dependência física manifestada por síndrome de abstinência. O síndrome de abstinência ocorre quando há consumo elevado (mais de 10 cigarros por dia) e quando há privação após 2 a 12 horas, apresenta um pico entre as 24 e as 48 horas e dura até cerca de 4 semanas. Os sintomas de privação são uma necessidade imperiosa de fumar, irritabilidade e agressividade, ansiedade, dificuldade de concentração, cefaleias, tonturas e aumento do apetite. Precisamente a dependência é decretada de acordo com a Classificação Internacional de Doença (CID – 10) na presença de pelo menos 3 critérios entre os seguintes, de forma repetida, no último ano: 1 - Um forte desejo ou compulsão para consumir a substância; 2 - Dificuldade em controlar o consumo, em termos do seu início, do termo ou da sua intensidade; 3 - Síndrome de abstinência; 4 - Desenvolvimento de tolerância; 5 - Perda progressiva do interesse por actividades sociais, laborais ou de lazer, devido ao uso da substância, ou aumento do tempo dedicado à sua obtenção ou à sua utilização; 6 - Persistência do consumo, mesmo quando já existem sintomas evidentes de doença.

A dependência da nicotina pode ser quantificada pelo teste de Fagerström (figura 1), podendo ser o grau de dependência baixo, moderado ou elevado.



**Avaliação da dependência da nicotina ( Teste de Fagerström)**

1 - Quanto tempo depois de se levantar fuma o 1º cigarro ?  
*Primeiros 5 minutos* (3)  
*6-30 minutos* (2)  
*31 – 60 minutos* (1)  
*Mais de 60 minutos* (0)

2 - Tem dificuldade em não fumar nos locais em que é proibido ?  
*Sim* (1)  
*Não* (0)

3 - Qual é o cigarro que mais o satisfaz?  
*O 1º da manhã* (1)  
*Qualquer outro* (0)

4 - Quantos cigarros fuma por dia ?  
*≤ 10* (0)  
*11 - 20* (1)  
*21 - 30* (2)  
*≥ 31* (3)

5 - Fuma mais no começo do dia ?  
*Sim* (1)  
*Não* (0)

6 - Fuma mesmo quando está doente?  
*Sim* (1)  
*Não* (0)

Pontuação total \_\_\_

**Grau de Dependência:** < 4 *baixa*    4 - 7 *moderada*    > 7 *elevada*

Figura 1. Teste de Fagerström

O investimento na cessação tabágica faz todo o sentido pois, segundo a Organização Mundial de Saúde (OMS), a cessação tabágica é a única medida efectiva para a obtenção, a curto e a médio prazo, de melhorias nos indicadores de morbidade e mortalidade relacionados com o consumo de tabaco (2). Além disso, se até 2020 se diminuir para 50% o número de jovens que anualmente começa a fumar irão diminuir 20 milhões de mortes acumuladas até 2050 e se até 2020 50% dos actuais fumadores parar de fumar irão diminuir 180 milhões de mortes acumuladas até 2050 (3). Estes números reflectem bem a importância do investimento da cessação tabágica para a saúde pública.

Os benefícios de parar de fumar são mais que muitos e são bem conhecidos, podendo dividir-se em benefícios físicos, psicológicos e económicos entre os quais se podem destacar melhor odor, melhor paladar, benefícios estéticos, benefícios cardiovascular, diminuição do risco de neoplasia e maior fertilidade. Deve-se personalizar cada um dos benefícios consoante o fumador que recorre à consulta de cessação tabágica.

O tratamento deve ser continuado e existem várias modalidades terapêuticas onde se inclui o tratamento farmacológico. Este é importante nos fumadores de mais de 10 cigarros por dia. Os fármacos de primeira linha são a Terapêutica de Substituição da Nicotina (TSN) e a Bupropiona. Os fármacos de segunda linha são a Nortriptilina, a Clonidina e a Vareniclina sendo estes menos utilizados.

A consulta especializada é uma actividade desenvolvida por uma equipa, idealmente multidisciplinar, especialmente vocacionada para este tipo de intervenção. O êxito aumenta com o número de intervenientes, médico, psicólogo, enfermeiro..., sobretudo alargando a probabilidade de abordar com eficácia as múltiplas componentes do hábito de fumar, oferecendo terapêutica farmacológica e apoio comportamental e social (5).

A consulta de Cessação Tabágica, na Unidade de Cuidados de Saúde Personalizados em questão, teve início em Junho de 2005, é desenvolvida por um médico, um enfermeiro, uma psicóloga e formandos e ocorre às quartas-feiras à tarde.

Na primeira consulta elabora-se uma história clínica completa onde se engloba os antecedentes pessoais nomeadamente os sintomas e patologias relacionadas com o consumo de tabaco e os factores de risco cardiovasculares, os antecedentes familiares e a história tabágica. Na história tabágica é importante além do número de cigarros por dia, idade de início do tabagismo, tentativas prévias para deixar de fumar, identificar manifestações de privação e outros factores relacionados com as recaídas, assim como as terapêuticas utilizadas. É também de extrema importância ajudar o fumador a identificar situações relacionadas com o hábito, nomeadamente café, refeições e convívio social. Seguidamente procede-se ao exame físico global onde se destaca a avaliação do peso, da tensão arterial (TA), a auscultação cardiopulmonar e o exame mental. Numa primeira consulta também se avalia o estado de motivação para deixar de fumar através do Teste de Richmond (figura 2) e o estágio da desabituação segundo Prochaska (figura 3).

1 - Gostava de deixar de fumar se fosse fácil?  
 Não (0) Sim (1)

2 - Qual o seu interesse em deixar de fumar?  
 Nenhum (0) Algum (1) Muito (2) Absoluto(3)

3 - Vai tentar deixar de fumar nas próximas 2 sem?  
 Não (0) Talvez (1) Sim (2) Definitiva/ sim (3)

4 - Qual a probabilidade de ser um não fumador daqui a 6 meses?  
 Não (0) Talvez (1) Sim (2) Definitiva/ sim (3)

**Motivação: 0-6=baixa ; 7-9=moderada; 10=alta**

Figura 2. Teste de Richmond

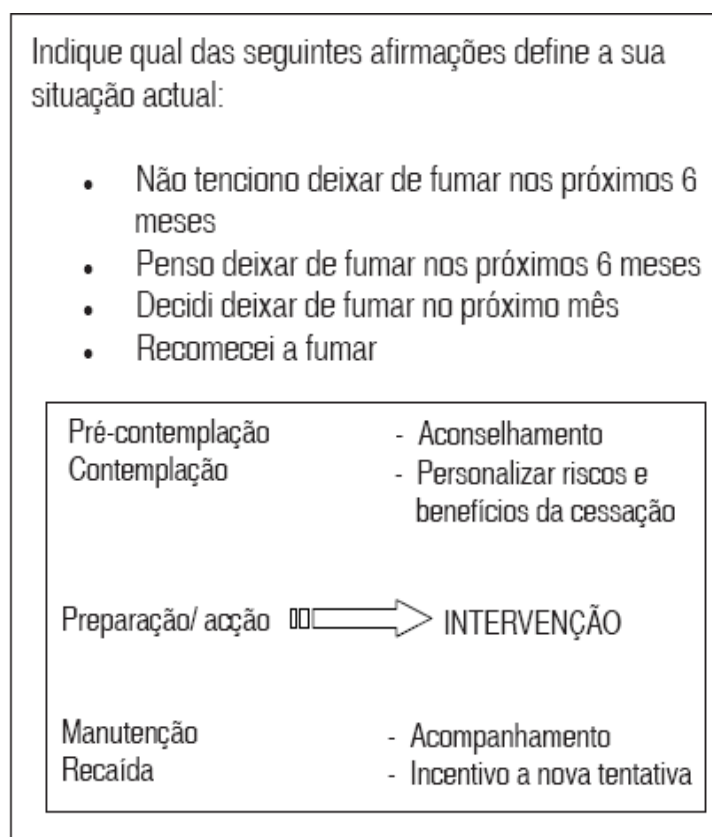


Figura 3. Estádio de desabituação segundo Prochaska

Se na primeira consulta o fumador pretende abandonar já o hábito, devem-se ensinar técnicas de ajuda e como lidar com os sintomas de abstinência. As técnicas de ajuda referidas passam por anunciar aos familiares e amigos a intenção, pedir apoio, afastar todos os objectos ligados ao tabaco, limitar o consumo de bebidas excitantes como café, chá e álcool, contornar a habituação gestual e oral, afastar de fumadores, em casais tentar a cessação conjunta e fornecer material informativo. Também é importante a

prescrição de substitutos da nicotina se é um fumador de mais de 10 cigarros por dia e dar o apoio telefónico da Unidade para esclarecimento de dúvidas e inquietações sempre que necessário. Se o fumador pretende uma redução gradual, devem -se ensinar as técnicas de ajuda, negociar com o fumador a marcação do “dia D”, planear uma redução do número de cigarros por semana e consequentemente por dia e prescrever terapêutica farmacológica sempre que necessário. A marcação do “dia D” deverá coincidir com uma data agradável para o fumador como o dia do aniversário, o início das férias ou de fim-de-semana e não se deve antecipar principalmente se existirem conflitos no trabalho, conflitos familiares ou sociais e se existirem situações agudas *stressantes*.

A periodicidade da consulta é semanal no primeiro mês, mensal no primeiro ano e anual posteriormente, estando por definir o tempo óptimo de seguimento. Ao fim de um ano de sucesso na consulta é entregue um diploma ao utente.

Em Portugal, estima-se que 20 a 26% da população fuma. Segundo a OMS, a cessação tabágica é a única medida efectiva para a obtenção, a curto e a médio prazo, de melhorias nos indicadores de morbi-mortalidade relacionados com o consumo de tabaco.

## **Objectivos**

Um dos objectivos deste trabalho foi determinar o perfil do fumador da Consulta de Cessação Tabágica da Unidade de Cuidados de Saúde Personalizados nomeadamente no que diz respeito às variáveis sexo, idade, escolaridade, idade de início, grau de dependência à nicotina, estado de motivação, patologia associada e tentativas prévias.

Pretendeu-se também verificar quantos utentes desta consulta deixaram de fumar no período de tempo definido e ainda relacionar o sucesso na consulta com as variáveis do perfil descritas anteriormente.

## **Metodologia**

Para isso foi elaborado um estudo quantitativo, descritivo - correlacional, transversal e observacional, envolvendo os utentes utilizadores da consulta de cessação tabágica da UCSP. A unidade de estudo foi os fumadores que tiveram consulta de cessação tabágica entre Junho 2008 e Junho 2009 na Unidade. A técnica de amostragem foi por conveniência tendo sido obtida uma amostra de 74 fumadores.

A colheita de dados foi feita através da consulta de processos clínicos, quer em suporte papel quer em suporte informático, e utilizando a ficha da consulta de cessação tabágica.

Os dados foram processados através do programa SPSS versão 16.0. Para relacionar as variáveis e ver se estas eram dependentes foi usado o teste do Qui<sup>2</sup>.

## Resultados

Durante o período considerado, foram inscritos na Consulta de Cessação Tabágica 87 Fumadores, tendo frequentado a consulta apenas 74 fumadores, sendo que 13 nunca vieram à consulta (tabela 1).

	Número	Percentagem (%)
<b>Nº inscritos</b>	87	100
<b>Nº frequentadores</b>	74	85
<b>Nunca vieram consulta</b>	13	15

Tabela 1. Números globais da consulta.

Dos 74 fumadores, 68% eram do sexo masculino (n = 50) e 32% do feminino (n=24). O grupo etário mais frequentemente observado foi dos 55 aos 59 anos, seguido do grupo etário dos 50 aos 54 anos.

A maioria dos fumadores do sexo masculino apresentava o 4º ano de escolaridade e do sexo feminino apresentava o 9º ano de escolaridade.

A idade de início do tabagismo mais frequente foi entre os 13 e os 15 anos, mas os extremos, ou seja, menos de 10 anos e mais de 19 anos também foram observados.

A dependência à nicotina foi avaliada através do Teste de Fagerström, sendo que entre os fumadores seguidos 31% apresentavam dependência baixa à nicotina (n=23), 46% apresentavam dependência média (n=34) e 23% apresentavam dependência alta (n=17) à nicotina (gráfico 1).

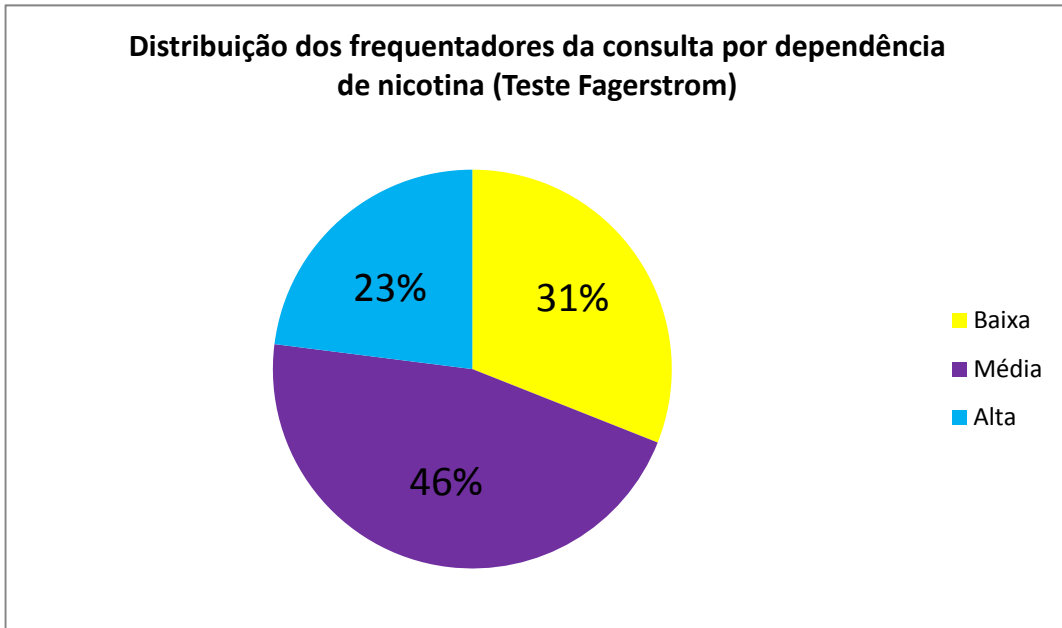


Gráfico 1. Grau de dependência à nicotina segundo o teste de Fagerström.

Dos 74 frequentadores da consulta, 92% tinham patologia associada (n=68), as mais frequentemente observadas foram a patologia psiquiátrica (n=28) e a cardiovascular (n=20) (gráfico 2).

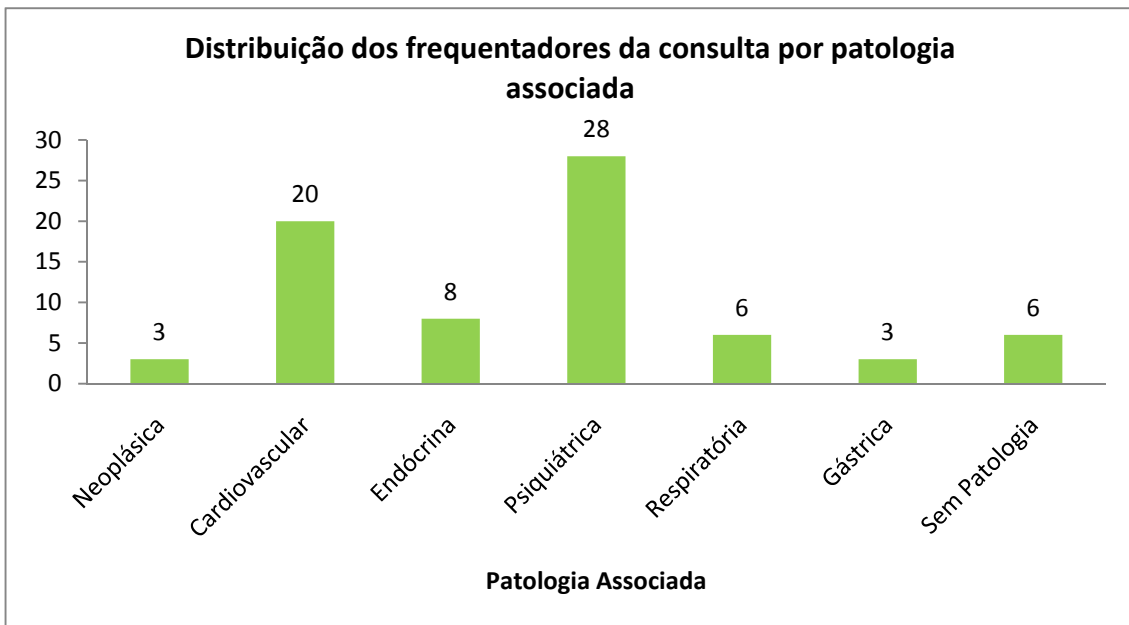


Gráfico 2. Patologias associadas.

Dos frequentadores da consulta, 50 utentes (68%) já tinham feito tentativas anteriores para deixar de fumar, reflectindo a dificuldade que existe em deixar de fumar.

Dos 74 frequentadores da consulta, 34 deixaram de fumar (46%) no momento da avaliação.

Perante estes resultados, foram avaliadas as relações de dependência entre as variáveis do perfil acima descritas e o resultado da consulta, ou seja, se os fumadores deixaram ou não de fumar.

Foi encontrada relação de dependência estatisticamente significativa ( $p < 0,05$ ) entre a dependência à nicotina e as tentativas prévias com o sucesso na consulta.

Não foi encontrada relação de dependência estatisticamente significativa ( $p > 0,05$ ) entre o sexo, o grupo etário, a escolaridade, a idade de início do tabagismo e patologia associada com o resultado da consulta.

### **Conclusão**

Apesar dos fármacos disponíveis e dos conhecimentos actuais sobre a cessação tabágica, a taxa de sucesso das consultas ronda os 20 a 35%. Os dados obtidos da consulta de cessação tabágica da respectiva unidade foi de 46%. No entanto, o processo de cessação tabágica é um processo dinâmico e este estudo avaliou o resultado na consulta num determinado ponto temporal, pelo que pode haver recaídas.

Sendo o tabagismo uma das principais causas de morte evitável, embora a taxa de sucesso tenha sido superior à nacional, melhores resultados poderão ainda ser obtidos apostando na prevenção essencialmente na faixa etária mais prevalente para o início do tabagismo (13-15 anos).

A cessação tabágica deve fazer parte da formação pré-graduada e pós-graduada, essencialmente na especialidade de Medicina Geral e Familiar por esta se reger essencialmente por princípios de prevenção primária. É de extrema importância a articulação entre os cuidados primários e secundários, a nível institucional.

A intervenção na sociedade é fundamental mas também junto das autoridades governamentais, bem como nos meios de comunicação social.

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# THE INTER-RELATION BETWEEN THE USE OF TOBACCO AND ALCOHOL AND OTHERS RISK BEHAVIOURS IN A LONGITUDINAL SAMPLE

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## Abstract

### Introduction

Tobacco and alcohol are initiation drugs for youth and may be the gateway for the use of other drugs and for several risk behaviours. There is evidence that the impact of tobacco use on the later use of other drugs and on other risk behaviours is superior to the alcohol use impact. In Portugal there is evidence that tobacco is gaining ground to alcohol as a drug of initiation.

### Objectives

The aims of this paper are to examine which is the main drug of initiation in Portugal, what is the evolution of drugs use between the 7<sup>th</sup> and the 9<sup>th</sup> scholar years and what is the impact of tobacco and alcohol in the later use of other drugs (tobacco, alcohol and others) and in other risk behaviours.

### Methodology

Sample of 1205 Portuguese adolescents, 49% boys, average age 13.1 years old (SD=0.77), who answer to four questionnaires in the beginning of the 7<sup>th</sup> (T1), 8<sup>th</sup> (T2) and 9<sup>th</sup> (T3), and in the end of 9<sup>th</sup> (T4) scholar years. Data analysis included the description of the evolution of tobacco and alcohol use during the three years. Inter-correlations and linear regressions between T1 -> T2 and T2 -> T3 and T3-> T4 were used to evaluate the impact of tobacco use and alcohol use on the later use of tobacco and alcohol and on the frequency of other risk behaviours.

## **Results**

Tobacco and alcohol initiation rates increased markedly in this period of adolescence. The initiation rate of the two combined substances was 29.5% at T1 and 73.3 at T4. The initiation tends to occur with the two drugs simultaneously, with a slight tendency for tobacco to be the first drug. Overall, tobacco use is the factor with higher impact in the explanation of the other variables included in the current study (tobacco use, alcohol use, use of other drugs and risk behaviours).

## **Conclusion**

Tobacco has a higher impact than alcohol in the explanation of the use of tobacco, alcohol, drugs and other risk behaviour. These results suggest the need to intensify the prevention efforts to avoid or delay the initiation of tobacco in order to diminish the prevalence of smokers and also to minimize the impact of tobacco use on alcohol and other drugs use and on other risk behaviours.

# A INTER-RELAÇÃO ENTRE O CONSUMO DE TABACO E DE ÁLCOOL E OUTROS COMPORTAMENTOS DE RISCO NUMA AMOSTRA LONGITUDINAL

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## Resumo

### Introdução

O tabaco e o álcool são as drogas de iniciação para os jovens e podem ser a porta de acesso para o consumo de outras drogas e para diversos comportamentos de risco. Existe evidência que o impacto do consumo de tabaco no posterior consumo de tabaco, de álcool, de outras drogas e de outros comportamentos de risco é superior ao do álcool. Em Portugal, existe evidência que o tabaco tem ganho terreno ao álcool como droga de iniciação.

### Objectivos

Pretende-se averiguar qual a principal droga de iniciação em Portugal, qual a evolução do consumo de drogas entre o 7º ano e o 9º ano de escolaridade, e qual o impacto do tabaco e do álcool no posterior consumo de drogas (tabaco, álcool e outras drogas) e de vários comportamentos de risco?

### Metodologia

Amostra de 1205 jovens portugueses, 42,9% são rapazes, média de idade de 13,1 anos (DP= 0,77), que responderam a 4 questionários, no início do 7º(T1), do 8º(T2) e do 9º(T3) e fim do 9º(T4) anos de escolaridade. A análise dos dados incluiu a descrição da evolução dos consumos de tabaco e álcool. Para avaliar o impacto do consumo de tabaco e de álcool no posterior consumo tabaco e de álcool e também no consumo de

outras drogas e de outros comportamentos de risco foram calculadas intercorrelações e efectuadas regressões lineares T1 -> T2, T2 -> T3 e T3 -> T4.

### **Resultados**

Verifica-se um acentuado aumento da taxa de iniciação do consumo de tabaco e de álcool nesta fase da adolescência. A taxa da iniciação das duas substâncias combinadas passa de 29,5% em T1 para 73,3% em T4. A iniciação parece ocorrer com ambas as drogas em simultâneo, com uma ligeira tendência para o tabaco ser a droga de iniciação. No geral, o consumo de tabaco é o factor com mais impacto na explicação das variáveis em estudo (consumo de tabaco, consumo de álcool, consumo de outras drogas e comportamentos de risco).

### **Conclusão**

O tabaco tem um impacto superior ao álcool na explicação do uso de tabaco, álcool, drogas e outros comportamentos de risco. É necessário acentuar o esforço preventivo com a finalidade de evitar ou atrasar o início do consumo de tabaco para diminuir a prevalência de fumadores e também para minimizar o impacto do consumo de tabaco no consumo de álcool, de outras drogas e de outros comportamentos de risco.

# THE EFFECTS OF AN INTERVENTION PROGRAMME “PAR A PAR COM A SAÚDE” ON THE IMPORTANCE OF SMOKING AND RISK BEHAVIOURS IN ADOLESCENTS

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## **Introduction**

There are no doubts that adolescence is the part of the life cycle where most smokers start out. During this specific period of life, the adolescent is exposed to a set of micro, macro social and environmental influences that lead him to start smoking. Thus he learns to smoke as he learns other behaviors. The learning starts in the family and proceeds at school, with friends, adults, the media and their natural environment.

According to Precioso (2006) the prevention of smoking should consist in going against this vast set of risk factors and promote protective factors. Due to their role in the socialization process, the family and school should be one of the targets of these preventive actions.

Schools are one of the places and pupils one of the privileged targets of actions promoting health and preventing smoking. In fact, it is in school where pupils spend most of their time acquiring there the values and the healthy or harmful habits. Schools are also a privileged channel where information can be handed out to everyone, including the families and communities. Thus the intervention should be about health promoting schools in a curricular, psychosocial, environmental and communitarian dimension.

According to Precioso (2006) it should not be held through isolated measures, but through programme that aim to act on this set of factors in a global and comprehensive approach. Preventive actions to diminish the demand for cigarettes by young people should be implemented at schools and community as well.

## **Objectives**

-Assess the intervention programme “*Par a Par com a Saúde*” efficiently.

- Analyze the effect of the intervention programme “*Par a Par com a Saúde* – over the perception of risk behaviors.
- Understand the effect of the intervention programme – *Par a Par com a Saúde* – on the smoking perception.

## **Methodology**

It is a quasi-experimental investigation research “before-after with control group”, whose intervention maneuver is the “*Par a Par com a Saúde*” related with primary smoking intervention.

The intervention programme – *Par a Par com a Saúde* - is build up by a time-space of health education, related with values education, personality construction, problem solving and management, self-control education, promoting self-image and self-esteem and education for healthy lifestyles, mainly in what concerns smoking prevention aimed at pupils that attend grades 7 and 8 at two secondary schools in de Oliveira de Azeméis. Due to the it age (between 12 and 14) considered as key age in what concerns the effects and positive consequences in a short , medium and long term, resulting of health promotion programmes (Precioso, 2006). It has to be referred that this programme was built up on different methodologies, with emphasis on group Dynamics and taking into account some already existing projects related to smoking prevention such as “*Querer é poder I*” and “*Querer é poder II*” (Vitória, Raposo e Peixoto, 2007).

The programme *Par a Par com a Saúde*, named this way because it aims at training by peers, since most health promoting actions were held by young students attending the nursing degree course at the Escola Superior de Enfermagem da Cruz Vermelha Portuguesa de Oliveira de Azeméis.

The sample was made up of 310 pupils attending grades 7 and 8 at the Escolas Secundárias Ferreira de Castro e Soares de Basto de Oliveira de Azeméis and was made up of random sampling in groups (classes). In this sense, 153 pupils make up the control group (7<sup>°</sup>A, 7<sup>°</sup>C, 8<sup>°</sup>A, 8<sup>°</sup>C of Secondary Ferreira de Castro school e 7<sup>°</sup>B, 7<sup>°</sup>C e 8<sup>°</sup>C of the Secondary Soares Basto school) and 157 pupils make up the experimental group (7<sup>°</sup>B, 8<sup>°</sup>B, 8<sup>°</sup>D, 8<sup>°</sup>E of Secondary Ferreira de Castro school e 7<sup>°</sup>A, 8<sup>°</sup>A e 8<sup>°</sup>B of the Secondary Soares Basto school).

The design was a quasi-experimental investigation research “before-after” with control group. So the classes of pupils of two Oliveira de Azeméis Secondary Schools was done twice, this is in the beginning and at the end of interventive experience – *Par a Par com a Saúde*.

## **Results**

The results gathered allow us to conclude that in both groups, from the initial to the final moment, were observed statistically significant differences showing a high risk in “doing something just because the others admire you for that (p=0.002 for the experimental group and p=0.05 for the control group) and “not taking responsibility for your health” (p=0.011 for the experimental group and p=0.039 for the control group).

For the experimental group, from the initial to the final moment, were observed statistically significant differences showing a high risk “drinking alcohol on a regular basis” (p=0.001); being left by boyfriend” (p=0.013), “accept a cigarette” (p=0.013) and smoking on a regular basis” (p=0.000).

Other significant differences were observed in the experimental group from the beginning until the end where adolescents confronted with drugs “disagree accepting only to try out” (p=0.028) an “disagree accepting to start doing drugs” (p=0.028)

Comparing both groups in the beginning and at the end we can conclude that in the experimental group the adolescents mention that youngsters smoke “because their parents smoke too” (p=0.043), “to lose weight” (p=0.015), “to forget problems” (p=0.041) and to “make new friendships” (p=0.000). The control group, on the other hand, several differences were observed where smoking is seen as “a way to make new friendships” (p=0.003), “to be more attractive” (p=0.039), “to be fashionable” (p=0.024), “to succeed at school” (p=0.005), and “to succeed in their future career” (p=0.009).

Confronted with the possibility of quitting smoking at the end, the adolescents from the experimental group, mention that people need the help of doctors and nurses” (p=0.039, “need medication”(p=0.09) and “are able to stop smoking but can start over again after some time” (p=0.004).

## **Conclusion**

Thus we can conclude that the intervention programme gave the pupils from the experimental group a more realistic meaning and acquiring management strategies that can help protect them from smoking and other risks.



# EFEITOS DE UM PROGRAMA DE INTERVENÇÃO “PAR A PAR COM A SAÚDE” SOBRE A SIGNIFICAÇÃO DE TABAGISMO E COMPORTAMENTOS DE RISCO EM ADOLESCENTES

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## **Introdução**

Não restam dúvidas de que a adolescência é a fase do ciclo de vida em que a maioria dos fumadores começa a fumar. O adolescente sofre durante este período um conjunto de influências micro e macro-sociais e ambientais, que o podem levar a fumar. Assim, o adolescente vai aprendendo a fumar como aprende outros comportamentos. A aprendizagem começa na família e prossegue na escola, com os amigos, com os adultos, com os “*media*”, no ambiente natural...

Segundo Precioso (2006), a prevenção do consumo do tabaco deverá consistir em contrariar esse vasto conjunto de factores de risco e promover os factores protectores. A família e a escola, pelo impacto que têm no processo de socialização, devem ser um dos alvos das acções de prevenção.

Os estabelecimentos de ensino são um dos locais e os estudantes, um dos alvos privilegiados das acções de promoção da saúde e de prevenção do tabagismo. De facto, é na escola onde os estudantes passam uma grande parte do seu tempo e aí adquirem valores e comportamentos salutógenos ou prejudiciais. As escolas constituem o maior canal para colocar informação à disposição de todos, uma vez que alcançam estudantes e, através deles, as suas famílias e comunidades. Assim, a intervenção deveria passar pelo modelo das Escolas Promotoras de Saúde, tendo uma dimensão curricular, psicossocial, ambiental e comunitária.

Na perspectiva de Precioso (2006), não é preconizada a aplicação de medidas isoladas, mas sim através de programas que pretendam agir sobre esse conjunto de factores, numa perspectiva global e abrangente. As acções preventivas para contrariar a procura de cigarros pelos jovens deverão ser implementadas em meio escolar e também na comunidade.

## **Objectivos**

- Avaliar a eficácia do programa de Intervenção “Par-a-par com a Saúde”.
- Analisar o efeito do programa de intervenção - *Par a Par com a Saúde* - sobre a percepção dos comportamentos de risco;
- Compreender o efeito do programa de intervenção - *Par a Par com a Saúde* - sobre a percepção do tabaco.

## **Metodologia**

Trata-se de um estudo de investigação quase-experimental "antes-após com grupo controlo", cuja manobra de intervenção é o “Par-a-par com a Saúde”, relacionado com a prevenção primária do tabagismo.

O programa de intervenção – *Par a Par com a Saúde*, é constituído por um espaço-tempo de educação para a saúde relacionada com educação para os valores, construção de personalidade, estratégias de resolução e gestão de problemas, educação para o autocontrolo, promoção da autoimagem e autoestima e educação para os estilos de vida saudáveis, nomeadamente para a prevenção do tabagismo, dirigida a estudantes que frequentam o 7º e 8º anos do 3º Ciclo do Ensino Básico de duas Escolas Secundárias de Oliveira de Azeméis, por serem jovens com idades compreendidas entre os 12 a 14 anos, idade considerada chave, em termos de efeitos e de consequências positivas a curto, médio e longo prazo resultante de programas de promoção da saúde (Precioso, 2006). É de referir que, este programa foi constituído por metodologias diversas, salientando-se a dinâmica de grupos e tendo em consideração alguns projectos já existentes, nomeadamente os relacionados com a prevenção do tabagismo como o “Querer é poder I” e o “Querer é poder II” (Vitória, Raposo, & Peixoto, 2007).

O programa *Par a Par com a Saúde*, assim baptizado por ter como pressuposto a formação pelos pares, uma vez que a maioria das acções de educação para a saúde dirigida aos estudantes tiveram como formadores jovens estudantes do Curso de Licenciatura em Enfermagem da Escola Superior de Enfermagem da Cruz Vermelha Portuguesa de Oliveira de Azeméis.

A amostra foi constituída por 310 estudantes que frequentam o 7º e 8º anos das Escolas Secundárias Ferreira de Castro e Soares de Basto de Oliveira de Azeméis e foi feita por

amostragem aleatória em conglomerados (turmas). Neste sentido, 153 estudantes constituem o grupo de controlo (7ºA, 7ºC, 8ºA, 8ºC da Escola Secundária Ferreira de Castro e 7ºB, 7ºC e 8ºC da Escola Secundária Soares Basto) e 157 estudantes constituem o grupo experimental (7ºB, 8ºB, 8ºD e 8ºE da Escola Secundária Ferreira de Castro e 7ºA, 8ºA e 8ºB da Escola Secundária Soares Basto).

O desenho, consistiu num plano quase-experimental "antes-após com grupo controlo". Assim, as turmas dos estudantes das Escolas Secundárias de Oliveira de Azeméis foram repartidas nos grupos e a avaliação foi feita duas vezes, isto é, no início e no final da experiência interventiva – *Par a Par com a Saúde*.

## **Resultados**

Os resultados obtidos permitem-nos concluir que, em ambos os grupos, desde o momento inicial ao final verificou-se existir diferenças estatisticamente significativas revelando constituir alto risco “fazer qualquer coisa só porque os outros nos admiram” ( $p=0,002$  para o grupo experimental e  $p=0,05$  para o grupo de controlo) e “não se responsabilizar pela própria saúde” ( $p=0,011$  para o grupo experimental e  $p=0,039$  para o grupo de controlo).

Para o grupo experimental verificaram-se existir diferenças estatisticamente significativas desde o momento inicial até ao final no que se refere ao facto de considerarem alto risco “consumir regularmente bebidas alcoólicas” ( $p= 0,001$ ), “ser deixado pelo namorado” ( $p=0,013$ ), “aceitar um cigarro” ( $p=0,013$ ) e “consumir regularmente cigarros” ( $p=0,000$ ).

Verificaram-se ainda diferenças significativas no grupo experimental, do momento inicial para o final, em que os adolescentes perante uma oferta de drogas “discordam aceitar só para experimentar” ( $p=0,028$ ) e “discordam aceitar para consumir” ( $p=0,002$ ).

Comparando os dois grupos do momento inicial para o final podemos concluir que, no grupo experimental os adolescentes referem que os jovens fumam “porque os pais fumam” ( $p=0,043$ ), “para emagrecer” ( $p=0,015$ ), “para esquecer problemas” ( $p=0,041$ ) e “para fazer novas amizades” ( $p=0,000$ ). Já no grupo de controlo verificaram-se diferenças tendentes a que os jovens fumam “para fazer novas amizades” ( $p=0,003$ ), “para ficarem mais atraentes” ( $p=0,039$ ), “para estarem na moda” ( $p=0,024$ ), “para

terem sucesso na escola” ( $p=0,005$ ) e “para terem sucesso no futuro profissional” ( $p=0,009$ ).

Perante a questão de alguém que quer deixar de fumar, no momento final os adolescentes do grupo experimental referem que as pessoas “necessitam de ajuda dos médicos e enfermeiros” ( $p=0,039$ ), “necessitam de tomar medicação” ( $p=0,09$ ) e que “conseguem deixar de fumar mas após algum tempo podem voltar a fumar novamente” ( $p=0,004$ ).

### **Conclusão**

Desta forma, pode concluir-se que o programa de intervenção permitiu aos adolescentes do grupo experimental uma significação mais realista e adquirirem estratégias de gestão de situações problema, que os poderão proteger do consumo de tabaco e de outros riscos.

# **BASIC SCHOOL AND SECONDARY SCHOOL TEACHERS' AND PUPILS' PERCEPTIONS ABOUT SCHOOL SMOKING-PREVENTION TRAINING AND ANTI-SMOKING ACTION**

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## **Abstract**

Smoking harm may cause pernicious physical, psychological and social consequences not only for the active smokers but also for the second-hand smokers. In this context, several institutions (WHO, UNESCO) recognize the school, in particular the teachers, has the key persons for the smoking prevention.

This study aims at analyzing teachers' and pupils' about the school smoking prevention training and anti-smoking action.

Results showed that teachers and pupils recognize smoking addiction as a serious social problem which influences health negatively and the quality of life, being originated in personal and cultural values as well as idiosyncratic and socioeconomic reasons. Both groups recognize the important school preventive role (information, competencies), however they refer that, in the school practices, the smoking preventive actions are reduced. Teachers evoked didactic-curricular (programmes and textbooks), the vertical interaction (school years and school cycles) and horizontal interaction (multidisciplinarity) and school management (school education projects, school rules, classroom curricular projects and annual plan of activities).

From the teachers' and pupils' perceptions emerges the view that although school is the privileged setting for the generation of knowledge and cognitive, social and behaviour abilities, these should be complemented by health issues.

**Key-words:** Tobacco, smoking prevention, Teachers' perceptions, Pupils' perceptions.

# PERCEPÇÃO DE PROFESSORES E ALUNOS DO ENSINO BÁSICO E SECUNDÁRIO SOBRE A ACÇÃO FORMATIVA E PREVENTIVA DA ESCOLA NO DOMÍNIO TABÁGICO

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## Resumo

Os malefícios do tabaco trazem consequências perniciosas no domínio físico, psíquico e social não só para os fumadores mas também para os não fumadores expostos à poluição tabágica ambiental. Neste quadro, vários organismos internacionais (ONU, UNESCO) reconhecem na escola, e nomeadamente nos professores, o centro ideal de prevenção do tabagismo. Procurou-se verificar com este estudo, que percepções têm os professores e os alunos acerca acção formativa e preventiva realizada em contexto escolar no domínio do tabaco.

Os resultados mostram que professores e alunos reconhecem o tabagismo como um problema socialmente grave, que influencia negativamente a saúde e a qualidade de vida e que tem origem nas dinâmicas valorativas, culturais, socioeconómicas e idiossincráticas.

Ambos os grupos reconhecem o importante papel preventivo (informação, competências) da escola, todavia referem que nas práticas escolares as acções de prevenção do tabagismo têm pouca expressividade, tendo os professores invocado, para tal, obstáculos de natureza didáctico-curricular (programas e manuais escolares), articulação vertical (anos e ciclos de ensino) e horizontal (multidisciplinaridade) e de gestão escolar (projectos educativos, regulamento interno, projectos curriculares de turma e plano anual de actividades).

Emerge das percepções de professores e alunos que a escola é o local privilegiado para gerar conhecimentos e habilidades cognitivas, sociais e comportamentais, os quais devem ser complementados por questões e perspectivas de saúde.

**Palavras-chave:** Tabaco, Concepções de Professores, Concepções de Alunos.

## Introdução

Segundo Ezquerria (2003), as consequências do consumo de tabaco, abarcam o domínio biopsicossocial do sujeito dependente porque, para além de grande responsável pelo substancial aumento do risco de cancro do pulmão, o tabaco é também causa directa ou provável de outros cancros (cavidade oral, laringe, esófago, estômago, rim, bexiga), de doenças cardiovasculares (acidente vascular cerebral, doença vascular periférica, enfarte do miocárdio) e pulmonares (doença pulmonar obstrutiva crónica, enfisema pulmonar, broncoectasias). O tabaco tem igualmente efeitos nefastos na gravidez, estando

associado ao aborto espontâneo, gravidez ectópica, morte fetal in utero, parto pré-termo e baixo peso ao nascimento com eventuais consequências no domínio cognitivo e no processo de ensino e aprendizagem.

Os malefícios do tabaco trazem consequências perniciosas não só para o fumador mas também para os não fumadores expostos à poluição tabágica ambiental (PTA, ou “Environmental Tobacco Smoke” ou ainda “Secondhand Smoke”), também designada por fumo passivo. Socialmente, é a solidariedade contributiva que arca e é onerada com toda a perturbação gerada pelo consumo de tabaco.

A escola pode contribuir substancialmente para a saúde e bem-estar dos seus alunos e das populações em que se insere, na medida em que todos os aspectos da vida da comunidade escolar são potencialmente importantes para a promoção da saúde (Yong, 2005). Todavia, se se pretende que a escola desenvolva o seu potencial de promover a saúde de todas as suas crianças e jovens assim como das suas famílias, aquela tem de fazer mais do que desenvolver pequenas acções de prevenção e combate ao tabagismo (Precioso, 2004), ou dar apenas aulas de educação para a saúde no âmbito dos programas escolares e disciplinares. Na verdade, o combate e prevenção ao tabagismo, inserido no âmbito da promoção da saúde, deve passar pela melhoria dos resultados escolares, pelo desenvolvimento de competências no domínio do “saber ser”, “estar”, “fazer” e “viver” com os outros (Delors, 1996), e pela promoção da literacia crítica e do “empowerment” (Carvalho, 2003), por acções a favor da saúde gerando conhecimentos e habilidades nos domínios cognitivo, social e comportamental, pela gestão e liderança, pela melhoria da articulação com parcerias, pela multidisciplinaridade e ainda pela avaliação.

Tendo em conta que, a ONU, a UNESCO e outros organismos internacionais (ASHA, 2008), reconhecem na escola e nos professores o centro ideal de prevenção do tabagismo, procurou-se verificar com o presente estudo, tendo base o modelo Conhecimento (K), Valores (V) e Práticas (P) e os problemas da transposição didáctica interna (TDI) e externa (TDE) (Clément, 2006), que percepção têm os professores e os alunos acerca das abordagens realizadas em contexto escolar ao tema do tabaco e sobre a acção formativa-constructiva e preventiva da escola no domínio tabágico.

## **Metodologia**

Para averiguar as concepções dos professores e dos alunos do ensino básico e secundário sobre a acção formativa e preventiva da escola no domínio tabágico, foram construídos de raiz, validados (consistência interna, sensibilidade, validade – Tuckman, 2000) e aplicados dois “*questionários*” específicos: um para alunos e outro para professores.

A população do estudo engloba professores e alunos do 1º Ciclo do Ensino Básico (1CEB), do 2º Ciclo do Ensino Básico (2CEB), do 3º Ciclos do Ensino Básico (3CEB) e do Ensino Secundário (ES), em que os docentes leccionam respectivamente as disciplinas de Estudo do Meio, Ciências da Natureza e Ciências Naturais/Biologia.

Em ambos os casos, professores e alunos, a amostra constituída obedece aos parâmetros da “*conveniência*” e da “*estratificação*” (Tuckman, 2000).

## **Resultados**

### **Caracterização da amostra em função do sexo, nível e ano de ensino**

A amostra dos professores (N=209) é composta por três subgrupos; um constituído por docentes do 1ºCEB (N=76; 36,4%), o outro por docentes do 2ºCEB (N=68; 32,5%) e terceiro por docentes do 3ºCEB e ensino secundário (N=65; 31,1%) (Tabela 1). Por seu turno, o conjunto dos alunos (N=816), é formado por quatro subgrupos: 198 alunos (24,3%) do 1ºCEB (3º ano), 210 alunos (25,7%) do 2ºCEB (6º ano), 207 alunos (25,4%) do 3ºCEB (9º ano) e 201 alunos (24,6%) do ES (10º ano).



**Tabela 1- Distribuição dos sujeitos da amostra por sexo, nível e ano de ensino**

Professores					Alunos				
Sexo	Nível de Ensino			Total	Anos de Ensino				Total
	1ºCEB	2ºCEB	3ºCEB/SEC		3ºano	6ºano	9ºano	10ºano	
<b>Masculino</b>	18	22	18	<b>58</b>	102	103	106	88	<b>399</b>
<b>Feminino</b>	58	46	47	<b>151</b>	96	107	101	113	<b>417</b>
<b>Total</b>	76	68	65	<b>209</b>	198	210	207	201	<b>816</b>

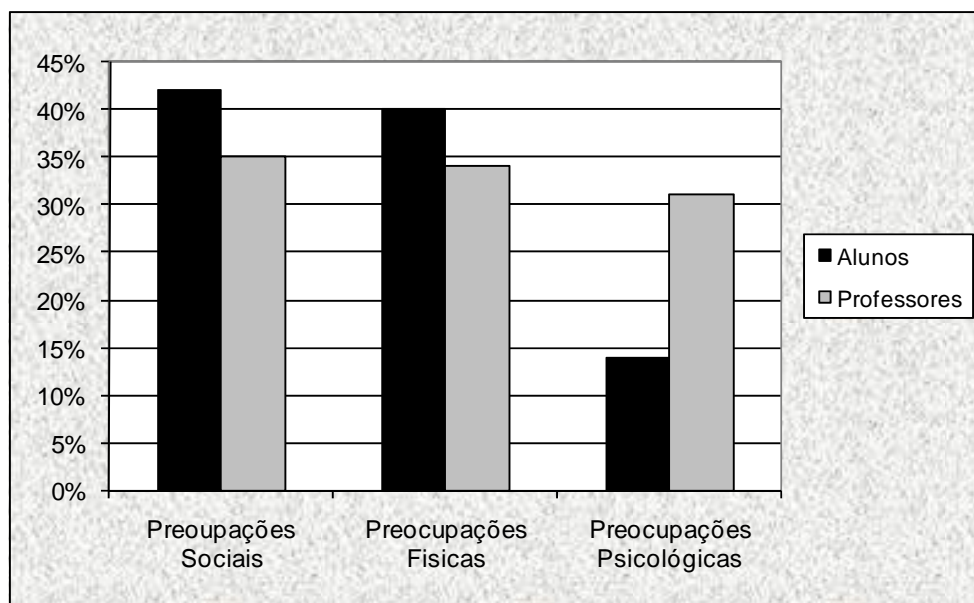
No tocante ao gênero, a amostra dos professores é dominada por sujeitos do sexo feminino (72,2%) comparativamente aos 27,8% do sexo masculino. Esta predominância é constatável em todos os níveis de ensino (Tabela 1).

Quanto à amostra de alunos, constituída por 816 sujeitos, embora haja uma predominância do sexo feminino, ela apresenta uma distribuição relativamente homogênea nos quatro anos de escolaridade analisados (Tabela 1).

### **Preocupações sociais, físicas e psicológicas de Professores e Alunos**

O tabagismo e toda a adição estão intimamente ligados a um amplo conjunto de problemas comportamentais que envolvem a transgressão dos valores sócio-culturais e das normas sociais e legais (Biederman et al. 2006).

No âmbito das problemáticas do tabaco, embora com intensidades diferentes, professores e alunos apresentam o mesmo padrão de preocupações (Figura 1).



**Figura 1 – Preocupações de professores e alunos em relação ao tabaco**

### **Prevenção e combate do tabagismo: Instituições e Profissionais**

Na concepção dos professores e dos alunos, a prevenção e combate à adição tabágica deve assentar essencialmente numa estrutura tripla composta pela Família, pela Escola e pelos Serviços de Saúde, a qual deve trabalhar colaborativamente e em articulação.

Para os docentes, a centralidade da acção está na escola em articulação com a família. Para os alunos, o núcleo do acto preventivo, centraliza-se nos serviços de saúde em parceria com os da educação (Tabela 2).

Quanto aos profissionais imprescindíveis para trabalharem a prevenção e o combate ao tabagismo, existe uma certa convergência entre os docentes dos três níveis de ensino, onde estes profissionais reclamam para si o papel principal na intervenção. Já na amostra dos discentes há duas percepções distintas. Os alunos do 3º e do 6º ano indicam maioritariamente os médicos como os profissionais que deveriam liderar o processo, enquanto os de idades mais avançadas (9º ano e 10º ano), incumbem os professores desse encargo (Tabela 2).

**Tabela 2- Instituição e profissionais que devem trabalhar a prevenção tabágica**

		Instituição			Profissionais		
		Escola	Família	Saúde	Professores	Psicólogos	Médicos
Professores	1ºCEB	37%	34%	29%	45%	29%	26%
	2ºCEB	40%	35%	25%	45%	28%	27%
	3ºCEB/SEC	39%	33%	28%	46%	27%	27%
Alunos	3ºAno	32%	26%	42%	34%	22%	44%
	6ºAno	35%	23%	42%	34%	25%	41%
	9ºAno	38%	28%	34%	36%	33%	31%
	10ºAno	39%	26%	35%	37%	30%	33%

### **Abordagem do tabagismo nos programas e manuais escolares**

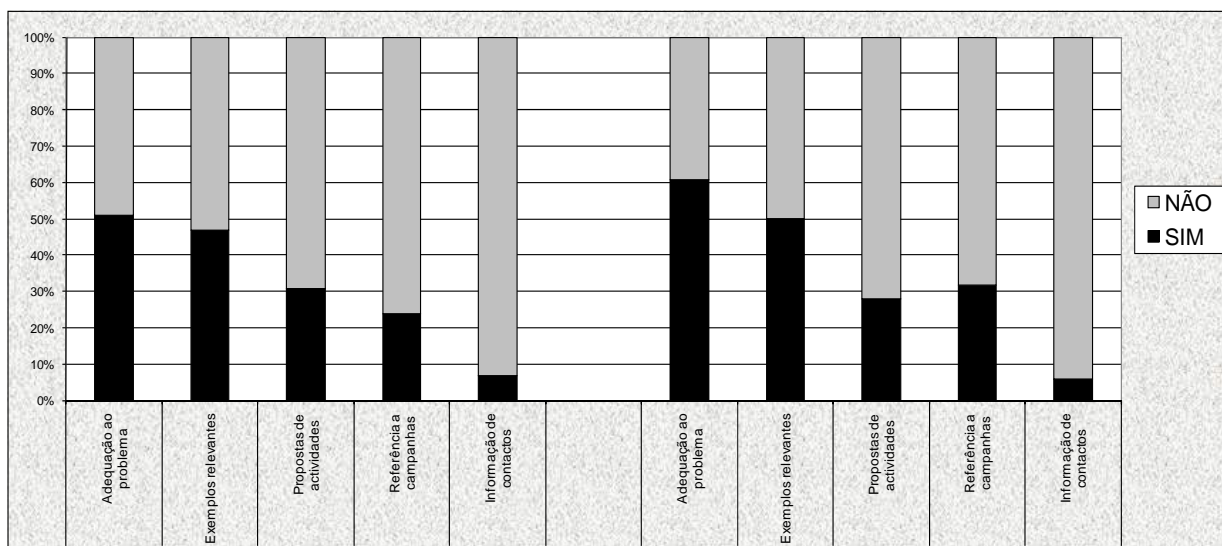
Os docentes dos diferentes níveis de ensino manifestam a percepção que a problemática do tabaco é abordada nos programas escolares que executam (Tabela 3). Todavia, segundo os professores (principalmente os do 1CEB e 3CEB/S), há défices ao nível da Transposição Didáctica Externa na medida em que os programas escolares têm como principais atributos a insuficiência, o facto de não abordarem de forma global a problemática, as orientações programáticas serem de natureza implícita e não apresentarem proporcionalidade/equilíbrio entre as diferentes unidades temáticas a serem trabalhadas.

**Tabela 3 -Percepção dos professores sobre a abordagem ao tabaco nos programas escolares**

Ciclo de Leccionação		Parâmetros considerados				
		Referência	Explícito	Global	Suficiente	Equilibrado
1ºCEB	<b>Sim</b>	72%	30%	50%	33%	37%
	<b>Não</b>	28%	70%	50%	67%	63%
2ºCEB	<b>Sim</b>	91%	80%	69%	68%	76%
	<b>Não</b>	9%	20%	31%	32%	24%
3ºCEB	<b>Sim</b>	47%	24%	38%	35%	36%
	<b>Não</b>	53%	76%	62%	65%	64%

Quanto ao manual escolar, docentes (88%) e alunos (93%), consideram-no um elemento fundamental no processo de ensino e de aprendizagem e também, muito importante, na prevenção e combate ao tabagismo. A grande maioria dos professores (86%), com destaque para os do 2ºCEB (93%), referem que os manuais escolares com que trabalham estão em conformidade e cumprem as orientações programáticas que lhe estão na génese.

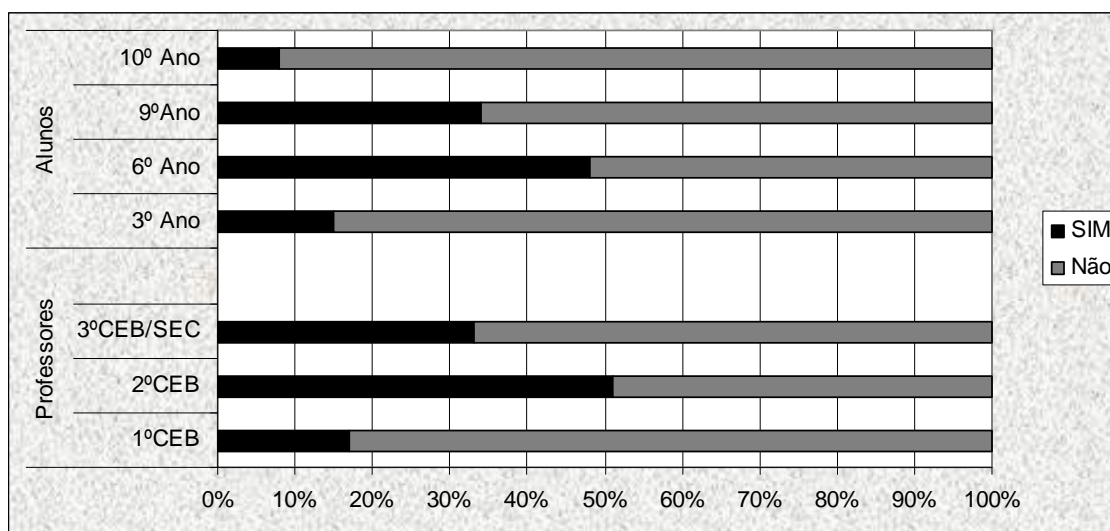
No domínio da prevenção e combate ao tabagismo, tanto os professores como os alunos avaliam negativamente os manuais escolares nas suas diversas vertentes: adequação ao problema, exemplos relevantes, propostas de actividades, referência a campanhas anti-tabágicas e informação de contactos úteis (Figura2).



**Figura 2- Percepções de professores e alunos sobre a abordagem do tabaco nos manuais escolares**

### **Percepção de professores e alunos sobre campanhas de prevenção e combate ao tabagismo desenvolvidas em meio escolar**

A transversalidade curricular e a operacionalização programática devem ser fonte criadora de mecanismos que possibilitem aos docentes trabalhar construtivamente com os alunos a adição tabágica em campanhas de promoção da saúde e redução de riscos (Goulão, 2002). No entanto, como se constata na figura 3, professores e alunos referem que as campanhas de combate e prevenção do tabagismo são pouco significativas em meio escolar, principalmente no 1ºCEB e no ensino secundário. O ciclo onde a prevenção é mais incisiva é o 2ºCEB (alunos com 12-13 anos), o que corresponde também ao período de início do consumo tabágico.



**Figura 3- Percepções de professores e alunos sobre campanhas de prevenção e combate ao tabaco nas escolas**

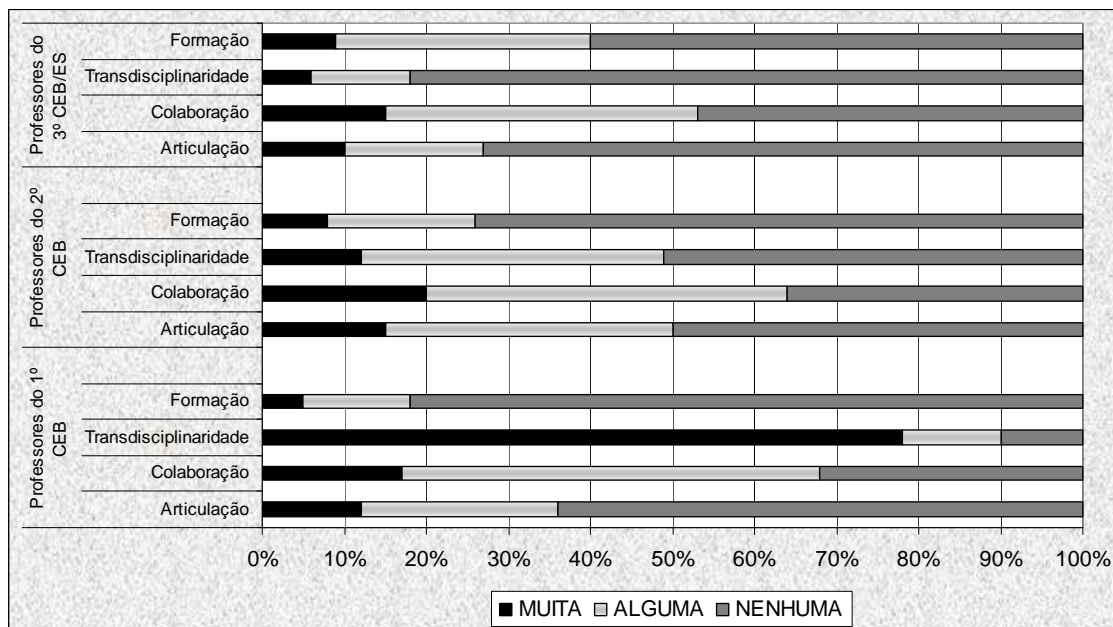
### **Percepção dos professores sobre elementos estruturantes na prevenção e combate ao tabagismo**

Para os professores, o tabagismo deve constituir uma preocupação pública de saúde e de educação porque envolve individual e colectivamente as dimensões físicas, psicológicas, sociais e económicas. Para prevenir e combater a adição tabágica, na percepção dos docentes, a sociedade, a ciência e os decisores (Transposição Didáctica Externa) necessitam de elaborar estratégias de acção em função do quadro de conhecimentos (K), Valores (V) e Práticas (P) e dos universos “morais” veiculados por entidades da educação, saúde, direito, sociologia, economia, e religião (Clément, 2006) que centralizam o foco do problema segundo o seu paradigma profissional e trabalham colaborativamente, em articulação e de forma multidisciplinar.

Neste contexto, os docentes referem a existência de bons níveis de colaboração entre serviços, entidades, ciclos de ensino e disciplinas, no entanto, no plano, da articulação para intervenção, ela só tem algum significado no 2º CEB (Figura 4).

A multidisciplinaridade, eventualmente devido ao regime de monodocência, é muito significativa no 1ºCEB, mas decresce abruptamente no 2º CEB e é quase inexistente no 3ºCEB e ensino secundário (Figura, 4).

A formação dos docentes no domínio da adição tem pouca expressão em todos os ciclos de ensino, e constitui-se como uma área deficitária (Figura 4).



**Figura 4- Percepções dos professores sobre articulação, colaboração, abordagem multidisciplinar e formação no domínio do tabagismo**

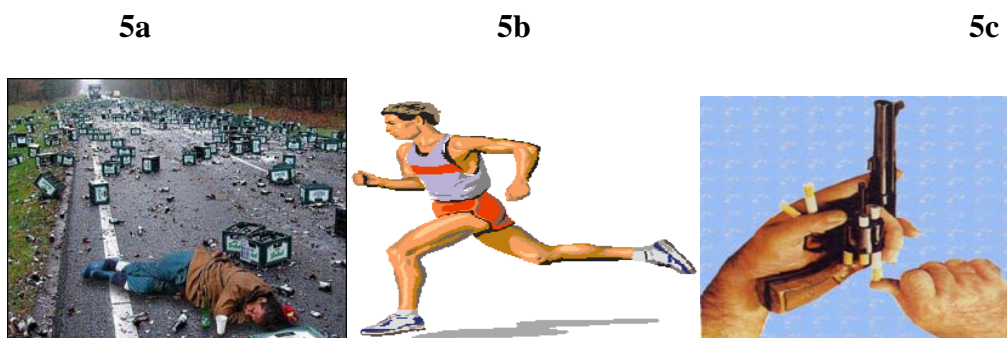
### **Percepção dos professores e dos alunos sobre a importância das imagens na prevenção e combate ao tabagismo**

Para 93% dos docentes e 96% dos alunos a imagem tem uma grande importância na abordagem aos conteúdos curriculares. O papel pedagógico das imagens assenta em factores de suma importância que objectivam a transmissão de conhecimentos, desenvolvimento de capacidades e saberes, consolidação das aquisições realizadas, operacionalização das aquisições e elaboração de um quadro referencial nos domínios educativo, social e cultural.

Assim para trabalhar a temática aditiva em contexto de sala de aula (Figura 5a, 5b, 5c), 50,7% dos docentes da amostra optaria pela imagem de maior agressividade (associação tabaco/revólver-5c), 26,3% referiram que utilizariam a imagem do “acidente de viação-5a”, enquanto 23% escolheria a imagem da “prática desportiva-5b”.

Também para os alunos a imagem mais valorizada para trabalhar a problemática aditiva em ambiente de escola é do “revólver com cigarros-5c” (36%), seguida da do “acidente rodoviário-5a” (34%) e, em último, ficou a “prática do exercício físico-5b” (30%).

Desta análise, sobressai a predominância do modelo Biomédico (doença, patologia), sobre o modelo de Promotor de Saúde (práticas e ambientes saudáveis).



**Figura 5- Imagem que na percepção de professores e alunos deveria ser usada em contexto escolar para abordar o problema aditivo**

A Imagem pode exercer uma forte acção influenciadora sobre acções comportamentais dos jovens na demissão do consumo de tabaco. A melhor abordagem pode passar pela combinação de medidas de protecção da saúde (Van der Stel, 1998), que na situação presente envolve a dimensão policial-prisão, as considerações de moral pública, ética, valores e acção psicológica-snifar, e consequências para o organismo resultantes do consumo-cancro pulmonar (Figura 6a, 6b, 6c).

Neste domínio, 46% dos docentes indicaram que a melhor imagem para demover os jovens do consumo aditivo seria a imagem do “cancro pulmonar-6c”, 30% seleccionaram a imagem da “privação da liberdade- 6a” e 24% optaram pela incorpora marcadores éticos, sociais e psicológicos (snifar-6b) .

Também neste ponto se assiste a uma convergência de percepções, pois a maioria dos sujeitos da amostra discente (54%) escolheu a imagem do “cancro do pulmão-6c” como a que mais poderia demover as pessoas da adição, seguindo-se a imagem relacionada com a perda da liberdade- “detenção/prisão-6a”(27%) e, por fim, a imagem de “inspiração de droga-snifar-6b” (19%).





**Figura 6- Imagem que na percepção de professores e alunos mais afastaria os jovens do consumo aditivo**

A construção e representação do futuro são elaboradas com base em influências, vulnerabilidades, sensibilidades positivas ou negativas de modelos, contextos e factores ambientais a que estão expostos (Boardman & Onge, 2005). Assim para os alunos as imagens da problemática toxicológica que mais os preocupam e que mais pode condicionar o seu futuro (Figura 7a,7b,7c) têm a sua expressão maior na imagem da “droga/injecção-7b” (46%), “tabaco-7a) e “álcool-7c” (12%). Em relação às preocupações futuras, também os professores sequenciaram os seus desassossegos por outras drogas-7b, tabaco-7a e álcool-7c.



**Figura 7- Imagem que mais preocupa professores e alunos em relação ao futuro**

## Conclusão

Emerge das percepções de professores e alunos que a escola é o local privilegiado para gerar conhecimentos e habilidades cognitivas, sociais e comportamentais, os quais devem ser complementados por questões e perspectivas de saúde. Ou seja, as competências gerais no domínio da compreensão, análise síntese da informação para a criação de soluções às questões gerais, locais ou globais devem também proporcionar aos alunos a prática de habilidades pessoais e sociais e a aquisição de comportamentos promotores de saúde. Porque o principal objectivo do aluno é conseguir os melhores resultados de aprendizagem e ainda porque um aluno saudável aprende melhor, a escola deve ter como anseio:

- promover a saúde e o bem-estar dos alunos fornecendo um ambiente seguro;
- articular com os pais/encarregados de educação, poder autárquico, serviços de saúde e outros serviços da comunidade;
- integrar a dimensão da saúde (prevenção do tabagismo) no projecto educativo, no projecto anual de actividades, nos planos curriculares de turma e em outras actividades correntes da escola;
- abordar as questões do tabagismo e o bem-estar físico, psíquico e social envolvendo todo o pessoal docente e não docente de modo a aumentar o nível de competências/*empowerment*.

No combate e prevenção ao tabagismo em meio escolar, das concepções/percepções dos professores e dos alunos, sobressaem como elementos essenciais a considerar:

- A necessidade de serem implementadas políticas de escolas saudáveis (práticas de alimentação saudável, minimização bullying, implementação da educação sexual, multidisciplinaridade e articulação vertical e horizontal na abordagem aos problemas aditivos do tabaco, álcool e outras drogas);
- Melhorar o ambiente físico da escola (conforto, adequabilidade/ergonomia do material, iluminação e luz natural, espaços para a prática da actividade física, espaços para estudo e diversão, recreios e equipamentos de lazer, práticas de

higiene sanitária, qualidade do ar e da água, ausência de contaminantes ambientais químicos ou biológicos);

- Melhorar o ambiente social da escola através da fomentação da qualidade das relações entre professores, auxiliares, alunos, pais e comunidade mais alargada,
- Construir, implementar e desenvolver um Projecto Educativo orientado para o desenvolvimento de competência individuais para a acção e para a saúde (formação), isto é, proporcionador de actividades ligadas ao currículo formal e informal, através das quais os alunos realizam experiências, adquirem conhecimentos, desenvolvem Skills, habilidades e competências que lhes permitem melhorar a sua própria saúde e a saúde doutras pessoas da comunidade (campanhas de prevenção);
- Articulação da escola com a comunidade através do estabelecimento de relações colaborativas com as famílias dos alunos e grupos de pessoas influentes, a celebração de protocolos e parcerias com empresas, centros de saúde, serviços de saúde mental, hospitais e universidades no sentido de prestarem apoio e promoverem a saúde aos alunos e às famílias;
- A nível técnico e político emerge a necessidade da reformulação dos programas educativos como estruturas normativas e os manuais escolares.

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# SMOKING IN PORTUGUESE SCHOOL PROGRAMMES AND TEXTBOOKS ALONG THE LAST FIVE DECADES

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## Abstract

### Introduction

The World Health Organization and other international institutions have recognised the school as an appropriate setting to prevent smoking addiction. The school programme and the school textbooks are essential tools for the educative action. The former prescribes the policies and cultural guidelines and the latter helps to put them in action.

### Methodology

In this work on smoking, 13 natural life science programmes and 348 textbooks of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> cycles of Basic Education and the Secondary School of the last five decades were analysed. For the present study, this period was divided according to the education reforms: before 1974, between 1974 and 1983, between 1983 and 1991, between 1991 and 2001, and after 2001. A grid of analysis constructed by the European project BIOHEAD-CITIZEN was used. Both text and images were analysed, giving particular emphasis to the physical, psychological and social effects as well as to the anti-smoking campaigns.

### Results

The smoking issue appears for the first time in textbooks in the reform following the 25th April 1974 and since then textbooks are in conformity with the national programmes. This topic is present in all school levels, but it is at the 3<sup>rd</sup> cycle of Basic Education that programmes and textbooks refer it more frequently whereas the Secondary School is the level where it is less treated.

The number of smoking references increases significantly along the several education reforms, in both text and images. All along the education reforms the physical effects are always predominant as compared to psychological or social effects caused by tobacco. In the sample of 348 textbooks references to smoke consuming pleasure, smoking environments, cultural contexts, tobacco traffic, smoking industry, market legislation or consumption legislation are scarce. However, in current textbooks, 18 textbooks refer in text and images socio-environmental smoking contexts. Altogether, these results show that the Portuguese textbooks are in conformity with the underlying school programmes.

## **Conclusion**

This overall study indicates that the didactic transposition along the successive reforms shows a growing concern about children's and young people's smoking and its prevention.

**Key-words:** Tobacco, School programmes, School textbooks.

# ABORDAGEM DO TABAGISMO NOS PROGRAMAS E MANUAIS ESCOLARES PORTUGUESES AO LONGO DAS ÚLTIMAS CINCO DÉCADAS

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## Resumo

### Introdução

A Organização Mundial de Saúde e outras instâncias reconhecem na escola o centro de acção para a prevenção do tabagismo. Os programas escolares e os manuais escolares constituem as ferramentas fundamentais da acção educativa, em que o primeiro prescreve as orientações de natureza política e cultural e o segundo dá-lhe operacionalidade.

### Metodologia

Neste trabalho sobre o tabaco foram analisados 13 programas e 348 manuais escolares da área das ciências naturais do 1º, 2º e 3º Ciclos do Ensino Básico e do Ensino Secundário ao longo das últimas cinco décadas. Para o presente estudo, este período foi dividido em função das reformas escolares: anterior a 1974, entre 1974 e 1983, entre 1983 e 1991, entre 1991 e 2001 e depois de 2001. Utilizou-se uma grelha de análise desenvolvida no âmbito do projecto Europeu BIOHEAD-CITIZEN. Tanto o texto como as imagens foram matéria de análise, dando-se particular ênfase aos efeitos físicos, psicológicos e sociais bem como a campanhas antitabágicas.

### Resultados

O tema do tabaco só surge na reforma depois do 25 de Abril de 1974 e desde então existe conformidade entre programas e manuais escolares. Este tema é tratado em todos os níveis de ensino, mas é no 3º Ciclo que os programas e os manuais mais referem esta problemática enquanto que é no Ensino Secundário que este tema é menos tratado.

O número de referências à problemática do tabagismo aumentam significativamente no decurso das diferentes reformas educativas, tanto na dimensão icónica como na componente textual. Verifica-se o predomínio das referências aos problemas físicos relativamente aos problemas psicológicos e sociais originados pelo tabaco ao longo das diversas reformas.

Na amostra constituída pelos 348 manuais analisados são raras as referências ao prazer originado pelo consumo do tabaco, aos ambientes de fumo, a contextos de culturas, ao tráfico, às tabaqueiras, à legislação sobre a venda e o consumo. Todavia, na reforma vigente, 18 manuais escolares abordam, em texto e imagem, contextos sócio-ambientais do consumo de tabaco. No seu todo, este estudo mostra que os manuais escolares portugueses conformam com o programa escolar que lhes está subjacente.

## **Conclusão**

No seu todo este estudo indica que a transposição didáctica, ao longo das sucessivas reformas, denota uma crescente preocupação pela abordagem da problemática do tabagismo e da sua prevenção para crianças e jovens.

## **Introdução**

O tabagismo constitui um grave problema de saúde pública porque, para além de ser factor de risco para o próprio fumador, também o é para quem, não o sendo, se encontram expostos ao fumo passivo (Berthet e Paradas, 2006). Segundo dados da Organização Mundial de Saúde (WHO, 1993; 2000), anualmente cerca de 4,9 milhões de pessoas morrem, em todo o mundo, em resultado do tabagismo e, se a epidemia não for travada, a mesma organização estima que na década de 2020-2030, esse número chegará aos 10 milhões de pessoas por ano. Para a prevenção e combate ao tabagismo, as instâncias nacionais e internacionais (ONU, OMS, UNICEF, UNESCO), reconhecem nas políticas educativas (programas e manuais escolares) e na escola, o mais poderoso instrumento para esse fim e o pilar onde se deve alicerçar toda a acção.

A centralidade da escola na prevenção e combate ao tabagismo advém do reconhecimento de que a infância e a adolescência são as fases desenvolvimentais privilegiadas para a aquisição, ou não, de muitos hábitos de vida saudáveis, pelo que, Educação para a saúde na escola tem de significar formação de atitudes e valores que levem o aluno a desenvolver comportamentos adequados ao longo da vida, revertendo em benefício de sua saúde e da saúde dos outros (Carvalho, 2003).

O papel da escola, quer no âmbito do tabagismo quer no contexto da sociedade actual, não é certamente o da mera transmissão da informação (saber sábio). À escola cabe, isso sim, ser o elemento dinamizador da reprodução do conhecimento pela acção contextualizada nos diferentes níveis do modelo ecossistémico de desenvolvimento dos sujeitos (Bronfenbrenner, 1979), em harmonia com a tríade composta pelo Conhecimento (K), Valores (V) e Práticas (P) (Clement, 2004).

No campo da prevenção e combate ao tabagismo em contexto de escola, o manual escolar é uma ferramenta fundamental porque, assumindo muitas vezes a dupla função de recurso didáctico e de programa, ou oscilando entre o substituto do currículo formal e/ou do currículo real, é, inequivocamente, o mediador entre ambos (Cabral, 2005), ou



seja, o manual escolar constitui a ponte que liga a Transposição Didáctica Externa – TDE (saber científico, saber politicamente seleccionado para ensino e programas) e a Transposição Didáctica Interna – TDI (aquilo que é efectivamente ensinado) (Clément, 2004; Carvalho e Clément, 2007). Assim, é no manual escolar que se encontram vertidas as deliberações da cultura dominante em cada época histórica relativamente às modalidades de aprendizagem, ao tipo de saberes, de competências, de valores e de comportamentos que a sociedade objectiva promover (Vidigal, 1994).

Neste sentido, o manual escolar constitui-se e assume-se como o dispositivo central de combate e prevenção ao tabagismo em contexto escolar já que é a ferramenta pedagógica nuclear no actual modelo de ensino e aprendizagem (Aran, 1997). Para ajudar a compreender a importância do manual escolar no processo de prevenção ao tabagismo analisaram-se programas e manuais escolares dos Ensinos Básico e Secundário do período pós 25 de Abril de 1974, procurando-se averiguar o grau de vinculação destes com as medidas de esclarecimento, prevenção e combate à pandemia tabágica.

Para dar resposta aos objectivos formulados cuja incidência recai nas diferentes do Projecto Educativo de Agrupamento/Escola (currículo transversal, articulação, inclusão escolar, diferenciação curricular, organização estratégica, práticas educativas, colaboração), definiram-se três questões de investigação:

1ª- Os programas escolares do ensino oficial público português estabelecem directrizes objectivas para o tabagismo ser abordado nos diferentes ciclos de Ensino Básico e Ensino Secundário?

2ª- Que evolução se registou nos manuais escolares portugueses ao longo dos tempos no domínio da prevenção e combate ao tabagismo?

3ª- Os manuais escolares tratam adequadamente o problema do tabagismo e incorporam as orientações emanadas pelos programas escolares neste domínio?

## **Metodologia**

Foram analisados 13 programas escolares nacionais (dos 1º, 2º e 3º CEB e do Ensino Secundário), desde 1968 a 2006 e de 348 manuais escolares (Estudo do Meio do 1º CEB, Ciências da Natureza do 2º CEB, Ciências Naturais do 3º CEB e Biologia do Ensino Secundário), desde 1967 a 2007, conforme se apresenta na tabela 1.

Tabela 1- Número de manuais analisados por ciclos de ensino e anos de escolaridade													
R E F O R M A S	Anos	1º CEB				2ºCEB		3ºCEB			E. Secundário		
		1º	2º	3º	4º	5º	6º	7º	8º	9º	10º	11º	12º
	2001	21	17	17	18	2	5	7	4	4	6	3	2
	1991	13	10	16	7	12	10	27	26	2	13	7	6
	1983	5	6	8	6	2	7	6	8	3	7	2	4
	1974	1	2	1	2	2	2	5	1	3	2	.	2
	<1974	1	-	-	1	2	-	-	-	1	-	-	-
TOTAL		41	35	42	34	20	24	45	38	13	28	12	14
%		11,8%	10%	12%	9,8%	5,8%	7%	13,1%	11,1%	3,8%	8,1%	3,5%	4%

O critério utilizado na divisão temporal foi as reformas educativas mais significativas ocorridas em Portugal:

- i), Lei nº 5/73 ou reforma Veiga Simão;
- ii) Decreto-lei nº 221/74 de 27 de Maio e 735-A/74 de 21 de Dezembro;
- iii) Despacho 194-A/83 ou reforma Seabra;
- iv) Lei nº 46/86 ou reforma global da educação, iniciada em 1986 e implementada em 1991;
- v) Decreto-lei ME/6/2001 de 18/01 alterado pelo Decreto-Lei nº 203/2002 os quais definem a reforma curricular para o ensino básico e pelo Decreto-Lei 7/2001 de 18/01 concretizado pelo Decreto-Lei nº74/2004 de 27 de Março onde se estabelecem os currículos do ensino secundário actualmente em vigor.

Para a análise de manuais utilizou-se uma parte da grelha de Educação para a Saúde (Quadro 1) desenvolvida no âmbito do projecto BIOHEAD-CITIZEN (Biology, Health and Environmental Education for a Better Citizenship FP6-STREP, CIT2-CT-2004-506015 – Carvalho, 2004; Carvalho e Clément, 2007).

Quadro 1 - Grelha com indicadores para a recolha de elementos sobre o Tabaco				
3.1 SMOKING				
CONCEPTIONS	INDICATORS	IMAGES Nº occurrences	TEXT Nº occurrences	ANNEX HE-3.2.n
3.2. ALCOHOL ABUSE	Unhealthy components of tobacco			
	Physical effects in the body: - respiratory tract - circulatory system - nervous system - foetus disorders (of smoking mother) - lung cancer - other diseases			
	Psychological and behavioural effects: - anxiety - addiction (dependence) - others (specify)			
	family disturbance: overspending, children's illness - passive smoking - mortality rates - others (specify)			
	Anti-smoking campaign - information - educational action - legal rules - promotion of healthy habits - fear contents - Possible assistance (phone number, website...)			
	Environmental (and social) approach: - tobacco factories - identifying images - notion of pleasure during consumption			
	<b>Total Occurrences</b>			

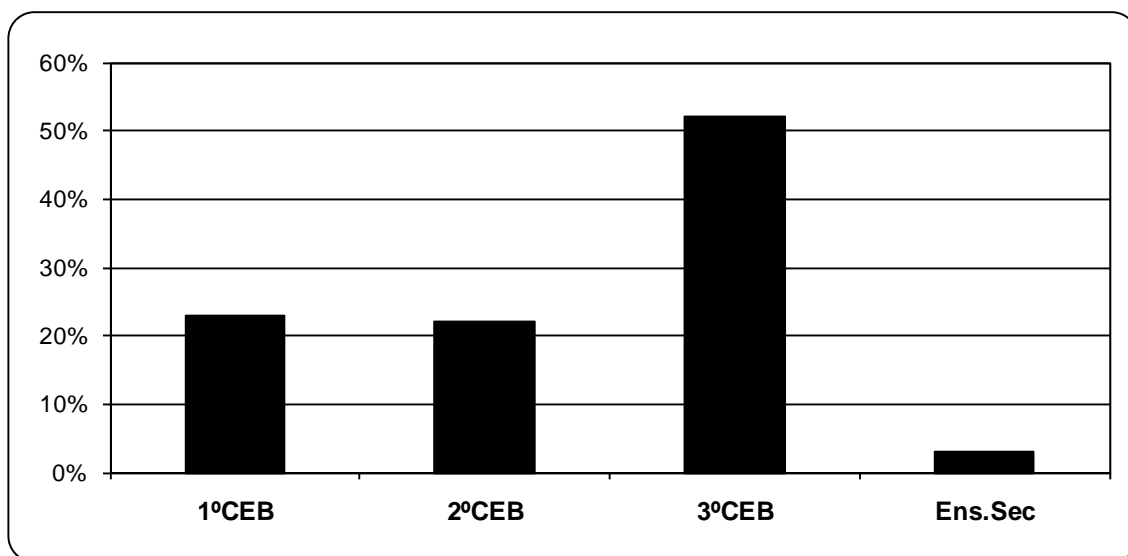
## Resultados

### Referências explícitas ao problema tabágico nos Programas Escolares

No âmbito da Transposição Didáctica Externa, aquilo que se vai ensinar, encontra-se nos Programas Escolares e, neste contexto, no Quadro 2, sintetiza-se o referencial histórico à problemática do tabaco nos Programas Escolares do Ensino Básico (1º, 2º e 3º CEB) onde foram encontradas referências explícitas e implícitas nos programas de Biologia dos cursos Científico-humanísticos. A problemática é abordada no 10º ano do Curso Tecnológico de Desporto ao nível das unidades temáticas: Transformação e Organização da Energia: ter “*atitude crítica face aos efeitos do tabaco e da poluição...sobre o sistema respiratório*” (Mendes, Rebelo e Pinheiro, 2002:28).

<b>Quadro 2- Referência nos programas escolares do Ensino Básico e Secundário à problemática do Tabaco nas reformas educativas consideradas.</b>															
		1968 a 1974		1974 a 1975		1975 a 1978		1978 a 1980		1980 a 1990		1990 a 2001		2001	
		Refere		Refere		Refere		Refere		Refere		Refere		Refere	
		Sim	Não	Sim	Não	Sim	Não	Sim	Não	Sim	Não	Sim	Não	Sim	Não
1º CEB	1º Ano		X		X		X		X		X		X		X
	2º ano		X		X		X		X	X			X		X
	3º ano		X		X		X	X			X	X		X	
	4º ano		X		X		X	X		X			X		X
2ºCEB	5º ano	Não foram analisados Programas Referentes a estes períodos de tempo											X		X
	6º ano											X		X	
3ºCEB	7º ano												X		X
	8º ano											X			X
	9º ano												X	X	
Secundário	10º ano												X	X	
	11º ano												X		X
	12º ano												X		X

Da totalidade de referências explícitas ao tabaco, é no 3º Ciclo do Ensino Básico que os programas escolares mais referem esta problemática (52%), sendo que no 1º ciclo e 2º Ciclo o número de referências é idêntico (23% e 22%), mas no ensino Secundário, as referências ao tabaco são mínimas (n=1 ou 3%) (Figura 1).



**Figura 1- Distribuição das referências explícitas ao Tabaco nos programas escolares dos quatro ciclos de ensino.**

### **Abordagem dos problemas do tabaco no contexto das reformas consideradas por anos de escolaridade**

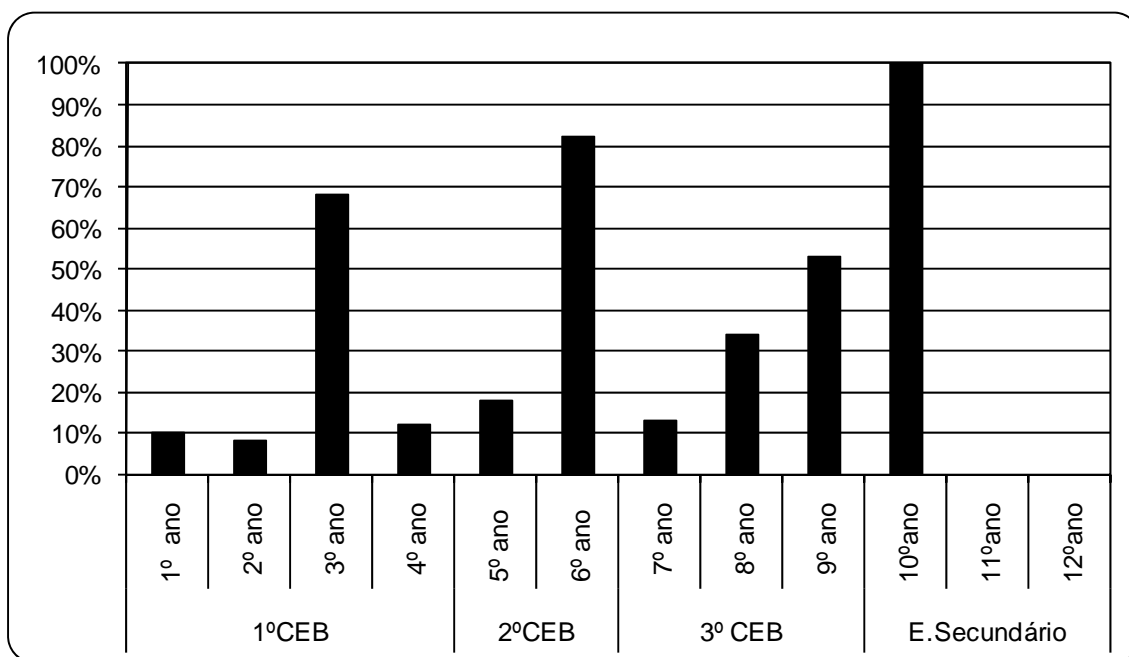
Nos manuais anteriores a 1974 não foram encontradas quaisquer referências ao tabaco. No conjunto de todos os subsequentes períodos de reforma, o 3º ano é o ano central de abordagem a esta problemática no 1º CEB (Figura 2), ressaltando ainda que o assunto tabaco só passou a ter cabimento no 1º ano de escolaridade aquando da reforma actual.

Quanto ao 2º CEB, o ano fulcral de abordagem aos problemas do tabaco é o 6º ano (Figura 2), contudo, anteriormente a 1974 os dados mostram que essa abordagem era somente feita no 5º ano e que na reforma de 1974-1983, o tabaco não era de todo tratado.

Relativamente ao 3º CEB, em função das alterações ocorridas na estrutura disciplinar do currículo de cada ano de ensino, com a supressão ou integração da disciplina de Biologia/Ciência Naturais, os assuntos relacionados com o tabaco encontram-se

principalmente referenciados no 8º ano para as reformas de 1983-1991 e 1991-2001 e, no 9º ano nas reformas de 1974-1983 e na da actualidade (Figura 2).

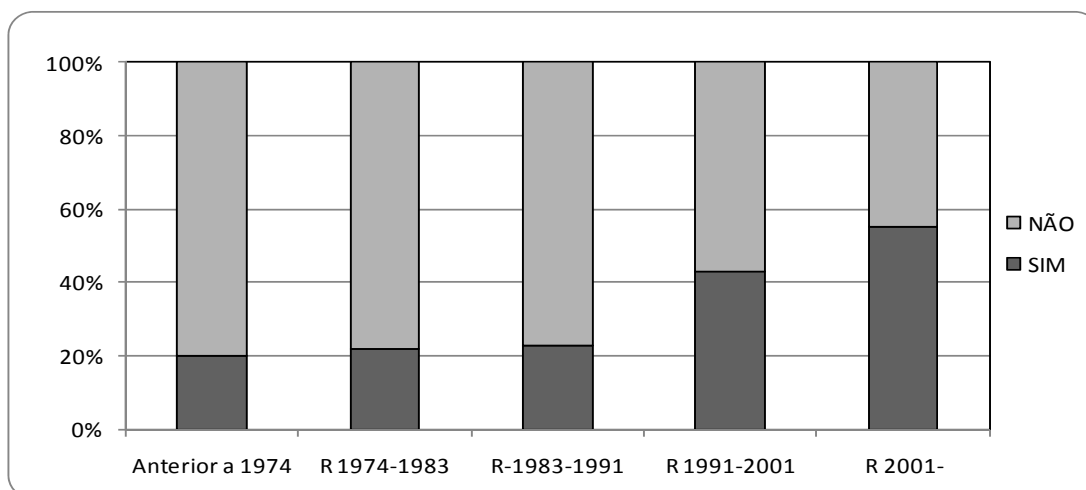
No que concerne ao ensino secundário, o tabaco nunca foi tema presente nos manuais escolares analisados para este nível de ensino até à actual reforma, onde apenas se encontram ligeiras abordagens em manuais escolares do 10º ano (Figura 2) do curso tecnológico de desporto.



**Figura 2- Abordagem aos problemas do tabaco nos manuais escolares (no conjunto de todos os períodos de reformas) por ano e ciclo de escolaridade.**

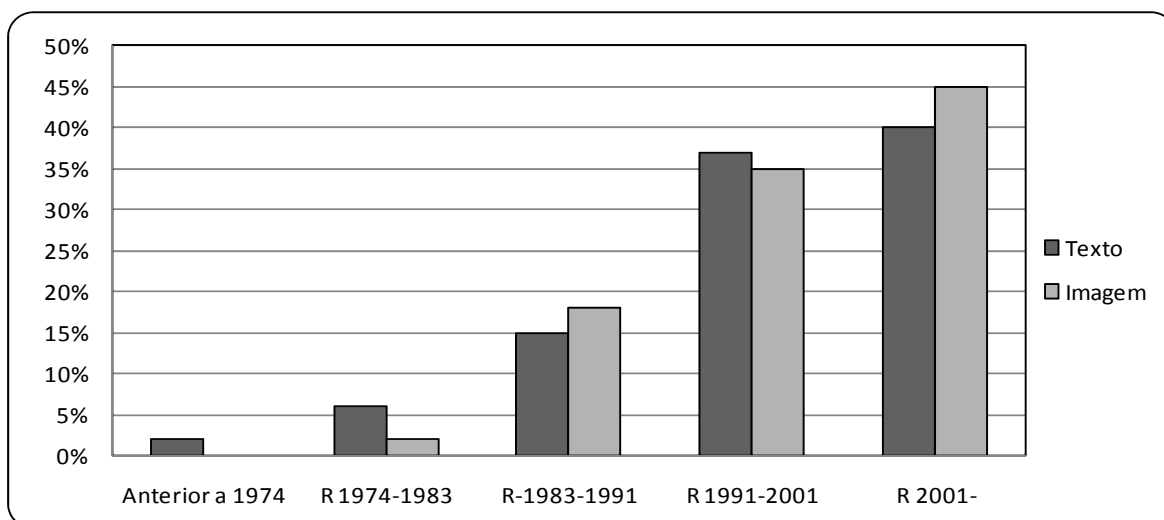
### **Análise evolutiva do número de manuais escolares que abordam o Tabaco.**

No universo dos 348 manuais escolares analisados, constata-se que a proporção dos manuais que abordam o problema do tabaco é inferior aos que não lhe fazem qualquer referência até 2001, situação que se inverte apenas com a reforma actualmente em vigor: 55% abordam e 45% não abordam o tema (Figura 3).



**Figura 3- Evolução da proporção de manuais escolares que abordam (e que não abordam) o Tabaco no decurso das cinco reformas.**

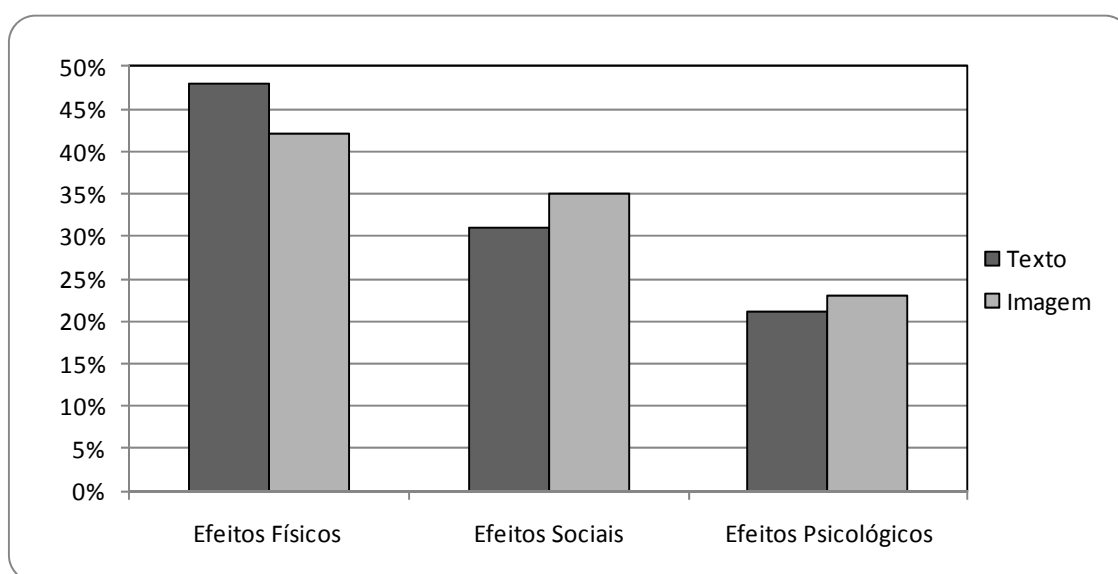
No que concerne ao número de referências à problemática do tabagismo, sobressai tanto na dimensão icónica como na componente textual, que estas aumentaram significativamente no decurso das diferentes reformas educativas consideradas (Figura 4).



**Figura 4- Evolução do número de referências à problemática tabágica nos manuais escolares, em texto e em imagens, ao longo das cinco reformas.**

## Problemas físicos sociais e psicológicos do tabaco abordados nos manuais escolares

Nos manuais, tanto em texto como em imagem, os problemas físicos do tabaco (trato respiratório, sistema circulatório, sistema nervoso, distúrbios fetais devido ao fumo da mãe, cancro da língua, do pulmão, etc.) sobrepõem-se a dimensão social (distúrbios familiares, demasiados gastos, doenças infantis, fumadores passivos, taxa de mortalidade, etc.) e psicológica (ansiedade, dependência, etc.) (Figura 5).



**Figura 5- Consequências físicas, sócias e psicológicas do consumo de tabaco referido nos manuais escolares na globalidade das cinco reformas.**

No quadro das reformas em análise, verifica-se que anteriormente a 1974 apenas a dimensão física do tabaco foi encontrada na componente textual de um livro do 5º ano. Na reforma de 1983, os valores das referências aos problemas físicos (36%), psicológicos (30%) e sociais (34%) do tabaco convergem, em texto e imagem, para valores muito similares. Nas restantes reformas, regista-se o predomínio das referências textuais e icónicas aos problemas físicos relativamente aos problemas psicológicos e sociais originados pelo tabaco.

Focalizando a análise sobre a variável “ano de escolaridade” os manuais do 3º ano (24%), 6º ano (23%), 8º ano (17%) e 9º ano (19%) são aqueles que, no contexto das



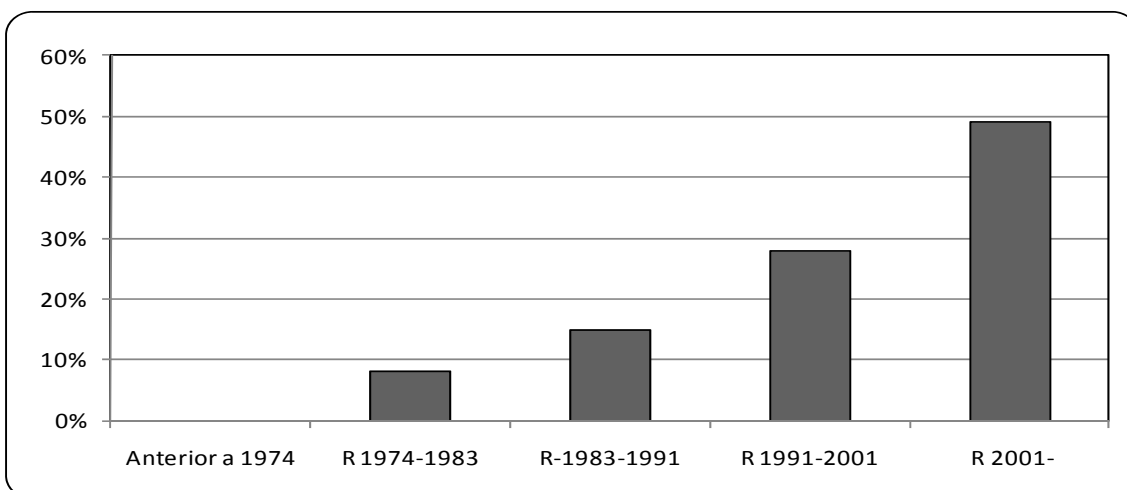
diferentes reformas, mais abordam nos seus textos e imagens os problemas físicos, psicológicos e sociais originados pelo tabaco.

### **Ambientes e Campanhas de prevenção sobre o tabaco referidas nos manuais escolares no decurso das reformas educativas**

A estrutura das campanhas de prevenção referidas nos manuais escolares analisados é essencialmente de natureza icónica (80%) e incidem principalmente sobre informação, acção educativa, leis e penas, promoção de hábitos de vida saudáveis, imagens chocantes, números de telefone para possíveis contactos.

No contexto global das diferentes reformas, as campanhas de prevenção sobre o tabaco referidas nos manuais escolares atingem 34% comparativamente com os 25% do álcool e os 41 % das outras drogas (Gonçalves, 2008; Gonçalves, Rodrigues e Carvalho, 2009; Carvalho, Gonçalves e Dantas, in press).

Centrando a análise nas diferentes reformas educativas consideradas neste estudo regista-se a não existência de campanhas de prevenção nos manuais escolares com edição anterior ao ano de 1974 (Figura 6). Posteriormente a essa data verifica-se um progressivo crescimento na referência às campanhas de prevenção, que ocorreram nos três domínios: físico, social e psicológico. As campanhas de prevenção sobre o tabaco sendo menos representativas nos manuais escolares das reformas de 1983-1991 (16%) e de 1991-2001 (27%) tornam-se o elemento dominante nos manuais escolares da reforma actualmente em vigor (48%) (Figura 6).



**Figura 6- evolução do número de campanhas referidas nos manuais escolares tendo em conta as 5 reformas.**

Na amostra constituída pelos 348 manuais analisados são raras as referências ao possível prazer originado durante o consumo do tabaco, aos ambientes de fumo, a contextos de culturas, ao tráfico, às tabaqueiras, à legislação sobre a venda e o consumo. Todavia, na reforma vigente, 18 manuais escolares mencionam em texto (68%) e imagem (32%) o contexto sócio-ambiental do tabaco.

### **Conclusão**

Tendo em conta os 13 programas escolares portugueses analisados, verifica-se que as primeiras referências explícitas sobre a problemática do tabaco surgem só depois de 1974. As referências explícitas aos malefícios do tabaco vão aumentando progressivamente nos programas escolares de reforma educativa para reforma educativa. Nos programas escolares, em que a adição tabágica se encontra definida por ciclo de ensino e não por ano de escolaridade, verifica-se que são os programas do 3º CEB que mais abordam as questões do tabagismo, enquanto que, no plano oposto, os programas do ensino secundário são os que apresentam menos alusões ao tabaco.

No âmbito das reformas educativas consideradas para o estudo regista-se, ao longo do tempo, um progressivo aumento de referências aos problemas do tabaco quer nos programas escolares quer nos manuais escolares. De facto, nas reformas iniciais, a abordagem à prevenção do tabaco nos programas e manuais era quase inexistente, talvez pelo facto de então fumar conferia um determinado estatuto, associado à apologia

do fumo nos campos de futebol, nas corridas de fórmula 1, nos desportos de pavilhão, no desporto automóvel e na publicidade fixa e televisiva. Com as reformas de 1983 e 1991, e tendo por base a alteração de valores sociais e culturais sobre o tabaco, verifica-se um aumento significativo de referências aos efeitos negativos do tabagismo. Esta abordagem pedagógica aos problemas do tabaco é acompanhada pelo aumento da censura social do fumo e pela maior agressividade das medidas legais da qual se destaca a Lei nº 37/2007 de 14 de Agosto.

A abordagem ao problema da adição tabágica tem centralidade nos manuais escolares do 3º ano do 1º CEB, 6º ano do 2º CEB e 9º ano do 3º CEB. No ensino Secundário, a abordagem ao tabaco ocorre apenas no 10º ano do curso tecnológico de Desporto.

Em todos os ciclos de ensino, os manuais escolares abordam os problemas físicos, sociais e psicológicos (WHO, 1986) da adição tabágica, no entanto incidem predominantemente sobre a dimensão física (patologias) e não tanto sobre a vertente social e psicológica da problemática. Esta discrepância de abordagem aos problemas físicos, sócias e psicológicos é, em princípio, justificável pelo facto de se tratar uma droga ainda socialmente aceite, cujo consumo não induz alterações repentinas do comportamento humano, sendo até considerada um factor de socialização, principalmente entre os jovens.

Tanto no domínio textual como icónico, as manuais escolares dos anos de escolaridade iniciais fazem uma abordagem à problemática aditiva do tabaco alicerçada no modelo da Promoção da Saúde. No entanto, esta perspectiva, à medida que se avança nos anos de escolaridade e nos ciclos de ensino, vai-se deslocando para o modelo Biomédico, que é a matriz de referência nos manuais escolares de ensino secundário (Carvalho *et al.*, 2008).

Os dados mostram ainda que, tanto ao longo do tempo como nos diferentes anos e ciclos de ensino, a referência a campanhas anti-tabaco, instituições de apoio à toxicod dependência, números de telefone e sítios da Internet para possíveis contactos são relativamente pouco frequente nos manuais escolares. Este aspecto, atendendo ao contexto socioeconómico e cultural português, parece-nos constituir uma séria insuficiência na medida em que, para muitos alunos, o manual escolar pode ser a única fonte de informação sobre o tabagismo a que têm acesso.

No cômputo geral, este estudo mostra que os manuais escolares portugueses conformam com o programa escolar que lhes está subjacente. Estes dois elementos da transposição didáctica denotam uma crescente preocupação, ao longo das sucessivas reformas, da abordagem da problemática do tabagismo e da prevenção do consumo de tabaco por crianças e jovens.

## **AGRADECIMENTOS**

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# TOBACCO'S SMOKE CESSATION - TREATMENT *MODUS OPERANDI* OF TOBACCO'S ADDICTION

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## Abstract

To achieve the best results in tobacco's smoke cessation it helps the acknowledgment of an individual as a bio-psycho-social unit.

Therefore, tobacco's addiction treatment is preceded by two stages: tobacco's dependency and use evaluation, and motivational evaluation for the tobacco's smoke cease. A negative result in this last one is enough criteria not to start treatment, but to refer the patient to a Psychology appointment.

Tobacco's use evaluation focus in items as habit's initiation age, type of smoked tobacco, number of cigarettes smoked a day, as also former attempts in tobacco cease, diary contact with other consumers and the patient's smoker profile.

Tobacco's dependency, which affects the choice of the pharmacological treatment, is evaluated gathering some indicators during anamnesis such as the time elapsed between arousal and the first cigarette smoked, several awakenings to quench the addiction, and in case of women tobacco's use during pregnancy.

Motivational evaluation uses the transtheoretical model of behavioral shifting of Prochaska and DiClemente.

Nowadays, 10-20% of smokers are in the preparation for behavioral shifting stage, which can evolve to maintenance and definitive abstinence, or to relapse.

In motivated individuals the pharmacological treatment is began, firstly with first hand drugs, such as nicotine's substitution therapy in its several formulations, and bupropiom; and/or second hand drugs, such as nortriptiline, clonidine and varenicline.

Finally, it is important to consider the tobacco's abstinence syndrome as it is the major cause for relapses. This syndrome begins between two to twelve hours after tobacco's cease, and can last until a month.

# CESSAÇÃO TABÁGICA – *MODUS OPERANDI* DO TRATAMENTO DO TABAGISMO

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## Resumo

Na ajuda à cessação tabágica interessa tratar o doente como um todo bio-psicossocial, de forma a obter os melhores resultados.

Assim, ao se abordar o tratamento do tabagismo, torna-se necessário referir duas etapas essenciais que o precedem: a avaliação do uso e dependência do tabaco, e a avaliação do grau de motivação do doente para a cessação tabágica; sendo que um resultado negativo neste último item é critério para não iniciar tratamento e, antes, encaminhar o doente para uma consulta de Psicologia.

Para a avaliação do grau de uso do tabaco importa não só saber a idade de início do consumo, o tipo de tabaco e o número de cigarros consumidos por dia, como também as tentativas anteriores para deixar de fumar, o contacto diário eventual com outros consumidores e o perfil de fumador do utente.

Já para a avaliação do grau de dependência tabágica, factor que influencia bastante o tratamento farmacológico, existem indicadores que se devem recolher durante a anamnese, como o tempo decorrido entre o acordar e o consumo do primeiro cigarro, os despertares frequentes para fumar, bem como, no caso das mulheres, o ter fumado durante a gravidez.

A avaliação motivacional faz-se preferencialmente pela fase do processo psicológico de mudança comportamental em que o doente se encontra, segundo o modelo transteórico de Prochaska e DiClemente.

Actualmente, 10-20% dos fumadores encontra-se em fase de preparação para a mudança, a qual depois de instituída pode evoluir para manutenção e abstinência definitiva, ou então para recaída.

Num indivíduo motivado para deixar de fumar inicia-se o tratamento farmacológico do tabagismo que passa pelo uso de fármacos de primeira linha como, a terapêutica de substituição de nicotina nas suas diversas formulações e a bupropiona; e/ou fármacos de segunda linha como o a nortriptilina, a clonidina e a vareniclina.

Por fim, será importante considerar e prevenir o síndrome de abstinência tabágica, já que é a principal causa de recaídas. Este síndrome inicia-se cerca de duas a doze horas após a cessação tabágica, podendo durar até um mês.

For achievement of the best results in tobacco's smoking cessation it is fundamental the acknowledgement of an individual as a bio-psycho-social unit.

Thus, for a more efficient treatment of this habit, you firstly have to gather information about the use, dependency and patient's motivation to change.

For evaluation of tobacco's use there is some information that must be known, like onset's age of tobacco's consumption, type of tobacco that is smoked, number of cigarettes smoked a day, tobacco's load, eventual contact with other consumers, and former attempts to stop smoking characterizing also implemented methods, abstinence's duration, causes for relapses, difficulties felt and last attempt's date.

Patient's profile is also important to this evaluation, because there are people who smoke for pleasure and/or as social entertainment, to reduce stress, to improve concentration and raise up confidence, to avoid fattening and because of "hand addiction".

This kind of information provides a field full of knowledge about what kind of smoker you are dealing with and will help you in finding the best techniques to help the patient reach the installed definitive abstinence.

The evaluation of tobacco's dependency affects the type of intervention chosen in treatment of tobacco's addiction and is usually measured by the Fagerström test, but there is other information that must be known, such as awakenings during sleep to smoke, elapsed time between awakening and the first smoked cigarette, and in case of women, having smoked during pregnancy.

Motivation to change is affected by two variables, firstly, the subjective importance that is given to the process of shifting behaviours, and secondly, patient's self-confidence or self-efficiency, which is the self's perception of its ability to change. Richmond's test is useful in measuring these variables, but one can obtain nearly the same information by asking the patient to classify from one to ten the importance of change and his/hers perception of self-efficiency.

Motivation is variable in time and can be affected by both internal and external factors. Most smokers live in a psychological conflict, called "ambivalence", between smoking and stop smoking. To know this kind of information leads the health professional to work this ambivalence away, acting like an external factor in tobacco's cessation.



Prochaska and DiClemente transtheoretical model considers seven steps in behavioural shifting, which have cyclic potential and no rigid order between them.

The first step in this model is pre-contemplation which can last for years. We meet here “reluctant” smokers who don’t care about smoking nor even intend to stop the habit. These adopt a defensive posture and avoid information, even though that’s the only thing that can be done at this stage.

Several reasons lead and maintain the smokers in pre-contemplation passing through demotivation, demoralisation and unconsciousness.

Ambivalence is just felt in the contemplation stage which follows pre-contemplation in this model. Smokers admit to stop the habit in 6 months but find some difficulties as lack of self-control, self-confidence and self-efficiency. Health professionals have again to counsel intensively and motivate these individuals.

Action’s stage follows contemplation stage. Patients stay abstinent for 6 months without relapses.

However, between contemplation and action there is the preparation step, at which there are 10 to 20% of smokers nowadays. Smokers here believe to stop habit in a month and several of them have already stopped smoking for a period of more than 24 hours.

After this period of 6-month abstinence maintenance is installed and can lead to definitive abstinence or can be shortened by relapse. Maintenance lasts until five years after onset of smoking cessation, assuming that the patient remains abstinent.

Relapse is different from lapse, which is having smoked an isolated cigarette but not maintaining the habit.

After relapse, smoker can begin the process wherever he/she was before.

Tobacco’s abstinence syndrome, which is the major cause for relapses, begins within 2 to 12 hours after smoke cessation, reaches a peak in 24 to 48 hours, and can last until a month. Symptoms are anxiety, irritability, restlessness, physical malaise, depression, headache, insomnia, urgency in smoking, lack of concentration, and appetite’s raise, which can last for 6 months and is often associated with weight gain after tobacco’s smoking cessation.

This syndrome can camouflage or worsen other psychiatric pathology symptoms or prescription drugs side effects.

Thus, health professionals must be aware of that in helping to stop tobacco's addiction.

After all said above, it's easily understood why tobacco's pharmacological treatment is weighed case to case and there is evidence that it is more efficient when applied to more than 10 cigarettes a day average consumers.

First hand drugs are nicotine's substitution therapeutics in its several formulations and bupropion. Second hand drugs are nortriptyline, clonidine and varenicline.

Nicotine's substitution therapeutics is known to reduce symptoms of abstinence and is safer than smoking tobacco. It begins on the first day chosen to stop habit and it is very important that the patient remains abstinent during its use.

These therapeutics are contraindicated in the first two weeks after a coronarian stroke, in unstable angina, in severe cardiac arrhythmia, cerebral stroke in evolution, pregnancy and breastfeeding, and in people under age of 18. When its use is imperative, nicotine chewing gums can be given and if the patient is a pregnant woman it's mandatory to obtain informed consent.

Nicotine's substitution therapeutics appears in three formulations which are chewing gums, sucking pills and transdermal systems.

Chewing gums provide a blood's peak of nicotine within 20 minutes after onset of mastication. Correct use passes through slowly chewing the gum until its taste is strong. At that time it is pressed against the cheek and when the taste stays light the process is repeated. After about 30 minutes gums lose taste and must be thrown away.

Acidic drinks such as cola, coffee, juice and beer must be avoided 15 minutes before mastication and during gums' use.

There are two dosages being marketed, 2 and 4 mg, these last ones being reserved to more than 20 cigarettes a day smokers or to smokers whose first cigarette is within 30 minutes after awakening.

Contraindications are rare and side-effects derive from the local effect of mastication.

Its punctual use is an advantage although this can lead to underuse of nicotine's substitution therapeutics.

Sucking pills must not be chewed or swallowed but sucked as to provide nicotine in a constant and even way. These have lesser side effects than gums and do not adhere to teeth.

Technique of use is as much the same as for gums and if correctly used can last about 20 to 30 minutes. Acidic drinks are also prohibited.

There are pills of 1,5 mg and 2 mg currently being marketed.

A constant supply of nicotine is reached with transdermal systems. These are put against whole, dry and hairless skin and stay there for 16 hours, being removed before going to bed, or 24 hours, being removed next morning. Application site must vary and shall not be repeated within the same week.

Both of 24-hour and 16-hour transdermal systems reach a constant supply of nicotine after 4 to 10 hours of use's onset and have the same efficiency. Major advantage of 24-hour over 16-hour transdermal systems is that they avoid morning's abstinence symptoms but are more prone to insomnia.

Side effects are dose-dependent and are often cutaneous irritation and itching, which may be treated with topical corticosteroids and oral antihistamines. Generalized skin disease is a specific contraindication.

There are 3 dosages at the market of 24-hour systems: 7 mg, 14 mg, 21 mg; and also three dosages of 16-hour systems: 5 mg, 10 mg, 15 mg.

If the patient is not abstinent after two weeks of use, it's mandatory to review treatment by increasing dosages, combining dosages or choosing another drug.

Bupropion reduces abstinence's symptoms and smoking desire, also limiting weight gain by noradrenaline and dopamine recaptation's inhibition. When using this drug it is expected that the patient is abstinent in two weeks, so if it is not the case, this therapy must be abandoned.

Dose-dependent side effects are dry mouth and insomnia; convulsions are not related to dosage.

Contraindications are hypersensitivity, history of convulsion, CNS neoplasy, bulimia, nervous anorexia, severe hepatic cirrhosis, bipolar disease, toxic dependency, abrupt

discontinuation of alcohol or benzodiazepine intake, use or recent use of monoaminoxidase inhibitors, pregnancy and people under age of 18.

Bupropriom interacts with betablockers, antiarrhythmics, captopril, loratadine, codeine, cimetidine, orfenadrine, cyclophosphamide, ritonavir, levodope and zolpidem. Thus when combined with these drugs, dosage must be reduced.

Nortriptiline must be started two to three weeks before onset of smoking cessation. Common side-effects are sedation, dry mouth, constipation, turve vision, urinary retention, headache and cardiac toxicity.

Clonidine is an alfa2-agonist which is used in treatment of hypertension, as well as alcohol and opiates' privation symptoms. It has a high incidence of collateral side-effects and is contraindicated during pregnancy.

Varenicline is a partial nicotine's alfa4beta2 receptor agonist and reduces urgency for tobacco, privation symptoms and pleasure associated with smoking. This must be started seven to fourteen days before onset of smoking cessation and must be stopped in case of depression with suicide ideation and suicide attempts.

This drug is not recommended for combined therapy and is contraindicated during pregnancy and breastfeeding, in people under age of 18, and whenever there is a hypersensitivity reaction to varenicline.

Finally it shall be said that pharmacological treatment of smoking addiction can be done combining two different types of nicotine's substitution therapeutics associated or not to bupropriom. One must be aware of the hypertension's risk whenever using these kind of associations.

High dosages are recommended for heavy smokers, which can be defined by more than 30 cigarettes a day or more than 30 ppm of carbon monoxide in expired air. These dosages may also be used when everything else has failed.

A special note to the fact that when using high dosages of a nicotine's substitution therapy, the patient must be monitored in specialized centers with nicotine's metabolites assays.

# DEPRESSIVE SYMPTOMATOLOGY AND ABSTINENCE IN THE CONSUMPTION OF TOBACCO IN A PSYCHOLOGICAL TREATMENT TO STOP SMOKING

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## **Abstract**

The relationship between the presence of depressive symptomatology before beginning a psychological treatment to stop smoking and the abstinence in the consumption of tobacco in a sample of 202 smokers was studied. The Center for Epidemiological Studies Depression Scale (CES-D) was used to evaluate the presence of depressive symptoms. The results show that the smokers with depressive symptoms in the pre-treatment assessment stopped smoking less at the end of the psychological treatment. We conclude that the depressive symptomatology, even to low levels, is associated to a lower probability of achieve the abstinence at the end of a psychological treatment to stop smoking. Systematic and effective counselling of health professionals (HP) on smoking cessation is a major tool in tobacco control and smoking prevention.

# SINTOMATOLOGÍA DEPRESIVA Y ABSTINENCIA EN EL CONSUMO DE TABACO EN UN TRATAMIENTO PSICOLÓGICO PARA DEJAR DE FUMAR

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## Resumen

Se estudia la relación entre la presencia de sintomatología depresiva antes de comenzar un tratamiento psicológico para dejar de fumar y la abstinencia en el consumo de tabaco en una muestra de 202 fumadores. Para evaluar la presencia de síntomas depresivos se utilizó el *Cuestionario de Evaluación de Sintomatología Depresiva* (CES-D). Los resultados muestran que los fumadores con síntomas depresivos en la evaluación pre-tratamiento dejan menos de fumar al finalizar el tratamiento psicológico. Se concluye que la sintomatología depresiva, incluso a niveles bajos, se relaciona con una menor probabilidad de alcanzar la abstinencia al finalizar un tratamiento psicológico para dejar de fumar.

## Introducción

El consumo de tabaco se relaciona con diversos trastornos psicopatológicos, entre los que destaca la depresión. Se estima que entre el 25% y el 61% de los fumadores han padecido un trastorno depresivo alguna vez en la vida (Becoña y Míguez, 2004; Wilhelm, Wedgwood, Niven y Kay-Lambkin, 2006). Estos estudios han llevado a considerar el consumo de tabaco como un factor de riesgo para la depresión (Pasco, Williams, Jacka, Ng, Henry, Nicholson et al., 2008). Las personas que han padecido depresión tienen una mayor probabilidad de ser fumadores, de ser dependientes de la nicotina, tienen mayores dificultades para dejar de fumar y un mayor riesgo de sufrir alteraciones en el estado de ánimo al abandonar el consumo de tabaco (Becoña, Vázquez y Míguez, 2002; Breslau, Kilbey y Andreski, 1992; Dierker y Donny, 2008; Gurra y Pinet, 2004; Hughes, 2007; Leventhal, Kahler, Ray y Zimmerman, 2009; Schmitz, Kruse y Kugler, 2003). Varios estudios han demostrado que incluso niveles bajos de sintomatología depresiva en el momento de dejar de fumar se asocian a dificultades para dejar el hábito y a una mayor persistencia de la dependencia de la nicotina (Hitsman, Borrelli, McChargue, Spring y Niaura, 2003; Niaura, Britt, Shadel, Goldstein, Abrams y Brown, 2001).

## **Objetivos**

Evaluar la relación entre la sintomatología depresiva pretratamiento y la abstinencia en el consumo de tabaco en una muestra de 202 fumadores que acuden a un tratamiento psicológico para dejar de fumar.

## **Método**

La muestra estuvo formada por 202 fumadores que demandaron tratamiento psicológico para dejar de fumar en la Unidad de Tabaquismo de la Universidad de Santiago de Compostela entre octubre de 2006 y febrero de 2008. Los criterios de exclusión fueron: presencia de un trastorno mental grave diagnosticado (trastorno bipolar y/o trastorno psicótico); dependencia concurrente de otras sustancias (cocaína y/o heroína); haber participado en el mismo tratamiento psicológico o en otro similar durante el año previo; haber recibido algún tratamiento farmacológico eficaz para dejar de fumar (terapia sustitutiva de nicotina, bupropión, vareniclina) durante el año previo; padecer alguna patología física de alto riesgo vital para el sujeto, lo que precisaría una intervención inmediata en formato individual (ej., infarto agudo de miocardio reciente, neumotórax, etc.), y no acudir a la primera sesión del tratamiento en grupo. De una muestra inicial de 243 sujetos, fueron excluidos 41 por cumplir alguno de los criterios de exclusión mencionados anteriormente, quedando formada la muestra final por 202 fumadores de cigarrillos (43,1% varones y 56,9% mujeres). Su media de edad fue de 43,99 años (D.T.= 10,70). En el momento de comenzar el tratamiento fumaban una media de 24,32 cigarrillos al día (D.T. = 10,22).

Se utilizaron como instrumentos de evaluación el *Cuestionario sobre el hábito de fumar* (Becoña, 1994), el *Cuestionario de Evaluación de Sintomatología Depresiva* (CES-D, Radloff, 1977) y la evaluación de monóxido de carbono en aire espirado. El tratamiento aplicado fue el tratamiento psicológico cognitivo-conductual *Programa para Dejar de Fumar* de Becoña (2007).

Una vez finalizado el tratamiento se realizaron seguimientos personales a los 6 y 12 meses.

## Resultados

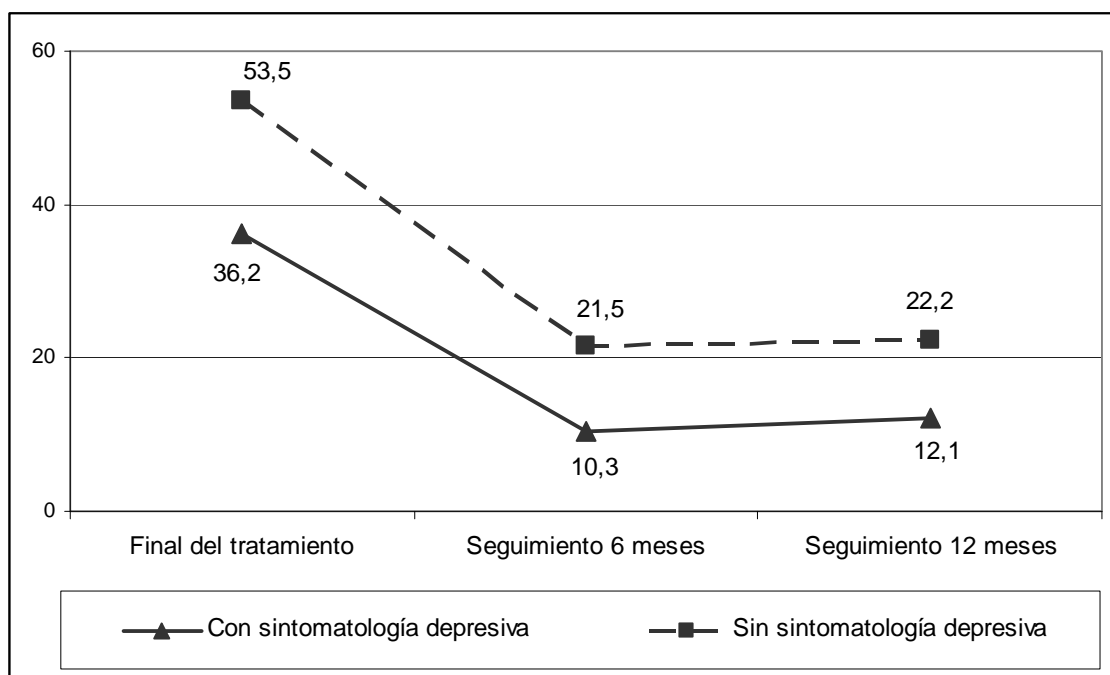
Antes de comenzar el tratamiento para dejar de fumar, se encontró que el 28,7% de los fumadores presentaba sospecha de depresión (puntuación igual o superior a 16 en el CES-D).

Tras 6 sesiones de tratamiento psicológico, encontramos que los individuos con sintomatología depresiva pretratamiento obtuvieron un porcentaje de abstinencia significativamente inferior en el consumo de tabaco ( $\chi^2_{(1)} = 4,934$ ,  $p < ,05$ ) que los fumadores sin sintomatología depresiva (36,2% frente al 53,5% abstinentes al final del tratamiento).

Sin embargo no se alcanzó la significación estadística en cuanto a la relación entre sintomatología depresiva pretratamiento y el estatus de fumador a los 6 meses ( $\chi^2_{(1)} = 3,456$ ,  $p = ,063$ ) y a los 12 meses de haber finalizado el tratamiento ( $\chi^2_{(1)} = 2,736$ ,  $p = ,098$ ). No obstante, el porcentaje de sujetos con sintomatología depresiva antes de comenzar el tratamiento que estaban abstinentes a los 6 y 12 meses fue inferior que el de los sujetos sin síntomas depresivos (10,3% frente a 21,5% a los 6 meses; 12,1% frente a 22,2% a los 12 meses) (ver figura 1).



Figura 1. Porcentaje de individuos abstinentes con y sin sintomatología depresiva pretratamiento, evaluada con el CES-D, al final del tratamiento y en los seguimientos de 6 y 12 meses.



## Conclusión

La presencia de sintomatología depresiva, incluso a niveles bajos, antes de comenzar un tratamiento psicológico para dejar de fumar se relaciona con una menor probabilidad de alcanzar la abstinencia al finalizar el mismo, tal y como han encontrado estudios previos (Breslau et al., 1992; Dierker y Donny, 2008; Hitsman et al., 2003). Por ello, es fundamental tener en cuenta la presencia de síntomas depresivos antes de comenzar la intervención clínica, en la medida en que pueden influir negativamente en el resultado del tratamiento, y una vez que se ha abandonado el consumo de tabaco, por las propiedades antidepresivas que tiene la nicotina (Gurrea y Pinet, 2004).

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## UM HOMEM DE VÍCIOS

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### Resumo

#### Introdução

O tabagismo aparece muitas vezes associado ao alcoolismo. É difícil a cessação quer de um quer de outro e, frequentemente, os doentes que entram em abstinência alcoólica dificilmente fazem cessação tabágica.

#### Metodologia

Victor, 52 anos, alcoólico crónico em abstinência desde Maio de 2008. Fumador há mais de 20 anos. Recorreu à consulta por olho vermelho, no entanto refere também cansaço progressivo para pequenos esforços. Ao Exame Objectivo verifica-se a presença de sibilos na auscultação pulmonar. Pediu-se Espirometria que revela Doença Pulmonar Obstrutiva Crónica moderada. Nessa altura diz que quer deixar de fumar porque sente que o cigarro o está a prejudicar.

#### Resultados

Numa primeira tentativa quer deixar sem medicação. Agenda-se dia D e consulta. A tentativa falhou. O doente encontra-se nessa altura pronto para fazer nova tentativa, mas com ajuda medicamentosa. Iniciou com bupropiona, marca-se novo dia D e nova consulta. Tentativa novamente falhada por grandes níveis de ansiedade. Remarca-se novo dia D e consulta. Aguarda-se o resultado.

#### Conclusão

A decisão de deixar de fumar pode ser accionada por um problema de saúde. A cessação tabágica é difícil mesmo para quem já está em abstinência alcoólica há mais de 1 ano.

Portugal encontra-se em 3º lugar a nível mundial em termos de consumo de álcool. Nos Açores essa realidade, apesar de não haver estudos ou estatísticas, parece haver uma média de alcoólicos superior à média nacional.

No que concerne ao tabaco, o seu consumo parece ser maior nestas Ilhas Atlânticas. Isso deve-se em boa parte aos muito baixos preços praticados. Na realidade o preço do maço mais barato nos Açores é de 1,60 a 2,25 euros, enquanto em Portugal Continental o seu preço está acima dos 2,5 euros por maço.

Socialmente tanto o álcool como o tabaco são muito bem aceites. Na maioria das vezes uma mesma pessoa tem os dois vícios. Nos meios rurais, como no caso do concelho de Nordeste, os principais passatempos à noite são ver televisão ou ir ao café, que são escolhidos pelas mulher e pelos homens respectivamente. No café bebe-se, conversa-se e fuma-se.

A nível da nossa formação pré-graduada temos muito pouca instrução em alcoolismo e nenhuma em desabituação tabágica ou até mesmo em consulta motivacional. Dos muitos fumadores de um ficheiro de 500 utentes, até hoje apenas se conseguiu motivar 3 para deixarem de fumar e 2 para deixarem de tomar bebidas alcoólicas.

Este trabalho teve como objectivos demonstrar as dificuldades do ponto de vista do profissional de saúde, da aceitação do doente em termos da cessação tabágica e da necessidade de medicação para deixar de fumar. Também é uma forma de demonstrar que as agendas dos doentes não são as agendas dos profissionais de saúde e que ambas são mutáveis.

O Sr. Victor M. tem 52 anos, é de raça caucasiana, é casado, tem o 4º ano de escolaridade (escolaridade obrigatória para a sua idade). É casado, vivendo numa família alargada, tendo como co-habitantes a mulher, a filha e a sogra. O filho mais velho já saiu do agregado familiar. Socioeconomicamente encontra-se na classe IV da classificação de Graffar. Trabalha como condutor para os Serviços Florestais da Região Autónoma dos Açores.

A lista de problemas activos do Sr. Victor incluía síndromes da coluna com irradiação (L86 do ICPC2) e abstinência alcoólica há cerca de 10 meses. (Abuso do álcool – P15).

A primeira consulta realizou-se a 10 de Março de 2009. O motivo da consulta para o doente foi olho vermelho. De acordo com o mesmo tinha olho vermelho com secreções purulentas em especial pela manhã, associado a lacrimejo e prurido. Por ser o primeiro contacto com aquele doente fez-se revisão de sistemas e hábitos do paciente tendo encontrado de novo consumo de tabaco, cansaço progressivo para pequenos esforços e alterações a nível das articulações das mãos. Ao exame objectivo verificou-se a presença de olho vermelho, dedos em cabeça de cisne e sibilos frequentes na auscultação pulmonar. As hipóteses diagnósticas colocadas foram conjuntivite, artrite reumatóide ou outra doença do tecido conjuntivo e DPOC. Nesta consulta fez-se a abordagem rápida para a possibilidade de se iniciar a cessação tabágica a qual não foi

aceite pelo doente. Prescreveu-se um colírio, pomada oftálmica e terapêutica de alívio para a possível DPOC. Como exames complementares de diagnóstico pediu-se uma Espirometria e análises com estudo das doenças auto-imunes.

Após esta consulta o doente passou a ter mais um problema activo, nomeadamente o abuso de tabaco (P17).

No dia 15 de Junho dá-se a 2ª consulta que tem como motivo trazer o resultado dos exames complementares de diagnóstico. A Espirometria revelou uma DPOC estadio 2. Diagnostica-se DPOC e medica-se com tiotrópio. Após este resultado e a prescrição de medicação o Sr. Victor toma consciência que o fumo já o está a prejudicar e decide deixar de fumar. Aplicando o Teste Fagerström verifica-se um grau de dependência muito alto. O doente decidiu que ia deixar de fumar sem ajuda de terapêutica farmacológica. A data escolhida para o fazer foi 26 de Julho. Foi uma data distante, para assim deixar passar as grandes festas do concelho. Remarcou-se consulta para o dia 3 de Agosto para verificar como estava a decorrer a tentativa.

Nesta data não houve sucesso. Como plano o doente iria iniciar terapêutica com Bupropiom, mas uma vez que o doente fazia medicação prescrita pela Psiquiatria e tinha consulta para breve decidiu-se escrever uma carta ao Psiquiatra a perguntar da exequibilidade desta terapêutica.

A 12 de Agosto o doente traz a informação que pode fazer Bupropiom, e, desta forma, inicia-se a terapêutica correcta para cessação tabágica. O dia D é marcado para 24 de Agosto e remarca-se consulta para 31 de Agosto.

Nesta última data ainda não temos sucesso, e adiciona-se à terapêutica um ansiolítico. Nesta consulta o doente já se sente à vontade para falar de mais um problema que o atormenta: não consegue ter erecções. É medicado para tal. Planeia-se contacto telefónico para dali a um mês e depois consulta em Outubro.

Nos 2 contactos telefónicos estabelecidos o Sr. Victor encontrava-se em abstinência tabágica e já nem colocava o cigarro na boca.

No dia 26 de Outubro, data da última consulta, o Sr. Victor estava em abstinência alcoólica há 17 meses e abstinência tabágica há 1 mês e 10 dias. O mais difícil, segundo ele, foi a abstinência tabágica.

As expectativas iniciais do paciente em relação à sua doença não eram nenhuma; na realidade ele não considerava a sua adição como uma patologia. Ao receber o resultado da Espirometria passou a admitir que tinha doença e esperava com confiança que podia deixar de fumar sozinho. As expectativas do técnico de saúde nesta segunda consulta eram que o doente não conseguiria deixar de fumar devido ao seu alto grau de dependência. Na terceira consulta tanto as expectativas do doente como as do médico passaram a ser semelhantes: seria difícil, necessitaria de ajuda farmacológica, mas acabaria por deixar de fumar. O doente nesta altura dizia que se deixou de beber também seria muito capaz de deixar de fumar.

Economicamente a terapêutica com Bupropiom é difícil de fazer para o doente. Antes da última consulta o Sr. Victor ficou 2 dias sem medicação porque ainda não havia recebido o ordenado e não tinha dinheiro para a mesma.

Este foi um caso duplamente feliz: um homem com dois vícios e que agora não tem nenhum.

No caso da cessação tabágica, além de consumir recursos económicos, é preciso a motivação do doente e, acima de tudo, a disponibilidade de tempo que, de certo quando se tratar de uma lista de 1500 doentes será muito mais difícil de obter se não houver uma consulta com periodicidade e multidisciplinaridade (presença de um psicólogo, por exemplo) fixas. Por outro lado, há que apostar mais na formação pré e até mesmo pós graduada para cessação tabágica e consulta motivacional.

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## **PROCESS OF MENTAL CHANGE IN THE TOBACCO WITHDRAWAL. THE GROUP ROLE**

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### **Abstract**

The actual norms dictated by the General Directorate of Health in the process of tobacco cessation, are fundamented in clinic-patient dual models of communication. The process of tobacco cessation demands the mobilization of a complex series of adaptations bio-comportamental that include physiologic, physiologic, social and cultural dimensions. In the likeness of what happens in so many other areas of physiologic intervention, the cognitions, the meta-cognition and finally, the narratives that each smoker creates about himself and the other, can only be deconstructed by a creative approach (poesis). This tributeante transformation bettew the desire of smoking and the pleaser of being an ex-smoker takes place in several studios and the process of identitary chance is partial understood in the light of the transteoric model. The amplification and the facilitation of the chance process are better achieved throw the group approach.

It has been created a consult that we called “Consult to the Diminution of the Tobacco Risc”, fundamented on the transteoric model of Prochaska and on the multi-component model and the group intervention, supported by the social cognitive theories.

This consult began in January of the current year and, with base on the clinic evidence, this is the experience that we present to communicate, since it highlights the importance of the group has a therapeutic instrument. The Group works as an enzyme capable of trigger, identifications, complicity’s, messaged, sensations, experiences, rivalry and atituted that work together to overcome the “clinic-patient” stile of communication.



# PROCESSOS MENTAIS DE MUDANÇA NA DESABITUAÇÃO TABÁGICA. O PAPEL DOS GRUPOS

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## Resumo

As normas de actuação implementadas pela Direcção Geral de Saúde (D.G.S.) nos processos de cessação tabágica fundamentam-se em modelos de comunicação dual clínico-utente. O processo de cessação tabágica exige a mobilização de uma série complexa de adaptações bio-comportamentais que incluem dimensões fisiológicas, psicológicas, sociais e culturais. À semelhança do que acontece em tantas outras áreas da intervenção psicológica, também na desabitação tabágica a propriocepção, os gestos, as emoções, as cognições, as meta-cognições e finalmente, as narrativas que cada fumador constrói acerca de si e dos outros, só pode ser desconstruída por meio de uma abordagem criativa (poiesis). Esta transformação titubeante entre o desejo de fumar e o prazer de ser ex-fumador é pautada por vários estádios e processos de mudança identitária que parcialmente são compreensíveis à luz do modelo transteórico. A amplificação e a facilitação destes processos de mudança são melhor conseguidas por meio de abordagens em matriz grupal.

Criou-se umas consultas que denominamos Consulta de Diminuição do Risco Tabágico, fundamentada no modelo transteórico de Prochaska e nos modelos multi-componentes e de intervenção em grupo, apoiados na teoria social cognitiva.

Esta consulta iniciou-se em Janeiro do corrente ano e, com base na evidência clínica, é esta a experiência que se pretende comunicar, uma vez que ressalta a importância do grupo como instrumento terapêutico. O grupo funciona como um enzima capaz de despoletar, no aqui-e-agora, identificações, cumplicidades, mensagens, sensações, vivências, rivalidades e atitudes de cooperação que ultrapassam o estilo de comunicação dual “clínico-cliente”.

A “Consulta para a Redução do Risco Tabágico” do Centro Hospitalar Psiquiátrico de Lisboa – Hospital Júlio de Matos funciona desde o início do corrente ano e destina-se principalmente a fumadores que sofrem de doença psiquiátrica, utilizando um modelo de intervenção em grupo.

Apresentou-se-nos pertinente a sua criação a partir da constatação da nossa experiência na “Consulta de Desabitação Tabágica” no Centro de Saúde de Odivelas, que vimos a desenvolver desde 2004, em modelo de intervenção grupal, onde pudemos constatar a

necessidade de uma intervenção específica para este tipo de fumadores, tal como vem indicado no Programa Tipo de Actuação em Cessaç o Tab gica implementado pela Direc o Geral de Sa de para o tratamento do uso e depend ncia do tabaco.

Numa revis o da literatura sobre a falta de ades o dos pacientes e dos processos sociais e psicol gicos que medeiam a rela o m dico doente, DiMatteo (1994) refere que 43% dos pacientes deixam de cumprir um tratamento cr nico (como por exemplo, o tabagismo) e que cerca de 75% n o seguem recomenda es relacionadas com mudan as de estilos de vida, como por exemplo deixar de fumar ou lidar com restri es alimentares.

As pessoas com doen a mental grave ou de evolu o prolongada apresentam desvalias ou desvantagens psicossociais que se traduzem por menor integra o socio-familiar e dificuldades ao n vel do funcionamento pessoal, afectivo, social, vocacional e/ou laboral, maior dura o dos sintomas de doen a e n mero de hospitaliza es e maior dificuldade no acesso aos servi os p blicos,   defesa, promo o e cria o de oportunidades de realiza o pessoal (Lieberman, 1993).

Passar do estado de fumador para o estado de ex-fumador implica uma mudan a bastante consider vel nos estilos de vida, trajecto que se enquadra no dom nio da crise, uma vez que se trata de uma viv ncia temporalmente circunscrita, que implica a ruptura de um equil brio pr -existente e   marcada por mudan as r pidas, sendo o seu desenvolvimento mut vel, aberto e influenciado por fen menos internos e externos, estando ainda associada  s caracter sticas da personalidade (Erikson, 1972).

Processos de mudan a s o actividades e experi ncias de confronto, conscientes e inconscientes, com que os indiv duos se deparam de modo a conseguir uma mudan a. O modelo transte rico de mudan a de Prochaska (1992) contempla diversos est dios de mudan a e apresenta o seu percurso. Um dos aspectos importantes que este modelo contem   o de sublinhar que cada processos de mudan a   que cada processo   mais influenci vel em certos est dios que os noutros. As pessoas passam eficientemente atrav s dos est dios quando os processos utilizados s o apropriados a cada um deles. Se alguns processos s o utilizados excessivamente, em est dios inapropriados, eles podem obstruir uma mudan a ou precipitar um retrocesso para um est dio anterior.

Os factores que influenciam a ades o a uma prescri o ou uma motiva o para mudar um comportamento enquadram-se num conjunto de caracter sticas relacionadas com o

profissional, o utente, a relação profissional-paciente, a prescrição, bem como, aspectos ambientais e físicos do meio externo e do serviço de saúde. Na mudança de comportamentos relacionados com a saúde a Teoria Socio-Cognitiva (T.S.C.), enfatiza que esta mudança pode ser facilitada por factores pessoais internos (cognições) e por factores ambientais (Maibach & Cotton, 1995).

No treino de aptidões para levar os fumadores a mudar (Rothman, 2000), uma das tarefas iniciais mais importantes é aumentar a motivação para deixar de fumar, pelo que para além de estratégias comportamentais, a visualização de uma vida livre de fumo é uma maneira importante de aumentar a confiança por pequena que seja a modificação. Incrementa-se a confiança, incrementando o sentido de auto-eficácia e a crença na capacidade de mudar o comportamento. A chave para uma mudança sustentada e para a redução do risco de recaída passa por uma evolução em espiral, onde o utente experimenta alguma satisfação com o processo que está a realizar, pelo que é necessário monitorizar como está a correr a mudança de fumador para ex-fumador, procurando saber como se sente, como está a qualidade das relações sociais, o que já consegue fazer que não conseguia enquanto fumador. Deste modo, o foco situa-se mais na prevenção da recaída, na mudança para estilos de vida positivos, aumentando a motivação posta no esforço de se manter como não-fumador, o que implica voltar a frisar as estratégias de prevenção da recaída e de aumento da auto-eficácia.

Neste âmbito, inclui-se o trabalho sobre o lapso. É importante explicitá-lo como um fenómeno bastante comum, e portanto, não inesperado. Assim, quando acontece, e mesmo antes de acontecer, é fundamental reforçar a motivação, atribuindo uma conotação positiva ao lapso associada a um reforço da consciencialização da sua vulnerabilidade. Uma atitude empática por parte do técnico é importante, falar sobre o reconhecimento da dificuldade da luta que foi empreendida e da frustração de recair em hábitos antigos, tem aqui cabimento (Prochaska, Norcross, Fowler, Follick, & Abrams, 1992).

Neste processo, a intervenção em grupo, mais que a psicoterapia individual, facilita o acesso à problemática ligada à transformação da identidade (fumador / ex-fumador) e à resolução dos diversos conflitos ligados a esta evolução.

Baseando-se estes grupos no Esquema Conceptual Referencial Operativo (ECRO) (Fernandes, Svartman, & Fernandes, 2003), observam-se neles os fenómenos característicos dos grupos terapêuticos específicos.

Terapeuta (s) e candidatos a ex-fumador são actores que chegam ao grupo com um esquema de referência próprio. Da sua interacção, do esclarecimento, da comunicação e da aprendizagem, resulta um novo ECRO, onde a estereotipia do comportamento (fumar) dá lugar a uma maior mobilidade de papéis (todo o leque de comportamentos a adoptar em vez de fumar - estilos de vida mais saudáveis), operando-se estas transformações num nível explícito e nouro implícito (Fernandes, Svartman, & Fernandes, 2003).

O nível explícito contém:

- Adaptação activa à realidade, que compreende a caracterização do perfil de fumador e a implementação de estratégias de auto-eficácia;
- Assunção de novos papéis, que integra a modificação do estilo de vida;
- Responsabilização e consciencialização dos comportamentos de mudança;
- Abandono de papéis inadequados para a tarefa de deixar de fumar;
- Dilatação da produtividade pela acção da vivência partilhada no grupo.

Por seu lado, o nível implícito tem contido:

- Afiliação e pertença. A afiliação é o sentimento mais superficial e a pertença o mais profundo, quando os participantes sentem que fazem parte de um grupo;
- Cooperação. Capacidade de ajuda mútua e circulação de papéis dentro do grupo. Estes papéis, apesar de bem definidos, podem circular entre os diversos membros;
- Persistência. Capacidade de se manter no programa, lidando com as tarefas específicas que são propostas;
- Comunicação. É o veículo que transporta todos os aspectos acima mencionados, bem como os diversos tipos de vinculação entre os elementos do grupo.

No relativo à vinculação, temos também de considerar a coexistência e inter-relação de vários factores, designadamente 1) *Transferências múltiplas*: possibilidade de deslocar para o grupo sentimentos e emoções que em *setting* individual se focalizariam apenas na figura do terapeuta; 2) *Feedback*: processo através do qual cada elemento pode utilizar o que recebe dos outros para avaliar e reflectir sobre o seu comportamento e atitudes; 3) *Reacção de espelho*: cada elemento poderá ver-se reflectido e identificado nas reacções e verbalizações do(s) outro(s). Como fenómeno dinâmico, permite uma troca de experiências que conduz a uma melhor compreensão de ele próprio e dos demais; 4) *Ressonância*: das diversas narrativas que surgem no grupo, cada elemento, em função do seu mundo interno, pode escolher o que lhe for mais significativo.

O programa construído por Miller (1995), FRAMES (*feedback, responsibility, advice, menu, empathy e self-efficacy*), sistematiza este modelo de intervenção em grupo, englobando todas as características acima referidas, pelo que passamos a apresentá-lo de forma sintética:

*Feedback* - é importante dar *feedback* personalizado a cada utente, sobre os efeitos do seu comportamento, tendo o cuidado de não formular juízos de valor;

Responsabilizar – implica o consciencializar as pessoas pelos seus comportamentos no processo de mudança, enfatizando que são elas que têm de fazer as suas próprias escolhas;

Aconselhamento – refere-se a orientações sobre o modo de transformar a motivação em acções, na direcção do ex-fumador;

Menu – o esquema terapêutico não pode ser rígido, deve contemplar um Menu de opções, no sentido em que não existe uma única maneira de implementar a mudança, apenas diversos caminhos que vão sendo ajustados para cada um. Por exemplo, a escolha de um dia para deixar de fumar é programada como uma janela de oportunidade e não como um dia rígido que é imposto;

Empatia – É muito importante para aumentar a motivação, ter um estilo de comunicação sensível, agradável, atento e que compreenda, resulta muitas vezes num aumento da confiança. Uma escuta reflexiva ajuda a ganhar um entendimento empático sobre o que o fumador está a dizer;

Auto-eficácia – Os fumadores não vão deixar de fumar se não pensarem que tal é possível. Optimismo é uma maneira de aumentar e manter a motivação dos fumadores e ex-fumadores. O grupo pode facilitar o optimismo de cada um. Ouvir o ex-fumador ou os outros elementos do grupo, aumenta a confiança em cada um.

De um modo geral, o papel do terapeuta passa por encorajar cada um a partilhar com o grupo a sua história, as suas ambivalências, o modo como resolve alguns dos problemas, como se sente, reforçando o posicionamento face à abstinência. É sempre importante definir o papel do grupo, frisar que não existe para julgar ninguém, mas para ajudar as pessoas a ultrapassar os seus problemas, ouvindo e dando fala. Todos, utentes em vários estádios de mudança e ex-fumadores, desde recentes ( $\leq 1$  mês) a veteranos ( $\geq 6$  mês), ao escutarem e apresentarem as estratégias que utilizaram, facilitam este processo, motivando para manter o rumo no sentido de ex-fumador. Não deixa nunca de ser significativo relembrar que o grupo apenas oferece as ferramentas, mas que a pessoa é responsável pela sua própria mudança.

Esquemáticamente a CRRT encontra-se organizada da seguinte forma:

- **Consulta médica.** A consulta médica é desenvolvida individualmente e constitui o primeiro contacto entre a equipa da CRRT e o fumador. Os principais objectivos resumem-se à avaliação (psiquiátrica, saúde geral, história do hábito tabágico e dados biométricos), triagem (inclusão ou adiamento da entrada no programa), avaliação analítica e avaliação da motivação para a mudança.
- **Sessões de grupo.** As sessões para redução do risco e desabituação tabágica integram-se num programa multicomponentes, com frequência semanal e em matriz de grupo aberto. Neste processo o fumador tem acesso, simultaneamente, a terapêuticas farmacológicas, técnicas de motivação para a mudança, terapia racional emotiva do comportamento (Bishop, 2001), terapia para a prevenção da recaída e materiais de auto-ajuda. Em média, cada fumador permanece no grupo por períodos de dois a quatro meses, em função do nível de dependência tabágica (i.e. cigarros por dia, anos de tabagismo), da gravidade do quadro psicopatológico e do plano terapêutico desenvolvido na CRRT para redução do risco ou cessação / desabituação tabágica.

Em jeito de conclusão, gostaríamos de partilhar o vivido desta experiência, não só por não termos ainda efectuado o necessário tratamento estatístico, mas porque a clínica foi

o nosso ponto de partida e é sempre o nosso caminho. Talvez o aspecto mais relevante, no referente ao tabagismo, tenha sido o constatarmos que as pessoas com doença mental que decidem passar a ser ex-fumadores não têm mais dificuldade em parar de fumar, comparativamente às pessoas sem doença mental. No referente à saúde, temos observado dois factores importantes. Por um lado, há um sentimento de auto-eficácia que ultrapassa o tratamento do tabagismo e se aplica à vida em geral, manifesto em frases do tipo “se consegui deixar de fumar, também hei-de conseguir outras coisas”. Por outro lado, o grupo oferece uma experiência de socialização, por vezes a única positiva, num longo período de tempo, promovendo a reabilitação psicossocial. Dos cerca de 100 fumadores que ingressaram na consulta, presentemente, mais de metade não fuma.

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# LEVELS OF ENVIRONMENTAL TOBACCO SMOKE IN GALICIAN HOSPITALS (SPAIN)

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## Abstract

### Introduction

In 2006 Spain passed a tobacco control law on smoking in enclosed workplaces. Since then smoking is totally banned in workplaces, except in hospitality venues, with a specific reference to hospitals.

### Objectives

To assess law compliance, 18 months after its enactment, in Galician hospitals.

### Methodology

The study was carried out, during 2007, in 16 Galician public hospitals (9 large and 7 small). Within each hospital we established a number of locations (12 in large hospitals and 10 in small), and for each of these we performed an observation of objective (presence of butts, ashtrays and people smoking) and subjective (perception of tobacco smell) signs of tobacco consumption. We also measured nicotine content in the air using nicotine as an airborne marker (178 samples). The presence of smoking prohibition signs was also ascertained.

### Results

169 nicotine samples were analyzed (9 were stolen during the fieldwork). Nicotine was detected in 86 (50.89%) of the sampled points, 8 detected nicotine levels from 0.7-2.2  $\mu\text{g}/\text{m}^3$  (polluted) and another one of 2.4  $\mu\text{g}/\text{m}^3$  (strongly polluted). The remaining ones were under 0.7  $\mu\text{g}/\text{m}^3$  (presence of ETS). The locations more frequently polluted were: the emergency rooms waiting areas (80%), halls (71,4%), nurse stations (53,3%) and public-cafés (53,3%). These places also presented a higher nicotine concentration

median. Only one hospital could be classified as smoke-free according to these measures. The objective and subjective signs of tobacco consumption did not work as well as environmental measures in order to establish the presence of ETS (tobacco smell was identified by the field workers in 5 locations and butts presence in 3). Field workers did not identified people smoking. In 48,59% of the sampled points there were not smoking prohibition signs, but this sign was present in all of the halls of the hospitals studied.

## **Conclusion**

Though the consumption of tobacco is hardly visible in Galician hospitals, the measures of nicotine reveal that this consumption continues to exist. It is necessary to improve the efforts to achieve that our hospitals become smoke-free places. Special attention will be required in those points identified as high consumption. It is necessary to re-define the criteria for deploying tobacco ban signs and to value if there are enough of them. In following studies, nicotine measures should be included in locations near the hospital entrance to value the possible crossed pollution produced by people smoking outside.

**MASS CALIBRATION AND RELATIVE HUMIDITY COMPENSATION  
REQUIREMENTS FOR OPTICAL PORTABLE PARTICULATE MATTER  
MONITORS: THE IMPASHS (IMPACT OF SMOKE-FREE POLICIES IN EU  
MEMBER STATES) WP2 PRELIMINARY RESULTS**

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## **Abstract**

### **Introduction**

Better knowledge of particulate matter (PM) concentrations needs portable, reliable, user friendly, low cost, real time mass analyzers of PM2.5 and PM10.

Optical Particle Counters (OPC) measuring mass have manufacturer calibration specific gravity “K” factor referred to polystyrene latex particles which are completely different than those of the real world, therefore they require specific calibrations. Measurements are also subject to Relative Humidity (RH) heavy interference.

### **Objectives**

To evaluate, within the IMPASHS WP2 Project, the performance of four different OPC's in Environmental Tobacco Smoke and background urban pollution and to find the new “K” factors using one Model BAM-1020 with certificate n. EPQM-0798-122 for comparison.

### **Methodology**

All instruments have been operating in parallel measuring PM2.5 generated by cigarettes (ETS) indoor and by urban pollution outdoor and the data were replicated three times.

### **Results**

“K” factors were widely different between manufacturer's model, instrument serial numbers, ETS and urban pollution, ranging from 0.5 to 2.27. Correlation with BAM-1020 was ranging from 0.7500 to 0.9800 and Student t test from 0.3000 to 0.9500. Relative Humidity interference resulted mathematically compensable up to 75 % RH, but above becomes uncontrollable and sample drying becomes compulsory.

## **Conclusion**

OPC's are very reliable and accurate but need specific calibration and special care in handling and elaboration of the measurements.

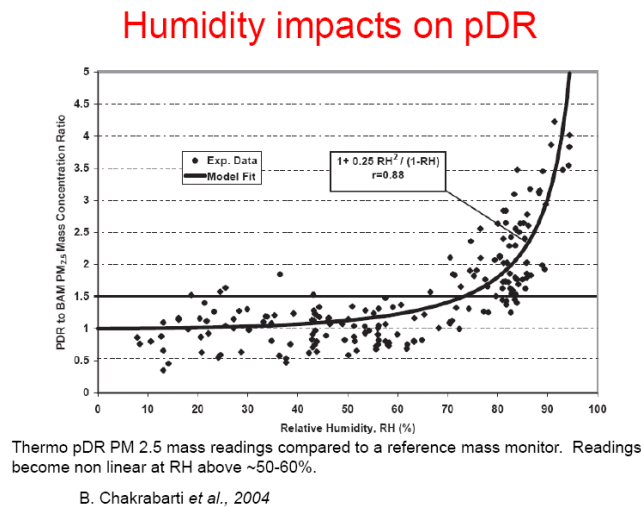
## **Introduction**

Measurement of indoor/outdoor particulate matter (PM) pollution in real time can be satisfactorily and reliably performed using Optical Particle Counters (OPC), if properly calibrated according to the procedure described in the next paragraphs. The OPC's principle of operation is the nephelometric measurement based on the light scattering of airborne particles. The sample of air is normally drawn into the light scattering sensor (nephelometer) with a flow controlled rotary vane pump. The nephelometer is constituted by a light source (low power laser diode), scattered light collection optics and a photo detector circuit. The flow path for the air crosses the path of the laser diode. When the air is clean (absence of airborne particulate), the laser diode light is extinguished in a light trap, but when the air is containing airborne particulate, there is scattering of light which is collected and measured.

The output signals from the detector are empirically proportional to the number and size of particles and are elaborated to present the data expressed in number of particles per liter of selected classes of diameters.

However the certified particulate matter measurement systems are based on gravimetric methods and the concentrations are expressed in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) therefore it is necessary to convert the number of particles per liter to mass. Unfortunately all light scattering devices have inherent difficulties when converting light scatters to mass. Index of refraction and mean particle diameter can affect the amount of light scattered from the same amount of mass<sup>6</sup>. A mathematical equation is applied to the number/size of particles measured by the OPC to obtain first the particle total volume on which a "K" factor is applied to adjust for the specific gravity of the PM to be measured. The simplest solution is to compare the OPC's mass measurements made with default factory "K" $=1.000$  for a set period of time with the mass measured by a gravimetric system over the same period of time. Comparing the concentrations will yield a "K" that can be applied to all OPC measurements performed by the same calibrated analyzer.

Another factor which greatly influences the mass measurements of the OPC's is the interference of the relative humidity (RH). Sioutas *et al.* in 2000, and Chakrabarti *et al.* in 2004 showed that RH could drastically affect the mass concentrations measurements of one OPC model as demonstrated in Fig. 1 in which the desired concentration ratio is 1 and, at RH values greater than 50 %, this ratio begins to increase due to particle aggregation (particle size increase as water is absorbed).



**Fig. 1**

To prevent this inaccuracy it is necessary to provide the OPC measurements with a simultaneous RH measurements and compensate mathematically. However above 80/85 % RH, the interference become so high that inaccuracy in RH measurements brings to unacceptable errors in the concentrations. To obviate to this errors and to permit the use of OPC's also when RH is greater than 80 % it become necessary to reduce the RH to the light scatter chamber to about 50 % either by heating the sample or by drying it by means of *permapure* dryer™.

### **Objectives**

To evaluate, within the IMPASHS WP2 Project, the performance of four different OPC's in the measurements of Environmental Tobacco Smoke (ETS) and background urban pollution and to find the new “K” factors for PM<sub>2.5</sub> using as automatic mass reference the measurements of one Model BAM-1020 with certificate of equivalence

## Methodology

The method to measure PM environmental pollution used in monitoring stations all over the world is the gravimetric (Federal Reference Method FRM or the European equivalent) and the data are generally presented as mass of PM<sub>2.5</sub> and PM<sub>10</sub>. The system consists of equipment designed to accumulate the PM on a pre-weighted filter through which a known air flow is sampled for a programmable time. At the end of the sampling time the filter is removed and accurately dried and weighted. The difference in weight is the amount of PM deposited on the filter which, divided for the number of cubic meters of air passed through the filter, gives the mass expressed in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). However this method requires skilled operators and expensive laboratory equipment, is time consuming and deliver the results of the measurements only with a delay of some days. To overcome this inconvenient, automatic sampling and measurement methods have been developed which can deliver the concentrations every 1 or 2 hour's. These methods are the Beta Attenuation Monitors (BAM) and Tampered Element Oscillating Balance (TEOM). Several manufacturers have developed analyzers based on these principles of operation and many have been designed as equivalent to the gravimetric by the U.S.A. Environmental Protection Agency. These analyzers are commonly used in most of the monitoring stations and deliver the concentrations in hourly averages informing in almost real time the pollution level. The PM<sub>2.5</sub> measurements of the OPC models described in Appendix A are compared with the same PM<sub>2.5</sub> measured by one Beta Attenuation Monitor model BAM-1020, equipped with standard PM<sub>2.5</sub> inlet. The BAM-1020, is manufactured by Metone Instruments Inc. and is designated as equivalent method by U.S. E.P.A. n.° EQPM-0798-122 and certified by the German T.Ü.V. (: 936/21205333/A Köln, 06.12.2006).

**Site informations:** the generation of ETS aerosol and the measurements have been performed in the Tobacco Control Unit Research Laboratory of the Fondazione IRCCS Istituto Nazionale dei Tumori, located in Milan, in a room of about 45 m<sup>3</sup> without air conditioning and with about 0.3/0.4 air exchange per hours (ach). To assure the maximum mixing factor (PM concentrations of the same value in every point of the room), one fan of about 1,500 m<sup>3</sup>/hour was always in operation during the ETS generation and measurements.

## Results

### RH Interference compensation

During all tests the RH was measured and all raw data have been mathematically compensated according the Sioutas tests using the following equation:

$$C_{comp} = C_{meas} / ((1+(RH/100)^7) \times 3.72)$$

Where:  $C_{comp}$  = concentration compensated for RH interference

$C_{meas}$  = concentration measured

$RH$  = Relative Humidity measured

Fig.2 shows the interference compensation curve and Fig. 3 the linear regression analysis.

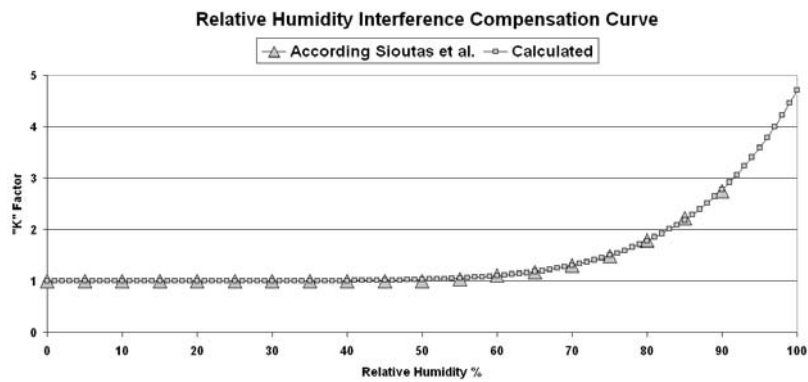


Fig. 2

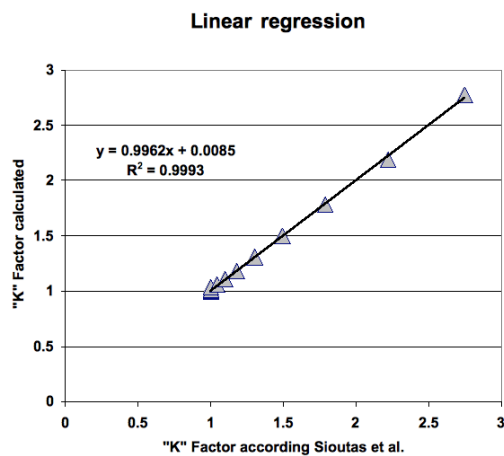


Fig. 3

The accuracy of the RH interference correction using the above equation has been experimentally tested measuring continuously the outdoor PM<sub>2.5</sub> concentrations over a wintertime period for 7 days using two OPC's: the model e-sampler and the model Aerocet 531 (same instruments used for the gravimetric calibrations) operating in parallel.

The e-sampler is normally equipped with a sampler heater control system driven by a RH sensor installed on the inlet of the laser chamber and the RH set point is programmable. In this case the RH set point was set at 40 %. The Aerocet is equipped only with a Temperature and RH measurement.

The results are represented in Fig. 4: the RH changed from a minimum of about 30 to a maximum of 98 % with no interference on the e-sampler indications (red line) but heavily interfering with the Aerocet 531 indication by increasing the value of a factor of 3 with RH > 80/85%. The thin black line is showing the uncorrected Aerocet 531 measurements. When the equation was applied, in excel, to the Aerocet 531 raw data, the correction was very effective. Correlation analysis and Student t test between e-sampler and Aerocet 531 indicate the accuracy of the correction giving the following results:

Without correction: correlation = 0.8511 and p = 7.7E-49

After correction: correlation = 0.9765 and p = 0.6859

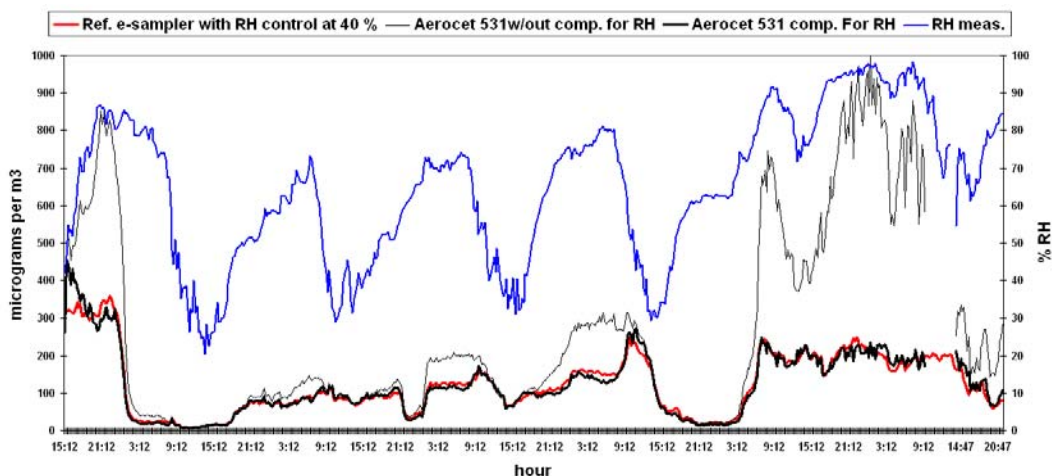


Fig. 4



### “K” factor corrections

All Analyzer measurements were made using the default “K” factor of 1.000 and the comparison yields to the results listed below for each instrument. Comparison is made on a hourly basis since the BAM-1020 supply the data as the average. This operation was made in Excel calculating the hourly average of the Analyzers with their internal clock synchronized with the BAM-1020 clock before starting the sampling. For each set of data, the correlation and the “p” of Student t test is calculated and reported to evaluate the accuracy and precision of the new “K” factor resulting from the calibration.

An example of the graphs and the regression analysis is shown in Fig. 5 and 6:

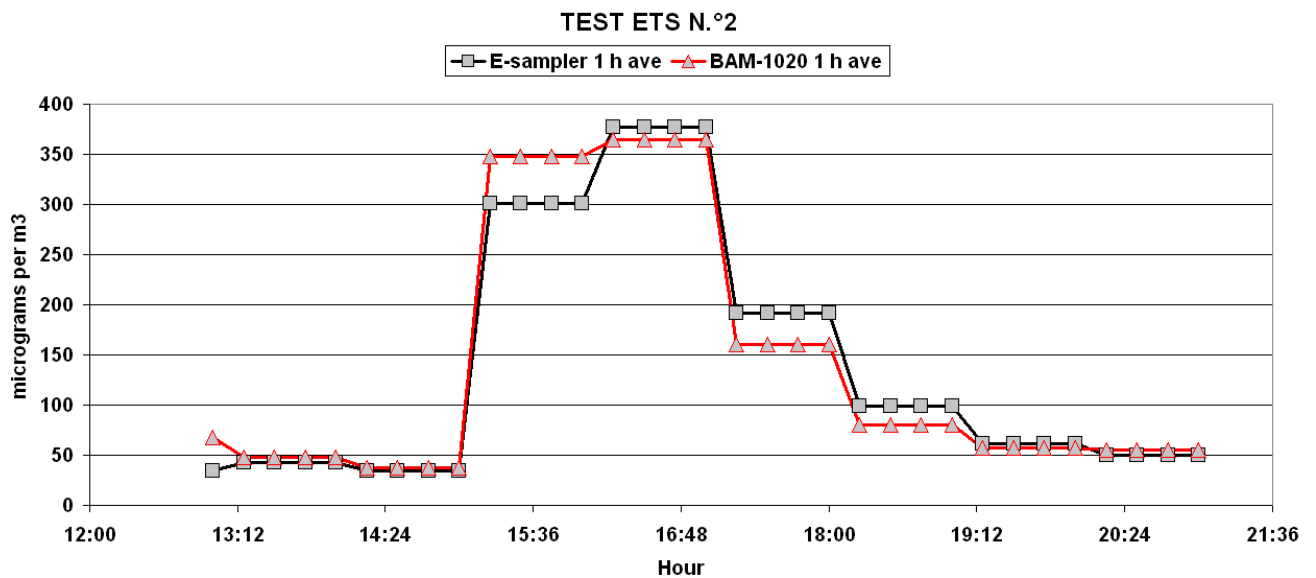


Fig. 5

**ESAMPLER/BAM-1020 TEST N.°2  
REGRESSION ANALYSIS**

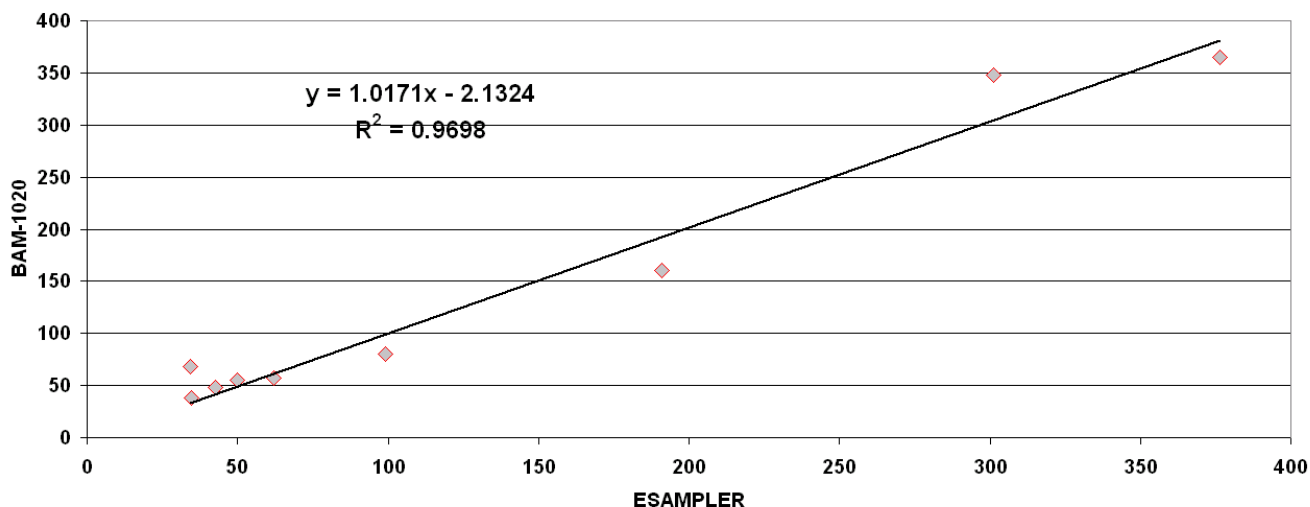


Fig. 6

The following tables show the detailed results for each test and each OPC.

**1.- Model Aerocet 531, Metone Instruments Inc. serial # E-1871**

**Tobacco Control Unit, National Cancer Institute, Milan, Italy**

<b>III° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	128.0	129.2	0.9147	0.2361	11.5
<b>URBAN</b>	49.0	49.0	0.7943	0.9769	8.1
<b>II° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	179.8	179.8	0.9940	0.9767	10.2
<b>URBAN</b>	57.3	57.4	0.8574	0.7661	14.3
<b>I° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	201.5	201.6	0.9912	0.9478	12.2
<b>URBAN</b>	52.0	52.0	0.9032	0.9871	16.9
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9666	0.7202	<b>11.3 (1.0)</b>		
<b>URBAN</b>	0.8516	0.9100	<b>13.1 (4.5)</b>		

**2.- Model Aerocet 531, Metone Instruments Inc. serial # 8551**

**Research Institute for a Tobacco Free Society, Dublin, Ireland**

<b>III° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	189.1	186.8	0.9821	0.9310	10.2
<b>URBAN</b>	18.9	19.0	0.9665	0.5470	6.6
<b>II° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	133.2	133.4	0.9915	0.7079	8.1
<b>URBAN</b>	na	na	na	na	na
<b>I° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	86.3	86.6	0.9871	0.8629	9.2
<b>URBAN</b>	na	na	na	na	na
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9869	0.8340	<b>8.1 (1.05)</b>		
<b>URBAN</b>	na	na	<b>6.6 (na)</b>		

**3.- Model Aerocet 531, Metone Instruments Inc. serial # F-8557**

**OFT, Paris, France**

<b>III° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	189.1	189.1	0.9818	0.1924	8.3
<b>URBAN</b>	18.9	18.9	0.9777	0.8638	5.5
<b>II° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	109.3	109.4	0.9904	0.9278	6.3
<b>URBAN</b>	na	na	na	na	na
<b>I° test</b>	<b>BAM</b>	<b>Aerocet</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	86.3	86.7	0.9974	0.5606	7.0
<b>URBAN</b>	na	na	na	na	na
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9899	0.5603	<b>8.1 (1.01)</b>		
<b>URBAN</b>	na	na	<b>5.5 (na)</b>		

**4.- Model 1.180 Portable Aerosol Spectrometer, Grimm serial#8F070042**

**Inst. Umwelthygiene, ZPH, Wien, Austria**

<b>I° test</b>	<b>BAM</b>	<b>Grimm</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	253.3	253.0	0.9990	0.9625	1.26
<b>URBAN</b>	51.7	51.5	0.8423	0.6725	1.30
<b>II° test</b>	<b>BAM</b>	<b>Grimm</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	198.2	199.2	0.9781	0.9468	1.22
<b>URBAN</b>	56.9	54.4	0.9733	0.4936	1.30
<b>III° test</b>	<b>BAM</b>	<b>Grimm</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	151.6	152.7	0.9969	0.7579	1.10
<b>URBAN</b>	49.6	49.6	0.9391	0.9308	1.26
<b>Average</b>	<b>Correlation</b>	<b>p test</b>	<b>K Factor (SD)</b>		
<b>ETS</b>	0.9914	0.8890	<b>1.2 (0.08)</b>		
<b>URBAN</b>	0.9182	0.6990	<b>1.3 (0.02)</b>		

**5.- Model SidePak TSI Serial# 10805037**

**Servei d'Avaluació i Metodes d'Intervenció**

**Agencia de Salut Publica de Barcelona, Barcelona, Spain**

<b>III° test</b>	<b>BAM</b>	<b>S. 10805037</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	135.8	134.7	0.9980	0.7397	0.45
<b>URBAN</b>	49.1	49.1	0.9304	0.9763	0.51
<b>II° test</b>	<b>BAM</b>	<b>S. 10805037</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	198.2	49.1	0.9304	0.9763	0.51
<b>URBAN</b>	58.0	57.6	0.9756	0.6299	0.47
<b>I° test</b>	<b>BAM</b>	<b>S. 10805037</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	196.5	196.3	0.9947	0.9880	0.56
<b>URBAN</b>	52.8	52.8	0.8990	0.9700	0.52
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9744	0.9013	<b>0.51 (0.05)</b>		
<b>URBAN</b>	0.9350	0.8587	<b>0.50 (0.02)</b>		

**6.- Model SidePak TSI Serial# 10805044**

**Servei d'Avaluació i Metodes d'Intervenció**

**Agencia de Salut Publica de Barcelona, Barcelona, Spain**

<b>III° test</b>	<b>BAM</b>	<b>S. 10805044</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	135.8	135.9	0.9981	0.9727	0.45
<b>URBAN</b>	49.1	49.5	0.9263	0.6171	0.48
<b>II° test</b>	<b>BAM</b>	<b>S. 10805044</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	157.6	157.2	0.9884	0.9677	0.52
<b>URBAN</b>	47.2	47.6	0.3453	0.6901	0.48
<b>I° test</b>	<b>BAM</b>	<b>S. 10805044</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	176.0	174.9	0.9955	0.9020	0.55
<b>URBAN</b>	52.7	52.4	0.9184	0.8267	0.55
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9940	0.9475	<b>0.51 (0.05)</b>		
<b>URBAN</b>	0.7300	0.7113	<b>0.50 (0.04)</b>		

**7.- Model e-sampler, Metone Instruments Inc. serial # G3427**

**Tobacco Control Unit, National Cancer Institute, Milan, Italy**

<b>III° test</b>	<b>BAM</b>	<b>e-sampler</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	224.0	224.6	0.8621	0.4453	1.77
<b>URBAN</b>	52.4	52.0	0.9659	0.4390	1.85
<b>II° test</b>	<b>BAM</b>	<b>e-sampler</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	141.6	141.3	0.9884	0.9070	1.77
<b>URBAN</b>	56.9	56.6	0.9884	0.9070	1.66
<b>I° test</b>	<b>BAM</b>	<b>e-sampler</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor</b>
<b>ETS</b>	123.3	124.2	0.9568	0.5634	1.51
<b>URBAN</b>	49.2	49.1	0.9568	0.8593	1.24
<b>Average</b>	<b>Correlation</b>	<b>P test</b>	<b>K factor (SD)</b>		
<b>ETS</b>	0.9358	0.6385	<b>1.68 (0.1)</b>		
<b>URBAN</b>	0.9704	0.7351	<b>1.58 (0.3)</b>		

**Summary of “K” factors**

	<b>Aerocet</b>	<b>Aerocet</b>	<b>Aerocet</b>	<b>Grimm</b>	<b>SidePak</b>	<b>SidePak</b>	<b>e-sampler</b>
	<b># 1</b>	<b># 2</b>	<b># 3</b>	<b># 4</b>	<b># 5</b>	<b># 6</b>	<b># 7</b>
<b>ETS</b>	11.3 (1.0)	8.1 (1.05)	8.1 (1.01)	1.2 (0.08)	0.51 (0.05)	0.51 (0.05)	1.68 (0.1)
<b>URBAN</b>	13.1 (4.5)	6.6 na	5.5 na	1.3 (0.02)	0.50 (0.02)	0.50 (0.04)	1.58 (0.3)

**Comments**

“K” factors were found to vary noticeably not only between manufacturer's model but also between instruments of the same manufacturer with different serial numbers.

Differences in the “K” factors between ETS and urban pollution have also been found and must be taken in consideration during the measurements campaigns.



Long term measurements in urban pollution (7 days) showed changes in the optimal “K” factor suggesting that there may be changes in urban pollution composition affecting it sensibly, but the evaluation of the amount of these changes needs more investigations.

These facts are confirming the very well known phenomena of optical characteristics modifications caused by changes in the physical/chemical composition and morphology of the PM.

These factors together with the modification in specific gravity are consequently changing the final mass measurement whenever the typology of PM is changing.

In the test conditions, the “K” factors were ranging from 0.5 to 13.1. But despite this wide range, the accuracy and precision for a given typology of PM measured with all OPC’s compared with the BAM-1020 measurements were good, ranging from about 0.3500 to 0.9800 and Student t test from about 0.3000 to 0.9500. Also the repeatability of the measurements of all analyzers when used with the same PM characteristics is acceptable.

## **Conclusion**

All OPC’s can be considered suitable for the measurements of ETS PM provided the above “K” factors are applied to the raw data. Regarding urban pollution it must be advised that there may be differences in case the physical/chemical composition and morphology of the PM of the site where the measurements are made differs from those of Milan, where the calibration have been made. In this case it is suggested to proceed locally with a further calibration to determine the new factor.

Relative Humidity interference can be compensated mathematically and with acceptable accuracy up to 80/85 % RH, but above these values the error introduced by the RH measurement (normally  $\pm 5$  % RH) becomes unacceptable and sample drying becomes compulsory.

OPC's are extremely simple and user friendly to use, maybe too simple: just push a button and they go and in a few minutes they produce the data. They are also very reliable and accurate. But the correct interpretation of the data is not so simple; manufacturer factory calibration data cannot be applied and they absolutely need

specific calibration and special care in handling and elaboration of the measurements applying the procedures above described.

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# EFFECTIVENESS OF SMOKE-FREE POLICY ENFORCEMENT: A CROSS-SECTIONAL STUDY OF LISBON TAXIS – PRELIMINARY RESULTS

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## Abstract

### Introduction

Smoke-free policy enforcement is crucial to effective tobacco control. In order to reduce exposure to environmental tobacco smoke (ETS), WHO recommends smoking bans and 100% smoke-free public places. Under current Portuguese law, smoking is banned on public transport.

### Objectives

To evaluate the effectiveness of current smoke-free policy, a survey of Lisbon taxi drivers was carried out.

### Methodology

This survey, undertaken between January and June 2009 was based on direct structured interviews while using taxi services (random sample).

### Results

Eighty-two male taxi drivers participated in the survey. Average age was 54.3 years. Of the responders, 37.8% admitted being current smokers smoking on average 27.8 cigarettes per day, 36.6% were ex-smokers. Of the smokers, 81.0% did not want to quit and 61.2% admitted smoking in their taxi. When questioned about the smoking behavior of their colleagues, 92.3% reported that colleagues that smoked did so in their taxis. 12.5% of the drivers allowed clients to smoke. Prior to the current law, 79.5% allowed clients to smoke.

The current reasons for not allowing smoking were the legal ban and associated fines (76.5%), disease concerns (5.9%), ETS was unpleasant for them (7.4%) and “not to disturb non-smokers” (4.4%).

86.4% of the drivers reported that some clients still asked if they could smoke in their taxis. 86.6% of the drivers agreed with the ban on smoking in closed spaces. When questioned about their understanding of the ban, 44.2% mentioned “health protection”, 26.0% “respect for non-smokers”, 9.1% “disease prevention” and 10.4% did not know the reason.

Only one driver had attended a smoking prevention session. All taxis displayed the required signs. Stale smoke smells were detected by the person conducting the survey in 25.0% of the cars.

### **Conclusion**

The high prevalence of smoking among Portuguese taxi drivers contributes directly to low compliance with the ban on smoking in public places. While most taxi drivers approve the ban, most who are also smokers do not comply with it. Media campaigns promoting smoking prevention and awareness among taxi drivers and better law enforcement would contribute directly to improved tobacco control in Portugal.

# IMPACT ASSESSMENT OF THE *LEI N° 37/2007* IN THE USERS OF GUALTAR'S FAMILY HEALTH UNIT (BRAGA)

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## Abstract

### Introduction

Tobacco is the main cause of death and preventable diseases in the developing world and even for the second-hand smoke there is no safe level of exposure. Therefore on the 1st of January of 2008 a tobacco control policy in Portugal, *Lei n° 37/2007*, was implemented. It bans smoking in public places and workplaces.

### Objectives

Assess the impact of the implementation of *Lei n° 37/2007*, on the 1<sup>st</sup> of January of 2008, in tobacco consumption, social habits and well-being in workplace of the users of Gualtar's Family Health Unit (Unidade de Saúde Familiar de Gualtar), that smoked at least until the 31th of December of 2007 and assess its contribution to smoking cessation.

### Methodology

An observational, transversal and analytical study with the application of a questionnaire to a convenience sample.

### Results

The 218 analysed smokers had decreased tobacco consumption from 11-20 cigarettes/day to 1-10 cigarettes/day after the implementation of smoke-free law, *Lei n° 37/2007*, without statistically significant changes in their well-being in workplace or social habits (frequency and time of permanence in public places such as cafés, shopping centers, bars/pubs, discos, restaurants and smoking at home). Only a minority needed to turn to health professionals or medicines to adapt to smoke-free workplaces

(4,2% e 3,2% respectively). This law facilitated the tobacco cessation and abstinence maintenance in 73% of the 22 former smokers analysed, through the increase of the price of cigarettes and the banning of smoking. From these 27% turned to a health care professional to quit smoking.

### **Conclusion**

This survey confirms the effectiveness of tobacco control policies in the decrease of the tobacco use, as it has been occurring in other countries, without interfering significantly in the smoker's social habits and well-being in the workplace. These results should be corroborated by similar studies with randomized samples, in order to be representative.

# **AVALIAÇÃO DO IMPACTO DA LEI Nº 37/2007 NOS UTENTES DA UNIDADE DE SAÚDE FAMILIAR DE GUALTAR – BRAGA**

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## **Resumo**

### **Introdução**

A Lei nº 37/2007, que entrou em vigor a 1 de Janeiro de 2008, introduziu restrições tabágicas nos locais de trabalho para combater o tabagismo activo, que é a principal causa de morte e doenças evitáveis nos países desenvolvidos, e passivo, para o qual não existe um limiar seguro de exposição.

### **Objectivos**

Avaliar o impacto da entrada em vigor da Lei nº 37/2007, a 1 de Janeiro de 2008, no consumo tabágico, hábitos de lazer e bem-estar no local de trabalho dos utentes da Unidade de Saúde Familiar de Gualtar, que eram fumadores, pelo menos, até 31 de Dezembro de 2007, e avaliar a sua contribuição para a cessação tabágica.

### **Metodologia**

Estudo observacional, analítico e transversal, através da aplicação de um questionário a uma amostra de conveniência.

### **Resultados**

Nos 218 fumadores analisados o consumo tabágico reduziu de 11-20 para 1-10 cigarros/dia após a entrada em vigor da Lei nº 37/2007, sem alterações significativas no seu bem-estar no local de trabalho, bem como nos seus hábitos de lazer (frequência de locais públicos como cafés, centros comerciais, bares/*pubs*, discotecas, restaurantes e respectivo tempo de permanência e consumo tabágico no interior dos domicílios). Apenas uma minoria recorreu a um profissional de saúde ou a medicamentos para se



adaptar às novas restrições tabágicas no local de trabalho (4,2% e 3,2%, respectivamente). Esta Lei facilitou a cessação e manutenção da abstinência tabágica em 73% dos 22 ex-fumadores analisados, essencialmente pelo aumento do preço dos cigarros e pelas restrições tabágicas. Destes, 27% recorreu a ajuda médica para deixar de fumar.

### **Conclusão**

Este estudo confirma a eficácia das políticas de restrição tabágica nos locais de trabalho na diminuição do consumo tabágico, tal como tem ocorrido noutros países, sem interferir significativamente nos hábitos de lazer e no bem-estar do fumador no local de trabalho. Estes resultados deverão ser corroborados por estudos semelhantes com amostras aleatórias, logo representativas.

# HOSPITAL STAFF, SMOKING BEHAVIOUR AND SMOKING ATTITUDES: A CROSS SECTIONAL STUDY IN A PORTUGUESE HOSPITAL BEFORE THE SMOKING BAN

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## Abstract

### Introduction

Tobacco control and smoking prevention should be top priorities in all hospitals.

Hospitals should play an exemplary role in making smoke-free environments the social norm.

As part of a smoke-free hospital policy, a Portuguese teaching hospital implemented a tobacco control program before the national smoking ban came into force on 1 January 2008. Staff smoking behaviour and attitudes in the hospital were surveyed by the smoking prevention department

### Methodology

A tailored version of the European Network of Smoke-Free Hospitals self-administered questionnaire was delivered to all department heads along with a request for their cooperation to maximize staff compliance.

### Results

Five hundred and eighty-nine (52.9%) of the 1,112 staff returned the questionnaire. Completion rates were highest among nurses (72.0%) and lowest among doctors (30.8%).

Among the responders, 65.1% were females and 34.9% males. Average age was  $38 \pm 0.4$  (min = 20; max = 68); 6.3% of the participants were physicians, 38.8% nurses,

21.4% medical support staff, 17.2% office staff, 7.9% other health professionals (OHPs), and 8.4% non-health professionals (NHP).

Of the responders, 29.5% admitted being current smokers and 17.1% ex-smokers.

Smoking prevalence in males was 40.6% and 23.5% in females. The highest smoking prevalence rates were found among the medical support and NHP staff (43.2% and 34.7%, respectively). The lowest rate was observed among doctors (18.9%).

The great majority of smokers (70.3%) admitted smoking on hospital premises during working hours. Nurses (81.1%) and OHPs (88.9%) reported the highest rates of smoking in the hospital. Lower rates were found among administrative staff (40.9%) and doctors (42.9%).

The great majority of responders (97.8%) believed that second-hand smoking is harmful and that the hospital should be smoke free (87.8%). Tobacco control attitudes were related to smoking behaviour ( $p < 0.001$ ), but not to professional group, gender or age ( $p > 0.05$ ).

## **Conclusion**

Overall smoking prevalence was high but, nevertheless, similar to that of other surveys in Portuguese hospitals. Smoking prevalence was highest among the less qualified health professionals and non-health professionals.

The great majority of hospital staff had positive attitudes towards a smoke-free policy.

Hospital doctors were those who smoked the least, in line with declining prevalence trends among Portuguese physicians in general. However, this group also had the lowest response rates. In addition, doctors attitudes to tobacco control did not differ from those of other staff.

## **SMOKE-FREE HOMES PROGRAMME: PAST, PRESENT AND FUTURE**

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### **Abstract**

#### **Introduction**

Childhood exposure to Environmental Tobacco Smoke (ETS) is associated with serious health problems. Despite the recognised severity of childhood exposure to environmental tobacco smoke (ETS), several studies show high prevalence of exposed children in the world and also in Portugal. In order to protect children of this serious health hazard an ETS type preventive programme, “Smoke free-homes”, was developed and tested in Portugal. Its main purpose is to increase the number of parents who do not smoke and / or to reinforce the norm of not allowing smoking at home and in the car, enabling “participant students” to proactively promote parents’ behaviour change and effectively reduce or avoid ETS home exposure. This is a school based programme, to be applied in the classroom by teachers.

#### **Objectives**

To evaluate the effectiveness of the "Smoke-free homes" programme, directed to 4<sup>th</sup> grade children and their parents or carers, aiming to reduce their exposure to ETS at home and in the family car.

#### **Methodology**

This is a pre-test and post-test study with 795 students belonging to 32 schools of the 1<sup>st</sup> cycle of basic education, at the Braga council. A self-administered and structured questionnaire was applied to 795 students at school year 2007/08, in the context of the classroom, before and after the intervention. To analyze the data, chi-square was used for the categorical variables.

#### **Results**

The prevalence of children exposed to daily or occasional ETS (at least one of co-inhabitants smokes at home), dropped from 42.2% in the pre-test to 32.6% in the post-test ( $p = 0.001$ ).

#### **Conclusion**

Based on the data, we can conclude that the programme “Smoke-free homes” was effective in reducing the tobacco smoke of parents and other co-inhabitants at home, and therefore helped to reduce the prevalence of children exposed to ETS in

about 10%. However, it appears that there is still about a third of children exposed, which highlights the need for more interventions in this area.

Thereby trying to discover the reality of Portuguese children's exposure to ETS and understand the determinants of smoking by fathers and mothers at home, a project entitled "Prevention of children's exposure to Environmental Tobacco Smoke (ETS) at home", is ongoing, funded by the FCT (Foundation for Science and Technology).

The tasks of this project include a study involving the gathering of qualitative and quantitative data of parents, to get a better knowledge of the motives which lead them to smoke inside their home. Based on the knowledge of the determinants of such behavior, the program "Smoke Free Homes" will be updated and then evaluated once more, using an experimental design with experimental and control groups.

**Keywords:** Environmental Tobacco Smoke (ETS); Smoking prevention; Health Education.

## PROGRAMA “DOMICÍLIOS LIVRES DE FUMO”: PASSADO, PRESENTE E FUTURO

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### Resumo

#### Introdução

A exposição das crianças ao Fumo Ambiental do Tabaco (FAT) está associada a graves problemas de saúde.

Apesar da evidência científica sobre a gravidade da exposição das crianças ao FAT, muitos estudos mostram que existe uma elevada percentagem de crianças expostas ao FAT no Mundo (aproximadamente 50%) e também em Portugal (40% segundo alguns estudos realizados).

Com o objectivo de proteger as crianças desta agressão, foi desenhado em Portugal o programa de prevenção denominado “Domicílios Livres de Fumo”. A sua principal finalidade é aumentar a prevalência de pais e mães que não fumam (e/ou não permitam que se fume) em casa e no carro. O programa foi desenhado para ser aplicado nas salas de aulas, pelos professores.

#### Objectivo

Avaliar a eficácia de uma intervenção preventiva, dirigida a alunos do 4º ano e aos seus pais/encarregados de educação, com a finalidade de reduzir a exposição das crianças ao fumo ambiental do tabaco, no domicílio.

#### Metodologia

Trata-se de um estudo, do tipo pré-teste e pós-teste, com 795 alunos pertencentes a 32 escolas do 1º Ciclo do Ensino Básico, de cinco Agrupamentos de Escolas do Concelho de Braga. No ano lectivo 2007/08 foi aplicado um questionário de auto-relato, em contexto de sala de aula, antes e depois da intervenção. Na análise de dados foi utilizado o teste Qui-Quadrado por se tratar de variáveis categoriais.

#### Resultados

A prevalência de crianças expostas diária ou ocasionalmente ao FAT, pelo facto de pelo menos um dos conviventes fumar em casa, desceu dos 42.2% para os 32.6% ( $p=0.001$ ).

#### Conclusão

Os resultados sugerem que o “Programa Domicílios Livres de Fumo” foi efectivo, diminuindo o consumo dos pais e outros conviventes em casa, tendo por isso

ajudado a reduzir a prevalência de crianças expostas ao fumo ambiental. No entanto, verifica-se que ainda há cerca de um terço de crianças expostas, o que releva a necessidade de investimento em intervenções nesta área.

Neste sentido, para tentar conhecer a realidade da exposição das crianças Portuguesas ao FAT e compreender os determinantes do consumo de tabaco pelos pais/mães no domicílio, está em curso um projecto denominado “Prevenção da exposição de crianças ao Fumo Ambiental de Tabaco (FAT) no seu domicílio”, financiado pela FCT (Fundação para a Ciência e Tecnologia).

As tarefas compreendidas neste projecto envolvem um estudo qualitativo e um estudo quantitativo com pais, para conhecer as razões/motivações do seu consumo no interior do domicílio. Com base no conhecimento dos determinantes desse comportamento, o Programa “Domicílios Livres de Fumo” será actualizado e posteriormente avaliado, segundo um desenho experimental do tipo pré-pós teste, com grupo experimental e de controlo.

**Palavras-chave:** Fumo Ambiental de Tabaco (FAT); Prevenção do Tabagismo; Promoção da Saúde; Educação para a Saúde.

## **Introduction**

Childhood exposure to Environmental Tobacco Smoke (ETS) is associated with serious health problems – more frequent lower respiratory tract infections, higher risk of recurrent respiratory infections, asthma induction and exacerbations (USDHHS, 2006).

Recently an additional health hazard has been documented – “third-hand smoke” or “residual smoke”, e.g. smoke particles that stick to clothing, carpets, curtains, car seats, etc. These materials act as deposits of carcinogenic and irritating products that affect children’s health (Winickoff *et al.*, 2009).

Despite the recognised severity of childhood exposure to environmental tobacco smoke (ETS) several studies show high prevalence of exposed children.

The World Health Organization (WHO) estimates that half of the world’s children breath ETS contaminated air and that this exposure occurs mainly at home (WHO, 1999).

A study conducted in 2002/2003 in a sample of 1141 students from 12-15 years of age, (children attending the 7<sup>th</sup> to 9<sup>th</sup> grades), in Portugal, revealed that 38% were exposed to ETS because their closest family members (father, mother and/or siblings) smoked daily or occasionally at home (Precioso, Calheiros, & Macedo, 2005).

These results lead also to the conclusion that home tobacco consumption by parents and by mothers is a relevant microsocial risk factor associated with future tobacco consumption by children (Precioso, Macedo, & Rebelo, 2007).

A large populational study (Third National Health and Nutrition Examination Survey, NHANES-III), conducted in the U.S. between 1988 and 1994, involving 11,728

children aged between 2 months and 11 years, showed that 38% were exposed to ETS, because of parents' smoking habits, 23% had been exposed to passive smoking during pregnancy and 19% were exposed to both (smoking and gestational FAT) (Jarvis *et al.*, 2000).

In 2008, another study conducted, based on a sample of 525 students from Rio Tinto-Portugal, 4th year students, showed similar results - high prevalence of childhood exposure to passive smoking because of their parents smoking behaviour at home. It also was found that 51.2% of mothers, who smoke, smoked daily or occasionally at home and that 56% of fathers had the same behaviour (Campos, Precioso, Pereira, & Samorinha, 2008).

In order to reduce ETS exposure among children of Braga, the programme "Smoke-Free Homes" was developed and implemented.

It is an ETS exposure among children prevention program, based on the strategy developed by the U.S. Environmental Protection Agency (2004) – "The ABCs of Secondhand Smoke." Its main purpose is to increase the number of parents who do not smoke and / or to reinforce the norm of not allowing smoking at home and in the car, enabling "participant students" to proactively promote parents' behaviour change and effectively reduce or avoid ETS home exposure.

The programme "Smoke-Free Homes" aims to do so that the fathers / mothers do not smoke nor allow that one smokes at house and in the car. The program was designed to be applied in the school, in the classroom by teachers.

It consists of five sessions:

1. A small approach to the resulting problems of active and secondhand smoke;
2. Role playing exercises, in which a student plays his/her role of child and another (or the teacher) plays the role of the father, mother or another smoking relative;
3. Preparation of small works (letters, leaflets, or fundamentally a distich of not smoker) to be sent by school to the smoking parents. The distich must be affixed at home or/and in the car;
4. Signature of a declaration between father/mother and son/daughter, in which the first is committed to the creation of a home without smoke;



## 5. Information leaflets to parents.

After receiving training in the school, students acted at their homes to create smoke-free homes and cars. They apply the knowledge acquired in the role-playing trying to persuade parents not to smoke at home and / or do not allow to smoke. They posted a sign stating that their homes are smoke-free and signed a commitment with their parents, committing them not to smoke at home.

The main objective of this study is to evaluate the effectiveness of the programme "Smoke-Free Homes", directed to 4<sup>th</sup> grade children and their parents or carers, aiming to reduce their exposure to ETS at home and in the family car.

### **Methods**

This pilot study was conducted in 4th year students of 32 schools of the 1st cycle of basic public education, integrated into five clusters of schools in the municipality of Braga, during the academic year 2007/2008. It was a pre-experimental study, which included two assessments (before and after implementation of the programme).

Students completed a questionnaire self-report (pre-test) in the context of the classroom, used in other studies by Precious, Calheiros and Macedo (2005). This questionnaire consists of questions regarding demographics (age and gender) and eight multiple-choice questions, designed to assess: the prevalence of smoking in the Fathers, the prevalence of Fathers, siblings or other cohabiting smoking at home, the attitude of children before the smoke, tobacco, tobacco use children and their intention to smoke. Then, we proceeded to the implementation of the programme "Smoke-Free Homes", by teachers of the classes. At the end – about two months later, however varied from school to school –, the same questionnaire was applied as pos-test.

The data collected were processed through the statistical analysis program Statistical Package of Social Sciences (version 15.0 for Windows). Comparisons between periods were made using the chi-square, with category variables.

## Results

### Sample

At pre-test, 795 students completed the questionnaire; 48.6% were female and 51.4% were male. The average age is 9.14 years $\pm$ 0.65 years. At post-test, there was sample mortality of 7.3% (n=58), then, 737 participants completed the questionnaire, of which 47% were female and 53% were male. The average age is 9.63 years $\pm$ 0.70 years (Table 1).

**Table 1. Sample demographic characterization**

	Pre-test n= 795		Post-test n= 737	
	n (%)	Mode	n (%)	Mode
<b>Gender</b>				
1-Female	374 (48.6%)	(Male)	333 (47.0%)	2 (Male)
2-Male	396 (51.4%)		375 (53.0%)	
	Mean (SD)	Min.-Max.	Mean (SD)	Min.-Max.
<b>Age</b>	9.14 (0.65)	7-13	9.63 (0.70)	8-14

### Parents' smoking

As can be seen in table 2, at pre-test, there are 15.5% of the sample students perceiving their mothers smoked and 37.0% that their fathers were smokers. These percentages have not changed significantly in the post-test (15.9% for women and 35.3% for fathers).

**Table 2. Prevalence of smoking mothers and fathers, according to the sample students**

Parent		Smoker				Non Smoker			p
		n	%	CI (95%)	f	%	CI (95%)	f	
Mother	Pre	(760)	15.5	(13.0 – 18.3)	118	84.5	(81.7 – 87.0)	642	0.886
	Post	(706)	15.9	(13.2 – 18.8)	112	84.1	(81.2 – 86.8)	594	
Father	Pre	(745)	37	(33.6 – 40.6)	276	63	(59.4 – 66.4)	469	0.511
	Post	(697)	35.3	(31.7 – 39.0)	246	64.7	(61.0 – 68.3)	451	

### Smoking at home, in the total sample

Based on data in Table 3 and Chart 1, we note that, in the pre-test, 14.2% of children reported that at least one of cohabiting (father, mother, siblings or another) is daily smoker at home. 28.0% reported that one of them is occasionally smoker at home. Thus, approximately 42.2% of students are daily or occasionally exposed to the ETS, because at least one of cohabiting is smoking at home. In the post-test, the percentage of children who declared that at least one of cohabiting smoke daily or occasionally declined from 42.2% to 32.6%, being these results statistically significant ( $p = 0.001$ ). We can see that the prevalence of children daily or occasionally exposed to ETS, because at least one of cohabiting smoke at home, reduced about 10%.

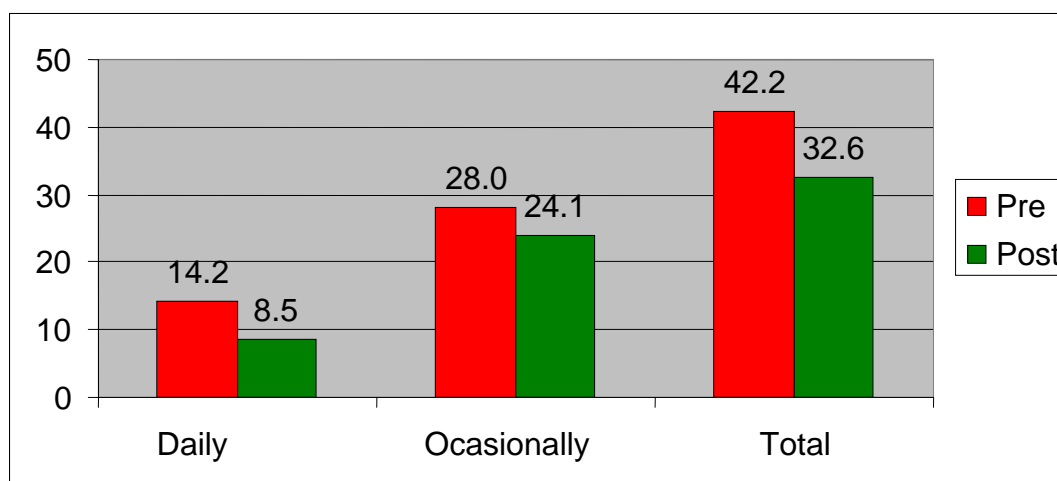
Regarding only parents smoking at home, we observed that at the pre-test, 5.1% of students stated that their mothers smoked daily at home and 6.3% reported that they did it occasionally, which means that 11.4% of students perceived their mothers smoke daily or occasionally, at home. In the post-test, the percentage of students stating their mothers smoked everyday reduced to 3.2% and that of occasionally smoking mothers increased to 6.8%. These differences are not statistically different ( $p = 0.191$ ).

Regarding fathers' smoking at home, 9.2% of students said that they smoked daily at home and 16.6% occasionally. In the post-test, the percentage of students stating that the father smokes daily or occasionally was, respectively, 5.6% and 13.2%, being these differences statistically significant ( $p = 0.003$ ).

**Table 3. Prevalence of regular and occasional smokers at home, at pre and post-test, according to the sample students**

Parent		Daily smokes at home				Occasionally smokes at home			Doesn't smoke or doesn't smoke at home			p
		n	%	IC (95%)	f	%	IC (95%)	f	%	IC (95%)	f	
Mother	Pre	729	5.1	(3.6 – 7.0)	37	6.3	(4.7-8.3)	46	88.6	(86.1-90.8)	646	0.191
	Post	692	3.2	(2.0 – 4.8)	22	6.8	(5.0-9.0)	47	90.0	(87.6-92.2)	623	
Father	Pre	727	9.2	(7.2 – 11.6)	67	16.6	(14.0-19.6)	121	74.1	(70.8-77.3)	539	0.003
	Post	696	5.6	(4.0 – 7.6)	39	13.2	(10.8-16.0)	92	81.2	(78.1-84.0)	565	
Mother or Father or siblings or other	Pre	793	14.2	(11.9-16.9)	113	28.0	(24.9-31.3)	222	57.8	(54.2-61.2)	458	0.001
	Post	729	8.5	(6.6-10.8)	62	24.1	(21.1-27.4)	176	67.4	(63.8-70.7)	491	

**Chart 1. Prevalence of daily or occasionally smokers at home (father, mother, siblings and/or other), in the total sample, at pre and post-test, according to the sample students**



## **Conclusions**

We can conclude that the programme “Smoke-Free Homes” had no effect on prevention of smoking by parents, noting that the prevalence of smoking fathers/mothers has not changed after application.

However, the results of this study show that the implementation of this Programme was effective in reducing in 10% the prevalence of children exposed to ETS at home.

We noted however that it seemed easier for fathers stop smoking at home than it was to mothers.

Next studies should include the introduction of a control group, since its absence doesn't allow concluding that the reduction of smoking at home prevalence is exclusively due to the programme. Other variables that may have played a role were not controlled, especially the introduction of the law n° 37/2007- 14 de August of tobacco control and all the public discussion about the consequences of second-hand smoke that it caused.

Despite the results indicating its effectiveness, this Programme was developed without a thorough understanding of the determinants of tobacco consumption by parents, mothers and other relatives. Therefore, we consider that further studies should be conducted to expand our understanding of the factors that lead parents to smoke at home, once this knowledge is essential for the design of effective preventive interventions.

For this purpose we designed a project entitled “Prevention of the Environmental Tobacco Smoke (ETS) exposure among children at home”, which will be ongoing soon, funded by the FCT (Foundation for Science and Technology)<sup>1</sup>.

This research project aims to evaluate the extent of the problem at national level, to characterize the determinants of tobacco consumption by parents at home and to design and evaluate the effectiveness of a preventive intervention, based on the development of children skills.

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<sup>1</sup> The project referred to in this text, “Prevention of the Environmental Tobacco Smoke (ETS) exposure among children at home” (PTDC/CPE-CED/098281/2008), has the financial support of the Portuguese Foundation for Science and Technology (FCT).

To determine the prevalence of Portuguese children exposure to passive smoking and understand the factors associated with occasional and daily consumption by kin, a cross-descriptive will be conducted. The study population will be a stratified sample of students enrolled in the 4<sup>th</sup> year of the first cycle (basic education) of the Norte, Centro, Lisboa and Vale do Tejo, Alentejo, Algarve, Madeira and Açores (n=5000). A self-completed anonymous questionnaire will be applied.

To characterize the determinants of tobacco consumption by parents at home, a qualitative study will also be conducted, which will consist of a series of interviews with smoker fathers and mothers of 4<sup>th</sup> year first cycle students.

The results of these studies will allow:

1. To pre-test evaluation (the development of a questionnaire to be administered to parents and children);
2. To improve the programme “Smoke-Free Homes”, which will then be applied.

To evaluate the effectiveness of this programme, a third study, of a *quasi*-experimental type (pre-test and post-test with an experimental group and control) will be conducted during the academic year 2010/2011. We consider this to be an innovative project, involving children themselves in protecting their health, by using methods associated with the development of common action, in order to develop skills of persuasion to change their parent’s behaviour.

The main result of this project will be the development of an educational intervention expected to modify parent’s behaviour and reduce ETS exposure of this particularly vulnerable population. Best practices guidelines for smoking control and prevention among children and adolescents for physicians, psychologists, teachers, caregivers, and others, will be developed.

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# THE RELEVANCE OF A HEALTH PROMOTION EDUCATIVE PROJECT: SMOKING PREVENTION IN THE PALMEIRA SCHOOL GROUP

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## Abstract

The Palmeira School Group (PSG) has built its Educative Project (EP) having as reference the new educative paradigm that valorises the future (human, scientific and technical future) in order to face appropriately the new challenges in a globalisation context. The PSG Educative Project (PSG-EP) aims at “*developing health promoting habits in the school community*”, where smoking addiction is a major bad habit target. The PSG-EP goals are the following: (i) to supply potentials for the development of competencies in the domains of “knowing how to be” and “knowing how to do”; (ii) to develop habits of critical, reflexive and aware citizenship; (iii) to promote the interlinking of knowledge and curricular contents with the needs of globalization; (iv) to promote collaboration, teamwork, the multidisciplinary/transdisciplinarity of both health promotion know-how and authority for the progress of healthier lifestyles, particularly in giving up smoking.

In this work the PSG-EP participants’ conceptions and perceptions were taken into account. They were teachers, educational action staff, pupils, parents and the local administrative authorities of a specific outskirts area of Braga town, making a total of 1423 participants.

The results showed that 25% of the PSG population were smokers. There were fewer women smokers than men in all the sample groups, except for the teachers where both men and women smoking groups were similar, 35% each. From the total sample, the street group effect was the major factor (30%) contributing to smoking addiction, followed by lack of prevention (25%), low general literacy (19%), unemployment (9%), poverty (9%) and Legislation (8%). Less than 20% of the respondents were aware of smoking preventive campaigns in the PSG: 18% of the teachers, 15% the other school staff, 12% of the pupils and only 6% of the parents.

Results show that 43% of the respondents do not know about any partnership with other institutions or persons for smoking prevention and that 41% say there is not any partnership in this domain. Altogether, data show that the local administrative authorities, the teachers and the educational staff valorise the family as the dimension mostly effective in smoking prevention whereas pupils and parents emphasize the school dimensions for it. In addition, teachers tend to give more importance to the pedagogic activities (educational project, classroom health education teaching and good textbooks) whereas the educational staff, pupils and parents give more relevance to the pupils’ social protection.

Further work is now going on to put together all these school actors in order to build a serious smoking preventive programme in this Palmeira School Group, where all will feel truly committed.

**Key words:** Educative Project, Smoking, Prevention.

## Introduction

Smoking addiction is a severe social problem, being programmes of “Tobacco control” a main strategy in Public health to reduce it. For this purpose the WHO (World Health Organisation), IUHPE (International Union for Health Promotion and Education), UNESCO (United Nations Educational, Scientific and Cultural Organisation), UNICEF (United Nations Children’s Fund), U.S. CDC (Centers for Disease Control and Prevention), FRESH (Focussing Resources on Effective School Health) initiative, among others, have recognised schools as being potentially important in the promotion of health and wellbeing (IUHPE, 2008). Beyond health education classes, all aspects of life in the school community need to be developed towards health promotion, by using strategies contributing to improve pupils’ personal and social competencies, their critical literacy and empowerment and equity (Carvalho, 2003). To achieve this efficiently, there is a need for interlinked relationship between the health system and school education (IUHPE, 2008). Therefore, important health issues, like the smoking addiction, must be incorporated in current school activities, in their structural and organisational elements (the so called “School group curricular project” or PCA<sup>1</sup>, “Class curricular project” or PCT<sup>2</sup> and the “Evaluation criteria” or CA<sup>3</sup>), being the Educative Project, EP (or PE<sup>4</sup>) of paramount importance (Fontoura, 2006). The PE legal framework can be found, among others, in the Portuguese decree-laws n° 43/1989, n° 172/1991, n° 115-A/1998 and more recently in the decree-law n° 75/2008. In addition, the educational goals generated from the Education Act (LBSE, Law n° 46/1986)<sup>5</sup> demand that schools develop an Educative Project to be “beneficial to pupils”.

The school EP is a referential document, guiding all school activities and involving the possible and realistic participation of all school members, subject to evaluation in order to be improved (Fontoura, 2006). The school EP assumes, on one hand, the recognised school autonomy and, on the other hand, the development of a specific identity which is essential to its autonomy process and to its principles, aim and goals substantiation. The construction of an EP expressing the image of the school community (including both educators and learners) is necessary (i) to identify problems and to collaborate in solving them, (ii) to reflect and to question the methods, the processes and the decisions,

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<sup>1</sup> PCA – *Projecto Curricular de Agrupamento escolar* (School group curricular project).

<sup>2</sup> PCT – *Projecto Curricular Turma* (Class curricular project).

<sup>3</sup> CA – *Critérios de Avaliação* (Evaluation criteria).

<sup>4</sup> PE – *Projecto Educativo* (Educative Project).

<sup>5</sup> LBSE – *Lei de Bases do Sistema Educativo Português*.

(iii) to evaluate the outcomes and (iv) to motivate towards future goals (Roldão, 2005). In order to be effective, it requires the awareness about school community interests and expectations, the understanding of the school context (indoors and surrounding), the identification of priorities, definition of strategies, the participation of all school community members (pupils, teachers and other school staff and parents) as well as the collaborative interlink between the school and the local municipal authorities, the local health centres and, last but not the least, the larger community where the school is included (Marques, 2001; Roldão, 2005).

The Palmeira School group (PSG or AEP<sup>6</sup>) has built its Educative Project having as reference the new educative paradigm that valorises the future (human, scientific and technical future) rather than tradition or the old times (Marques, 2001), in order to appropriately face the new challenges in a globalisation context, by trying to harmonise the didactic transposition (content knowledge, the selected knowledge for teaching and the knowledge taught) (Clément, 2006) with the improvement of pupils' personal and social competencies towards a healthier lifestyle and a better citizenship (Carvalho, 2006; Carvalho & Carvalho, 2008).

The PSG Educative Project (PSG-EP) aims at “*developing health promoting habits in the school community*”, where smoking addiction is a major bad habit target. The PSG-EP goals are the following: (i) to potentiate the development of competencies in the domains of “knowing how to be” and “knowing how to do”; (ii) to develop habits of critical, reflexive and aware citizenship; (iii) to promote the interlinking of knowledge and curricular contents with the needs of globalization; (iv) to promote collaboration, teamwork, the multidisciplinary/transdisciplinarity of both health promotion know-how and authority for the progress of healthier lifestyles, particularly in giving up smoking.

## **Methodology**

Bearing in mind that the EP must result from the actual school reality knowledge and persons' participation (Roldão, 2005; Marque, 2006), the PSG-EP participants' conceptions and perceptions were taken into account. They were teachers and other school staff, pupils, parents and the local administrative authorities (PJF)<sup>7</sup> of a specific

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<sup>6</sup> AEP – *Agrupamento de Escolas de Palmeira*.

<sup>7</sup> PJF – *Presidente de Junta de Freguesia*.

outskirt area of Braga town, making a total of 1423 participants. Questionnaires were constructed specifically for this work.

All educators and teachers (140 subjects) from all schools included in the PSG and all school levels answered the questionnaire: 18 kindergarten educators, 42 teachers from the 1<sup>st</sup> cycle of basic education CEB<sup>8</sup>, 41 teachers from the 2<sup>nd</sup> CEB, 57 teachers from the 3<sup>rd</sup> CEB and 4 teachers from special educational needs.

Similarly, all PSG educational action staff (52 subjects) were enquired: 11 from kindergarten, 11 from 1<sup>st</sup> CEB and the remaining 36 from the 2<sup>nd</sup> and 3<sup>rd</sup> CEB schools.

From the pupil population (1593 subjects), a sample of 606 (38.0%) was obtained: 150 from the 1<sup>st</sup> CEB (6-10 year-old pupils), 150 from the 2<sup>nd</sup> CEB (10-13 year-old pupils), 300 from the 3<sup>rd</sup> CEB (13-16 year-old pupils), as well as 3 from the “Alternative curricular course” or PCA<sup>9</sup> and 3 from the “Education and training courses” or EFA<sup>10</sup>.

The parents of these pupils (except for the EFA pupils’ parents) plus 15 kindergarten pupils’ parents, in a total of 618 subjects, also answered the questionnaire.

For the perception of the actual PSG social reality, the 7 local administrative authorities (PJF) were asked to fill in a table with some social indicators, as shown in the Results.

## **Results**

### **Social characterization of the Palmeira School Group (PSG) Educative Project territory**

From the preliminary raw data obtained from the seven local administrative authorities, it is possible to understand that this PSG is located in a deprived Braga outskirts area (Table 1). More detailed data are about to be analysed.

### **Smoking frequency in the Palmeira School Group and smoking influencing factors**

Results showed that 25% of the PSG population were smokers. There were fewer women smokers than men in all the sample groups, except the teachers where both men and women smoking groups were similar, 35% each (Figure 1). Teachers, both men and

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<sup>8</sup> CEB – *Ciclo do Ensino Básico*.

<sup>9</sup> PCA – *Percurso Curricular Alternativo*.

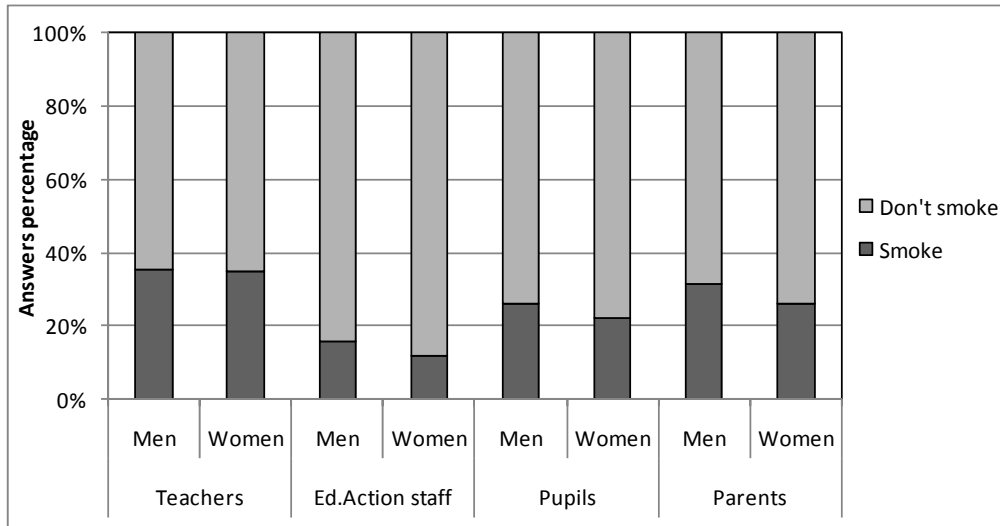
<sup>10</sup> EFA – *Cursos de Educação e Formação*.

women, were the group with a higher percentage of smokers (35%) whereas the educative action staff was the group with a lower proportion of smokers (13%).

Although the average of smoking pupils is 24% (Figure 1), results by age group showed that the oldest pupils, those of 13-16 years-old (3<sup>rd</sup> CEB), were the highest smokers, 48%. Statistical analysis showed significant differences between groups (ANOVA;  $p < 0.05$ ).

**Table 1- Social characterization of the PSG Educative Project territory**

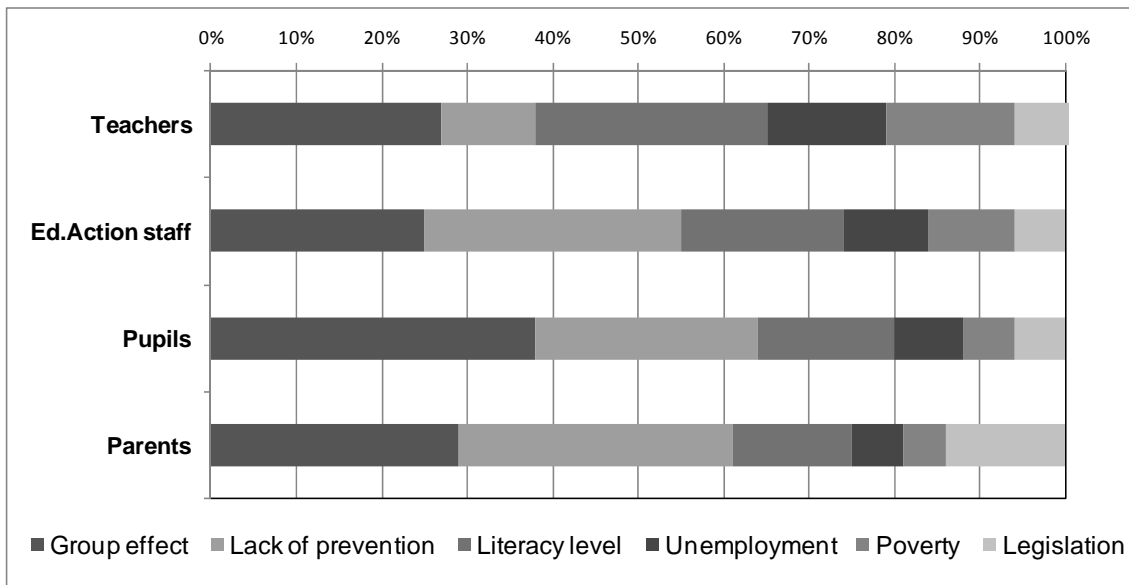
INDICATORS	Local authorities (“Freguesias”)						
	Adaúfe	Crespos	Dume	Navarra	Palmeira	Pousada	St.Lucrécia
Poverty situation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emigration	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unemployment	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Precarious jobs	Yes	Few	Yes	No	Yes	Yes	Yes
Food deprivation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Housing shortage	Yes	No	Yes	Yes	No	Yes	Yes
Families with a social integration income	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family support structures	Yes	No	Yes	No	Yes	No	No
Health centre extension	Yes	No	No	No	No	No	No
Economic development	Low	Medium	Medium	Medium	Medium	Low	Medium
Social development	Low	Medium	Low	Medium	Medium	Low	Medium
Literacy/academic qualifications	Low	Medium	Low	Medium	Medium	Medium	Low
Divorces	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Domestic violence	Yes	No	Yes	No	Yes	Yes	Yes
Smoking	High	High	High	High	High	High	High
Alcoholism	Yes	No	Yes	Yes	Yes	No	Yes
Other drugs	Yes	Yes	Yes	Few	Few	Few	Yes
Libraries/Mediatecas	No	No	No	No	1	No	No
Cultural groups	1	No	No	No	No	2	1
Recreative groups	No	No	No	1	1	No	No
Sports groups	1	1	1	1	2	No	1



**Figure 1- Smokers per group of teachers, educative action staff, pupils and parents**

From the total sample, the street group effect was the major factor (30%) contributing for smoking addiction, followed by a lack of prevention (25%), low general literacy (19%), unemployment (9%), poverty (9%) and Legislation (8%). Teachers, educational action staff and pupils consider that the street group effect as the major factor influencing young people smoking (27%, 25% and 38%, respectively). In contrast, parents express the lack of prevention as the major effect (32%), followed by the street group effect (29%) (Figure 2).

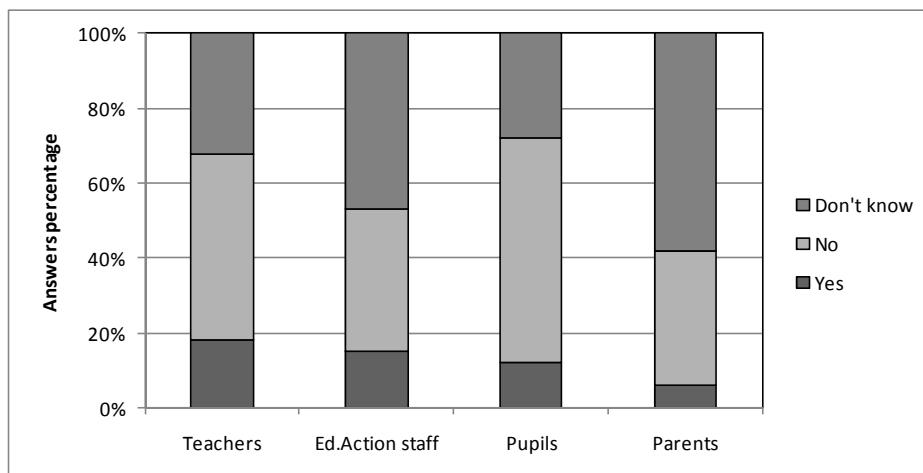
Interesting is the fact that teachers do not assume the lack of prevention as an important factor (only 11%) as compared to the other three groups: Educational action staff (30%), pupils (26%) and parents (32%) (Figure 2).



**Figure 2- Factors influencing the smoking habit**

### Smoking prevention and measures to be implemented in the Palmeira School Group

Less than 20% of respondents were aware of smoking prevention campaigns in the PSG: 18% of the teachers, 15% the other school staff, 12% of the pupils and only 6% of the parents (Figure 3), which shows that little has been done in schools.

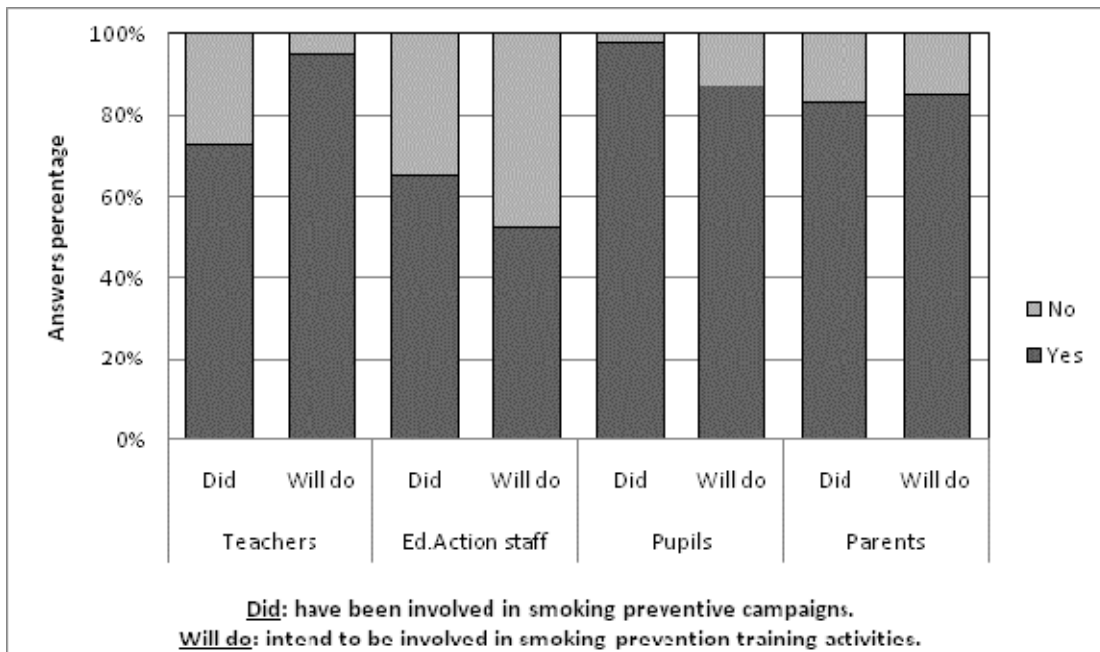


**Figure 3- Knowledge about PSG smoking prevention campaigns**

When asked about their involvement in such preventive campaigns, the educational action staff seems to be the group less involved (65%) as compared with teachers (73%), parents (83%) and pupils (98%). Similarly, the educational action staff is the

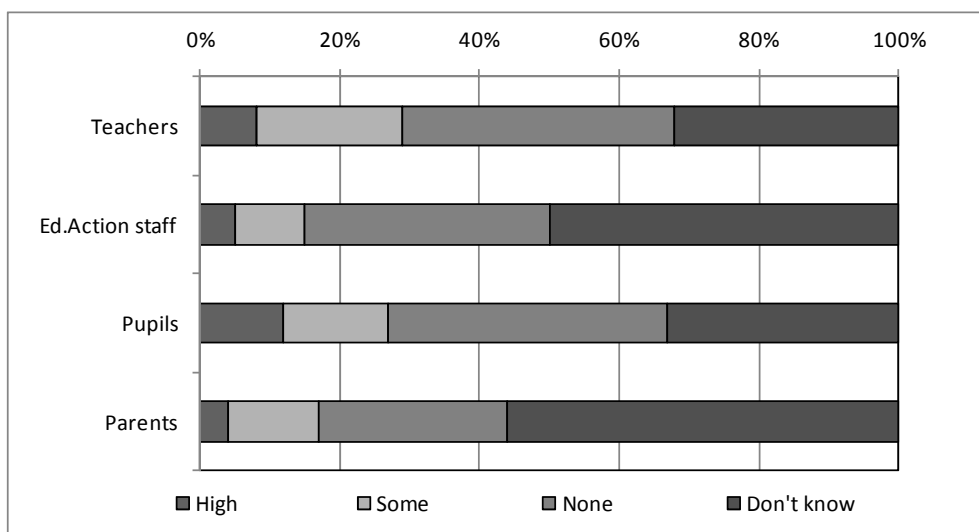


less motivated group to carry out preventive campaign training courses (52%) when compared to the other groups: 95%, 85% and 87%, respectively (Figure 4).



**Figure 4- Participation in smoking preventive campaigns and intention to participate in smoking prevention training courses**

Results show that 43% of the respondents do not know about any partnership with other institutions or persons for smoking prevention and that 41% say there is not any partnership in this domain. Pupils are the more positive ones, as 12% say that there is high partnership whereas the other groups are less positive: 8% of the teachers, 5% of the educational action staff and 4% of the parents (Figure 5).



**Figure 5- Knowledge about smoking prevention partnership**

When asking about the influence of several factors in smoking prevention, the results shown in Table 2 indicate that the school outcomes are the more important dimension, followed by the family context.

Altogether, data show that the local administrative authorities, teachers and the educational staff valorise the family as the dimension mostly effective in smoking prevention, whereas pupils and parents emphasize the school dimensions (Table 2).

**Table 2- Smoking prevention dimensions**

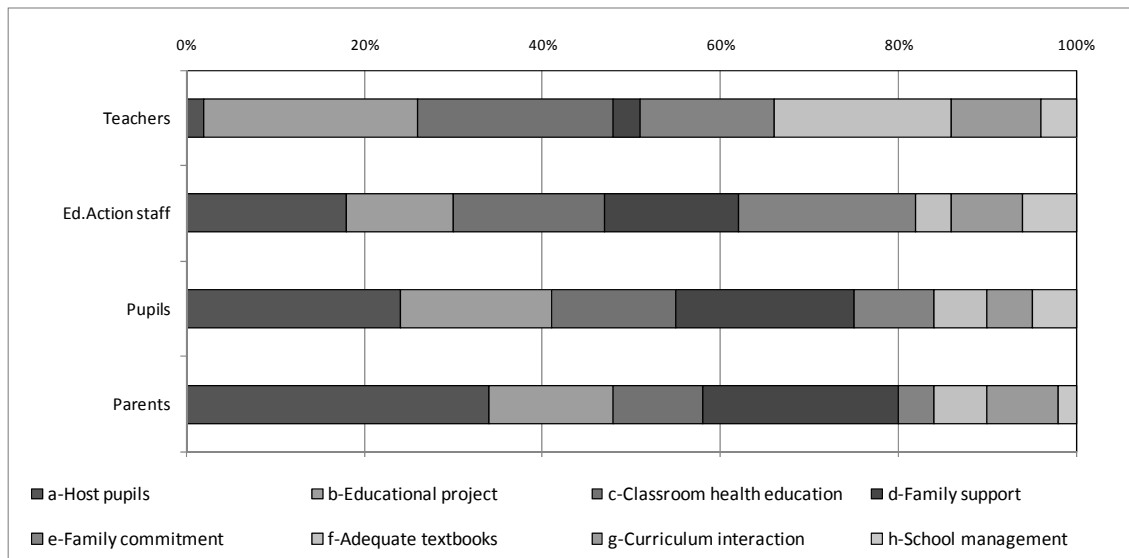
Dimensions		School outcomes	Family	School Curriculum	Strategy organisation	School management	Educational policies
Teachers	<b>HI</b>	83%	78%	80%	71%	68%	75%
	<b>LI</b>	14%	16%	23%	23%	21%	17%
	<b>NI</b>	3%	6%	7%	6%	11%	8%
Educational action staff	<b>HI</b>	68%	66%	49%	41%	28%	36%
	<b>LI</b>	23%	25%	36%	38%	34%	27%
	<b>NI</b>	9%	9%	15%	21%	38%	37%
Pupils	<b>HI</b>	75%	42%	34%	40%	27%	33%
	<b>LI</b>	21%	29%	40%	36%	38%	34%
	<b>NI</b>	4%	27%	26%	24%	35%	33%
Parents	<b>HI</b>	72%	54%	23%	55%	30%	40%
	<b>LI</b>	20%	30%	32%	34%	52%	39%
	<b>NI</b>	8%	16%	45%	11%	16%	21%
Local administrative authorities	<b>HI</b>	100%	100%	58%	72%	42%	42%
	<b>LI</b>	0%	0%	28%	14%	42%	58%
	<b>NI</b>	0%	0%	14%	14%	14%	0%
		<b>HI</b> – High Influence	<b>LI</b> – Little Influence	<b>NI</b> – No Influence			

The groups involved in this research showed different interesting views about the smoking preventive measures to be applied in the future (Figure 6):

- The teachers were focused on implementing anti-smoking educational approaches, such as Educational projects (24%), classroom health education teaching (22%) and adequate textbooks (20%);

- The educational action staff gave more attention to pupils social environment, concerning both family commitment (20%) and school host pupils (18%), followed by classroom health education teaching (17%);
- Pupils and parents showed similar concerns assigned to the school: school host pupils (24% and 34%, respectively), family support given by the school (20% and 22%), followed by anti-smoking educational projects (17% and 14%).

The differences between groups were statistically significant (ANOVA;  $p < 0.05$ ).



**Figure 6- smoking prevention measures to be implemented**

## Conclusion

The Palmeira School Group PSG is located in a deprived Braga outskirts area and the proportion of smokers is 3% below the average of the smoking Portuguese population (28%) and 9% below the European average (34%) (Berthet & Paradas, 2006). Of course this is also due to the fact that our sample includes a high proportion of children and young people (who do not smoke) that do not correspond to the normal distribution of the population.

The street group effect is recognised by all groups (teachers, educational action staff, pupils and parents) as a major effect factor influencing pupils' smoking addiction. Furthermore all groups, except teachers, consider the lack of prevention as an important factor as well. But when asked about preventive campaigns in the School Group less

than 20% of respondents were aware of it. Similarly, the knowledge about partnerships with other institutions regarding prevention of smoking addiction was very low, below 43% of respondents. These results together indicate that little has been done in smoking prevention in this Palmeira School Group.

It is rather interesting to notice that those directly involved in the promotion of school activities (the local administrative authorities (PJF<sup>1</sup>), the teachers and the educational staff) valorise the family as the dimension mostly effective in smoking prevention whereas those expecting positive outcomes from the school (pupils and parents) emphasize the relevance of the school dimensions (Table 2). Moreover, all groups consider school management as the less important dimension for smoking prevention, where on the contrary it is well known that it plays a crucial role in school education policies, such as the implementation, or not, of smoking and other drugs prevention programmes (Barnekow *et al.*, 2002).

In addition, teachers tend to give great importance to the pedagogic activities (educational project, classroom health education teaching and good textbooks) whereas the educational staff, pupils and parents give major relevance to the pupils' social protection.

This was a preliminary study attempting to understand the main concerns of the school groups (teachers, educational action staff, pupils and parents) about smoking addiction and its prevention. Further work is now going on to put together all these school actors in order to build a serious smoking prevention programme in this Palmeira School Group, where all will feel truly committed. Only in this way, we do think it is possible to accomplish an effective smoking prevention.

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# SMOKING DETERMINANTS BY GENDER: A PILOT STUDY IN SCHOOLS OF THE VISEU DISTRICT

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## Abstract

### Introduction

According to the data of the Health Behaviour in School – Aged Children: 11 – 15 years old (HBSC), of 1997/ 98 and 2002, the smoking epidemic is growing in Portugal, particularly among the female adolescents. It seems to indicate that the preventive actions in our country are not working out, which can be an outcome of not considering important issues like gender differences. Much has been researched on the determinants of smoking but the existed data has not been conclusive or specific of Portugal.

An Investigation Project is ongoing, aiming to deepen the knowledge of the adolescents' determinants of smoking by gender and to develop more effective preventive actions. Preliminary results of the Project are here presented.

### Objectives

The main objectives are to determine the individual, micro-social and environmental variables related to smoking by gender.

### Methodology

A quantitative study, of the transversal descriptive type, was carried out on a sample of schools of the 3<sup>th</sup> grade and secondary level of Viseu District. An anonymous self-filling questionnaire, purposed-built, was fulfilled in the classroom from 9<sup>th</sup> to 12<sup>th</sup> years. Odds-Ratio test was used to measure the risk factor.

### Results

470 students from 9<sup>th</sup> to 12<sup>th</sup> grades fulfilled the questionnaire. They were aged between 13 and 20 years old. 8.1% of the girls and 16.1% of the boys are regular or occasional smokers. Smoking, in girls and boys, seems to be related to these factors, among others: inability to refuse a cigarette offer, drunkenness, smoking among best friends (boys and girls), cigarette offers by best friend(s) and availability of money. Gender differences were found in some smoking

determinants. Body dissatisfaction appears as a factor related to smoking only in girls.

### **Conclusion**

There are differences in the variables related to the risk of smoking in girls and boys. It is then a crucial issue to continue the investigation about gender differences so that prevention actions based on them can be developed.

**Keywords:** smoking; determinants of smoking; gender differences; tobacco.



# DETERMINANTES DO CONSUMO DE TABACO EM FUNÇÃO DO SEXO: UM ESTUDO PILOTO REALIZADO EM ESCOLAS DO DISTRITO DE VISEU

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## Resumo

### Introdução

Segundo os dados do Health Behaviour in School - Aged Children: 11 - 15 anos (HBSC), de 1997 / 98 e 2002, a epidemia tabágica está em crescimento em Portugal, particularmente nas adolescentes. Este pode ser um indício de que as acções preventivas, no nosso país, não estão a ter os resultados esperados, o que pode estar relacionado com o facto de não terem em conta, entre outros factores, as diferenças de sexo. Apesar de existirem muitos estudos acerca dos determinantes do consumo de tabaco em adolescentes, os dados existentes, em relação às diferenças de sexos, não são conclusivos nem específicos do nosso país. Um Projecto de investigação está a decorrer em Portugal, com o objectivo de aprofundar o conhecimento dos determinantes do consumo de tabaco nos adolescentes, por sexo, e desenvolver acções preventivas mais eficazes. Os dados preliminares do estudo são aqui apresentados.

### Objectivos

Os principais objectivos deste estudo são: determinar os factores individuais, micro-sociais e ambientais relacionados com o consumo de tabaco em adolescentes.

### Metodologia

Trata-se de um estudo quantitativo, do tipo transversal descritivo, realizado numa amostra de escolas do 3.º Ciclo e Ensino Secundário do distrito de Viseu. Foi utilizado um questionário anónimo de auto-relato, construído para o efeito e aplicado em contexto de sala de aula. Para medir o grau de risco, foi utilizado o teste do Odds-Ratio.

### Resultados

Responderam ao questionário 470 alunos do 9.º ao 12.º anos, com idades compreendidas entre os 13 e os 20 anos. 8.1% das raparigas e 16.1% dos rapazes da amostra são consumidores regulares ou ocasionais de tabaco.

O consumo de tabaco, por rapazes e raparigas, parece estar associado, entre outras variáveis, a: incapacidade de recusa de oferta de cigarros, consumo excessivo de álcool, consumo de tabaco pelos melhores amigos (rapazes e raparigas), ofertas de

cigarros pelos melhores amigos e disponibilidade de dinheiro. Foram encontradas diferenças, entre sexos, relativamente a alguns determinantes do consumo de tabaco. A insatisfação com o corpo é uma variável que surge relacionada com o consumo de tabaco apenas nas raparigas.

### **Conclusão**

Há diferenças nos factores determinantes do consumo de tabaco, em relação ao sexo. É, assim, fundamental continuar a investigação acerca destas diferenças, para que as acções preventivas possam incluir estes dados, tornando-se mais efectivas.

**Palavras – chave:** tabagismo; determinantes do consumo; diferenças de sexo; tabaco.

### **Introduction**

Smoking keeps on being the main isolated cause of premature death in the western world (World Health Organization [WHO], 2008).

According to the data of the Health Behaviour in School – Aged Children: 11 – 15 years old (HBSC), of 1997/ 98 (Currie, Hurrelmann, Settertobulte, Smith, & Todd, 2000) and 2002 (Currie *et al.*, 2004), the smoking epidemic in Portugal is growing, particularly among the female adolescents. In four years, the prevalence of 15-year old adolescent boys, daily smokers, raised from 13% to 13.1%. In the same time period, the prevalence of girls, daily smokers, registered an alarming increase from 10 to 19.5%. These tendencies being maintained, the pre-birth and post-birth problems related to smoking will aggravate in a near future. It seems to prove that the preventive actions in our country are not working out, either because they are not being applied or because they are not considering the differences of gender. For that reason it is necessary to get to know better the motives that lead adolescents to smoke.

Much has been researched on the determinants of smoking but a smaller attention has been paid to gender differences. Data from the European project Gender differences in Smoking in young people, in which 13 countries have participated, have not been conclusive (Hublet, Lambert, Verduyck, Maes, & Broucke, 2002). Also in the Paris Conference About Smoking and Woman, which took place in 1999, some explanations were presented to the increase in the epidemic in women, but little has been put forward about the reasons for the increase in the young women who had schooling.

To have smoking prevention done based on the scientific evidence, several researches have been done to get to know the aetiology. The majority of smokers start smoking in

adolescence, before the 18 years old (Precioso, 2004; Puerta & Checa, 2007). In Portugal, according to an investigation of Precioso (2004), with 388 students of the University of Minho, 49% of them started smoking between 15-18 and the initiation age was earlier to boys than girls (32% of the boys started smoking in the Basic Education, where only 1.7% of the girls did it, which is seen in many other studies (Currie *et al.*, 2008; Matos *et al.*, 2006; Nebot, Tomás, Ariza, Valmayor, & Mudde, 2002). School is the place of initiation of the smoking behaviour for the majority of the students.

According to the four stages of development of the “smoker career” - preparation; initiation/ experimentation; habituation and maintenance/ dependency -, there are different factors influencing each of them (DeVries, 1989; Nutbeam, Mendoza, & Newman, 1988; Precioso, 1999).

The “Preparation” stage goes from birth to the beginning of adolescence. It is characterized by the fact that the child has not yet smoked but starts to raise expectations and form attitudes that may lead him/ her to experiment the first cigarette (Initiation). To the formation of a positive attitude towards smoking it is particularly strong the parents’ smoking, the opinion of parents and social communication, especially television (Becoña & Vázquez, 1996; DeVries, 1989; Nutbeam, *et al.*, 1988).

The “Initiation and Experimentation” stage consists in the first cigarette try and it is associated with the process of secondary socialization that happens particularly at school, with the closest friends, and also through the “media”. To the experimentation of the cigarette the following influences are particularly strong: the natural curiosity of all children of this age; the exercise of smoking by intimate friends; the exercise of smoking by parents; the “media”, especially television and magazines; the easiness in getting cigarettes; the desire of social acceptance; curiosity concerning adults’ habits (Becoña & Vázquez, 1996; USDHHS, 1994, 2001).

The “Habituation” stage generally occurs during adolescence and it is characterized by the fact that the adolescent starts smoking with some regularity (at least one cigarette a week). The main psychosocial risk factors associated with this kind of use are: having smoker friends, being involved in social situations in which friends support smoking, having low self-efficiency and refusal ability, having cigarettes available, having the perception that smoking is useful for the person, having little restrictions to smoking at school and in the community.

The acquisition of the habit is related to the reinforcement of physical, social and psychological positive experiences related to smoking. Particularly influent in this stage are the beliefs about the effects of smoking (for instance: “it calms down”, “it gives confidence”, “it controls the weight”); the acceptance or underestimation of the risks for the health; the friends’ attitude concerning smoking (including the one of the brothers/sisters) and habits. Those whose parents, siblings, friends or others of their social environment smoke have a higher probability of remaining smokers (Ariza & Nebot, 2002; Piperakis, *et al.*, 2008; Puerta & Checa, 2007; USDHHS, 2001; Vitória, Silva, & DeVries, 2007; WHO, 2001). The ability to refuse cigarette offers and the image of himself/ herself are some of the psychological factors with impact at this and following stages. Also, the non smokers reveal more positive emotions (Hoving, Reubsæet, & DeVries, 2007). The accessibility and the price of the cigarettes are environmental factors which have a great influence in smoking (USDHHS, 2001).

In the stage of Maintenance/ Dependency the individual continues to smoke due to the physical dependency on nicotine and the social and psychological dependency (Becoña & Vázquez, 1996; Precioso, 1999; USDHHS, 1994).

The way followed by a smoker may not be linear. From the knowledge of the determinants of smoking several preventive strategies have been drawn to apply on each stage of the smoker career, namely: school-based curricula; school environmental changes; parental involvement; promotional bans; price increases (Becoña & Vázquez, 1996; Flay, 1998; Nutbeam, *et al.*, 1988; Perry & Forster, 2002; USDHHS, 1994).

In this context, determinants of smoking among adolescents deserve a profound study. In Portugal, data have not been conclusive and few studies have been carried out so far regarding gender differences.

Due to this set of reasons, an Investigation Project is ongoing, aiming to deepen the knowledge on the smoking determinants by gender, heightening the chances of developing more effective preventive actions.

### **Objectives**

This study presents preliminary results of the Project, with the data from schools of the Viseu District. The main objective is to determine the individual, micro-social and environmental factors related to occasional and regular smoking in adolescents by gender.

## Methodology

### Sample

The sample consists of 470 students from four schools of the 3<sup>th</sup> Cycle and Secondary Level of the Viseu District, in the school year 2008/09. The students who fulfilled the questionnaire were those whose parents gave permission to participate in the study. Regarding sociodemographic characterization of the sample (Table 1), 262 participants are girls (55.9%) and 207 are boys (44.1%). Girls have a mean age of 16.12 years and boys of 16.02. Regarding parents' education level, the medians reveal that girls have mothers and fathers mainly with the 7<sup>th</sup>, 8<sup>th</sup> or 9<sup>th</sup> years, while boys have mothers and fathers mainly with a higher education level (10<sup>th</sup>, 11<sup>th</sup> or 12<sup>th</sup> years). Regarding residence, both girls (45.8%) and boys (38.5%) live mainly in the village.

**Table 1. Sociodemographic data of the sample**

**N= 469**

	<b>GIRLS</b> n = 262 (55.9%)		<b>BOYS</b> n = 207 (44.1%)	
	<b>Mean (DS)</b>	<b>Min.-Max.</b>	<b>Mean (DS)</b>	<b>Min.-Max.</b>
<b>Age</b>	16.12 (1.39)	13-20	16.02 (1.37)	13-20
<b>Mothers' education</b>	<b>Median</b> 4 (7 <sup>th</sup> , 8 <sup>th</sup> or 9 <sup>th</sup> year)		<b>Median</b> 5 (10 <sup>th</sup> , 11 <sup>th</sup> or 12 <sup>th</sup> year)	
<b>Fathers' education</b>	4 (7 <sup>th</sup> , 8 <sup>th</sup> or 9 <sup>th</sup> year)		5 (10 <sup>th</sup> , 11 <sup>th</sup> or 12 <sup>th</sup> year)	
<b>Residence</b>	<b>Frequencies</b>		<b>Frequencies</b>	
	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
- Village	120	45.8	79	38.5
- Town	71	27.1	54	26.3
- City	71	(27.1)	72	35.1

### Materials

An anonymous self-filling questionnaire, purposed-built for the Project, was applied.

Once the construct assessed is multidimensional – determinants of smoking -, this is a questionnaire where most variables are measured by one item. It has 53 items and a scale, with 24 items. In addition to the original items, using some drawn from previously validated questionnaires was suitable to this instrument: the “Questionnaire

for the assessment of smoking behaviour” (Precioso, 2001) and the “Research Protocol for the 1997-98 study”, from the Health Behavior in School-Aged Children (2008). The questionnaire was validated by experts.

Dimensions evaluated with this questionnaire are: sociodemographic data; smoking habits; cigarette experimentation; individual, environmental, micro and macrosocial determinants of smoking. Regarding the individual determinants of smoking, in this study were analyzed the perception of smoking in the micro-social environment, the subjective norm, assertiveness, opinion about tobacco price, school failures, feelings about school, physical exercise, body satisfaction, alcohol consumption, drunkenness, emotional feelings and ability to make new friends. At the micro-social level, were chosen the perception of smoking by parents and friends, second-hand smoke exposure, cigarette offers, transmission of knowledge about the disadvantages of smoking and the perception of interest shown by parents about their school performance. At the environmental level, the availability of money was analyzed.

The questionnaire was approved by the Direcção Geral de Inovação e Desenvolvimento Curricular (DGIDC).

### *Procedure*

A quantitative study was carried out, of the transversal descriptive type. After having validated the sample collection plan of the Project, for the whole country, schools from the Viseu District were assigned by convenience. Previously, authorization from the Direction of the Schools has been collected. Two classes from each year (from 9<sup>th</sup> to 12<sup>th</sup>) were randomly assigned to participate in the study. After getting the parents authorization, children fulfilled the questionnaire in a classroom, with the presence of a teacher. Teachers were responsible to gather and deliver the questionnaires, which were then collected by an investigator.

In order to determine prevalences, frequency distributions were used. To get to know the factors related to smoking in the sample Odds Ratio test (OR) was used, with category variables being dichotomized. The Odds Ratio test is a way of comparing whether the probability of a certain event is the same for two groups. In this study, these groups were formed based on the variable “smoking habits”. It was measured through the question “Do you currently smoke?”. Answers were dichotomized in two categories, creating the two groups of analysis: “smokers”, which included regular and occasional

smokers, and “non smokers”, including those who are not smokers, although they may have experienced a cigarette.

The analyzed variables of the determinants of smoking were those that in a preliminary analysis seemed to have a greater impact on smoking.  $\chi^2$  was used to evaluate the significance of the OR results, although these data are not presented. According to these significances, variables were then grouped in three categories: related factors – those clearly related to smoking (where the  $\chi^2$  test revealed an association between variables or the OR result was consistent); undetermined (those whose result could be compromised by the small number of subjects in each category) and non-related factors (those clearly not related to smoking). Data were statistically analyzed through the Statistical Package for Social Sciences *Statistics* (version 17.0 for Windows).

## Results

*These results represent an exploratory study, and so data should be understood with high precaution. We are aware that these data can be strongly affected by the reduced size of the sample. More consistent data will be obtained in the end of the project, being this only a small part of it.*

Regarding smoking habits, there is a prevalence of 11.6% (54) smokers (daily and occasional) in the total sample. Analyzing by sex, 8.1% (21) of the girls and 16.1% (33) of the boys are smokers (Table 2).

**Table 2. Smoking habits**

N= 463

		Smoking habits			
		Smokers		Non smokers	
	n	f	%	f	%
GIRLS	258	21	8.1	237	91.9
BOYS	205	33	16.1	172	83.9

Regarding cigarette experimentation (table 3), there is a higher percentage of boys than girls who have experienced (56.3% vs 42.5%). Boys also experience to smoke at an earlier age (12.79 years vs 13.54). Both point out the curiosity as the first motive for trying a cigarette (83.6% of the girls and 76.1% of the boys) and both got the first one mainly given by a friend.

**Table 3. Cigarette experimentation**

	GIRLS		BOYS	
<b>Experimentation</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Yes	111	42.5	116	56.3
No	150	57.5	90	43.7
<b>Experimentation Age</b>	<b>Mean (Standard-Deviation)</b>		<b>Mean (Standard-Deviation)</b>	
Years	13.54 (2.22)		12.79 (2.88)	
<b>Motive</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Curiosity (“wanted to know how it was to smoke”)	92	83.6	89	76.1
Others	18	16.4	28	23.9
<b>Way of getting the first cigarette</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
Given by a friend	80	72.1	91	77.8
Bought	9	8.1	4	3.4
Others	22	19.8	22	18.8

*Individual determinants of smoking*

Table 4 presents the risk values associated with each individual determinant of smoking, by gender. In table 5 we can see the significance of that risk values, regarding their relation with smoking.

Common factors related to smoking are: to be unable to refuse a cigarette offer (Girls - OR=3.20; Boys – OR= 4.73) and to have been drunk at least one time (Girls - OR=6.36; Boys= 3.00). Body dissatisfaction appears as a factor related to smoking, only in girls (OR=3.23).

Undetermined individual factors to smoking, in both sexes, are: to believe that father and mother would like them to smoke (subjective norm); to have little assertiveness (“to do things that others convince them to do”); to feel confident never or rarely; to have school failures (at least one year failed); not liking the school and to have experienced alcohol. The lack of physical exercise is an undetermined factor to smoking in girls. In boys, to think that their siblings want them to smoke is an undetermined factor, along with “feeling sad sometimes or always”, body dissatisfaction and difficulty in making new friends.



To consider tobacco cheap, very cheap or affordable and to have the perception that more than half of classmates smoke (overestimation) are non-related factors to smoking in girls and boys. Specifically in girls, factors that are not related to smoking are: to believe that siblings would like them to smoke (subjective norm); to feel sad (sometimes or always) and to have some difficulties in making new friends. The lack of physical exercise is a non-related factor to smoking in boys.

Table 4. Odds–Ratio Test results for the individual determinants of smoking, by gender

		Smoker	vs	Non Smoker
		GIRLS		BOYS
<b>Individual determinants</b>				
<b>Opinion about tobacco price</b>				
	Expensive or very expensive	1.00		1.00
	Very cheap, cheap or affordable	0.32 (0.12-0.89)		0.57 (0.25 – 1.27)
<b>Perception of smoking among classmates and adolescents of their age</b>				
Colegas de turma	Less than half	1.00		1.00
	More than half	0.37 (0.11-1.31)		0.42 (0.19 – 0.92)
<b>Subjective norm (“They would like me to smoke”)</b>				
Father	No	1.00		1.00
	Yes	9.52 (0.87 – 10.05)		1.01 (1.00 – 1.02)
Mother	No	1.00		1.00
	Yes	9.52 (0.87 – 10.05)		1.02 (1.00 – 1.02)
Siblings	No	1.00		1.00
	Yes	0.94 (0.84 – 1.06)		1.01 (1.00 -1.03)
<b>Ability to refuse a cigarette offer</b>				
	Refuse	1.00		1.00
	Accept	3.20 (1.20 – 8.54)		4.73 (1.89 – 11.82)
<b>Assertiveness (“They convince me to do things that later I regret”)</b>				
	Never or rarely	1.00		1.00
	Sometimes, often or always	1.11 (0.39 – 3.18)		2.12 (0.88 – 5.04)
<b>School failures</b>				
	No	1.00		1.00
	Yes	0.42 (0.06 – 3.30)		2.20 (1.04 – 4.68)
<b>Feelings about school</b>				
	Like or really like	1.00		1.00
	Not really like or dislike	1.96 (0.38 – 10.05)		1.44 (0.43 – 4.84)
<b>Physical exercise</b>				
	Never or once or twice a month	1.00		1.00
	1/ 2 times a week or every day	2.26 (0.86 – 5.92)		0.77 (0.21 – 2.74)
<b>Body satisfaction</b>				
	Yes	1.00		1.00
	No	3.23 (1.21 – 8.61)		0.67 (0.26 – 1.74)
<b>Have you ever drunk an alcoholic drink?</b>				
	No	1.00		1.00
	Yes	1.17 (1.11 – 1.24)		1.93 (0.43 – 8.69)
<b>Drunkenness</b>				
	Never	1.00		1.00
	Yes, at least one time	6.36 (2.49 – 16.25)		3.00 (1.38 – 6.53)

<b>Emotional state</b>			
d) <sup>1</sup>	Sometimes or always	1.00	1.00
	Never or rarely	1.47 (0.60 – 3.60)	1.20 (0.54 – 2.65)
e) <sup>2</sup>	Never or rarely	1.00	1.00
	Sometimes or always	0.79 (0.31 – 1.97)	0.78 (0.36 – 1.67)
<b>Ability to make new friends</b>			
	Easy or very easy	1.00	1.00
	Difficult or very difficult	0.76 (0.31 – 1.86)	1.06 (0.50 – 2.25)

Table 5. Risk significance for each individual determinant of smoking, by gender

				Smoker	vs	Non Smoker					
				GIRLS			BOYS				
<b>Individual determinants</b>											
<b>Opinion tobacco price</b> – Cheap, very cheap or affordable				NR			NR				
<b>Perception</b> that more than half of classmates smoke				NR			NR				
<b>Subjective norm (“They would like me to smoke”)</b>											
Father				U			U				
Mother				U			U				
Siblings				NR			U				
<b>No ability to refuse a cigarette offer</b>				R			R				
<b>Assertiveness (“They convince me to do things that later I regret”)</b>											
Sometimes, often or always				U			U				
<b>School failures</b>				U			U				
<b>Feelings about school</b> - Not really like or dislike				U			U				
<b>Physical exercise</b> - Never or once or twice a month				U			NR				
<b>Body dissatisfaction</b>				R			U				
<b>Alcohol experimentation</b>				U			U				
<b>Drunkenness</b> - at least one time				R			R				
<b>Emotional state</b>											
d) <sup>3</sup>	Never or rarely			U			U				
	e) <sup>4</sup>	Sometimes or always			NR			U			
<b>Difficulty to make new friends</b>				NR			U				

R - Related factor; U – Undetermined; NS - Non-related factor

### *Micro-social and environmental determinants of smoking*

As can be seen in tables 6 and 7, regarding micro-social determinants of smoking, there are common factors related to smoking: to have more than three friends – girls – who smoke (Girls – OR= 8.12; Boys - OR= 3.55); to have more than three friends – boys – who smoke (Girls – 4.27; Boys - OR= 3.90); to receive cigarette offers from best friends (Girls - OR= 7.71; Boys - OR=7.35) and to have not been spoken about the disadvantages of smoking by a teacher (Girls - OR= 7.54; Boys - OR= 2.62).

<sup>1</sup> Frequency with which he/she feels confident

<sup>2</sup> Frequency with which he/she feels sad

<sup>3</sup> Frequency with which he/she feels confident

<sup>4</sup> Frequency with which he/she feels sad

Also availability of extra money by month, the analyzed environmental factor, is a related factor to smoking both in girls (OR= 3.34) and boys (OR= 1.53).

Related factors to smoking only in girls are: to have a smoking mother (OR= 5.4) and siblings (OR= 3.17); to be exposed to second-hand smoke exposure by mother (OR= 6.44); to receive cigarette offers by “other people” (OR= 3.4) and to have not been spoken about the disadvantages of smoking by best friend(s) (OR= 1.42).

In both sexes, there are micro-social factors to smoking which relation to smoking is undetermined: the second-hand smoke exposure by siblings; to receive cigarette offers by father, mother and friends and to have not been spoken about the disadvantages of smoking by the father or mother. Other undetermined factors appear in boys: to have a smoking father and siblings; to be exposed to second-hand smoke by mother and to have not been spoken about the disadvantages by their best friend(s) and siblings.

The non-related factor to smoking, in both sexes, is to be exposed to second-hand smoke by father. In girls, specific factors non-related to smoking are: to have a smoking father and to have not been spoken about the disadvantages of smoking by siblings. Non-related factors to smoking only in boys are: to have a smoking mother; to receive cigarette offers by “other people” and to percept parents to show a lack of interest about their school performance (“parent’s help in everything that is related to school” and “encouragement to do good homework”).

Table 6. Odds–Ratio Test results for the micro-social and environmental determinants of smoking, by gender

		Smoker	/	Non Smoker
		GIRLS		BOYS
<b>Micro-social determinants</b>				
<b>Smoking in the social environment (parents, siblings)</b>				
		<b>ODD Ratio (CI)</b>		<b>ODD Ratio (CI)</b>
Father	Doesn't smoke	1.00		1.00
	Smokes	0.99 (0.35-2.83)		1.21 (0.50 – 2.95)
Mother	Doesn't smoke	1.00		1.00
	Smokes	5.4 (1.84 – 15.81)		0.86 (0.23 – 3.06)
Siblings	Doesn't smoke	1.00		1.00
	Smokes	3.17 (1.15 – 8.70)		2.40 (0.83 – 6.91)

<b>Second-hand smoke exposure</b>			
Father	No	1.00	1.00
	Yes	0.79 (0.18 – 3.60)	0.94 (0.26 – 3.43)
Mother	No	1.00	1.00
	Yes	6.44 (1.76-23.58)	1.42 (0.28 – 7.16)
Siblings	No	1.00	1.00
	Yes	2.16 (0.24 – 19.47)	1.02 (1.00 – 1.05)
<b>Smoking among best friends (boys and girls)</b>			
Friends (boys)	Less than three	1.00	1.00
	More than three	4.27 (1.60-11.40)	3.90 (1.78 – 8.54)
Friends (girls)	Less than three	1.00	1.00
	More than three	8.12 (3.09-21.34)	3.55 (1.47 – 8.57)
<b>Cigarette offers</b>			
Father	No	1.00	1.00
	Yes	1.44 (0.16 – 13.02)	1.05 (1.01 – 1.09)
Mother	No	1.00	1.00
	Yes	1.84 (0.20 – 17.36)	1.02 (1.00 – 1.05)
Best Friends	No	1.00	1.00
	Yes	7.71 (2.74 – 21.64)	7.35 (2.57 – 21.00)
Friends	No	1.00	1.00
	Yes	1.15 (1.08 – 1.22)	2.94 (0.37 – 23.67)
Other people	No	1.00	1.00
	Yes	3.4 (0.90 – 12.88)	0.96 (0.35 – 2.64)
<b>To have been spoken about the disadvantages and harm of smoking by one of the following:</b>			
Father	Yes	1.00	1.00
	No	1.68 (0.64 – 4.43)	2.18 (0.87 – 5.46)
Mother	Yes	1.00	1.00
	No	1.78 (0.61 – 5.16)	0.93 (0.30 – 2.91)
Siblings	Yes	1.00	1.00
	No	0.69 (0.27 – 1.73)	0.82 (0.37 – 1.83)
Best friend(s)	Yes	1.00	1.00
	No	1.42 (0.57 – 3.59)	0.60 (0.27 – 1.32)
Teacher(s)	Yes	1.00	1.00
	No	7.54 (2.85 – 19.95)	2.62 (1.13 – 6.11)
<b>Perception of the interest shown by parents about school performance</b>			
a) <sup>5</sup>	Often or always	1.00	1.00
	Never, rarely or sometimes	2.03 (0.23 – 17.71)	2.69 (0.47 – 15.35)
b) <sup>6</sup>	Often or always	1.00	1.00
	Never, rarely or sometimes	3.42 (0.88 – 13.39)	2.03 (0.78 – 5.26)
<b>Environmental determinants</b>			
<b>Availability of money</b>			
	Less than 10€	1.00	1.00
	More than 10€	3.34 (1.32 – 8.43)	1.53 (0.70 – 3.35)

<sup>5</sup> Parents' help in everything that is related to school

<sup>6</sup> Encouragement of parents to do good homework

Table 7. Risk significance for each micro-social and environmental determinant of smoking, by gender

		Risk significance	
		GIRLS	BOYS
<b>Micro-social determinants</b>			
<b>Smoking in the social environment (parents, siblings)</b>			
Father		NR	U
Mother		R	NR
Siblings		R	U
<b>Second-hand smoke exposure</b>			
By father		NR	NR
By mother		R	U
By siblings		U	U
<b>Smoking among best friends (boys and girls)</b>			
More than three friends smoking (boys)		R	R
More than three friends smoking (girls)		R	R
<b>Cigarette offers</b>			
Father		U	U
Mother		U	U
Best Friends		R	R
Friends		U	U
Other people		R	NR
<b>To have been spoken about the disadvantages and harm of smoking by one of the following:</b>			
Father		U	U
Mother		U	U
Siblings		NR	U
Best friend(s)		R	U
Teacher(s)		R	R
<b>Perception of the interest shown by parents about school performance</b>			
a) <sup>7</sup>	Never, rarely or sometimes	U	NR
b) <sup>8</sup>	Never, rarely or sometimes	U	NR
<b>Environmental determinants</b>			
<b>Availability of money - More than 10€extra/month</b>		R	R

R – Related factor; U – Undetermined relation; NS - Non-related factor

## Discussion and conclusion

This study intended to identify individual, micro-social and environmental determinants of occasional and regular smoking by gender. Gender differences were found regarding some smoking determinants.

Prevalence of smoking in this sample is about double in boys than girls. This data didn't match that of the HBSC (2004), where there were more smoking girls than boys smoking, which can be due to the fact that this is a small sample, that doesn't reflect the

<sup>7</sup> Parents' help in everything that is related to school

<sup>8</sup> Encouragement of parents to do good homework

national results and also the fact of belonging to a within city of the country, which is referred to in other investigation data.

Boys have their first smoking experience earlier than girls, which is in accordance with other studies (Matos *et al.*, 2006; Precioso, 2004). Both girls and boys experiment their first cigarette by curiosity, which reinforces the importance of individual factors, as refereed in other studies (Becoña, 2004) and environmental factors (accessibility to the substance).

There is an association between smoking, in both girls and boys, and some factors: the lack of ability to refuse a cigarette offer; to have been drunk at least one time; to have more than three friends smoking (being them girls or boys); to receive cigarette offers by best friends; to have not been spoken about the disadvantages of smoking by a teacher and to have availability of money.

Starting by the individual factors, girls and boys who have a lack of assertiveness, as the inability to refuse a cigarette offer, have a higher risk to be smokers than those that are able to refuse this kind of pressure. This highlights the importance of incrementing the assertiveness ability, in order to promote more resistance to peer pressure to consumption. Also the association between alcohol (to have been drunk at least one time) and smoking is seen in this study, in both sexes, which seems to reinforce that the risk behaviors are associated many times: smokers are involved in most risk health behaviors, like alcohol consumption (Scal, Ireland, & Borowsky, 2003), and this is also a related factor to the beginning and maintenance of smoking behavior (Ariza & Nebot, 2002; Hoving, Reubsaet, & deVries, 2007).

Differences have been found in individual determinants, by gender. Body dissatisfaction represents an elevated risk only for girls, which is, according to Ariza and Nebot (2002), related to a higher need of using tobacco as a tool to deal with distress, anxiety and other negative feelings. Also many girls believe smoking controls weight (USDHHS, 2001), which is not found in boys who smoke. Having this into account, it is extremely important that preventive programs include this variable, emphasizing the short-term negative consequences of smoking to appearance and health.

Regarding micro-social determinants, it should be emphasized the association, to both sexes, between smoking behavior and having more than three friends smoking (being them boys or girls) as well as having received cigarette offers from friends. This is

clearly in accordance with other studies (Puerta & Checa, 2007; USDHHS, 2001), reinforcing that the most direct influence in adolescents is the smoking of their best friends.

Also the lack of transmission of knowledge about the disadvantages of smoking by a teacher is a related factor to smoking in girls and boys, which supports the importance of the involvement of school to mitigate the negative impact of the friends' group beliefs, as this is a moderator factor between the models received (others smoking) and the behaviors.

Cigarette offers are more associated with smoking in the feminine gender, but both are influenced by cigarette offers by best friends, showing the higher impact of the proximal variables, as the easy availability to the substance, reinforced then by the peer pressure to the consumption.

Regarding smoking in the social environment, it is interesting to notice that girls who have a smoking mother and siblings, and also those that are exposed to second-hand smoke by mothers, have a greater risk to be or to become smokers, which is not seen in boys. Tobacco consumption by father has an undefined relation to their sons', as mother smoking has a defined relation to their daughter smoking. At the same time, smoking by mothers is not related to boys' smoking neither fathers' smoking to girls' smoking. This leaves opened the possibility of a greater impact of smoking by mothers in girls and smoking by fathers in boys. These results call attention for a great impact to girls of mother behavior, as mentioned in other studies (Puerta & Checa, 2007). Also the impact of social modeling, in general, is higher in girls (Hublet, *et al.*, 2002).

Regarding environmental factors, the availability of money should have some parental control and appeals to environmental interventions, as it is a smoking related factor for both sexes.

There are many individual and micro-social factors whose relation to smoking is undetermined, to both sexes, in this study, like the subjective norm, as the belief that "mother and father would like me to smoke", school failures, feelings about school, feelings of confidence/lack of self-esteem, to have not been spoken about the disadvantages of smoking by parents, which are probably, in some direction, related to smoking, but need to be analyzed with further data.

These results should be seen in the context of this study's limitations. This is an exploratory study, and so data should be understood with high precaution. These data revealed many undetermined factors and didn't allow making more analyses with all the interesting variables regarding gender, due to the reduced sample size. As mentioned before, we are aware that these data can be strongly affected by this limitation. The project foresees the collecting of a national sample, with about 8000 participants, which will allow gathering more feasible data. Prosecution of the investigation is needed in order to have more accurate results and clarify the variables related to smoking in adolescents, and especially by gender.

However, this study highlighted the importance of including gender specific measures while constructing preventive intervention programmes directed to adolescents. There is a fundamental role played by some individual, micro-social and environmental factors in smoking behavior. In this study, both girls and boys appeared to have more clearly related factors to smoking from the micro-social level. Micro-social factors are related to aspects of the social environment of the individual, as family, peer group and their influences operating as proximal determinants of behaviour.

It is a crucial issue to continue the investigation about gender differences so that prevention actions based on such differences can be developed.

### **Acknowledgements**

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The authors particularly thank the school Directors and teachers who gathered data or coordinated the questionnaire application process in the schools.

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# POSTERS

## SMOKING CESSATION- DIFFERENCES BETWEEN MAN AND WOMAN?

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### **Introduction**

Smoking cessation is a complex and multifactorial process. Women are more susceptible to tobacco smoke, have a higher risk of opportunistic diseases related to this and greater difficulty in stopping.<sup>1</sup> It is known that gender leads to different characteristics and different rates of abstinence. These differences are attributed to various factors, such as increased concern with weight, less confidence in the ability to stop smoking, hormonal changes, increased tendency to depression, stress and lower efficacy of nicotine replacement in women.<sup>2</sup> Furthermore, the effectiveness of interventions seems to differ in males and females.<sup>3,4</sup>

### **Objectives**

To assess comparatively the characteristics and results up to six months, between two groups, men and women, attending a hospital smoking cessation clinic in the years 2007 and 2008.

### **Methodology**

Retrospective study of 331 clinical records of smokers that attended a hospital smoking cessation clinic in 2007 and 2008. Age, age of smoking initiation, smoking burden, previous attempts to give up smoking, degree of motivation, degree of dependence, associated diseases, prescribed therapy, abstinence rate, relapse and abandonment until six months were evaluated. We tried to investigate if the gender had implication in the success, using linear regression analysis.

## **Results**

331 patients evaluated, 74% (n=244) male with a mean age 48.8 ( $\pm$  11.8) and 26% (n=87) female, with a mean age 43.6 ( $\pm$ 8.9).

The results of initial assessment and follow-up until six months are in the table below:

<b>Analised variable</b>	<b>Men</b>	<b>Women</b>
Number of individuals	244	87
Mean age	48.8 ( $\pm$ 11.8)	43.6 ( $\pm$ 8.9)
Marital status	Single-13% Married-74% Divorced/widower-13%	Single- 16% Married-61% Divorced/widower-23%
Education	Primary- 44% Secondary - 48% Graduate -8%	Primary-15% Secondary- 65.5% Graduate -19.5%
Socio-economical stratum	Low-52% Medium-45% High- 3%	Low-55% Medium-45% High-0%
Diseases	Respiratory-33.6% Cardiac-11% Psychiatric - 6.5%	Respiratory -31.2% Cardiac-6.8% Psychiatric-13.7%
Average age of smoking initiation	15	17
Mean burden (UMA)	46	29
Previous attempts to give up smoking	48,3%	53%
Motivation (Richmond test)	Low -27% Moderate -58% High -15%	Low-54% Moderate - 39% High- 7%
Dependence (Fagerström test)	Low -24% Medium -38% High -38%	Low-38% Medium - 39% High -23%
Prescribed Therapy	180 Nicotine Replacement-68% Varenicline -30% Combined- 2%	50 Nicotine Replacement - 53% Varenicline-47 % Combined- 0 %
Abstinence rate until 6 months	27.1%	22%
Relapse (until 6 months)	12.4%	11,5%
Abandonment rate	57.7%	64,4%

In both sexes, most individuals were married. The percentage of divorced or widowed was higher in females (23%) compared with males (13%).

Regarding education, there was a difference between the two groups; women had a higher educational level.

The majority belonged to low socio-economic stratum (52% for men and 55% for women).

The most frequent pathologies in both groups were the pulmonary pathology, cardiovascular and psychiatric. The pulmonary pathology was distributed equally between the two groups, while the prevalence of psychiatric disorders was higher in females.

Respecting to smoking history, it was found that men had a lower average age of smoking initiation (15 years), a higher level of smoking (46 UMA compared with women who had 29 UMA) and a greater reliance and motivation. Women had made more previous attempts to stop.

It must be noted that there is a significant proportion of smokers not sufficiently motivated or prepared for the cessation and a high abandonment rate, with about 20% who did not attend the second consultation.

Drug therapy was prescribed to 40 women and 180 men. Treatment with nicotine substitutes was the most commonly prescribed drug in either men or women. Varenicline was prescribed to 47% of women and 30% of men. Combined therapy (nicotine substitutes + bupropion) was prescribed in a very small number of patients.

The success rate at six months was slightly higher among men, 27.1% compared with 22% in women.

The global rate of treatment success was 36%.

Moreover, the relapse rates were higher in men, while the abandonment rate of consultation, assessed up to six months, was slightly higher in women.

Through linear regression analysis, we observed that although men have a superior abstinence rate up to 6 months, such difference is not motivated by gender, but by motivation ( $p=0.00098$ ) and age ( $p=0.0021$ ).

## Conclusion

Women were a minority of the patients attending the smoking cessation clinic, due to the smaller smoking incidence and the different smoking epidemic phases regarding men, which occur in Portugal.<sup>5</sup> Women begin smoking later, make more attempts to give up smoking, present lesser smoking burden, lesser dependence and lesser degree of motivation. The prevalence of psychiatric pathology is superior in women. The results up to 6 months, inferior in women, were influenced by the motivation and age; therefore gender is not determinant to success ( $p=0.59$ ). It is necessary to adapt the approach and treatment to the specificities of each smoker.

Smoking control policies directed to women are imperative, in order to reinforce the motivation and favour cessation.<sup>4,5</sup>

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## CESSAÇÃO TABÁGICA – DIFERENÇAS ENTRE HOMENS E MULHERES?

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### **Introdução**

A cessação tabágica é um processo complexo e multifactorial. As mulheres apresentam maior susceptibilidade ao fumo do tabaco, risco superior de vir a desenvolver doenças relacionadas com o mesmo e maiores dificuldades na cessação.<sup>1</sup> Sabe-se que o género condiciona diferentes características, e diferentes taxas de abstinência. Estas diferenças são atribuídas a variados factores, como maior preocupação com o peso, menor confiança na capacidade de conseguir deixar de fumar, alterações hormonais, maior tendência para depressão, stress e menor eficácia dos substitutos da nicotina nas mulheres.<sup>2</sup> Por outro lado, a efectividade das intervenções parece diferir no sexo masculino e no feminino.<sup>3,4</sup>

### **Objectivos**

O objectivo deste trabalho foi avaliar comparativamente as características e resultados até aos 6 meses de 2 grupos de indivíduos, homens e mulheres, que frequentaram uma consulta de cessação tabágica hospitalar nos anos de 2007 e 2008.

### **Metodologia**

Estudo retrospectivo de 331 processos clínicos de fumadores que frequentaram a consulta neste período de tempo. Foram avaliados os seguintes parâmetros: idade, sexo, estado civil, escolaridade, estatuto sócio económico, comorbilidades, idade início do consumo, carga tabágica (UMA), tentativas prévias de cessação, motivação (Escala de Richmond), dependência (Teste de Fagerstrom), terapêuticas utilizadas, taxas de abstinência, recaídas e abandonos até aos 6 meses. Através da análise de regressão linear, procurou-se averiguar se o género teria implicação nos resultados nomeadamente no sucesso.

## **Resultados**

Dos 331 utentes avaliados, 74% (n=244) eram do sexo masculino, com uma idade média de 48.8 ( $\pm$  11.8) e 26% (n=87) do sexo feminino, com média de idades de 43.6 ( $\pm$ 8.9). Os resultados da avaliação inicial e do seguimento até aos 6 meses, estão descritos no quadro seguinte:

<b>Variável analisada</b>	<b>Homens</b>	<b>Mulheres</b>
Nº de indivíduos	244	87
Média de idades	48.8 (± 11.8)	43.6 (±8.9)
Estado civil	Solteiro-13% Casado-74% Divorciado/viúvo-13%	Solteiro- 16% Casado-61% Divorciado/viúvo-23%
Escolaridade	Ensino 1º- 44% Ensino 2º - 48% Ensino superior- 8%	Ensino 1º-15% Ensino 2º-65.5% Ensino superior-19.5%
Estrato sócio-económico	Baixo-52% Médio-45% Alto- 3%	Baixo-55% Médio-45% Alto-0%
Comorbilidades	Pulmonar-33.6% Cardiovascular-11% Psiquiátrica- 6.5%	Pulmonar-31.2% Cardiovascular-6.8% Psiquiátrica-13.7%
Média de idade início do consumo	15	17
Consumo médio (UMA)	46	29
Tentativas prévias de cessação	48,3%	53%
Motivação (Teste de Richmond)	Baixa -27% Moderada -58% Alta -15%	Baixa-54% Moderada - 39% Alta- 7%
Dependência (Escala de Fagerström)	Baixa -24% Média -38% Alta -38%	Baixa -38% Média - 39% Alta -23%
Terapêutica farmacológica	180 Substitutos nicotina-68% Vareniclina -30% Combinada- 2%	50 Substitutos nicotina-53% Vareniclina-47 % Combinada- 0 %
Taxa de abstinência aos 6 M	27.1%	22%
Recaídas (até aos 6 M)	12.4%	11,5%
Taxa de abandono	57.7%	64,4%

Em ambos os sexos a maioria dos indivíduos eram casados. A percentagem de divorciados ou viúvos foi maior no sexo feminino (23%) comparativamente com o masculino (13%).

Em termos educacionais, constatou-se uma diferença entre os dois grupos, sendo que as mulheres apresentavam um grau de escolaridade superior.

A maioria pertencia a um baixo estrato sócio-económico (52% para os homens e 55% para as mulheres).

As comorbilidades mais frequentes em ambos os grupos foram a patologia pulmonar, cardiovascular e psiquiátrica. A patologia pulmonar distribuiu-se equitativamente entre os dois grupos, enquanto que a prevalência de patologia psiquiátrica foi superior no sexo feminino.

Relativamente à história tabágica, constatou-se que os homens tinham uma média de idade de início do consumo mais baixa (15 anos), uma carga tabágica maior (46 UMA comparativamente com as mulheres que tinham 29 UMA) e uma dependência e motivação superiores. As mulheres tinham feito mais tentativas anteriores de cessação.

De salientar, uma percentagem significativa de fumadores não suficientemente motivados nem preparados para a cessação e a elevada taxa de abandono, sendo que cerca de 20% não compareceu à segunda consulta.

Foi prescrita terapêutica farmacológica a 50 mulheres e 180 homens. A terapêutica com substitutos da nicotina foi a mais prescrita quer nos homens quer nas mulheres. A vareniclina foi prescrita a 47% das mulheres e 30% dos homens. A terapêutica combinada (substitutos da nicotina + bupropiona) foi prescrita num número muito reduzido de doentes.

A taxa de sucesso aos seis meses foi ligeiramente superior nos homens, 27.1% comparativamente com 22% nas mulheres.

A taxa de sucesso terapêutico global foi de 36%.

Por outro lado, as recaídas foram maiores nos homens, enquanto que a taxa de abandono da consulta, avaliada até aos seis meses, foi ligeiramente superior nas mulheres.

Através da análise de regressão linear, observou-se que, apesar dos homens terem uma taxa de abstinência aos 6 meses superior às mulheres, essa diferença não era justificada pelo género, mas pela motivação ( $p=0.00098$ ) e pela idade ( $p=0.0021$ ).

### **Conclusão**

As mulheres representam uma minoria dos utentes acompanhados na consulta de cessação tabágica, o que traduz a menor prevalência de Tabagismo na mulher e fases diferentes da epidemia tabágica no homem e na mulher no nosso País.<sup>5</sup> As mulheres começam a fumar mais tarde, fazem mais tentativas de cessação, apresentam menor carga tabágica, menor dependência e grau inferior de motivação. Os resultados aos 6 meses, inferiores nas mulheres, foram influenciados pela motivação e idade, não sendo o género determinante para o sucesso ( $p=0.59$ ). É necessário adequar a abordagem e tratamento às especificidades da mulher. São indispensáveis políticas de controlo do tabagismo, dirigidas às mulheres, que reforcem a motivação facilitem a cessação.<sup>4,5</sup>

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## SECONDHAND SMOKE AND ATTITUDES TO SMOKEFREE ENVIRONMENT

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### Abstract

#### Introduction

According to the estimates, more than milion people in Europe die annually from diseases caused by tobacco, in Serbia approximately 16000. According to the survey conducted in Serbia in 2006, 70,8% adolescents 15-19 years old are exposed to second-hand smoke at home, and 44,9% adults at their workplaces. In Serbia, smoking is still allowed in some public places such as restourantes, bars and clubs resulting in extremely high exposure to second-hand smoke for employees and all guests.

#### Objectives

Determine the magnitude of second-hand smoke at schools, workplaces and public places as well as attitudes toward banning smoking in those places.

#### Methodology

The survey was carried out among citizens aged 15 years and older in five cities of Serbia (Subotica, Zrenjanin, Sremska Mitrovica, Sabac and Kragujevac). It was organized in collaboration with the National Commitee for Smoking Prevention, Institute of Public Health of Serbia. Surveys were conducted in all towns at the same time, on May 31st, with 766 individuals interviewed on a face-to-face basis (random sample of citizens that visited the street perfomances organized to celebrate the World No Tobacco Day).

#### Results

Surveys included almost the same number of women (381 or 49,7%) and men (385 or 50,3%). Among them, 201 (26,2%) were smokers and 113 (14,8%) ex-smokers. Exposure to tobacco smoke was the lowest at schools, fairly high at the workplaces - one third of employees, and the highest at public places – over 80%. That passive smoking is dangerous was stated by 714 respondents (93,2%). The ban of smoking at workeplaces was supported by every second person (50,4%). A majority of respodents supported separated rooms for smokers and non-smokers in public places (45,0%) while 41,3% were for completely smoke-free public places. Smoke-free public places received more support among non-smoker than among smokers. The majority of smokers (78,6%) report that they smoke in presence of non-smokers. One-third off smokers (33,3%) do not wish to quit smoking.

## **Conclusion**

Exposure to second-hand smoke is the highest at public places. The support for the total ban of smoking at public places is statistically higher among non-smokers. Since a new law banning smoking at workplaces and at indoor public places is in preparation, media campaigns and other activities are needed to ensure broader support for the ban.

## **Introduction**

Over 50 years, evidence has been collected on harmful effects of secondhand tobacco smoke on health. Numerous expert scientific and medical bodies all around the world have documented harmful effects of secondhand tobacco smoke on respiratory and circulatory system, role of tobacco smoke in incidence of cancer in adults, and influence of tobacco smoke on health and development of children. (1, 2, 3, 4) It is estimated that annually, over a million people in Europe die due to tobacco use, and in Serbia alone, about 16 000. It has been estimated that annually in Europe, about 200 000 workers die due to exposure to tobacco smoke at work place. (5, 6, 7, 8)

Despite numerous scientific and expert evidence on tobacco harmfulness, about 1 billion 250 million people worldwide smoke – about 35% of men and 22% of women in developed, and 50% of men and 9% of women in undeveloped countries. Smoking prevalence rates among men have reached their peak and are now coming down in all countries in the world; in some developed countries the rate is 23% (USA, Great Britain, Scandinavian countries), while in undeveloped countries the lower smoking prevalence trend is not as intense, but it is evident. Among women, smoking is going down in developed countries (USA – 18%, Great Britain – 21%), while in many countries of Southern, Central and Eastern Europe the number of female smokers is either the same or getting higher. (9, 10)

Persons are most commonly exposed to tobacco smoke in public and work places, as well as in their homes and cars. Data show that there still are 126 million Americans, adults and children, who are exposed to tobacco smoke at home and at work. According to estimates, in 2006 2,5 million persons in EU were exposed to tobacco smoke at work. (9, 10)

A global school personnel survey in Serbia was carried out in 2008, showing that the majority of our schools prohibit use of tobacco in school buildings to students (74%) and the staff (60%). One third of schools (33.1%) are declared as “schools without tobacco smoke”, with a complete prohibition of smoking in all school objects, playgrounds and at all events organized by schools. Nevertheless, the above prohibitions are completely abided by only by 37.4% of all schools. (11)

A survey among catering staff – non smokers – in many European countries and in Serbia has shown that 4/5 of non smokers have cotinin, nicotine metabolite, in their bodies, to which they had been exposed during work. (4, 12)

Having in mind the fact that there is no safe level of tobacco smoke exposure, elimination of tobacco smoke from enclosed spaces is the only scientifically justified measure, which properly protects health of the population from dangerous effects of passive tobacco smoke exposure. The trend of elimination of tobacco smoke from enclosed space protects health, and cost-efficiency is very high, especially in comparison with inefficient alternatives, such as: separation of smoking and non smoking zones in the same space, increased ventilation and filtration in combination with particularly intended smoking zones, central and local machines for purification of air, one-direction systems, etc. (4,13,14).

Raising awareness is an imperative for building the necessary support of the public for efficient legal action, and “smooth” enforcement of law. In countries where the public understands health risks of tobacco smoke, laws on prohibition of smoking are popular, respected and mostly self-enforceable.

### **Objectives**

The goal of the survey in five cities in Serbia was to establish the level of exposure to tobacco smoke in schools, at work places and at public places, as well as to establish standpoints in connection with prohibition of smoking in these places. Media campaigns and other activities in the community aim at provision of a broad public support to the coming prohibition of smoking in enclosed public premises.



## **Methodology**

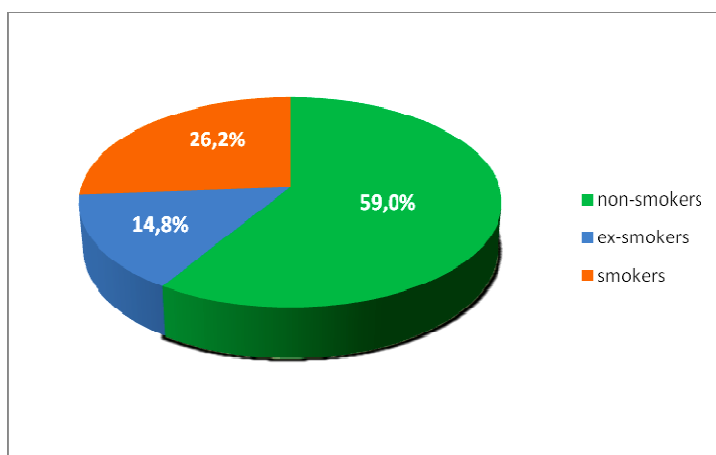
A survey has been conducted, using the same methodology, in 5 cities of Serbia (Subotica, Zrenjanin, Sremska Mitrovica, Sabac and Kragujevac) in cooperation with the Tobacco Control Office (within Institute of Public Health of Serbia “Dr Milan Jovanovic Batut”). Passers-by (random sample) visiting the activities in the community in connection with 31 May, World No Tobacco Day, have been interviewed. This sample included 766 persons, equal number of women (381, or 49.7%) and men (385, or 50.3%). 134 persons were interviewed (17.6%) aged 20 and less, 242 (31.8%) persons aged 21-40, 287 (37.7%) aged 41-60, and 99 (12.9%) over 60. The questionnaire contained 10 questions (3 questions on general background, 3 questions on smoking status, 4 questions on exposure to tobacco smoke – in school, at work or in public places, as well as on attitude towards prohibition of smoking in such places). With the aim of providing quality data, standardization of procedures for collection of data was conducted by drafting instructions for completion of forms and relevant training of surveyors, as well as for adequate control of interviewing, verification of collected data, control of entering of data and processing of data. Obtained data have been computer-processed in the statistic software SPSS version 17.0. Statistic processing had specific parameters: percentage value, test of statistical significance – non parametrical, tabular and graphic presentation of data.

## **Results**

### **Smoking Status**

766 persons have been interviewed, out of which 201 (26.2%) were smokers and 113 (14.8%) ex-smokers. (Graph 1) Smoking is equally present in both men and women, regardless of profession ( $p > .05$ ). In the company of non-smokers 158 smokers smoke (78.6%), while each fifth smoker doesn't (21.4%). (Table 1) There is no statistically significant difference with regards to sex, profession and age ( $p > .05$ ). Every third smoker (67, or 33.3%) does not wish to quit smoking, while two thirds (66.7%) wish to quit smoking, regardless of sex, age or profession ( $p > .05$ ).

*Graph 1. Smoking status. This figure illustrates distribution by smoking status.*



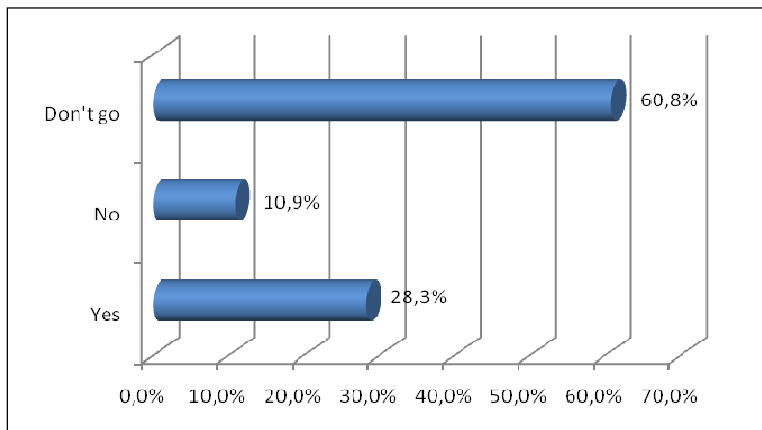
*Table 1. Smokers smoking in the presence of nonsmokers*

Answer	Number	%
Yes	158	78.6
No	43	21.4
Total (N = 201)	201	100.0

### **Exposure to Smoking**

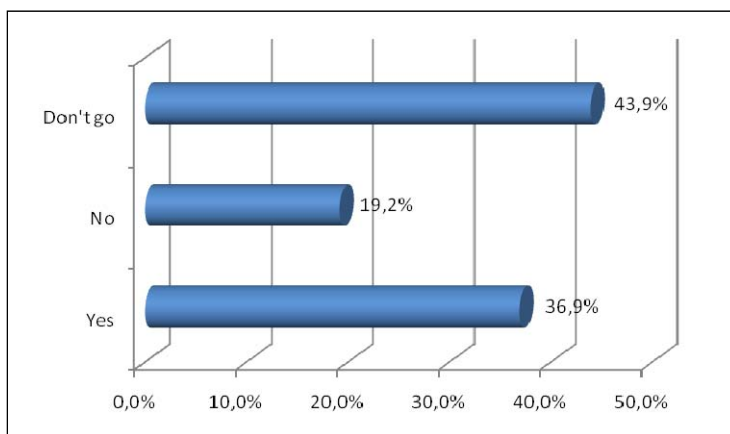
Three out of ten interviewed persons (28.3%) are exposed to tobacco smoke in school, regardless of sex ( $p > .05$ ). (Graph 2)

*Graph 2. Exposure to tobacco smoke at schools. This figure illustrates magnitude of exposure at schools.*

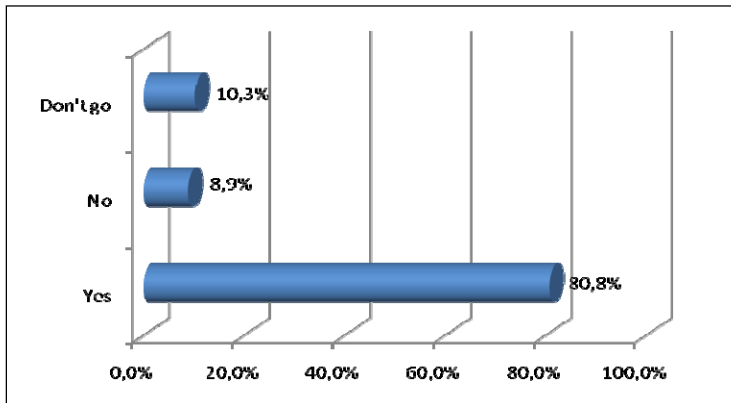


More than one third of interviewed persons (36.9%) is exposed to tobacco smoke at work, regardless of sex ( $p > .05$ ). (Graph 3) Eight out of ten interviewed persons (80.8%) is exposed to tobacco smoke at public places, regardless of sex, age, and profession ( $p > .05$ ). (Graph 4)

*Graph 3. Exposure to tobacco smoke at the workplaces. This figure illustrates magnitude of exposure at the workplaces.*



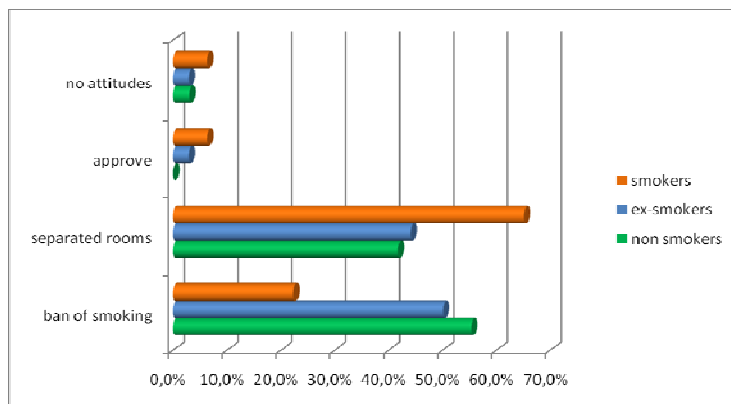
Graph 4. Exposure to tobacco smoke at public places. This figure illustrates magnitude of exposure at public places.



### Attitude towards Prohibition of Smoking

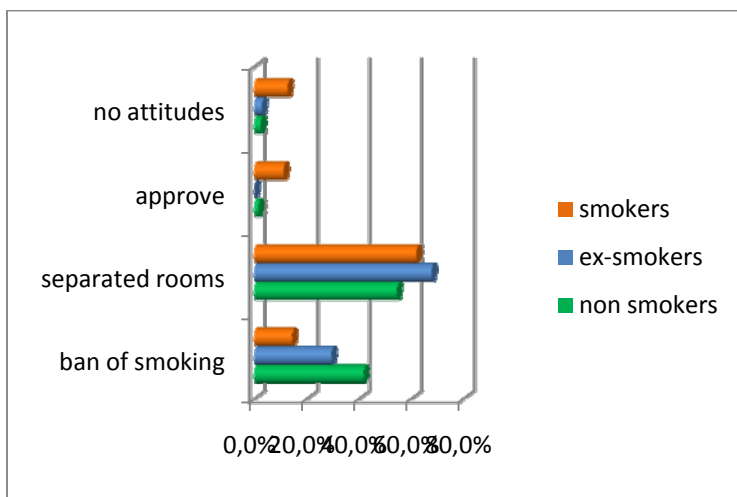
93.2% of interviewed people (714) think that time spent in premises where people smoke (at home, at work or in public places) are harmful. Every second interviewed person supports prohibition of smoking at work – from the point of statistical significance, more often non-smokers (55.3%) and ex-smokers (50%), than smokers (22.3%;  $\chi^2=24,713$ ;  $DF=6$ ;  $p<.01$ ; Graph 5). Every second interviewed person supports separate rooms in public places, while only every third person supports the full prohibition of smoking (32.3%).

Graph 5. Attitudes about ban of smoking at the workplaces. This figure illustrates difference attitudes between smokers and non-smokers.



From the point of statistical significance – prohibition of smoking is more often supported by non-smokers (41.7%) than smokers (14.3%;  $\chi^2=31,772$ ; DF=6;  $p < .01$ ; Graph 6).

*Graph 6. Attitudes about ban of smoking at public places. This figure illustrates difference attitudes between smokers and non-smokers.*



## Discussion

In EU countries, three out of ten residents over 15 years of age smoke, while one quarter (26%) smokes on a daily basis, and 5% smoke sometimes. The largest number of smokers lives in Greece (42%), Bulgaria (39%), Latvia (37%), Romania, Hungary, Lithuania, Czech Republic, and Slovakia (37%). The smallest number of smokers is in Slovenia (23%), Sweden and Finland (25%), Portugal, and Malta (27%). In Serbia, there has been an evident reduction of smoking according to data from the health status surveys, implemented by the Ministry of Health of the Republic of Serbia in 2000 and 2006. According to the latest survey, 33,6% adult residents of Serbia smoke every day or sometimes, that is 38,1% of men and 29.9% of women. Compared to the survey from 2000, the incidence of smoking has gone down by 6.9% that is 9.8% in men and 3.8% in women. (5, 6, 15). The number of smokers in the survey in 5 Serbian cities, which was implemented on 31 May, is 26.2%, which is less compared to the last survey from 2006.

On the average, 14% of non smokers and 23% of smokers in EU are, almost on a daily basis, exposed to tobacco smoke at home (from other people's cigarettes). According to the same survey, about 20% of employed people in the EU are exposed to tobacco smoke at work on a daily basis, one half of them during more than an hour daily. In Greece, 60% of employed people are exposed to tobacco smoke at work daily, a bit less in Cyprus (45%), and in Bulgaria (36%), a lot less in Finland (11%) and Sweden (8%). (15) Data for our country show that almost two thirds of adult population in Serbia (61.7%) is exposed to tobacco smoke at home, and 44.9% at work. (5 ,6). In Serbia, according to the latest GYTS survey, 76.9% of young people aged 13-15 are exposed to tobacco smoke in their own homes. (11). According to results of the survey in 5 cities, exposure to tobacco smoke still exists in schools, while exposure of employed people at work has been reduced since the last national survey. It is necessary to be cautious when interpreting this result and one has to take into consideration the fact that this is caused by a large number of unemployed people, with economic crisis influencing a considerable loss of working places; this can give us a false positive picture.

According to the last report of the Eurobarometre, on "Attitudes of European Citizens towards Tobacco", there is a considerable support of citizens for introduction of comprehensive laws. Four out of five participants in this survey support prohibition of smoking in working places (86%), and in any public enclosed space (84%). Most of Europeans also support prohibition of smoking in bars (61%) and in restaurants (77%). (15)

Results of the survey in 5 Serbian cities show that the most severe exposure to tobacco smoke is in public places. Support to introduction of comprehensive laws is considerably smaller in our country than in the EU. Only every other participant in the survey supports the comprehensive prohibition of smoking in working places, and only every third in public places. A preparation of law that is supposed to change the current status of high exposure to tobacco smoke in public places of all inhabitants is under way; this will contribute to protection and improvement of health of the whole population.

During the last several years, there has been a reduction of exposure of people to tobacco smoke in countries which have introduced the comprehensive prohibition of smoking in public and working places, and in public transportation (Ireland, Great

Britain, Italy, Malta, Sweden, Letonia, Finland, Slovenia, France, Netherlands, and Greece), while in three countries, implementation of such laws will start in 2009 and 2010 (Bulgaria, Germany, and Hungary). According to the recommendation of the European Commission dated 30 June 2009, other countries will be obliged to pass such laws at the latest by 2012, with the aim of protecting their citizens from tobacco smoke. (4, 13, 16, 17)

## **Conclusion**

It is evident that incidence of smoking has gone down in Serbia, but the fact that one third of smokers does not want to stop smoking is worrisome. Even more so is the high incidence of smoking in the company of non smokers, reported by eight out of ten smokers.

There are still smokers in schools, so children are exposed to tobacco smoke, three out of ten. At working places, about one third of employees are exposed to tobacco smoke. At public places in Serbia smoking is permitted, so exposure to tobacco smoke is extremely high, eight out of ten people.

Nine persons out of ten think that spending time in a room full of tobacco smoke is harmful for their health. However, only every other person supports prohibition of smoking at working places, non smokers considerably more so. Every other person supports “separate rooms” in public places, while only every third person supports the complete prohibition of smoking in public places, non smokers considerably more so.

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# DETERMINANTS OF TOBACCO CONSUMPTION IN YOUNG COLLEGE STUDENTS

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## Abstract

Accordingly to the World Health Organization (1998), healthy individuals should have a certain quality of life. Therefore, tobacco consumption, as it affects each person's degree of health, also interferes in the experienced life quality. This way, we intended to assess tobacco consumption, lifestyles and quality of life in 684 college students. Results seem to suggest positive moderate correlations between tobacco consumptions and alcohol, coffee and other substances consumptions. There weren't any statically significant differences between sexes, but between full time and part time students, regarding the adequation of tobacco consumption. As determinants of tobacco consumptions, in the sample collected, we can point out coffee and other substances consumptions, besides lifestyles, in a general way. It seems that lifestyles are intimately related with the degree an individual finds his tobacco consumption adequate. Lastly, if we consider the explaining factors of the life quality experienced by young students, their lifestyles and tobacco consumptions are the variables that appear to represent a primordial influence in this individual perception.

# DETERMINANTES DO CONSUMO TABÁGICO EM JOVENS UNIVERSITÁRIOS

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## Resumo

De acordo com a Organização Mundial de Saúde (1998), os indivíduos deverão ser saudáveis para usufruírem de uma determinada qualidade de vida. Como tal, o consumo de tabaco, na medida em que afecta o grau de saúde de cada um, interfere também na qualidade de vida experienciada. Neste sentido, propomo-nos nesta investigação a avaliar o consumo de tabaco e os estilos e qualidade de vida de 684 jovens adultos universitários. Os resultados parecem sugerir correlações positivas moderadas entre o consumo de tabaco e os consumos de álcool, café e outras substâncias. Não se verificam diferenças estatisticamente significativas entre sexos, mas sim entre os estudantes e os trabalhadores estudantes, face à adequação do consumo de tabaco. Como determinantes do consumo tabágico, na amostra avaliada, podemos indicar os consumos de café e outras substâncias, para além dos estilos de vida no seu geral. Deste modo, parece que os estilos de vida de um sujeito se relacionam intimamente com o grau em que o consumo de tabaco é considerado adequado. Em última análise, se considerarmos os factores explicativos da qualidade de vida experienciada pelos jovens estudantes, os seus estilos de vida e o consumo de tabaco são as variáveis que parecem exercer uma influência primordial nesta percepção individual.

# SMOKE GETS IN YOUR EYES

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## Abstract

### Introduction

According with WHO, each 8 seconds a person dies for cardiovascular related diseases. Cigarette or tobacco smoking is a well-recognized major risk factor for a wide range of diseases, such as cardiovascular, respiratory, and malignant diseases in both men and women. There is also a strong association between smoking and a number of common eye diseases.

### Objectives

Review about smoking and ophthalmologic diseases.

### Methodology

SUMsearch, The Cochrane Library, Bandolier, MEDLINE, last 5 years, keywords: “ophthalmology”; “eyes” ; “smoke”, “smoking”.

### Results

Tobacco smoke is composed of as many as 4,000 active compounds, most of them toxic and potentially damaging to the eye. Smoking can cause or worsen several eye disorders, particularly cataract and Age-related Macular Degeneration (AMD), and may lead to blindness.

In adults, smoking cigarettes is associated with other eye diseases and disorders: *Graves ophthalmopathy (thyroid eye disease), ocular surface disorders and glaucoma.*

Nonsmokers often complain of eye irritation when exposed to tobacco smoke. There is currently little evidence about the risks of passive smoking for eye disease.

### Conclusion

From ophthalmologic point of view, it is proven the causal relation between active smoking and DMRI, Graves’s ophthalmopathy cataract and eye surface diseases. Public awareness about the risk of eye diseases associated with smoking is very low. Campaigns and adds are need to increase knowledge of these effects. Cessation and avoidance of passive smoking is advised to minimize the harmful effects of smoking on the eyes.

## **Introduction**

Accordinging with WHO, each 8 seconds a person dies for cardiovascular related diseases. Cigarette or tobacco smoking is a well-recognised major risk factor for a wide range of diseases, such as cardiovascular, respiratory, and malignant diseases in both men and women. There is also a strong association between smoking and a number of common eye diseases, which include Graves' ophthalmopathy, age-related macular degeneration, glaucoma, and cataract. Despite the multifactorial aetiology of these ocular syndromes, smoking is an independent risk factor that has dose-response effects. [1]

Opthalmologic diseases smoke related are a less frequent matter which should be addressed and discussed more often. [2]

## **Objectives**

Review about smoking and opthalmologic diseases.

## **Methodology**

SUMsearch, The Cochrane Library, Bandolier, MEDLINE, last 5 years, keywords: "opthalmology"; "eyes" ; "smoke", "smoking".

## **Results**

**Smoking** causes morphological and functional changes to the lens and retina due to its atherosclerotic and thrombotic effects on the ocular capillaries. Smoking also enhances the generation of free radicals and decreases the levels of antioxidants in the blood circulation, aqueous humour, and ocular tissue. Thus, the eyes are more at risk of having free-radical and oxidation attacks in smokers.[2]

## **Graves' ophthalmopathy**

Graves' ophthalmopathy (GO) is a condition that primarily affects the extraocular muscles. It is closely associated with Graves' disease, an autoimmune disorder that causes the thyroid to produce excess thyroid hormone

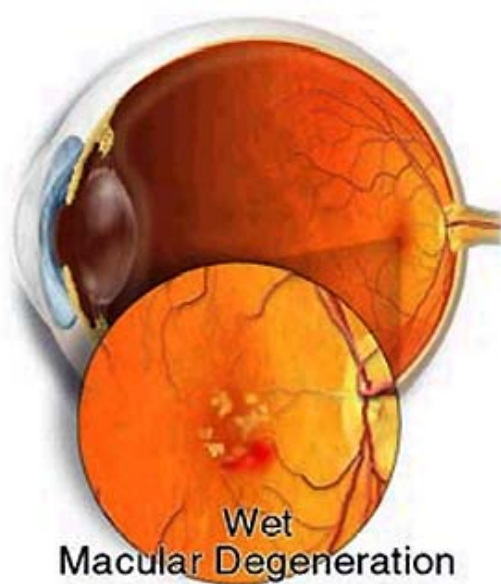


**Fig.1 - Graves' ophthalmopathy**

(hyperthyroidism). Smoking increases the risk of Graves' ophthalmopathy and adversely affects the clinical course and response to treatment. The amount of smoking also correlates with the severity of the ocular disorder, The actual mechanism of the adverse effects is still unknown – disturbances in immune system are probable.

*For example:* increase in formation of superoxide radicals and decrease in the formation of antioxidants. In cultures of fibroblasts from retro-ocular connective tissue obtained from patients with Graves' ophthalmopathy, cell proliferation was induced by superoxide in a dose-response pattern. The proliferation of retro-ocular fibroblasts and secretion of glycosaminoglycans into the extracellular matrix cause orbital oedema. Such volume expansion is a feature of Graves' ophthalmopathy.[1]

### **Age-related macular degeneration (ARMD) [5]**



**Fig.2 and 3 – Age-related macular degeneration – soft drusen in retinal epithelium**

### **How the eye is affected**

The macular area of the retina has the finest blood supply in the body, serving the retinal receptors that enable us to see minute detail clearly. Obstruction and failure of the blood supply to the macula happens even before other body functions may be affected. This blood vessel damage causes a gradual failure of vision. New vessel growth and leakage can result in scarring of the retina and severe

vision loss. The average age that people present with age-related macular degeneration in the first eye is about 65 years. The second eye becomes impaired at a rate of about 12 per cent each year and about 60 per cent of patients are legally blind in both eyes by their 70th birthday. There is no effective medical or surgical cure for age-related macular degeneration, but rehabilitation advice helps people to live more independently.

### **The impact of vision problems**

Age-related macular degeneration has extensive implications. People who have it:

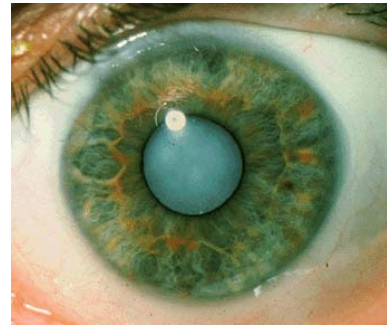
- Cannot read or see detail on the TV
- Cannot easily recognise faces
- Cannot drive
- Confuse medication labels and are at risk of other illnesses
- Fall more easily and suffer more serious complications from falling
- Lose independence and may require residential care earlier than if their vision was normal.

ARMD may be defined as the presence of either soft drusen or any type of drusen if associated with changes in retinal pigment epithelium or increase in retinal pigmentation in the macular area. It is a major cause of blindness and the leading cause of severe visual loss in the elderly. It characteristically takes the form of localised degeneration and leads to death of the associated rods and cones, with (exudative ARMD) or without (non-exudative ARMD) the complications of vascular invasion. Although only 10% of ARMD patients have the exudative form of the disease, more than 85% of legal blindness attributable to ARMD is the result of this form of disease. Patients with exudative ARMD are more likely to be smokers than non-smokers. The effect of cigarette smoking on the risk of ARMD is dose-dependent. [3] Quitting smoking, or not starting in the first place, is a way to ensure that good vision is maintained for as long as possible.

## **Cataract**

Cataract refers to the opacification of the lens, it is the leading cause of blindness worldwide.

Anatomically, there are nuclear, cortical, and posterior subcapsular types of cataract. Nuclear cataracts, usually seen in elderly patients, are caused by the exaggeration of the sclerosis of the nucleus. Because of the central location, vision is significantly affected.



**Fig.4 - Cataract**

There is a dose-response relationship between the cumulative amount of smoking and the risk of nuclear cataract developing. The risk for nuclear opacity has been shown to decrease in subjects who stop smoking for 10 years or more. Smoking may indirectly impose additional oxidative stress on the lens by reducing the levels of nutrients with antioxidative capabilities, such as ascorbic acid and nicotinamide. Furthermore, direct and structural lens injury may be caused by components in cigarette smoke<sup>84</sup> or its byproducts, such as cadmium or isocyanate [1,2,4]

## **Surface diseases [2]**

The untrained eye can observe corneal and conjunctiva irritation, hyperemia and, eventually, tearing in a smoker, all these signs may represent ocular surface diseases.



**Fig.5 – Conjunctiva hyperemia**

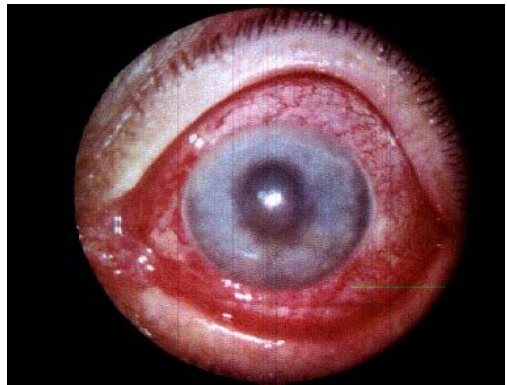
Smoking has been linked to an increase in disorders of the eye's ocular surface which result in symptoms such as itchiness, redness and irritation of the eyes. Changes to the eye's ocular surface associated with smoking include changes to the lipid layer of the tear film, reduced tear secretion and reduced corneal and conjunctival sensitivity. Passive smoking can also increase the risk of these disorders. Ocular surface disorders include atopic keratoconjunctivitis and allergic conjunctivitis.



## **Glaucoma**

Glaucoma is an optic neuropathy associated with visual field changes for which high intra-ocular pressure is a major risk factor. It is a common and serious ocular disorder in most populations.

A study of the dynamics of aqueous humour showed a 5-mm Hg rise in intra-ocular pressure immediately after smoking. Smoking may be an avoidable risk factor for glaucoma, but there is



**Fig.6 - Glaucoma**

not a established a causal relationship between the two. [1]

Attendees of the workshop were surprised at the lies of the BATN and many of the high school students were not aware of the chemicals included in cigarette, this facts made students who had intentions to start smoking stopped. Most of the teachers and school head who attended the workshop also realized the damages caused by smoking.

## **Conclusion**

From ophthalmologic point of view, it is proven the causal relation between active smoking and DMRI, Graves ophthalmopathy cataract and eye surface diseases. Effect of passive smoke is less studied. We need to know these risks and inform about the importance of an annual exam. Smoking, if continued, may perpetuate further ocular damage and lead to permanent blindness. Cessation and avoidance of passive smoking is advised to minimise the harmful effects of smoking on the eyes. [4]

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# SMOKING & A FLU

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## Abstract

### Introduction

The evolution of A (H1N1) virus epidemic implies that measures be adapted to the clinical and epidemiologic context. At the moment, when community transmission chains are being developed, efforts must concentrate in shortening the impact of the disease in the society.

Cigarette smoke has both pro-inflammatory and immunosuppressive effects. Both active and passive cigarette smoke exposure are linked to an increased incidence and severity of respiratory virus infections, but underlying mechanisms are not well defined.

### Objectives

Review about the association of cigarette smoking with infection from the A flu virus: A (H1N1)v.

### Methodology

Search in database: SUMsearch, The Cochrane Library, Bandolier, MEDLINE, last year, keywords: “smoking”; “A flu” and “swine”.

### Results

**Several studies** have confirmed the relationship between cigarette smoking and the risk of influenza infections. Influenza infections are more severe, with more cough, acute and chronic phlegm production, breathlessness, and wheezing in smokers.

The mechanisms of increased susceptibility to infections in smokers are multifactorial and include alteration of the structural and immunologic host defenses.

Other studies show the hypothesis that treatment with nicotine could block the “cytokine storm” in severe cases of the current H1N1 flu, therefore, improving patient’s outcome and clinical status.

### Conclusion

With the emerging new infections like the one from A flu virus (H1N1)v it’s important to reinforce the effects that smoking has on the immune system, causing increased sensibility to infection and its complications.

Recent increase in circulation of this virus strain must, therefore, represent an opportunity to intensify smoking cessation campaigns, insist in hygiene measures and taking seasonal flu vaccine.

## **Introduction**

The evolution of A (H1N1) virus epidemic implies that measures be adapted to the clinical and epidemiologic context. At the moment, when community transmission chains are being developed, efforts must concentrate in shortening the impact of the disease in the society. One study mentioned that  $\frac{3}{4}$  of the patients with worse symptoms had risk factors that made them vulnerable. Amongst the more common were: chronic pulmonary diseases (like asthma and emphysema), diabetes, cardiovascular diseases, obesity and pregnancy. Smoking can be a reinforcement, acting together with these factors, worsening patient's clinical condition. [1,7]

## **Objectives**

Review about the association of cigarette smoking with infection from the A flu virus: A (H1N1).

## **Methodology**

Search in database: SUMsearch, The Cochrane Library, Bandolier, MEDLINE, last year, keywords: "smoking"; "A flu" and "swine".

## **Results**

### **Influenza**

Influenza (flu) is a common and potentially serious viral infection at all ages. It is caused by the influenza virus, which has a segmented, negative strand RNA genome and belongs to the *Orthomyxoviridae* family. Over three recent successive winters in the UK, a total of 32% of patients seeing a doctor with symptoms of respiratory infection had PCR-detected influenza. The H1N1 viral strain implicated in the 2009 flu pandemic among humans often is called "swine flu" because initial testing showed many of the genes in the virus were similar to influenza viruses normally occurring in North American swine. [1]

According to the Centers for Disease Control and Prevention (CDC), in humans the symptoms of the 2009 "swine flu" H1N1 virus are similar to those of influenza and of influenza-like illness in general. Symptoms include fever, cough, sore throat, body aches, headache, chills and fatigue. The 2009 outbreak has shown an increased

percentage of patients reporting diarrhea and vomiting. The 2009 H1N1 virus is not zoonotic swine flu, as it is not transmitted from pigs to humans, but from person to person. The most common cause of death is respiratory failure. Other causes of death are pneumonia (leading to sepsis), high fever (leading to neurological problems), dehydration (from excessive vomiting and diarrhea) and electrolyte imbalance. Fatalities are more likely in young children and the elderly. [7]

The role of inflammation in the resolution of influenza infection remains controversial, with evidence for both immune-mediated amelioration and worsening of the host's overall condition.

### **Relationship between cigarette smoking and influenza infections**

Several studies have confirmed the relationship between cigarette smoking and the risk of influenza infections. Influenza infections are more severe, with more cough, acute and chronic phlegm production, breathlessness, and wheezing in smokers. Female smokers in the Israeli Army had a 60% risk of influenza compared with 41.6% in nonsmokers (OR, 1.44; 95% CI, 1.03-2.01). They also had a 44% increase in complications (visited the clinic more frequently) during an epidemic influenza illness caused by the A(H1N1) subtype.

In another study of 336 healthy young male recruits in the Israeli military unit the incidence of smokers and 47.2% among nonsmokers ( $P_{.001}$ ). The OR was 2.42 (95% CI, 1.53-3.83). Influenza was more severe among smokers, with a dose-related increase in rate: 30% in nonsmokers, 43% in light smokers, and 54% in heavy smokers ( $P_{.001}$ ). Work loss occurred in 50.6% of smokers and 30.1% of nonsmokers.

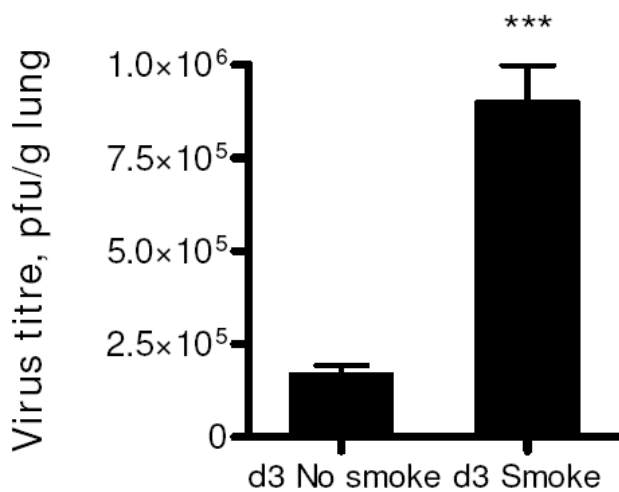
Overall, 31.2% (95% CI, 16.5-43.1) of influenza cases were attributed to cigarette smoking. Enhanced bacterial adherence has been documented for respiratory cells infected, with influenza A virus being responsible for viral-bacterial combination pneumonia. [7]

One experiment showed that the immune systems of mice exposed to cigarette smoke from as little as two cigarettes a day for two weeks overreacted when they were also

exposed to a mimic of the flu virus.

The mice's immune systems cleared the virus normally but the exaggerated inflammation caused increased levels of tissue damage. Other 2008 study showed increase in influenza virus titres in mice with prior exposition to cigarette smoke.

(Fig1) [5]



**Fig.1 – Virus titres in mouse lungs [5]**

Moreover, influenza antibodies wane more rapidly in smokers than in nonsmokers. This finding suggests that smokers are not only at a high risk of influenza, but have an increased susceptibility to new attacks afterward.

## **FACTS SUPPORTING**

### **Tobacco effects**

The mechanisms of increased susceptibility to infections in smokers are multifactorial and include alteration of the structural and immunologic host defenses.

Tobacco has a gas and solid phase; this one is responsible for its immunosuppressant properties which affect cellular and humoral immunity. Nicotine is the main immunosuppressant component causing, TNF, IL-1, among other effects. Carbon monoxide and cyanide are believed to be responsible for loss of elasticity in the alveoli.

- **Structural changes**

In smokers there is a chronic irritation in bronchia which produces structural changes in the respiratory tract. These changes include peribronchiolar inflammation and fibrosis, increased mucosal permeability, impairment of the mucociliary clearance, changes in

pathogen adherence, and disruption of the respiratory epithelium. A number of components of cigarette smoke, including acrolein, acetaldehyde, formaldehyde, free radicals produced from chemical reactions within the cigarette smoke, and nitric oxide, may contribute to the observed structural alterations in the airway epithelial cells.

As a defense of these structural changes there is an enhance in production of mucus, being an adequate mean for developing bacteria and virus. Cilia paralysis hardens the removal of excess secretions making these accumulate in the airway, difficulting air circulation.

The accumulation of mucus and continuous action of toxic substances “soak” the lungs increasing the risk for pulmonary infections (pneumonia), chronic bronchitis, emphysema and flu. As a result of this chain event, bigger mortality and work absenteeism appear. This increase in upper and lower respiratory tract infections may amplify the cigarette smoke– induced lung inflammation. [1]

- **Platelet dysfunction**

One study of September 2009 pointed platelet dysfunction as one of the hidden factors for death in new influenza A. The unfavourable influence of both active and passive smoking is connected with the effect on platelets. Addicted smokers show increased potential for platelet aggregation, lower platelet survival rate and increased excretion of thromboxan metabolites.[6]

In fact studies have suggested that inflammatory activation of platelet-activating factor is an important factor in the attachment and invasion of cells by pneumococcal strains. Cigarette smoking alters platelet-activating factor metabolism and may contribute to the increased incidence of bacterial superinfection in people who develop influenza. [2]

- **Immunologic Mechanisms [4]**

Cigarette smoking affects both cell mediated and humoral mediated immune responses in humans and animals.

### **Cell-Mediated Immune Responses**

Smokers on average exhibit an elevated peripheral white blood cell count, about 30% higher than that of nonsmokers. All major cell types are increased. It is suggested that

nicotine induced catecholamine release might be the mechanism for this effect. Other studies support the hypothesis that cigarette smoking causes bone marrow stimulation. The authors suggested that proinflammatory factors released from alveolar macrophages, such as tumor necrosis factor, interleukin (IL) 1, IL-8, and granulocyte-macrophage colony-stimulating factor, are probably responsible for the stimulation of bone marrow by cigarette smoking. Reports of the effects of smoking on the different subsets of lymphocyte T cells are conflicting. The influence of cigarette smoking on lymphocyte T-cell subpopulations in the peripheral blood has been investigated by means of monoclonal antibodies. Moderate to heavy smokers were reported to have a significant decrease in CD4+ counts and a trend toward increased CD8+ lymphocyte count. These effects appeared to be reversible as soon as 6 weeks after smoking cessation

Since CD4+ cells facilitate B-cell proliferation and differentiation and immunoglobulin synthesis, the decrease in this subset observed in heavy smokers might contribute to the increased susceptibility to infections in this population. An increase in CD8+ cells, such as that observed in heavy smokers, has been associated with both neoplasia and infection.

Other findings suggest that smokers have a deficit in cell-mediated immunity in the lung alveolus, a site critical in the first-line defense against infection. Smoking is also associated with significant increases in the percentage of macrophages in bronchoalveolar lavage fluid.

Several studies showed that cigarette smoking affects the function of white blood cells.

Polymorphonuclear leukocytes from the peripheral blood of smokers exhibit depressed migration and chemotaxis compared with PMNs from nonsmokers. The motility and chemotaxis of PMNs are depressed in the oral cavity of smokers compared with nonsmokers. Which constituents of smoke are responsible for these effects remains unclear.

Macrophages from the lungs of smokers have a greater inhibitory effect on lymphocyte proliferation than macrophages from the lungs of nonsmokers. Thus, the immunosuppressive effects of the macrophages on cell-mediated immune response are increased in smokers.



The release of cytokines from macrophages may also be altered in smokers. Cigarette smoking decreases the secretion of the proinflammatory cytokines such as IL-1 and IL-6. The cytokines IL-1 and IL-6 are important in the host defense against infection. Animal studies have shown that depletion of these cytokines increases susceptibility to bacterial pneumonia. Since PMNs play a significant role in host defense against acute bacterial infections, an impairment of PMN functions by smoke may contribute to the increased susceptibility of smokers to systemic infections, including bacterial pneumonia.

Natural killer (NK) cell activity in peripheral blood has been reported to be reduced in smokers compared with nonsmokers. These alterations appear to be reversible, since NK activity in ex-smokers was similar to that of a never-smoking group compared with smokers. Since NK cells are important in the early surveillance response against viral infections and resistance against microbial infections, impairment of NK cell activity by cigarette smoking is a potential mechanism for the increased incidence of infections among smokers. The molecular mechanisms by which cigarette smoking alters lymphocyte function, as described previously, are still poorly defined.

### **Humoral Immune System**

The effects of cigarette smoking on humoral immunity have been studied extensively. Several studies have found that smokers had serum immunoglobulin levels (IgA, IgG, and IgM) 10% to 20% lower than those of nonsmokers. The IgG content of bronchial fluids was found to be twice as high in smokers than nonsmokers. A selective increase in immunoglobulin levels could be explained either by stimulation of local immunoglobulin production or exudation of plasma immunoglobulin into alveolar spaces in response to inhaled cigarette smoke.

The antibody response to a variety of antigens, such as influenza virus infection and vaccination and *Aspergillus fumigatus*, is depressed in cigarette smokers.

### **Summary of Immunologic Effects of Cigarette Smoking**

In summary, cigarette smoking is associated with a variety of alterations in cellular and humoral immune system function. These alterations include a decreased level of

circulating immunoglobulins, a depression of antibody responses to certain antigens, a decrease in CD4+ lymphocyte counts, an increase in CD8+ lymphocyte counts, depressed phagocyte activity, and decreased release of proinflammatory cytokines.

The pathogenesis of smoking effects on the immune system is not well understood. Some investigators have demonstrated an antigenic role of substances in cigarette smoking, resulting in the development of antigen-antibody complexes. These complexes are capable of causing pulmonary and peripheral changes in responses of the humoral and cell mediated system. It is suggested that the antigen-antibody complexes may induce localized alterations of the immune status of the saliva and the bronchoalveolar fluid and predispose to respiratory tract infections.

Smoking, via the effects of nicotine, can stimulate catecholamine and corticosteroid release. These mediators might increase CD8+ lymphocytes in the cellular-mediated system and suppress the host defense against infections. It is important to recognize that many of the immunologic abnormalities in smokers resolve within 6 weeks after smoking cessation, supporting the idea that smoking cessation is effective short time in the prevention of infections.

### **FACTS AGAINST**

Nicotine stimulates the cholinergic anti-inflammatory pathway. At the end of this pathway are immune cells that produce anti-inflammatory cytokines that block inflammation. Hypothesis is that treatment with nicotine could block the “cytokine storm” in severe cases of the current H1N1 flu.

In the same logic, a study observed that production of IL-10 by human mononuclear cells was inhibited by treatment with nicotine patches in patients with inflammatory bowel disease.

The tobacco control community should monitor the use of this results as a new method to circumvent the tobacco advertising ban and to support the social acceptability of tobacco by associating it with potential health benefits. [3]

## **Conclusion**

Cigarette smoking remains an enormous health problem and is the principal cause of several preventable diseases and much premature death. Generally, physicians think of cancer, atherosclerotic cardiovascular disease, and chronic obstructive pulmonary disease as the major health problems caused by smoking.

Cigarette smoking is a substantial risk factor for important bacterial and viral infections. To highlight some of the more common and serious links between smoking and infection, smokers incur a 2- to 4-fold increased risk of invasive pneumococcal disease, a disease associated with high mortality. Influenza risk is severalfold higher and much more severe in smokers compared with nonsmokers.

With the emerging new infections like the one from A flu virus (H1N1)v it's important to reinforce the effects that smoking has on the immune system, causing increased sensibility to infection and its complications.

Recent increase in circulation of this virus strain must, therefore, represent an opportunity to intensify smoking cessation campaigns, insist in hygiene measures and taking seasonal flu vaccine.

More than falling in a global awareness panic, attention should be led to simple preventive measures and to orientate global lifestyle alterations.

Global recommendations should be take into account:

1. Smoking cessation should be part of any therapeutic plan.
2. Secondhand smoke exposure should be controlled in children to reduce the risks of meningococcal disease and otitis media and in adults to reduce the risks of influenza and meningococcal disease.
3. Pneumococcal and influenza vaccine in all smokers. [1]

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## DAILY TOBACCO CONSUMPTION AND ALCOHOL INTOXICATION IN YOUNGS

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### **Abstract**

Actually tobacco and alcohol are the first drugs that youths consume. There are relationship between the consumption of these substances and the later consumption of other substances abuse. Therefore, to know the relationship between tobacco and alcohol consumption in adolescents is an aspect of interest. The aim of the present study is to analyze in a sample of youths between 14 and 17 years old the relationship among daily consumption of tobacco and to have been drunk at some time in the life and to have participated at some time in “botellón”. The sample is formed by youths that were selected in different cities of Galicia. The results indicate that there is a significant relationship among the daily tobacco consumption, to have been drunk lifetime and to have participated in “botellón”. Therefore, it is more probable than the youths with daily tobacco consumption they have been drunk and that they have participated in “botellón” lifetime.

# RELACIÓN ENTRE EL CONSUMO DE TABACO DIARIO Y EMBRIAGUEZ EN JÓVENES

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## Resumen

En la actualidad el tabaco y alcohol son las primeras drogas que consumen los jóvenes existiendo relación entre el consumo de estas sustancias y el posterior consumo de otras sustancias psicoactivas. Por lo tanto, conocer mejor la relación que hay entre el consumo de tabaco y el alcohol en los más jóvenes es un aspecto de interés. El objetivo del presente estudio es analizar en una muestra de jóvenes de entre 14 y 17 años si existe relación entre el consumo diario de tabaco y haberse emborrachado alguna vez en la vida y haber participado alguna vez en el “botellón”. La muestra está formada por jóvenes que fueron seleccionados en distintas ciudades de Galicia. Los resultados obtenidos indican que hay una relación significativa entre el consumo de tabaco diario, haberse emborrachado alguna vez en la vida y haber participado en el “botellón”. Por lo tanto, es más probable que los jóvenes que consumen tabaco diariamente se hayan emborrachado y que hayan participado alguna vez en el botellón.

# TOBACCO DEPENDENCE AND ITS ASSOCIATION WITH SOCIODEMOGRAPHIC VARIABLES AND SMOKING HABITS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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## Abstract

Cigarette smoking is, according to Rebelo (2004), a public health's issue, which has a main effect on the acute myocardial infarction and is maintained by some psychosocial variables, namely negative affects and lack of assertiveness. Therefore, it is crucial to develop interventions that promote and strengthen the decision to abandon tobacco's consumption, particularly after the experience of an acute myocardial infarction, when the patient is frequently receptive to smoking cessation (Trigo & Rocha, 2002).

One of the aims of this study is to analyse the relationship between physiological dependence, behavioural dependence, assertiveness, alexithymia and sociodemographic data and smoking habits of a sample diagnosed with an acute myocardial infarction.

The data were collected from 30 male subjects, between 40 and 67 years old, hospitalized in the department of cardiology of "Hospital S. João" with the diagnosis of acute myocardial infarction, and who present tobacco dependence as a cardiovascular risk factor. The Fagerström Test for Nicotine Dependence, the Glover-Nilsson Smoking Behavioral Questionnaire, the Rathus Assertiveness Schedule and The Toronto Alexithymia Scale – 20 items were used, as well as a questionnaire to collect data about sociodemographic variables and the sample's smoking habits.

The results indicate that older people are those with a higher behavioral dependence, probably due to the weight of behavioral habits that are strengthened over time. In turn, alexithymia is more present in individuals with a low educational level and with a greater number of children. It was also found that alexithymic subjects are those that perform more attempts to quit this addiction.

This research contributes to a better understanding of the characteristics of cardiac patients and the variables which support their smoking habits, so that in the future smoking cessation programs can be more effective and successful.

## Introduction

Smoking is, according to Gavina and Pinho (2007), the leading cause of preventable illness and premature death, constituting itself as a cardiovascular risk factor, which

increases the risk of suffering an acute myocardial infarction. Therefore, tobacco dependence is and should be seen as a potentially fatal disease that requires changes in the individual's behavior (Ferreira-Borges & Filho, 2004).

According to Gomes (2007), tobacco dependence is the result of a complex association between the physiological dependence of a chemical substance (nicotine) and a set of behavioral, emotional and cognitive factors (behavioral dependence) that, although with common features in smokers, present some variability from individual to individual.

In addition, certain psychosocial variables, such as assertiveness and alexithymia, have been related to the initiation and maintenance of addictive behaviors. Indeed, assertive behavior is the capacity of the individual to stand for his rights, express his opinions, feelings, needs and dissatisfactions, as well as to seek for changes in the other people's behavior, without violating their rights (Bandeira & Ireno, 2002). Wills, Baker and Botvin (1989) found in their study a negative relation between assertiveness in the refusal of cigarettes, alcohol and drugs and their consumption, which supports the hypothesis that assertive responses to substances' offer should be a focus on research for the prevention of drug abuse.

In turn, the term alexithymia was introduced by Sifneos in 1972 and literally means - without words for emotions (Souto, 2000). Thus, the alexithymic individual has difficulties in identifying and communicating emotions (Berenbaum & Irvin, 1996). In general, alexithymia has been considered as an important risk factor for psychological and physical illness. In fact, it has been shown that alexithymia is implicated in eating disorders, panic disorders and it is also a common feature in individuals with severe substance abuse (Lumley, 2000; Sifneos, 1996 cit in Handelsman *et al.*, 2000).

## **Objectives**

The aim of this research is to analyse the relationship between physiological dependence, behavioural dependence, assertiveness, alexithymia and sociodemographic data and smoking habits of a sample diagnosed with an acute myocardial infarction. In this study, the main objective is the achievement of a better understanding of cardiac patients' characteristics (sociodemographic and smoking habits) and their relation with certain psychosocial variables that may play an important role in the maintenance of smoking addiction.



## Methodology

### *Subjects*

The sample consists of 30 male subjects admitted to the Cardiology Department of the “Hospital S. João” (HSJ) in 2008 with the diagnosis of acute myocardial infarction and presenting smoking as cardiovascular risk factor.

Table 1 shows the sociodemographic data of the sample, with an age range from 40 to 67 years old (mean 52 years). Regarding education, there is a wide range with subjects who never attended school up to individuals who finished high school (12th grade), being the 6th grade the mean value. About parenting, (the number of children), the sample average is around two children by subject. Regarding the number of people with whom the patient lives, the average is about two people: there are individuals who live alone and individuals who live with four people maximum.

**Table 1:** Demographic characterization

	<b>N</b>	<b>M</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>
Age	30	52.40	7.72	40	67
Level of education	30	6.43	3.55	0	12
Number of children	30	2.37	1.33	0	6
Number of people with whom the patient lives	30	2.10	1.21	0	4

Concerning the smoking habits, table 2 shows that the subjects are smokers for many years (mean 37 years), being 20 years the lowest value and 60 years the highest. The mean of the number of cigarettes smoked per day is approximately 26, ranging the number of cigarettes from 6 to 80. With regard to the question "How many times have you tried to quit smoking?", it applies only to individuals who have actually tried to

stop smoking. Therefore, we just considered the 22 subjects who carried out this attempt, whose average is approximately 3 times.

The period of abstinence, which accounted for the longest period of time during which the subjects were abstinent (in months), the average is approximately 11 months. The longest period of abstinence found in the sample was 60 months (five years). For this analysis, we considered the subjects who had tried to quit smoking, as well as the subjects whose period of abstinence had been greater than a month. Therefore, the number of individuals considered in this variable is 17.

**Table 2:** Smoking Habits

	<b>N</b>	<b>M</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>
Number of years as a smoker	30	37.00	10.52	20	60
Number of cigarettes smoked per day	30	25.57	15.44	6	80
Number of attempts to quit smoking	22	2.82	2.63	1	9
Period of abstinence (months)	17	11.06	17.32	1	60

### *Materials*

A questionnaire was first applied for collecting the most relevant clinical and sociodemographic data, which also included a few questions to assess the sample's smoking habits.

The Fagerström Test for Nicotine Dependence (FTND) has acceptable levels of internal consistency and it is a test of great value to know the level of nicotine dependence of the individual (Heatherton, Kozlowski, Frecker & Fagerström, 1991). The score ranges from 0 to 10: a value between 0 and 2 indicates a reduced physiological dependence; from 3 to 6 corresponds to a moderate dependence; while 7 to 10 reflects a high physiological dependence.

The Glover-Nilsson Smoking Behavioral Questionnaire (GNSBQ) consists of 11 items in order to identify the level of behavioral dependence of a smoker (Glover *et al.*, 2005). This score ranges from 0 to 44 and Glover *et al.* (2005) defined several cutting points

(<12 reduced behavioral dependence, 12-22 moderate behavioral dependence, 23-33 high behavioral dependency, > 33 very high behavioral dependence).

The Rathus Assertiveness Schedule (RAS) consists of 30 statements. The individual has to indicate on a Likert scale of six points (from 0 to 5) to what extent each statement is "descriptive" of his conduct. The results from the scale's validation for the Portuguese population point out a mean of -1.83 and a standard deviation of 23.67 (Detry & Castro, 1996). Thus, results of more than -1.83 mean lack of assertiveness, while values below -1.83 indicate an assertive behavior.

The Toronto Alexithymia Scale – 20 items (TAS-20) includes a Likert scale of five points (from 1 to 5). About the scores (from 20 to 80) individuals with results greater than or equal to 61 are considered alexithymic and the subjects with results less than or equal to 51 are not alexithymic (Taylor et al., 1997 cit in Torres, 2005). The results between 52 and 60 are not classified and correspond to a boundary zone. The Portuguese version used in this study is the one from Prazeres, Parker and Taylor, which has an adequate internal consistency and excellent test-retest reliability.

### *Procedure*

Prior to data collection, it was sent a draft of the study to the HSJ's Ethics Committee for Health in order to obtain authorization to carry out this research. After this study has been approved, we began to apply the instruments to each of the participants admitted to the Cardiology Department of HSJ with the diagnosis of acute myocardial infarction during the period established by the Ethics Committee.

It should be noted that initially the researcher has given a brief explanation to individuals about the research, has assured their confidentiality and informed consent according to the Declaration of Helsinki were obtained from all of them.

It was also used the SPSS program (Statistical Package for Social Sciences), version 15.0, for the introduction and statistical analysis, namely the Pearson Correlations to evaluate the associations between variables.

### **Results**

Under this topic it is presented the description of the results found through statistical analysis of the data.

Table 3 shows that the results of the FTND are not related to any of the sociodemographic variables, specifically with age, education level, number of children and number of people with whom the patient lives.

About the associations between behavioral dependence and socio-demographic data, the findings show a positive correlation between behavioral dependence and age (subjects with higher behavioral dependence are also older). Regarding the other sociodemographic variables, there are not any other significant relations.

This same scenario reflects the lack of significant relations between the results of the RAS and the sociodemographic variables.

Finally, with regard to the results obtained by applying the TAS-20, these are correlated with the level of education and number of children, although the direction of the correlations is different. Therefore, it can be observed that alexithymic subjects are those with a lower education level, but are also those with a greater number of children. It wasn't found significant relations with age and number of people with whom the patient lives.

**Table 3:** Correlations between the results of the FTND, GNSBQ, RAS, TAS-20 and the sociodemographic variables

	Age	Level of education	Number of children	Number of people with whom the patient lives
FTND's Result	.032	.044	-.062	.016
N	30	30	30	30
GNSBQ's Result	.383(*)	-.131	.124	-.028
N	30	30	30	30
RAS's Result	.056	-.056	.295	-.125
N	30	30	30	30
TAS-20's Result	.334	-.524(**)	.459(*)	-.264
N	30	30	30	30

FTND – The Fagerström Test for Nicotine Dependence; GNSBQ - The Glover-Nilsson Smoking Behavioral Questionnaire; RAS - The Rathus Assertiveness Schedule; TAS-20 - The Toronto Alexithymia Scale – 20 items.

\*  $p < .05$ ; \*\*  $p < .01$

Analyzing the associations between the results of each instrument and the variables related to smoking habits (Table 4), it can be observed that the results of the FTND, the GNSBQ and RAS are not significantly correlated with any smoking variable.

The same analysis on the results of TAS-20 shows that they correlate positively with the number of attempts to quit smoking. Therefore, the alexithymic subjects are the ones who make more attempts to quit smoking. With the remaining variables there are not any significant relations.

**Table 4:** Correlations between the results of the FTND, GNSBQ, RAS and TAS-20 and the variables related to smoking habits

	Number of years as a smoker	Number of cigarettes smoked per day	Number of attempts to quit smoking	Period of abstinence (months)
FTND's Results	.116	-----	-.135	-.352
N	30	-----	22	17
GNSBQ's Results	.320	.171	.148	-.450
N	30	30	22	17
RAS's Results	.120	-.294	.269	-.271
N	30	30	22	17
TAS-20's Results	.229	-.223	.439(*)	-.122
N	30	30	22	17

FTND – The Fagerström Test for Nicotine Dependence; GNSBQ - The Glover-Nilsson Smoking Behavioral Questionnaire; RAS - The Rathus Assertiveness Schedule; TAS-20 - The Toronto Alexithymia Scale – 20 items.

\*  $p < .05$ ;

Regarding the associations found between the results of the different instruments and the sociodemographic data, it should be noted that older people are those with a higher behavioral dependence, probably due to the weight of behavioral habits that are strengthened over time. In fact, Martinet and Bohadana (2003) stated that, after many years, the cigarette becomes one of the most important regulators of daily activities. The systematic association of cigarette smoking to certain events throughout the day, repeated for many years, makes those same experiences unsatisfactory without smoking.

This conditioned reinforcement makes the process of quitting even more difficult (Gomes, 2007). In this respect, Slama (2003) states that the conditioned associations created by situations and emotions are very difficult to remove and can trigger an intense desire of smoking several months or even years after quitting this addiction, mainly because of the psychosocial factors that affect this relationship and contribute to the reinforcement of habit.

In this study, alexithymia is more present in individuals with a low educational level. In this sense, Heiberg (1980 cit in Amorim, Guerra & Maciel, 2005) states that a higher level of education is reflected in a greater freedom of expression of feelings. Thus, subjects with a lower education level show a pattern of thinking not only externally oriented and problem-focused, but also more rational and less emotional, because of the cultural expectations and demands of survival of their daily lives (Zackheim, 2007; Lumley, Stettner & Wehmer, 1996a).

There is also a positive correlation between alexithymia and the number of children, which means that alexithymic people are those who have more children. These data contradicts the studies claiming an association between alexithymia and situations of isolation and a low social support. An example is the study of Kojima, Frasure-Smith and Lespérance (2001) which showed that alexithymic subjects present difficulties to establish and maintain close relationships, and therefore their social networks tend to be small. However, it is unclear to what extent a greater number of children contribute to a good perceived social support and a good communication and emotional expression of families. According to Dunn and Brown (1994 cit in Souto, 2000), the alexithymic individuals tend not to consider others as sources of help or comfort, leading to a perception of their social support as lower than non-alexithymic (Lumley, Ovies, Stettner, Wehmer & Lakey, 1996b). In fact, Zackheim (2007) highlights the significant relationship between alexithymia and dissatisfaction with the existing social support.

Contrary to the literature, we did not find a positive correlation between alexithymia and age. Salminen, Saarijärvi, Äärelä, Toikka and Kauhanen (1999) and Zackheim (2007) emphasize that the emotional constriction is a characteristic of aging. In addition, Kojima and colleagues (2001) state that the alexithymic subjects who live with someone tend to show a reduction in alexithymia, while the alexithymic individuals who live alone are more vulnerable to experiencing negative emotions. However, in this research

there were no significant relationships between alexithymia and the number of people with whom the patient lives.

It should be noted that, for the associations between the results of the instruments and smoking habits, we chose not to correlate the physiological dependence with the number of cigarettes smoked per day, due to the properties of the FTND, since the number of cigarettes smoked per day is one of the items that is included in this instrument.

In this context, alexithymia was found to be positively correlated with the number of attempts to quit smoking, that is, alexithymic subjects perform more attempts to quit this addiction. This relationship may be due to the strong influence of alexithymia in relapse of addictive behaviors (Li & Sinha, 2006), which means that alexithymic people try to quit more often, because they are not successful in the attempts they make to quit smoking definitively.

### **Conclusion**

The results highlight alexithymia as the variable that has more correlations with the assessed sociodemographic data and smoking habits. However, the more relevant correlation to be enhanced points to the fact that alexithymic subjects perform a greater number of attempts to quit smoking without success.

In conclusion, the results of this study allow us to recognize the importance of psychosocial intervention on smoking, as it has as a basic premise that smoking is a learned behavior, triggered and maintained by certain emotions and situations, which requires the modification of dysfunctional beliefs, the resolution of problems and social adjustment to eliminate this habit (Ferreira-Borges & Filho, 2004). Therefore, a consistent and comprehensive knowledge about smoking and the variables that support it, can mainly contribute to implement successful and effective smoking cessation programs.

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## SMOKING AND RESPIRATORY DISEASE IN PULMONOLOGY OUTPATIENT VISITS

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### Abstract

Respiratory diseases are the third cause of death in Portugal. Smoking is the main cause of diseases like COPD and lung cancer, contributing to the worsening of many others. Twenty percent of the Portuguese population continues to smoke. We can attribute 11.7% of all deaths to tobacco smoke. The recent Portuguese tobacco law had a positive impact mainly in passive smoking.

The authors conducted a study on smoking habits of a representative sample of the Pulmonology outpatient population in a 2 month period. We applied questionnaires to 106 outpatients, including data on demographics, respiratory and non respiratory diagnosis, smoking habits and their characterization, knowledge about tobacco harmful effects, characterization of smoking cessation, its benefits and interest in stop smoking.

Out of 106 questionnaires, we excluded 9 for incomplete fulfilling. The mean age was 62.6 years. The commonest respiratory diagnoses were COPD in 31.0% of cases, asthma in 21.1%, obstructive sleep apnea in 16.9%, and lung cancer in 7%. Almost half of the patients had previous hospital admissions for respiratory disease. More than half the patients (57.5%) had smoking history, but only 6.4% were current smokers.

The mean age of start was 16.5 years, and the mean consumption was 23.5 cigarettes per day. Almost all patients admitted tobacco induced harm (86,8%) and causality between smoke and disease in others. Surprisingly, only 37,0% recognized the relation between smoking and their own respiratory disease.

The majority recognized benefits in their own health after stop smoking. All current smokers recognized having already been counseled to quit and 75% would like to

receive specialized support. We emphasize that 96.9% agreed with the new Tobacco Law.

Concluding, there is a high prevalence of smoking habits in outpatients, with an early start of habits and many being heavy smokers, but with a high smoking cessation rate.

However, even though many knew passive and active smoking induced harm a majority did not relate it with their own disease.

Despite information initiatives there are still doubts and the need for more intervention continues to exist, even in specialized outpatient visits.

## PERCEPTION OF TABAGISM AT THE BRAZILIAN UNIVERSITY LEVEL

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### Abstract

#### Introduction

The World Health Organization considers smoking the leading single cause of morbidity and mortality worldwide and it represents a great interest to the public health.

#### Objectives

Evaluate the perception of university students about tabagism.

#### Methodology

A questionnaire made by the Center for Research in Environmental Perception / Núcleo de Estudos em Percepção Ambiental - NEPA, was applied to 1728 students (33 courses) of 11 higher education institutions (UFES, EMESCAM, UNIVIX, FAFIA, FESV, CUSC – Espírito Santo; UFRGS – Rio Grande do Sul; ESCS, UnB – Distrito Federal; UFJF – Minas Gerais; SENAI – São Paulo). The data were tabulated by NEPA through the program SPSS (error of 2.36 percentage points and confidence interval 95%).

#### Results

The study involved 1728 students, of which 60.4% were female, 79.7% were between 18 and 25 years old. From the total, 84.5% reported being nonsmokers, 8.6% smokers and 6.2% ex-smokers.

Of the smokers and ex-smokers, 72.9% started the habit between 14 and 19 years old, 50.39% were influenced by motivation in the influence of friends and curiosity, and 67.58% have already felt negative impact on their health. From the total, 87.6% believe that smoking has a moderate to strong effect in passive smokers, and 87.2% believe that

smoking should not be practiced everywhere. The vast majority considers that is very important that educational institutions should discuss more about tabagism with their students (86.7%).

### **Conclusion**

This study aimed to delineate the profile of tabagism among university students in an attempt to create a database of national scope, so that public policies could be designed in a more objective and effective manner. It was observed that the smoking habit starts predominantly between 14 and 19 years old (junior high and high school) so that the NEPA is preparing a study for this new segment. Finally, it is evident the importance of the preventive aspect during this period of greatest vulnerability, because comparatively, it is minimum the number of people that starts smoking after adulthood.

# AVALIAÇÃO DO TABAGISMO ENTRE ESTUDANTES UNIVERSITÁRIOS NO BRASIL

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## Resumo

### Introdução

A Organização Mundial da Saúde considera o tabagismo o maior agente isolado e evitável de morbidade e mortalidade no mundo, sendo de grande interesse para a saúde pública

### Objectivos

Avaliar a percepção de estudantes universitários frente ao tabagismo.

### Metodologia

Aplicou-se um questionário estruturado pelo Núcleo de Estudos em Percepção Ambiental – NEPA, em 1728 universitários (33 cursos) de 11 instituições de ensino superior (UFES, EMESCAM, UNIVIX, FAFIA, FESV, CUSC – Espírito Santo; UFRGS – Rio Grande do Sul; ESCS, UnB – Distrito Federal; UFJF – Minas Gerais; SENAI – São Paulo). Os dados obtidos foram tabulados pelo NEPA através do SPSS (erro de 2,36 pp e intervalo de confiança de 95%).

### Resultados

Dos 1728 estudantes universitários amostrados, 60,4% eram do sexo feminino; 79,7% tinham entre 18 e 25 anos; Do total, 84,5% relataram ser não fumantes, 8,6% fumantes e 6,2% ex fumantes.

Dos fumantes e ex fumantes, 72,9% iniciaram o hábito entre 14 e 19 anos, 50,39% tiveram motivação na influência de amigos e curiosidade, e 67,58% já sentiram repercussão negativa em sua saúde. Do total, 87,6% acreditam que o fumo tem efeito

moderado a forte em fumantes passivos, e que o tabagismo não deveria ser praticado em qualquer ambiente (87,2%). A grande maioria, 86,7% dos entrevistados, enfoca a necessidade da temática do tabagismo ser mais bem trabalhada pelas instituições de ensino.

### **Conclusão**

Este trabalho visou delinear o perfil do hábito do tabagismo em estudantes universitários, na tentativa de criar um banco de dados de âmbito nacional, possibilitando que políticas públicas possam ser elaboradas de forma mais pontual e eficiente. Como foi constatado o início do hábito de fumar predominando entre os 14 e 19 anos (ensino fundamental e médio) o NEPA está elaborando novo estudo para este segmento. Enfim, é notória a relevância do aspecto preventivo no período de maior vulnerabilidade, já que comparativamente, é irrisório o número dos que adquirem dependência após a idade adulta.

## SMOKING – THE REAL DIMENSION

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### Abstract

#### Introduction

Smoking is the leading cause of preventable death in developed countries.

#### Objectives

Knowing the numbers of smoking in order to alert the population to the current situation and its adverse effects.

#### Methodology

View the annual report of WHO on the numbers of smoking.

#### Results

The WHO estimates that about one third of the population is smoking, or 1 200 million people, including 200 million women. Another worrying fact is the increase in smoking in developing countries, which already involves a number of 900 million people.

Currently, the total of deaths due to tobacco use is 4.9 million deaths annually, representing more than 10 thousand deaths per day. If present consumption patterns continue, it is expected that in 2020 are 10 million deaths per day. The reality in Portugal is similar with 2 million smokers and 8 100 deaths per year. Still, the average life expectancy of smokers is less than 10 years compared to nonsmokers.

Tobacco has more than 4 000 chemical substances, most of them cancer. The leading causes of death are cardiovascular disease and various cancers account for 29% of deaths.



## **Conclusion**

It is important knowing and thinking about these numbers and transmit them to the society.

## TABAGISMO – A DIMENSÃO REAL

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### Resumo

#### Introdução

O tabagismo é a principal causa de morte evitável nos países desenvolvidos.

#### Objectivos

Conhecer os números do tabagismo de modo a alertar a população para a situação actual e para os seus efeitos nefastos.

#### Metodologia

Consulta do relatório anual da OMS acerca dos números do tabagismo.

#### Resultados

A OMS estima que cerca de um terço da população seja fumadora, ou seja, 1 200 milhões de pessoas, entre as quais 200 milhões de mulheres. Outra realidade preocupante é o aumento do tabagismo nos países em desenvolvimento, ascendendo já a um número de 900 milhões de pessoas.

Actualmente, o total de mortes devido ao uso do tabaco é 4,9 milhões de mortes anuais, o que corresponde a mais de 10 mil mortes por dia. Se os padrões de consumo actuais se mantiverem, prevê-se que em 2020 sejam 10 milhões de mortes por ano. A realidade em Portugal é semelhante com 2 milhões de fumadores e com 8 100 mortes por ano. Ainda, a esperança média de vida dos fumadores é inferior a 10 anos em relação aos não fumadores.

O tabaco apresenta mais de 4 000 substâncias, a maioria delas cancerígenas e as principais causas de morte são as doenças cardiovasculares e os diferentes cancros responsáveis por 29% das mortes.

## **Conclusão**

Vale a pena conhecer e reflectir sobre estes números e dá-los a conhecer à sociedade actual.



Closing ceremony