SERIOUS GAMES

Serious Games & Emotional Competence in Higher Education

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LECTURES

Serious Games for Nursing Students: Developing Emotional Competence

Prof. Dr. Lisa Gomes, Coordinator of the Erasmus + Project SG4NS, University of Minho, Portugal

Abstract:

Emotional competence is crucial in healthcare, especially for nurses who navigate complex interpersonal dynamics. Studies have emphasized the correlation between emotional competence and success in nursing care. The project "Serious Games for Nursing Students" aims to address the curriculum gap in emotional competence, essential for the well-being of healthcare professionals and the quality of patient care while unveiling the vital role of serious games and virtual reality in nursing education.

The Call for Emotional Competence in Education

Emphasizing emotional competence as a learned ability rooted in emotional intelligence, we recognize its impact on workplace performance and relationships. The evolving world demands a fresh perspective on education, urging the incorporation of transversal skills. Serious games provide a unique opportunity to engage students in an immersive environment, fostering emotional competence alongside traditional teaching methods. In contemporary healthcare education, the integration of innovative pedagogical tools is paramount to adequately prepare nursing professionals for the challenges of the dynamic healthcare landscape. This abstract delves into the significance of serious games and virtual reality (VR) as transformative elements in nursing education, illuminating their potential to enhance skill acquisition, emotional competence, and overall learning experiences.

Nursing Education Landscape

Nursing education demands a multifaceted approach to ensure the development of well-rounded professionals capable of navigating complex healthcare scenarios. The traditional emphasis on theoretical knowledge and clinical skills is essential but often lacks the interactive and immersive elements required to prepare students for the intricacies of real-world healthcare settings.

Serious Games: Bridging the Educational Gap

Serious games, defined as educational or training games designed to convey information and teach specific skills, emerge as a dynamic solution to bridge the educational gap in nursing. These games leverage elements of entertainment to make learning engaging and effective. In the context of nursing education, serious games have proven to not only enhance technical skills but also foster interpersonal skills, thereby improving learner motivation. The literature reveals a scarcity of scientific evidence regarding the use of serious games in nursing education. However, existing studies underscore their efficacy in improving both technical and interpersonal skills among nursing students. The adaptability of serious games to various learning objectives and program types emphasizes their potential to be integrated into nursing curricula worldwide.

Virtual Reality: Elevating the Learning Experience

Virtual reality, as an immersive and interactive technology, holds immense promise in nursing education. The ability to simulate realistic healthcare scenarios in a controlled environment allows students to practice and refine their skills without the inherent risks associated with real-

world patient care. VR technology not only enhances technical proficiency but also provides a platform for the development of crucial soft skills, such as communication and empathy.

The Game-Changer: "Escape Room: The Guilt"
Our project, centered around the development of the serious game "Escape Room: The Guilt," exemplifies the potential of serious games and VR in nursing education. This game, designed collaboratively by experts from nursing, digital games, and educational sciences, serves as an immersive platform for nursing students to experience and manage complex emotions within a virtual healthcare setting. Through extensive meetings and collaboration over six months, our team explored the unique intersection of serious gaming and emotional competence. The resulting game not only addresses technical competencies but also provides an avenue for emotional intelligence development, preparing nursing students for the multifaceted challenges of their future profession.

Student Feedback and Learning Outcomes
Preliminary results indicate positive student feedback and tangible improvements in emotional competence. The incorporation of serious games and VR into the nursing education paradigm demonstrates their potential to revolutionize the learning experience, ensuring that graduates are not only technically proficient but also emotionally intelligent and adept at navigating the complexities of patient care. In conclusion, serious games and virtual reality emerge as indispensable tools in the modernization of nursing education. Their capacity to bridge educational gaps, enhance technical and interpersonal skills, and provide immersive learning experiences positions them as transformative elements in shaping the next generation of nursing professionals. As the healthcare landscape evolves, embracing innovative educational methodologies becomes imperative, and serious games and virtual reality stand at the forefront of this educational revolution.

Biographical Note:
Lisa Gomes, born in Boston, Massachusetts (USA), PhD from the Portuguese Catholic University, Institute of Health Sciences, Porto-Portugal. Has a Master's degree in Education Sciences and a Bachelor's degree in Nursing. She is a specialist in Rehabilitation Nursing and also has a degree has a Nursing Specialist. She is a Professor at University of Minho since 2005. Coordinator of the Mobility and Internationalization Commission (Erasmus Academic Coordinator) at the School of Nursing of the University of Minho and Member of the Postgraduate Course in Rehabilitation Nursing Committee. Develops her research at the Nursing Research Center (CIEnf) of the Nursing School of the University of Minho and the Research Unit in Health Sciences: Nursing UICI-SA:E Coimbra/ University of Minho. In the area of internationalization, she has taught in more than 10 countries and in 2019 was Visiting Scholar at the Center for Nursing Research at Pennsylvania State University, USA. Areas of interest: chronic disease; health literacy; health promotion; cardiac rehabilitation; emotional competence; digital environments in nursing education.

Embedding emotions between science and art: how to reshape illness and health

Susana de Noronha, Centre for Social Studies, University of Coimbra, Portugal

Abstract:
Merging three subfields – the anthropology of art and material culture, medical anthropology,

and science and technology studies – my interlocutors are female cancer patients and survivors, focusing on their standpoints, situated knowledge and creative agency. This presentation unfolds the results of a research trilogy about artistic representations of illness, resistance, and death. (Part I) While analysing artistic projects created by (or with) women with breast cancer, what does the embodied knowledge of cancer patients teach us and what can their artistic narratives accomplish? Art will be understood as a constitutive part of experience itself, a form of knowledge and transformative action, immersed on the way patients live, understand and cope with breast cancer, between individual expression and collective activism, between remission and terminal experiences. (Part II) Opening my research to all other organs affected by malignancies, but also to women's representations of biomedical material culture, what can you know about cancer by looking at the uses and meanings given by women artists to these objects? What kind of stories can you tell, by focusing on a series of objects – on the material culture of cancer? Objects will be understood as modular components of our cancer experiences, inseparable from our bodies, defending the idea of a "third half" that unites everything and everyone. (Part III) From theory to practice, bringing scientific illustration into my research work, I transferred to paper the stories of eight women and cancer patients from my relational circle, completing the texts with drawings, paintings, and photographs, aiming to change our collective imagery and understandings about health and illness. This collaborative research blends embodied knowledge, oral narrative, anthropological reasoning, and art, reinventing social science and ethnographic drawing, enhancing them with metaphor and imagination. These three investigations point to the outline of another ontology, epistemology and methodology, a "third half" where people, experiences, objects and different forms of knowledge are parts of an undivided and indivisible sum.

Biographical Note:

Susana de Noronha: Anthropologist, PhD in Sociology, Researcher at the Centre for Social Studies (CES), University of Coimbra, Portugal. Co-coordinator of CES Ethics in Research Discussion Group, and member of the Editorial Board of the CES Collection Book Series (U. Coimbra Press IUC). Invited Assistant Professor at the Department of Sociology, University of Minho, Portugal. Ambassador for Portugal of the "Association for the Study of Death and Society" (UK). PREVIOUS POSITIONS: (2022-06/2023) Elected Secretary of CES General Assembly; (2020-01/2022) Elected Co-coordinator of the Science, Economy and Society Research Group (NECES) and Member of the Standing Committee of CES Scientific Board. Awards & Distinctions: Women in Science 2023, by Ciência Viva - National Agency for Scientific and Technological Culture, honouring Portuguese scientists who have excelled in different fields of investigation; 30 Years, 30 Anthropologists (2023), by Department of Life Sciences (DCV) U.Coimbra; Distinguished by an international jury with the 2007 CES Award for Young Portuguese-speaking Social Scientists, by CES U.-Coimbra; and winner of the 2003 Bernardino Machado Award for Anthropology (Best Student), by the University of Coimbra. Single author of three research monographs: A tinta, a mariposa e a metástase: a arte como experiência, conhecimento e acção sobre o cancro de mama (2009, Afrontamento); Objetos feitos de cancro: mulheres, cultura material e doença nas estórias da arte (2015, Almedina); and Cancro sobre papel: estórias de oito mulheres portuguesas entre palavra falada, arte e ciência escrita (2019, Almedina). As a writer and researcher, she is also a

published lyricist and author of scientific illustrations, using photography, painting and creative ethnographic drawing.

Panel "Emotional Education and Health Care Professionals"

Emotional education for future health practitioners

Dr. Juan-Carlos Pérez-González, EDUEMO Lab, Faculty of Education, Universidad Nacional de Educación a Distancia (UNED) & Instituto Mixto de Investigación Escuela Nacional de Sanidad (IMIENS)

Abstract:

Introduction

Pérez-González, Yáñez et al. (2020) point out that in the last 25 years, two approaches to the empowerment of personal and environmental factors that favour personal and social well-being have spread internationally.

On the one hand, there is the approach of mental health education from a salutogenic perspective. The field of "health education" has evolved from a focus on the causes of illness and disease avoidance (pathogenesis perspective) to an attempt to understand the conditions and mechanisms that contribute to the achievement and maintenance of health (salutogenesis perspective), thus emerging "mental health education" as a socially demanded area within "health education", especially since the COVID-19 pandemic in the year 2020.

On the other hand, there is the approach of affectivism in psychology (Dukes et al., 2021). After the emotional blackout of behaviourism and cognitivism, an "affective revolution" has emerged and grown in the last two decades, stimulating the study of emotions in general and positive emotions in particular. This affective revolution has come to be seen as a global shift in thinking about human psychology, as the importance of emotions and the need for their scientific investigation in any field of human activity has been widely recognised. One of the drivers of this affective revolution or affectivism is due to the emergence of the construct of "emotional intelligence" (EI) (Petrides et al., 2017; Salovey & Mayer, 1990). Another driver of affective affectivism is probably the so-called "positive psychology" trend, which advocates shifting the focus from the study of distress and psychopathology to the study of psychological variables that facilitate psychological well-being (covitality vs. comorbidity).

At this socio-historical moment in which we find ourselves, it seems reasonable and morally defensible that all health professionals should have basic training in emotional intelligence, both because of the implications for their own well-being and for that of the people they serve.

1. Brief historical review

According to Pérez-González and Qualter (2018), "emotional education", which seeks social and emotional learning (SEL) and the improvement of emotional intelligence, has gone through two main historical phases. The first phase took place in the 1970s, with the systematic application of Albert Ellis's principles of rational emotive therapy to the training of students and teachers in schools in New York (United States). The second phase began in the 1990s with the popularisation of the concept of EI, thanks to the popularisation work of Daniel Goleman, and is still alive and well today.

2. Two forms of emotional intelligence

Pérez-González, Saklofske et al. (2020) have proposed that emotional competence, which is a consequence of a good emotional education, can be expressed in two forms or can be operati-

onalised on the basis of two components (see Figure 1). These two components are the cognitive (controlled, conscious) component and the temperamental (automatic, non-conscious) component. The cognitive component is known as Ability EI, while the temperamental component is known as Trait EI.

3. Emotional competence and health

Meta-analytic research has shown that emotional competence, whether studied as Ability EI or as Trait EI, is positively and strongly associated with multiple markers of health and well-being (Martínez-Saura et al., 2023; Martins et al., 2020; Sarrionandia & Mikolajczak, 2020). However, the evidence is strong that correlations are almost twice as large when EI is operationalised as Trait EI rather than as Ability EI (Gutiérrez-Carrasco et al., 2022).

So EI, but especially Trait EI, appears to be closely related to indicators of better mental health, lower psychosomatic conditions, and better psychological well-being and happiness (see Figure 2).

Physical health markers associated with EI include, for example, better sleep quality, lower levels of the stress hormone (cortisol), or greater heart rate variability (Sarrionandia & Mikolajczak, 2020).

Finally, it should be noted that people with an above-average level of Trait EI have lower expenditures on healthcare resources (Mikolajczak et al., 2015), which is an economic advantage at both the individual and community level.

4. EI in medicine and nursing

A quick bibliometric analysis looking for published research in the Web of Science (see Figures 3 and 4) on EI and medicine shows that these publications are increasing every year (e.g., Cherry et al., 2014; Roth et al., 2019). However, this trend is even greater with respect to research on EI and nursing (e.g., Dugué et al., 2021), suggesting that, for the time being, the nursing research community is more sensitive to this topic than the medical community.

5. Improvement of EI

Given the consolidated benefits of EI for health and well-being as evidenced by research, the question arises as to whether it is feasible to improve it through psychoeducational intervention. In response to this question, research to date indicates that, indeed, EI, although it has an important genetic component (Van der Linden et al., 2018), is also malleable as a result of emotional education, and improvements in the level of EI have even been observed around an average effect size of 15% after the application of an emotional education programme in adults (Mattingly & Kraiger, 2019). Furthermore, some research has shown, in addition to these improvements, other collateral improvements in physical health indicators, such as a reduction in cortisol levels and glycated haemoglobin levels in diabetics (Petrides et al., 2016).

For all of the above reasons, we defend, in line with previous statements, the convenience of promoting research-based emotional education among students and healthcare professionals.

Biographical Note:

Vice-Dean of Research in Education. PhD in Educational Psychology, MA in Social Psychology, MSc in Education and Psychology.

Currently, He is Associate Professor of Research Methods and Assessment in Education. He researches the assessment of emotional intelligence and its relationship with well-being and life outcomes, as well as He studies the evaluation of emotional education programs across the li-

fespan. He has published over 30 journal articles and taught more than 60 invited lectures, including universities in the USA, United Kingdom, Ecuador, Dominican Republic, Portugal, and Brazil. He is a fellow of the International Society for the Study of Individual Differences (ISSID) and of the International Society of Research on Emotion (ISRE) and is an Associate Editor of the British Journal of Educational Psychology. He works at the Faculty of Education at the National University of Distance Education (UNED) in Madrid, Spain, where he is Founder and Director of EDUEMO Lab (Emotional Education Laboratory). He is co-author of some of the most cited papers in the field of emotional intelligence.

Academic burnout as a predictive factor of suicidal risk in nursing students?

Rodrigo-Alejandro Ardiles-Irarrázabal, International School of Doctorate, National University of Distance Education, Biomedical Sciences and Public Health Program, Spain - Universidad de Antofagasta

Abstract:

Introduction
Suicidal behavior constitutes a complex problem, with multiple causes, with mental illness being one of the most important factors that predisposes to suicidal behavior (1,2). Suicides are preventable. According to the WHO, a person somewhere in the world commits suicide every 40 seconds. The group with the highest risk are young people between 15-29 years old, this being the second cause of death in this age group (3,4). Chile has one of the highest suicide rates in Latin America (5). This shows that mental health problems affect 2 out of every 10 people in Chile. According to figures from the Ministry of Health, more than 100,000 admit that they tried to take their own life. Furthermore, 20.3% of people who commit suicide in Chile are young people between 20-29 years old, so it is necessary to focus on this population (6). It is in this age group where the population of nursing students is concentrated, so the problem may be relevant. Numerous articles report that nursing education increases levels of stress and burnout (7–9). Health sciences have been reported as one of the branches where students show higher levels of stress, thus, the nursing profession is considered stressful because those who study and practice it are susceptible to high levels of stress (10) and , consequently, suicidal ideation (2,11).

Objective
Search for the relationship between Academic Burnout Syndrome and suicidal risk in Nursing students from first to fifth year at a university in northern Chile.

Methodology
Study with a quantitative, correlational, and cross-sectional approach, with a non-experimental design.

Results
201 nursing students reported 10% of the sample with moderate and severe suicidal risk. The variables (suicide risk and academic burnout) showed statistically significant relationships (r=.501, p<.000).

Main conclusion
There is a relationship between academic burnout and suicidal risk.

Timely and early detection of the relationship between academic burnout and suicidal risk can help prevent suicidal behavior and even suicide in nursing students.

It is urgent that universities seek strategies for early detection of burnout syndrome and thus avoid tragedies such as associated suicide.

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Biographical Note:

Doctoral Student at the International School of Doctorate, National University of Distance Education, Biomedical Sciences and Public Health Program, Spain. Master in Psychospiritual Accompaniment, Universidad Alberto Hurtado; Master in Education, Universidad Bolivariana; Master in Human Resources Management, Escuela de Negocios EOI, Spain. Nurse and Bachelor's Degree in Nursing, Universidad de Antofagasta.

With 22 years of professional experience, worked 11 years in Primary Care, of which 10 years, served as director of different Health Centers. Since 2012, has been dedicated to academia in different institutions of higher education. Has been developing the research line, "risk and protective factors of suicidal ideation in nursing students". Has measured suicidal risk and its relationship with emotional intelligence, spirituality, burnout, academic engagement, among other associated factors.

Is currently Assistant Professor and Secretary of Outreach of the Department of Nursing belonging to the Faculty of Health Sciences of the Universidad de Antofagasta, is also a member of the Ethics and Scientific Research Committee of the same University. Has published fifteen scientific articles in Scopus and other indexed journals related to his line of research.

Panel "Outcomes of an Emotional Competence Program"

Developing an Emotional Intelligence Course for Nursing Students

Andreea Ursu, Ph.D, Faculty of Educational Sciences, Ştefan cel Mare, University of Suceava, Suceava, Romania

Abstract:

This presentation aimed to offer an overview on the rationale and the preparation of an emotional intelligence course dedicated to health professionals. Firstly, a brief presentation on the importance of discussing about emotions and emotional intelligence in healthcare settings was given. Secondly, the specific of the hidden curricula in Nursing formal training and its principles were addressed. Thirdly, the classical theoretical models of emotional intelligence and examples for each model were presented. Fourthly, the content of the emotional intelligence course, its structure and examples of activities and exercises for the course's themes were proposed. Finally, some recommendations on methodological and implementation strategies aiming to enhance course's effectiveness were highlighted.

The most intense positive and negative emotions are experienced in interpersonal relationships such as patient-health professional relationships. The emotions felt by patients, patients' family members and healthcare personnel and the strategies used to navigate those emotions have significant positive and negative consequences for clinical outcomes (da Silva & Carvalho, 2016; Mjaaland et al., 2011; Shapiro, 2011; Van Middendorp et al., 2010). Although the outcomes of patients' and healthcare personnel' emotions are known, it was suggested that the formal medical education tends to promote implicitly alexithymia (Shapiro, 2011) by encouraging students to separate and distance themselves from patients and their own emotions, to be less empathetic and more apathetic (Hammer et al., 2010).

The cognitive model, the personality trait model and mixed model were presented. These models took into account both the intrapersonal and interpersonal aspects of emotional intelligence. Thus, the content of the course was also developed taking into consideration both personal and social competences. The main learning outcomes for the personal competence were (a) demonstrating the ability to recognize and understand one`s own emotions and motivations, (b) demonstrating the ability to recognize individual strengths, weaknesses and needs related to emotions and (c) developing self-control or knowing how to address it in a flexible and constructive manner. The learning outcomes for social competence were (a) analyzing patients' and their relatives' emotions, needs and concerns, (b) discussing the patients' emotional signs, (c) demonstrating the ability to see things from the point of view of others, and (d) building a good relationship and a clear communication in order to influence and inspire others through the use of one's and others` emotions.

The course was organized as follows: twenty-four hours were assigned for theoretical concepts grounding and practical activities, 4 hours were designed to promote individual work (2 case scenarios) and 2 hours were planned for playing the Serious game developed within our project "Serious Games - Developing Emotional Competences for Nursing Students". Afterwards, examples of activities for themes such as "Exploring and addressing positive and negative emotions in healthcare systems", "Emotion regulation – adaptive and maladaptive strategies. Interventions for people with emotional difficulties in medical settings", and "Empathy – development

and consequences. Empathic and assertive communication" were presented. Finally, I proposed some recommendations to improve the intervention. Such guidelines included extended time for playing the serious game and extended time reflections after implementing the activities. Additionally, we discussed about the additional equipment necessary for playing the proposed game, such as VR headsets, more spacious rooms, and the need of an initial training on how to use the VR headsets. Other observations were made related to participants' recruitment, retention and benefits. The need to test the effectiveness of the training using a control group and apply scales that measure specific abilities or perceptions related to emotions in the future were also highlighted.

Biographical Note:

Faculty of Sciences of Education, University „Stefan cel Mare" of Suceava, Romania. Currently, she is also a postdoctoral fellow at Centre of Research in Psychology of Alexandru Ioan Cuza, University of Iași, Romania. Her research interests are focused on developing social-emotional abilities, and how Positive Psychology can be applied to educational contexts. Additionally, she is interested in studying intrapersonal and interpersonal effects of emotions and emotional processes on intimate partners' dynamics, the cross-cultural study of emotions and romantic relationships, resilience and personal growth. She teaches Couple and Family Psychology, Resilience Psychology, Work Psychology and Educational Psychology. She published 20 papers in English, in the form of journal articles. She has worked in 4 different European research labs, being able to conduct research projects in international teams.

Nurses With Emotional Competence Succeed In Activating A Positive Nurse-Patient Care Relationship

Gianluca Catania, PhD, MSN, RN, Associate Professor in Nursing Science, Department of Health Sciences, University of Genova – Italy

Abstract:

Effective healthcare is built on the interpersonal interactions that exist between medical staff, patients, and their families. Nurses have the moral and professional accountability for the interactions in these relationships.

It is widely accepted that emotional intelligence is linked to better patient care, less stress levels, therapeutic relationships, conflict resolution, and psychological well-being. The term emotional intelligence describes the aptitude for recognizing one's own and other people's emotional states as well as the ability to control or channel emotions to improve interpersonal interactions and function in a role.

It is commonly known that to reduce stress and improve their ability to handle the emotional demands of interpersonal clinical work, nursing students must acquire emotional intelligence skills. It is acknowledged that emotional labor is a necessary component of nursing as a profession. The idea of emotional intelligence has only lately been discussed in nursing literature, but its importance in the field of healthcare is starting to be recognized.

Successful interactions in healthcare involve interpersonal communication knowledge and abilities, which demand a significant amount of intra- and inter-personal labor from nurses. Inducing and/or suppressing feelings to make others feel cared for is known as emotional labor, which is a type of emotional self-regulation. Deep acting, or evoking real feelings in oneself, has been

connected to both a sense of connection with patients and job happiness. When nurses utilize surface acting more frequently, it can have detrimental effects such as emotional dysregulation, which can result in stress and burnout as well as less successful interpersonal practice. Surface acting is the suppression of real emotions or the stimulation of unseen emotions.

The literature review of Dinç & Gastmans points out to the necessity of trust as a relational phenomenon to have a successful nurse-patient interaction. It showed that building a trusting connection between a nurse and a patient is a dynamic, continuous process that involves several stages, from initial trust to a particular reconstructed trust, where trust can be broken and rebuilt. This suggests the brittle nature of trust, which is crucial for patients with certain conditions like children with burns and traumatic injuries who needed frequent painful procedures and whose voices are mostly silent; patients with psychiatric disorders who were forced into hospitalization, restrained, and subjected to coercive measures; and patients receiving palliative care.

Emotional intelligence has been linked to stress, mental health, emotional well-being, and behaviors that involve seeking assistance when needed in the nursing context. Individuals who struggle to control their emotions are less likely to ask for assistance or support. The capacity to support emotional regulation in patients and their families may aid in the development of therapeutic interactions between patients and nurses if nurses exhibit an emotionally savvy practice.

Literature showed that empathy and motivation are acknowledged as antecedents of emotional intelligence.

Empathy is the capacity to comprehend the feelings, ideas, and viewpoints of another person. Motivation is the intrinsic desire to succeed. A person would need to have a strong desire to comprehend emotions and be willing to accept both their own and other people's feelings. Maintaining general well-being for nurses and their patients depends heavily on self-awareness and self-management.

About consequences of emotional intelligence, the well-being of nurses as employed professionals was found to be impacted by emotional intelligence in the nursing profession. As a result, the literature primarily addresses burnout, stress levels, job satisfaction, and retention. A nurse with emotional intelligence will know how to use affective forecasting, which is the capacity to predict one's future emotional responses, in the context of patient and family care. Given their ability to forecast their potential feelings, reactions, and responses to upcoming events or interactions, nurses have the potential to facilitate the development of positive therapeutic relationships.

The literature also showed that managers who possess high emotional intelligence can foster a positive workplace culture. All dimensions of organizational climate and emotional intelligence have a positive correlation with one another, according to an analysis of their relationships. The findings specifically indicate that "credibility" has the greatest impact on emotional intelligence and that "self-awareness" and "self-management" have the greatest influence on organizational climate.

In conclusion, understanding when and how to express one's emotions as well as managing them are components of emotional intelligence. Establishing a positive nurse-patient relationship necessitates assessing the quality of care, including whether patients' needs and expectations are satisfied. The practice of nursing heavily relies on emotional intelligence. Emotional

Intelligence impact the quality of patient care and outcomes, decision-making, critical thinking and overall, the well-being of nurses.

Biographical Note:

Gianluca Catania started his academic career at the University of Genoa (Italy) in 2014, and ever since, in addition to all his teaching commitments, he has conducted many research studies and projects in the field of healthcare quality and safety, and palliative and cancer nursing care, with a history of over 90 publications in peer reviewed journals. In particular, he started conducting research in direct connection with the RN4CAST International Consortium in 2015 and has since then conducted several funded national research projects on topics specifically related to nurse staffing, nurse-patient ratios, skill-mix and missed care. In relation to these topics, he has built and maintained long-standing contacts and collaborated with renown international experts in this field. Especially in the last 5 years, Gianluca Catania has focused his work on exploring the association between essential missed nursing care, nurse staffing ratios, patient safety, and nurses' job satisfaction. Gianluca Catania is a Fulbright Scholar and Associate Professor at the Department of Health Sciences at the University of Genoa and Senior Fellow at the Center for Health Outcomes and Policy Research at the School of Nursing at the University of Pennsylvania (USA).

A Report of an Evaluative Focus Group Discussion Intervention with Program Participants

Maria CASSAR, Daren CHIRCOP, Roderick BUGEJA, University of Malta

Abstract:

Introduction

Emotional Intelligence is a fundamental element in the exercise of the nursing profession. Scientific evidence has positively correlated higher emotional intelligence to enhanced clinical decision-making, collegial relationships, clinical environment knowledge utilization and inter-professional relationships at multiple levels. The overall goal of the Serious Games for Nursing Students (SG4NS) project was to achieve higher standards of clinical practice through enhanced nurses' intrapersonal and social emotional competencies and abilities. This innovative Emotional Competence (EC) program, which integrated virtual reality by way of a serious game interface, was piloted at a 3-day workshop with a voluntary group of fifteen second year students reading the Bachelor of Science in Nursing Studies programme at the University of Malta. The programme consisted of presentations, completion of self-report brief measures of positive and negative emotions questionnaire tools, playing a dedicated virtual reality serious game, watching emotion-laden clinical scenarios and related audio-visual material, reflective processes and group discussions. Among other topics, key issues addressed were positive and negative emotions in healthcare settings; the role of healthcare professionals in relation to patients' and relatives' emotions; empathy and empathic abilities in healthcare; assertive communication, confrontation, conflict resolution, emotions and teamwork.

Aim and Objectives

The purpose of this evaluative exercise was to gain insight into the experiences and perspectives of the participants about :-

    a. Clarity of goals and purposes of the EC program

b. Perceived expected outcomes
c. Content / resources of the programme
d. Programme delivery
e. Perceived extent to which expectations were met/unmet
f. Recommendations for future intervention implementation

Method

The Focus Group Discussion (FGD) method is a qualitative research method and data collection technique in which a selected group of people with a similar background and experience discusses a topic or focused-issue in depth. A semi-structured discussion led by a discussion guide was conducted with all the pilot project participants, facilitated and moderated by the two academics (program coordinators) at the end of the workshop, audio recorded and transcribed verbatim. The transcript was analyzed thematically.

Findings

Overall the EC workshop was deemed very useful, worthwhile and much needed by the participating student nurses. They related the principles learned and exercises conducted with both their private personal lives and clinical practice placement experiences. The qualitative thematic data analysis gave rise to three main these. 1. Perceived motivation to voluntarily participate; 2. Positive Aspects; 3. Recommendations for future implementation.

The integration of virtual reality as a tool, and its relation to emotional competence within the programme, was among the main factors to motivate the students to voluntarily subscribe to the workshop, alongside an urge to enhance their personal and professional development, and to learn how to deal better with intense and overwhelming emotions, and heightened anxiety often experienced during clinical practice placements. The latter emotions are triggered by interactions taking place with both patients as well as clinical mentors.

Among the most positive aspects of the workshop highlighted were the increased comfort experienced in identifying with and managing emotions both intra- and interpersonally; increased confidence with expressing emotions; and increased awareness about and understanding other people's emotions. The small number of students, their common background and the level of trust enjoyed among the participants were identified as key aspects that made the workshop a perceived success. Feeling safe, protected and a sense of privacy and confidentiality by way which the workshop was managed, as well as the venue, seating arrangements and the experiential learning context created, made the participants feel more comfortable to explore and become more aware of an intimate aspect of the self, the emotional self-intimacy. The content and management of the workshop overall further facilitated this openness and connectedness with oneself and others, often considered a potential vulnerability, fostering personal growth. The workshop was characterized by emotionally loaded discussions, exercises and sharing of experiences, sometimes complemented with emotional outbursts too. In view of the latter, the participants advised due consideration to the duration of the sessions, to allow shorter and more frequent cooling down intermissions, and to focus and spend more time on specific topics of special interest.

Conclusion

While the employment of virtual reality, a serious game interface and new dimension added to pedagogy, evidently attracted a group of young nursing students to a workshop about develo-

ping and enhancing emotional competence, a strong perceived need to develop an ability to acknowledge, understand and manage intense emotions emanating from an academically challenging learning clinical environment was a key motivating factor among students participating in an intense 3-day personal and professional development programme, resultant from an Erasmus+ SG4NS project. Having perceived the workshop as extremely useful and needed, participants highlighted the need for educators to pay particular attention and focus not only on the content of such programme, but being a very intimate aspect of the self, self-awareness and emotional management (self-emotional appraisal) necessitates a learning context and environment that fosters and harbors sensitivity, trust and protection. Expressing emotions is often perceived a vulnerability and undue exposure of the self. Therefore, emotional competence education necessitates a carefully designed and managed learning environment, both physical and social, that promotes care, comfort, and personal safety. The latter conditions enable an individual to open-up an inner aspect and elements of being to oneself and to others, which is a prerequisite for personal and professional growth and development in the realms of emotional intelligence and emotional competence.

Biographical Note:

Dr Roderick Bugeja is a resident academic at the Department of Nursing, University of Malta and has been a lecturer since 2002. Graduated with a Bachelor's degree in Nursing in 1999, ENBA (Sexual & Reproductive Health) (University of Sheffield, UK) in 2001; Post Graduate Diploma in Nutrition & Dietetics (University of Malta) in 2001, Masters in Health Promotion & Public Health in 2002, MPhil in Research Methodologies (University of Southampton, UK) in 2004 and attained his doctorate (PhD) in Health Education in 2010. Roderick worked as a Sexual & Reproductive Health Adviser, Health Promotion Specialist in Sexual & Reproductive Health and Research & Development Officer in Primary Care, before embarking on a full-time academic role in 2008. He lectures about Sexuality, Sexual & Reproductive Health; Health Promotion & Primary Care; Research Methodologies and Conceptual Frameworks; Academic Searching, Reading and Writing; and Evidence Appraisal & Synthesis. He also conducts freelance Sexuality & Relationships Education Programmes consultancy. Outside working hours, Roderick is a cellist, a pianist, and a dad of two boys.

Panel "Serious Games and Gamification Promoting People Well-Being"

Gamification for children with dyscalculia

Filipa Ferraz, University of Minho, Gualtar

Abstract:

With the advance of knowledge in all areas, more is known about human behaviour that can be identified, explained, and understood. The study of learning disabilities has become far more significant in education. The identification of inherent disabilities not only helps comprehend children's needs and behaviour but also provides the tools to help the children surpass their weaknesses.

Development Dyscalculia (DD) is a Mathematic Learning Disability (MLD), belonging to the Specific Learning Disabilities (SLD) group, whose incidence is 6 to 7% of the worldwide population (Ferraz et al., 2017). Different from acalculia, which is acquired by trauma, brain injury or other incident, dyscalculia is born in the individual. It has its neurological origin in the Intraparietal Sulcus (IPS) (represented in Figure 1 by numbers 1 and 2) and the Left Angular Gyrus (LAG) (represented in Figure 1 by number 3) (Ferraz et al., 2016a). Even though there are studies confirming this relation, the neurological defects are not yet explained. Experts relate some cases of this learning disability with other causes besides neurologic, namely genetic, paediatric, linguistic, psychologic, or pedagogic (Ferraz et al., 2017).
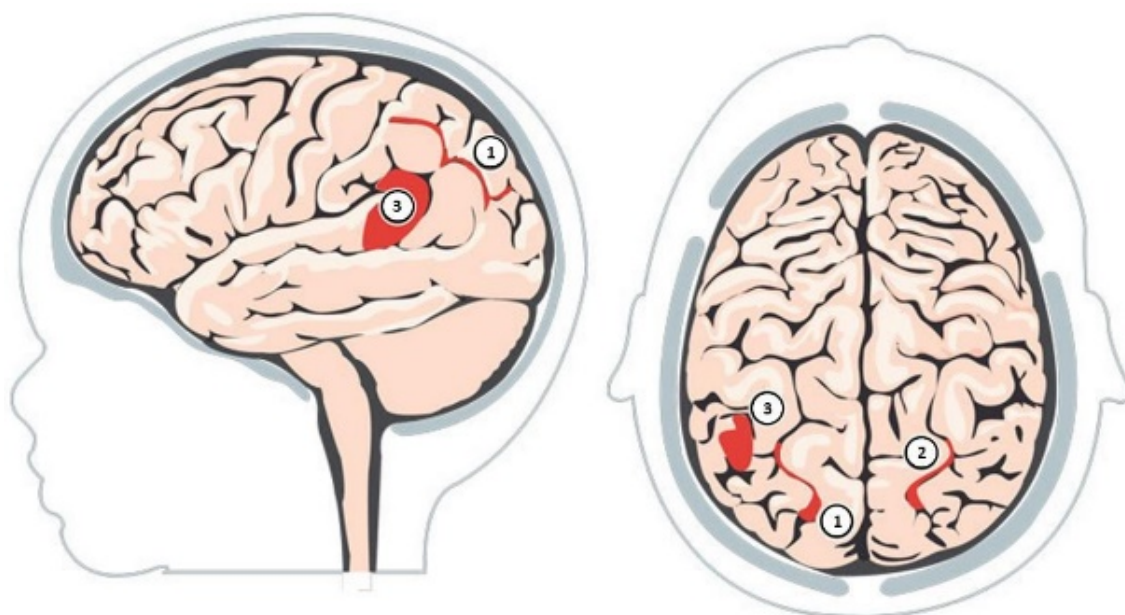
Figure 1 – Identification of the origin of dyscalculia in the brain (IPS represented by numbers 1 and 2, LAG represented by number 3) (Ferraz, 2021)

Dyscalculia is seen as "dyslexia" or "blindness for numbers" since it affects the capability to understand, reproduce and use mathematical concepts. According to the DSM-V[1] and ICD-10[2], it emerges when "the mathematical ability in the individual is substantially below that expected, given the person's chronological age, measured intelligence, and age-appropriate education"

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[1] *Diagnostic and Statistical Manual of Mental Disorders, International Classification of Diseases*

[2] *International Classification of Diseases*

(Ferraz et al., 2017). It is a disability with several degrees of severity and can be classified according to the most affected areas and the state of neurological immaturity (Ferraz et al., 2016b). The affected areas of this learning disability are lexical, verbal, graphical, operational, practognostic and ideagnostic, including troubles in dealing with numbers, using memory, dealing with measures, organising spatial and temporal concepts, counting, calculating and others.

Therefore, dyscalculia interferes with academic achievements and activities of daily living that require mathematical abilities, creating an impact on social and personal lives. Since it is a disability that exists since birth, it is irreversible. Consequently, it cannot be treated; DD can only be attenuated, being worked out in order to decrease its degree of severity and minimize its impact on the individual's life, so there is an urgency in screening this disability because as soon as it is identified, quicker a diagnosis is found, and a therapy plan is outlined. That is the reason why it is recommended to be alert in the first school years, where this type of learning disability is identified using a profiled test method and worked out with direct therapy. The therapy plan should involve adapting the teaching system to the child's needs and using neuroplasticity to re-educate the child's cognitive flaws with brain training, which includes the methodical habit of solving exercises using didactic support tools, either manual or digital. All the tools used consider the mitigation of DD's effects daily for the child (Ferraz et al., 2019; Neves et al., 2019).

A serious game is a game whose primary purpose is other than entertainment and is created to achieve specific goals in fields like education, training, or health promotion (Laamarti et al., 2014; Connolly et al., 2012), and gamification is the process of integrating game elements into non-game contexts, such as business, education, or healthcare, to attract and motivate people to achieve specific goals (Deterding et al, 2011; Seaborn et al., 2015; van der Lubbe et al., 2021), considering different purposes as training skills, supporting behaviours, transferring knowledge and others. Combining both concepts and based on their premises, games whose purpose is to help children with DD and other mathematical learning disabilities work on their weaknesses can be created as didactic tools (Kokol et al., 2020). With the technological advances, several games for the therapeutics of children with dyscalculia were created and adopted by schools and other educational centres. Examples include Maths Learning Center, Classroom Focused Software, Jungle Education, Giggle, Top Marks, Primary Games, Doorway and disMAT.

disMAT was developed in Portugal and is the only one that supports both English and Portuguese. It is an open application that uses Artificial Intelligence algorithms to adapt the level of the exercise to the children's needs. It selects the task's degree of difficulty presented to the child while playing the game, according to the time spent on previous tasks and the correctness of the answers, keeping them challenged to stay engaged and complete the set of tasks of that level. This application also provides a detailed report of the child's performance through their frequency of iterations with the game, helping experts to assess the child's evolution, compare with the same age and school year other users and identify weaknesses. Some Portuguese schools adopted this didactic tool that helps teachers and psychologists deal with children with mathematical learning disabilities, either in understanding their behaviour, needs and difficulties or in motivating the children to work on mathematical concepts in a playful way. Conducted studies showed an improvement in children's performance using disMAT. (Ferraz et al., 2015; Ferraz et al., 2016a; Ferraz et al., 2016b; Ferraz et al., 2017; Ferraz et al., 2019; Neves et al., 2019; Ferraz, 2021).

Analogous to disMAT, other serious games to aid children with dyscalculia and other mathematical learning disabilities created worldwide present several benefits (Ariffin et al., 2017; Torres-Carrión et al., 2018; Walcott et al., 2019; Kokol et al., 2020; Lam, 2020; Vanjari et al., 2020; Rohizan et al., 2020). Those benefits include increased interest in mathematics, feeling of understanding and comprehension, inclusivity, improvement in self-esteem, and gain of motivation to mitigate weaknesses, among others. Alongside children's improved performance in school, it also impacts their social skills, facilitating the process of creating friends, integrating a group, and boosting verbal confidence. Gamification and serious games can change children with dyscalculia.

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Physioland - A serious game for rehabilitation of patients with neurological diseases

Tiago Martins, University of Minho

Abstract:

There is an increasing number of victims of neurological disease, with reduced mobility, requiring physiotherapy, with programs full of repetitive, often tedious exercises, leading to patients' lack of motivation, poor adherence to treatments and abandonment.

Studies that refer to serious games reveal very positive results in the recovery of motor functions, all of them created pleasant environments and helped patients to acquire the necessary motivation to continue their rehabilitation programs.

The research carried out shows that, in almost general terms, there are few serious games based on specific exercises from traditional physiotherapy, but rather generic games adapted to different situations, few aimed at the rehabilitation of the lower limbs and covering only one neurological disease. Therefore, a gap was identified in relation to the broad spectrum of conventional physiotherapeutic exercises.

Therefore, six traditional physiotherapy exercises (for upper and lower limbs) were chosen, covering different neurological diseases to be monitored using image processing techniques.

In a preliminary phase, the physiotherapy exercise monitoring system was based on three conventional cameras, located one on each side of the patient and the other in front. Different problems led to the abandonment of the project, and the research team chose to develop new software for monitoring physiotherapeutic exercises, the PhysioSoft application, based on depth

image processing techniques, using the Microsoft Kinect sensor, making monitoring more simple, friendly and non-invasive.

PhysioSoft was the first step towards the development of what would be the main focus of the project – the development of a serious game for monitoring and motivating neurological patients to practice physiotherapy.

Then comes Physioland , a game with a medieval concept, in a 3D environment, designed for people of both sexes, with a wide age range, with mild or moderate neurological diseases, without associated cognitive problems . The narrative is very easy to understand, however, the player must always be accompanied by a healthcare professional while playing the game.

Physioland has six challenges, corresponding to the six selected traditional physiotherapy exercises, having been given names suggested by patients.

 A backoffice was also developed to manage all information on a single remote platform, supported by a centralized database. This way, both healthcare professionals and the research team will be able to access the patients' entire evolution.

A study was developed with the game with eleven patients, with different neurological diseases, of both sexes, aged between 15 years and 83 years in a physiotherapy clinic. This experience lasted ten weeks, with each patient undergoing a total of twelve to fifteen sessions, an average of two sessions per week. Each session lasted approximately thirty minutes. Each challenge lasted 2 and a half minutes or 5 minutes, depending on the patient's condition.

The results obtained were very positive: all patients were able to perform the different exercises provided by Physioland . The data obtained by the software provided information about the player's score and performance, in real time. Approval from participants was achieved in terms of ease of use, appearance and performance, usefulness. The adaptation of specific exercises from traditional physiotherapy to electronic game situations was successfully achieved. The most used adjective in the overall assessment was "Motivating". Characteristics such as fun, challenge, pleasure, encouragement, interest were highlighted by patients, all of which converge in motivation.

Physioland proved to be capable of checking whether a physiotherapeutic exercise is being performed well, adapting it to an electronic game situation, and above all promoting patients' motivation to practice physiotherapy.

SGECHI-19412

Development, Application And Validation Of The Lean Cards Game For Production Engineering Students

Bruna Andrade Machado - UNESP

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Abstract:

Technological advances and the infinite possibilities of accessing information increased the challenge of the teaching-learning process. Current students seek quick and short information and practical activities which do not coincide with traditional teaching methods. Thus, relevant topics face difficulties to be understood. Introducing innovative elements and methodologies can be a way to achieve greater student engagement and intensify their learning. A bibliographic survey and a case study applied at a public university in the State of São Paulo allowed the authors to identify the existence and use of some games related to Lean Manufacturing. Such games were complex, extensive, and covered up to the third step of Bloom's Taxonomy. So, the authors found an opportunity to develop a leaner game focused on student engagement and motivation that could be a formative assessment tool for teachers. The authors developed and applied a digital game (Lean Cards Game) from an analog commercial game ("Perfil"). Production Engineering students played with and evaluated it. The professor monitored the performance of the students in the game. As a result, students and a professor validated it as motivating and a tool to assess learning.

Palavras chave: Lean manufacturing, serious games, Bloom's taxonomy, formative evaluation.

SGECHI-20403

Use of serious games applied to the electrical engineering teaching

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Abstract:

The use of serious games in education has been recognized as very beneficial because they provide joy and pleasure in the learning process, which increases involvement (including emotional) and commitment, and therefore enhances students' learning success. However, its use in teaching remains low. This is due to several factors, including the high cost and time of developing digital games and the difficulty in designing, building and planning the educational content of the game and its framing within the entire curricular unit. Given the current difficulty in attracting students to electrical engineering courses, the objective of the present study was to understand the applications of serious games in teaching electrical engineering and the characteristics of these applications. To this end, a bibliographical research was used (using the PRISMA statement and PICO model).

The search carried out on the b-on platform resulted in 19 papers in conferences. The analysis of the articles published at the conference concluded that none of the games are for teaching electrical engineering, but are developed within the scope of electrical engineering. 40 articles (search on the Google Scholar platform) were analysed, and only 7 were about games applied

to teaching in electrical engineering.

The results obtained indicate that there is very little publication on serious games applied to the teaching of electrical engineering. This may indicate that the teaching of electrical engineering remains very traditional and therefore may be unattractive for students. This can increase the risk of academic failure and dropping out.

Palavras chave: Serious games, engineering education, electrical engineering, bibliographical research, dropping out

SGECHI-33318

Clinical Practices – An Unoccultation Of "Everything Is Fine"

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Abstract:

Aim: To know nursing students' feelings and emotional expression, during clinical practice of learning.

Methods: A quantitative, descriptive, study was carried, using the part I of Emotional Competence Veiga Scale (ECVS), where was introduced, the variable "feelings and emotions related to the practice context" through the words and phrases alluding to emotional components (positive and negative) in placement context. The sample of 103 nursing students, from several geographic parts of the continental country and islands, majority female (n=82; 79.6%), studying at an institution in Northeen Portugal, completed the questionnaire and the data was subjected to statistical analysis using the SPSS®, allowing the profile of feelings and emotional expressions percieved.

Results: The majority of the sample felt fulfilled in their area of study (87.4%), that they had adequate conditions for practice/study (n=66; 64.1%) and they don´t consider changing course (n=82; 79.6%). With regard to positive feelings/emotions, we find the interest (n=88; 85.4%), followed by a feeling of accomplishment (n=56; 54.4%) and joy (n=46; 44.7%) characterize the sample in clinical practice in clinical training. However, negative feelings/emotions such as fear (n=42; 40.8%), distress (n=19; 18.4%) and anguish (n=18; 17.5%) show worrying results in this sample.

Conclusions: The results of the study show that the majority of the sample has positive feelings/emotions, taking into account the five dimensions of EC, but the negative feelings/emotions lead to the conclusion that Emotional Education is an essential tool for developing cognitive and emotional skills to reverse these behaviors.

Palavras chave: Nursing Students Feelings; Emotional Expression; Clinical Practice of Learning.

Emotional Regulation And Competence Among Nursing Students: Exploring The Relationship Between Emotions And Academic Satisfaction

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Silvana Peixoto Martins - ProChild CoLAB Against Poverty and Social Exclusion – Association, Guimarães, Portugal; Health Sciences Research Unit: Nursing (UICISA: E)

Abstract:

Background: Understanding the emotional well-being of nursing students is vital for academic success. Emotional competence, encompassing emotional awareness and regulation, plays a crucial role in their satisfaction with the academic experience.

Aim: The aim of this study was to evaluate the emotional competence of nursing students and investigate the relationship between socioemotional competence, emotional regulation, and academic satisfaction.

Methods: A descriptive and correlational study was conducted with 74 nursing students in their first year, of which 87.8% were female. The mean age was 20.6 years old (SD = 3.78). Data were collected using a sociodemographic questionnaire, the Emotional Competence Questionnaire, The Emotional Regulation Questionnaire, and The Academic Domain Satisfaction Scale for data collection. The statistical analysis was performed using IBM SPSS, involving descriptive statistics, Pearson correlations and multivariate regression analysis

Results: The results demonstrated moderate, positive, and statistically significant correlations between academic satisfaction and emotional competence dimensions. Similar correlations were found between academic satisfaction and cognitive re-evaluation. No statistically significant correlations were observed between the average of the last academic year and academic satisfaction. Furthermore, a weak, negative, and statistically significant correlation was found between age and emotional regulation. In the multivariate regression analysis, it was observed that academic satisfaction was associated with cognitive re-evaluation.

Conclusion: Understanding how students express their emotions can profoundly impact their academic careers, particularly concerning how they assess their satisfaction within the academic domain.

Emotional Competence Profile Of Nursing Students In Clinical Practice

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Abstract:

Aim: Analyze the Emotional Competence (EC) profile in nursing students in clinical practice of learning.

Methods: A quantitative, descriptive, cross-sectional and correlational study was carried out through Emotional Competence Veiga Scale (ECVS), responses, applied to a 103 nursing students sample, mostly female, and aged between 19 and 44 attending a nursing degree coursean a north-east of Portugal institution. This data collection instrument, presents the CE 5 dimensions of the construct, operationalized along 112 items: each one is an independent variable representing an attitude or behavior operationalized through a Likert Scale with 7 cells: 1 (never), 2 (rarely), 3 (infrequent), 4 (normally), 5 (frequently), 6 (very frequently) and 7 (always), with the cutoff point at 4. The data was subjected to statistical analysis in SPSS allowing the EC profile.

Results: The 5 dimensions emerge in the score of EC "normally", but self-awareness emerges with the highest score, X=4.93 (dp=0.791), followed by Empathy with X= 4.84 (dp=1.02), and Self-motivation X= 4.70 (dp=0.687), Group Emotion Management with X= 4.61 (dp=1.05) and, with the lowest value, Emotion Management with X= 4.29 (dp=0.670), respectively. The global sample shows a moderate level in EC, but with low score in Self emotions management, and without any dimension reaching frequent or very frequent.

Conclusions: The results express a students nursing sample with difficulties in managing emotions, a fact that weakens the field of communication and interaction in patient care contexts. Therefore, training in Emotional education should be considered throughout the training process of health agents.

Palavras chave: Emotional Competence Profile; Nursing Students; Clinical Practice.

ORAL COMMUNICATIONS

SGECHI-11093

Sociodemographic Of The Sample Under Study, The Dimensions Of The Emotional Competence Profile

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Diana Filipa Mendes Machado - Instituto Politécnico de Bragança

Abstract:

Aim: To analyze the relationship between the sociodemographic characteristics of nursing students, the dimensions of the Emotional Competence (EC) profile and the overall ec.

Methods: a quantitative, descriptive, cross-sectional and correlational study was developed, from the application of the Emotional Competence Veiga Scale (ECVS), to a sample of 103 nursing students at an institution in the northeast of portugal. mostly female (n=82; 79.6%), and in the marital status of single (n=96; 93.2%) and between 19 and 23 years old (n=79; 76.6%). the data were subjected to statistical analysis using the statistical package for the social sciences®.

Results: It appears that the sample is in the 4th year of the degree (n=55; 53.4%); 3rd year of degree (n= 35; 34%) and 2nd year of degree (n=13; 12.6%). The average household consists of three members, including the respondent himself. Regarding the weekly workload, it appears that only 17 individuals are working students (16.5%) and that, on average, they work 25.6 hours/week. The analysis of these sociodemographic variables and the dimensions of the EC and the global EC allows to verify that there is no correlation between them.

Conclusions: It is concluded that these variables are not decisive in the EC profile, therefore ce must be developed through specific training. it is therefore not expectable that any life context variables can be determinant, alone, in the acquisition of skills in this matter.

Palavras chave: Social Demographic Variables; Emotional Competence; Nursing Students.

SGECHI-12068

Review Quizzes VS. Gamified Review Quizzes: Some Similarities And Differences

Fátima Faya - University of Santiago de Compostela

Abstract:

The introduction of gamification in the classroom since the early 2010s (Deterding et al, 2011) has been accompanied in the last few years by a plethora of apps and websites that have made the design and implementation of interactive quizzes easier than ever.

Taking advantage of one these tools, namely Socrative, with two groups of university students taking similar courses in Education degrees: one of them at Master's level and one of them with undergraduates in their last year.

In both courses the methodology included different review activities using Socrative to check contents regularly, following a simple quiz format. A new review quiz was designed, adding gamified elements, such as badges, challenges, and team competitions, among others.

The aims of this piece of research are to check whether there are differences (i) in students' ove-

rall perception of both activities, regarding usefulness, recall, feedback, motivation, and dynamics, and (ii) among undergraduates and postgraduates' perceptions, and (iii) which gamified elements in the second activity were preferred. For this purpose, both groups were asked to fill in the same ad-hoc questionnaire at the end of the semester. Following a Likert scale, it included the same two sets of questions for both activities, plus a specific one on gamified features in the second activity. Results reflect some differences in favour of the gamified review quiz, and also some differences among the two groups. A deeper analysis can contribute to adapting certain gamified activities and strategies to specific target groups, so that positive emotional factors are emphasised.

Palavras chave: Socrative, quizz, interactive activities, motivation

SGECHI-28449

Investor's Profile and the Level of Emotional Competence – is there any relationship?

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Abstract:
Over time, the assumptions of traditional financial theories have been questioned, particularly the research area of behavioural finance led to new insights into human behaviour in financial matters. Behavioural finance explores the psychological aspects of investors' behaviour and tries to understand how limited rational behaviour is in decision making. With research on risk tolerance, which leads to the investor profiles ranking from conservative to aggressive. Therefore behavioural finance research is related to Emotional Intelligence studies, consequently to Emotional Competence studies. Emotional Competence is divided into five dimensions: Self-Awareness, Emotions Management, Self-Motivation, Empathy, and Social Emotions Management behaves at the time of the decision. This research tries to understand if there is a relationship between the investor's profile and his emotional competence.

The main objectives of this research is: (i) To know the sociodemographic characteristics of the sample; (ii) Identify the profile of the individual investor: conservative, moderate, or aggressive; (iii) Identify the level of Emotional Competence of the individual investors (iv) Identify the most relevant Emotional Competence among the sample; and finally (v) Analyse the relationship between the dimensions of Emotional Competence and the types of Investor's Profile.

The results indicate that there is a relation between the investor's profile and his/her emotional competence. It also reveals that empathy is a very important skill and the motivational variable has great value among the skills. The research shows significant results that indicate the correlation between investors' profiles and emotional intelligence. Nevertheless, there is definitely need for further research on this topic.

Palavras chave: behavioural finance, emotional competence, investor's profile, self-motivation

SGECHI-40555

Veiga Emotional Competence Scale Short Version In Italian Language: A Validation Study

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Abstract:

Aim: Adapting and validating in Italian Language the Veiga Emotional Competence Scale Short Version for nursing students.

Methods: This was a validation study to implement the instrument in a pre-post-intervention study. The validation of the instrument was performed following the EORTC Quality of Life Group and the COSMIN guidelines for the translation process. The process consisted of four phases: translation, content validation, face validation, and pilot test. Data were collected between April and June 2023.

Results: Regarding the translation process, we performed forward and backward translations. The forward translation was carried out by two native Italian speakers with excellent English language skills. The two versions were compared to create a reconciled Italian language version of the instrument adapted to the Italian context. A backward translation was performed by an English native speaker with excellent Italian language skills. After this phase, content validity was performed by 5 researcher's experts on nursing education and emotional competencies (Scale-Content Validity Index = 0.93). Regarding the face validity, we performed it with 21 student of nursing master's degree (no negative comments received, generally positive). Finally, the pilot test was conducted on 100 bachelor's nursing students of different years of course (Cronbach α = 0.84).

Conclusions: The Italian Version of the Veiga Emotional Competence Scale Short Version had a good level of validation and reliability. This instrument could be used to analyze and evaluate nursing students' emotional competencies. The validated and adapted instrument was used in the Serious Game for Nursing Students (SG4NS) project.

Palavras chave: Veiga Emotional Competence Scale, Validation study, Emotional Competence

SGECHI-41658

The Contribution Of Innovative Technology To The Development Of Students' Emotional Competence In Higher Education

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Abstract:

Emotional competence is a key factor in the educational process. Also, the utilization of Serious Games and Virtual Reality can contribute to the development of emotional competence in students of all educational levels empowering them to develop skills such as: Emotional awareness, emotional communication, emotional expression, empathy and sympathy, internal and external

emotional state, adaptive emotional management, emotional communication, and emotional self-empathy.

This article tries to focus on this point, investigating the effectiveness of the utilization of Innovative Technologies, such as Serious Games and Virtual Reality, to the development of emotional competence in students of Higher education. A typical example of this process is "Edutainment". Serious games in Higher Education are scenario-based games that achieve complex skills learning in Higher Education. In order to effectively develop serious games, a specific methodology and generic toolkit are required, so that serious games are scenario-based games.

Based on the empirical results, it can be inferred that Serious Games exert a highly favorable influence on the learning process of students in higher education. Furthermore, they provide a valuable experiential teaching component that enables students to simulate intricate environments and decision-making scenarios through the use of these tools and platforms.

Palavras chave: Serious, games, emotional, competence

SGECHI-51662

The Experience Of Playing A Game To Learn About Oneself: A Qualitative Study

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Abstract:

Aim: The aim of this study was to understand how an interactive Serious Game (SG) could help to better manage emotions during clinical placement of nursing students.

Methods: This was a qualitative descriptive study. Data were collected through 5 semi-structured interviews. A convenience sampling was used. All students had to play the SG and voluntarily decided to be interviewed. A thematic analysis was conducted following the methodology of Braun and Clarke.

Results: The students participants showed and reported a particular interest in the proposed SG. Some of them also stated that the experience of the SG could be used instead of the traditional mannequin-based simulation. They explained that the mannequin-based simulation was fake, and they knew that the mannequin is not a person. So, they thought that a SG could work better on recognising emotions and knowing how to manage them. The predominant emotions felt during the SG: were curiosity, anxiety, and fear. Curiosity was directed towards discovering the game's plot and ending, while anxiety and fear were directed towards the dark setting. The students declared themselves interested and inclined towards the use of interactive virtual reality SG to feel better prepared to face new emotions that they might encounter in the hospital reality.

Conclusions: Immersive virtual reality simulation could facilitate learning of nursing student.

Palavras chave: Serious Game, Nursing Students, simulation, qualitative study

SGECHI-57196

Developing Of Two Problem-Based Learning Scenarios To Implement Emotional Competencies

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Abstract:

Aim: Creating case-based scenarios through a Problem Based Learning (PBL) methodology to develop emotional competencies on nursing students.

Methods: PBL methodology was chosen because it put the student at the center of its learning process. Indeed, PBL promotes critical thinking, interaction, and cooperative learning. To define the case-based scenario, two expert tutors in PBL methodology and a PhD student developed two case-based scenarios and their learning objectives. The researchers focused on emotional impact of some hospital situations: creating a PBL verisimilar to real-life situations helped nursing students to empathize with the case itself.

Results: Two case-based scenarios were developed: one based on positive emotions and the second on negative emotions which could experience in hospital by nurses. Cases emphasized on emotional impact of some situations on nurses, but the attention of the cases was also on patients or care-givers emotions. The first one was based on the positive rehabilitation of a stroke patient and the positive impact on the team. The second one was based on the death of a cancer patient, the bereavement of his father and the nurse's failure to manage negative emotions.

Conclusions: The PBL methodology could be used to develop soft-skills competencies as emotional competencies. Nursing students who attended the Serious Games for Nursing Students project, performed the two PBL. The strategies based on PBL had a positive impact on nursing students who declared that they would like more PBL about the emotional aspect and not only clinical ones.

Palavras chave: Problem Based Learning, emotional competencies, nursing student, Serious Games

SGECHI-69687

Expression of Emotions in Musical Visits in a Palliative Care Unit

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Abstract:

Aim: Recognize the emotions or feelings, and emotional expressions, expressed by hospitalized patients and family members, during a musical visit experience, in a Palliative Care Unit (PCU).

Methods: based on an action research with the implementation of a musical experience, an exploratory, phenomenological study was developed, through the qualitative analysis of discursive components, with a sample of 163 elements – patients and family members - in a UCP, in a socio-regional economic contexto in the North of Portugal.

Results: Emotional responses were obtained, associated with perceptions and physiological responses, such as changes in mood and affection. Of the overall sample, 75.4% (n=92) presented positive emotional expressions, 22.1% (n=27) a neutral attribution, and only three negative ones. Among the emotions identified, 71.4% (n=20) of respondents refer to "Joy", and 17.9% (n=5) refer to "Pleasure", but, interestingly, there are 7.1% (n=2) who referred to "Pain" and 3.6% (n=1) "Sadness".

Conclusions: The results present musical visits as a strategy with a therapeutic effect, in maintaining the well-being of users in UCP, whether in terms of the impact of musical sound on patients and families, or in terms of the relationships it triggers, in addition to the promoting socio-emotional health in general, and the inter-institutional synergies they develop.

Palavras chave: Palliative Care; Musical Visits; Expression of Emotions

SGECHI-70848

Perfil dos Empresários do Distrito de Bragança e Competência Emocional – estudo correlacional

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Abstract:

Objective: understand the relationship between the profile of the entrepreneur and the level of Emotional Competence. Thus, the specific objectives are: (i) to know the sociodemographic characterization of the sample, (ii) to know the Profile of the Entrepreneur of the sample; (iii) know the level of Emotional Competence of entrepreneurs; (iv) analyze the relationship between the level of Emotional Competence and the Profile as an Entrepreneur and; (v) identify the level of influence of each of the five dimensions of Emotional Competence on the profile of entrepreneurs.

Methodology: quantitative and correlational study, developed from the application of a questionnaire composed of three parts: (i) Entrepreneur Profile; (ii) Veiga Emotional Competence Scale – EVCEr33 and; (iii) Information about the Individual. This data collection instrument was applied to a sample of 53 entrepreneurs from the North of mainland Portugal.

Results: of the 53 participants, 22 are female and 31 are male, as well as the fact that the ages predominant were between 31 and 40 years old, between 41 and 50 years old and between 51 and 60 years old. Regarding the Businessman Profile, the Dynamic Profile and the Aggressive Profile are predominant. Regarding the Level of Emotional Competence, it is worth highlighting the Moderate Level and the High Level. Checked that:: (i) Total Emotional Competence presented a positive and significant correlation with the dimensions of self-awareness, emotion management, self-motivation and with empathy; (ii) a positive correlation between the "Dynamic Profile" and the "Moderate Level of Emotional Competence" and between the "Aggressive Profile" and the "High Level of Emotional Competence"; (iii) association between self-awareness, em-

pathy, group emotion management and Total Emotional Competence with the profile of the entrepreneur in the sample.

Conclusion: by recognizing the relationship between Emotional Competence and the typology of business action/investment, the pertinence of training in Emotional Education. However, there is a need for more studies on this topic, with other samples in other geographic areas.

Silva, A., Monte, A. P. & Veiga-Branco, M.A.R. (2023). Perfil dos Empresários do Distrito de Bragança e Competência Emocional – estudo correlacional [Dissertação de Mestrado, Escola Superior de Tecnologia e Gestão de Bragança, Instituto Politécnico de Bragança].

Palavras chave: -

SGECHI-71476

Developing Emotional Competence for Nursing Students through a VR Serious Game

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Abstract:

Emotional Intelligence (EI), is defined as the capacity to discern, comprehend, and regulate one's own as well as others' emotional states. It constitutes a pivotal aptitude for nursing professionals, bearing a profound impact on effective patient care provision and collaborative teamwork. Nevertheless, the conventional paradigms of imparting EI acumen are frequently encumbered by time constraints, resource scarcities, and ethical quandaries that curtail their optimal execution. In response, this study proposes "Serious Games – Developing Emotional Competence for Nursing Students" (SG4NS), an innovative pedagogical approach that harnesses the potential of Virtual Reality (VR) technology and serious gaming methodologies to revolutionise EI education. Within the format of an immersive 'escape room' game, SG4NS orchestrates a virtual environment wherein participants engage with diverse objects to solve puzzles and unravel the narrative mystery they are presented with. Throughout the course of these interactions, the game elicits various responses in the participant, such as repulsion, exasperation, fear, and elation. This provides a platform for the subsequent discussion of diverse emotional states, facilitated by an instructor. Conceived as an integral part of a more comprehensive EI curriculum, 30-minute sessions of SG4NS play-throughs are strategically complemented by didactic expositions and reflective debriefing sessions, forming a multifaceted learning experience. By offering an immersive and emotionally engaging educational experience, SG4NS diversifies the landscape of EI education strategies, and seeks to improve the pedagogical outcomes through increased student engagement. This paper presents the paradigms upon which the game was designed, and addresses strengths and weaknesses of SG4NS as a VR educational game. Recommendations for future initiatives are explored.

Palavras chave: Emotional Intelligence, Nursing Pedagogy, Serious Games, Virtual Reality, Educational Games

SGECHI-75130

The AppyBrain app and its uses

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Abstract:
Many technological proposals have been designed to transform education and classrooms. As society's digitization and the digitalization of educational spaces accelerate the idea that this digitalization should contribute to school transformation and investment in digital educational technologies, from which innovations and results are expected, has become more prominent. These changes are occurring (and facing resistance) in various contexts, in the day-to-day life of classrooms. It is essential to understand the uses, appropriations, and transformations that different technologies enable, both in terms of the pedagogical relationship and the motivation and academic performance of students.

In this regard, we have developed an application, "AppyBrain," a gamified digital educational tool for the subject of Mathematics, designed for 7th-grade students. It has been distributed to two public schools in the Northern region of Portugal, made available to all students in that grade (n=401). Its usage has been monitored throughout the academic year, involving both students and teachers. Three main types of usage have been documented: daily use, use geared towards exam preparation, and competitive use in intra and inter-class tournaments. These usages and appropriations, and their outcomes, will be explored and discussed based on data collected throughout the school year through a questionnaire survey (at the beginning and end of the academic year), focused group discussions with students (at the beginning and end of the academic year), teachers interviews, as well as data collected from the application itself.

Palavras chave: Digital Pedagogy, Gamification, Motivation

SGECHI-79726

Results Of A Public Event On The Emotional Intelligence: An Online Survey

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Abstract:
Aim: Evaluating the importance of a public event on the emotional intelligence.
Methods: A self-report online survey was conducted after the public event. A total of 73 partici-

pants attended the event. Demographic data regarding gender and age was collected. Through a Likert scale at 10 levels (1: no knowledge; 10: highest knowledge) we asked to the participants their knowledge of EI before and after the event. At the end of the survey an open-end question asked to the participants to describe their experience. A descriptive analysis was conducted on quantitative data with the software Jamovi (version 2.3.23). A thematic analysis based on Braun and Clarke methodology was conducted on qualitative data obtained from an open-ended question.

Results: A total of 19 participants completed the survey. In majority were female (84%, n=16), and the mean age was 33.32 (SD: 10.67) years. Eighty-four per cent of them were students. A positive correlation was present between the knowledge of EI before and after the event (Rp=0.600, p=0.007). Three main themes emerged from the data: curiosity (1), interest and enthusiasm (2), and restlessness (3).

Conclusions: Involving people in research studies can implement knowledge on relevant issues. Sharing knowledge inherent in emotional intelligence increases curiosity about the topic and implements people's knowledge.

Palavras chave: emotional intelligence, online survey, public event, thematic analysis

The Experience Of Nursing Students In A Virtual Reality Game: A Qualitative Study

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Abstract:

Aim: Analyzing the experiences of nursing students concerning a virtual reality videogame (VR) of Serious Game for Nursing Student project.

Methods: This was a qualitative descriptive study. Data were collected through 12 non-structured interviews in July 2023. A purposive sampling was used: all the students were involved in the project and played the VR. Thematic analysis based on the methodology of Braun and Clarke was conducted.

Results: Five themes emerged: "keyword: positive" (1), "several emotions" (2), "anxiety" (3), "goal: finish the game" (4), and "difficulties encountered" (5). VR was a positive experience for students especially if connected with the course because helped to reflect on the emotions felt playing VR (1). They felt (2) enthusiasm about the novelty, curiosity for the end of the VR, fun for playing, and a sense of anxiety. The anxiety (3) had more causes: the dark setting of the VR, their impossibility of helping the characters, or because students expected something to happen that never happened. In some cases, students felt anxiety because they thought not to be able to

finish the VR. To reduce anxiety, they used some strategies (4), such as: focus on the goal or puzzles, or talking to people outside the VR. Some difficulties were encountered (5): taking objects, walking in the space, identifying what to do, and affected by some symptoms as headache, nausea, and dizziness. In some cases, the symptoms caused a pause from VR.

Conclusions: VR could prepare students to face emotions which they can feel in hospitals.

Palavras chave: NURSING STUDENTS, VIRTUAL REALITY GAME, QUALITATIVE STUDY

SGECHI-84224

Relationship Between The Dimensions Of The Emotional Competence Profile And Emotional Competence

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Abstract:

Aim: Recognize the relationships between Emotional Competence (EC) Profile and dimensions of the construct.

Methods: A correlational study of the Emotional Competence Veiga Scale (ECVS) data, fom a 103 nursing students sample, the majority single (93.2%) and a small part married (2.9%), in an north-east of Portugal institution. The CE 5 dimensions of the construct, are operationalized along 112 items: each one operationalized through a Likert Scale with 7 cells, from 1 (never) to 7 (always), with the cutoff point at 4. The statistical analysis of data in SPSS allowing the EC global profile, to be drawn up using the five dimensions of the construct. and each dimension profile too.

Results: The correlational analysis ® between the dimensions of EC and overall EC in the sample was determined the following: Firstly: Global EC shows a high and statistically significant correlation with Self-Awareness (SW) (r=0.755; p=0.000), emotion management (EM) (r=0.835; p=0.000), Self-Motivation (SM) (r=0.714; p=0.000), Empathy (E) (r=0.709; p=0.000) and Group Emotion Management (GEM) (r=0.725; p=0.000).

Secondarily: SW shows a significant correlation with EM (r=0.586; p=0.00, 0), SM (r=0.589; p=0.000) and GEM (r=0.325; p=0.001). EM shows a statistically significant moderate relationship with SM (r=0.579; p=0.000), Empathy (r=0.492; p=0.000) and GEM (r=0.492; p=0.000). SM is only significantly related to Empathy (r=0.277; p=0.005). Finally, Empathy correlates significantly with MEG (0.739; p=0.000), and this relationship is the strongest of all the correlations between the dimensions.

Conclusions: All the dimensions correlate statistically with overall CE, but not all the dimensions correlate significantly with each other.

Palavras chave: Emotional Competence Profile; Emotional Competence Dimensions; Statistical Relationship.

SERIOUS GAMES