

Analysis of knowledge, perceptions and self-confidence regarding tobacco control among graduating nursing students in Portugal

Vera Afreixo¹, Marília Rua², Sofia Belo Ravara³, Mónica Condinho⁴, Carlos Albuquerque⁵, Pedro Aguiar⁶, Jorge Bonito⁷

¹ PhD, Department of Mathematics, University of Aveiro, Portugal. Email: vera@ua.pt

² PhD, Higher School of Health of University of Aveiro, Portugal. Email: mrua@ua.pt

³ PhD, Faculty of Health Sciences, University of Beira Interior, Portugal. Email: sbravara@fcsaude.ubi.pt

⁴ PhD, Faculty of Sciences and Technology of University of Algarve, Portugal. Email: monica.condinho@ac-ft.pt

⁵ PhD, Higher School of Health of Polytechnic Institute of Viseu, Portugal. Email: cmalbuquerque@gmail.com

⁶ PhD, National School of Public Health, New University of Lisbon, Portugal. Email: pedroaguiar@ensp.unl.pt

⁷ PhD, School of Social Sciences of University of Evora, Portugal. Email: jbonito@uevora.pt.

Corresponding author: Jorge Bonito. Email: jbonito@uevora.pt.

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Abstract

Introduction: In the 20th century, the tobacco epidemic killed around 100 million people worldwide, and in the present century can be the cause of billions of deaths. WHO advocates that the solution to this global epidemic, which is a risk factor for six of the eight leading causes of death in the world, is within our reach. The Government of Portugal signed the Framework Convention of the World Health Organization for Tobacco Control on January 9th, 2004, approving it and transposing it into national law on November 8th, 2005. The National Health Plan 2012-2016 considered smoking a priority health problem, and in 2012 it was created the National Program for Smoking Prevention and Control, a priority health program developed by the Director General of Health (DGS). With reference to this framework, the DGS launched a public tender for the study of evaluation of the acquisition of professional skills in the field of prevention and treatment of smoking during the nursing degree's final year. This study aims to explore attitudes, knowledge, perceptions of curricula contents and confidence to intervene in tobacco control among graduating nursing students in Portugal.

Methods: The research design is mixed in nature, observational, transversal and analytical. We opted for a no-probabilistic sampling. In 2016, a national-wide survey was carried out using a multiple-dimension questionnaire (administered online and in the classroom) applied to 2589 participants, obtaining 1100 validated answers (42.5%). For the confidence interval of 95%, the error sample is 2.24%. Likert summative scales were chosen. The questionnaire prepared for this study is composed of 110 items. The questionnaire has 8 dimensions: I - Sociodemographic information; II - Prevalence of

consumption of tobacco products; III - Exposure to environmental tobacco smoke; IV - Attitudes and knowledge; V - Perceptions of theoretical training received; VI - Perceptions of practical training received; VII - Perceived skills acquisition; VIII - Perceptions on pedagogical methods. Piloting and analysis of the determined Cronbach's alpha values allows considering that there is internal reliability in the pilot questionnaire. The questionnaire received a favorable opinion from the Ethics Committee at the Higher School of Health, Polytechnic Institute of Viseu. An Informed Consent Statement has been prepared. The analysis of the information resorted to a set of not parametric tests. Coefficients of Pearson (in numerical variables) and Spearman (in ordinal variables) were calculated. In addition, the Mann-Whitney and the Kruskal-Wallis Test (to test the homogeneity of two ordinal samples) and the Chi-square test (to evaluate quantitatively the relationship between the observed and the distribution expected for the phenomenon) were used.

Results: Of the participants, 84.4% were females; median age was 22 years old. Most respondents (55.9%) state that they have smoked or consumed tobacco products. This experimentation has greater expression in males (64.3%) ($p < 0.009$). Among consumers (46.8%), most (19.9%) started smoking regularly at the age of 18 years old. There is a 1.7% increase in the prevalence of smoking in men compared to that of women. Among regular smokers ($N = 272$), 60.3% reported that they had tried to stop smoking, mostly (45.9%) only once, followed by the group that tried twice (27.7%). Among smokers, about 62.6% of female students and 69.4% of male students smoke daily, with the majority (75.8%) consuming up to 10 cigarettes per day. About 26.8% of respondents were exposed to secondhand smoke (SHS) every day. Significant associations were found between smoking habits and age when smoking for the first time ($p < 0.003$), age of regular smoking ($p < 0.001$), exposure to SHS at home and away from home ($p < 0.001$). Most respondents agree with the attitudes and knowledge presented in the questionnaire regarding the consumption of tobacco products. It should be noted that 23.6% of the respondents considered that the theoretical training components presented were not addressed during their four-year academic training. Most students reported good knowledge of tobacco hazards, positive attitudes regarding their role in supporting cessation and their need for training. However, a significant part disagreed that they should be role models as non-smokers; denying that curricula impacts in their tobacco attitudes. While most students reported receiving good theoretical training, especially in tobacco hazards, a significant part considered their training poor (45.0%) in behavioral changes and brief cessation skills while 31.9% reported low self-competence to intervene. From a 1-10 scale, mean score of self-confidence to intervene in cessation was 4.8. Self-confidence was associated with tobacco use, SHE, attitudes / knowledge, perception of theoretical training, and, above all, clinical skills and curricula extension (mean 2.4 hours). Students considered their training insufficient and provided clear indications about curricula gaps.

Conclusions: The competence to intervene varies in the direct ratio of the number of hours of academic formation of nursing students in tobacco prevention (number of hours of

training: $\beta = 0.228$; $p < 0.001$) and, likewise, in the direct ratio of the perceptions evidenced by the students on the practical training received (perceptions of practical training received: $\beta = 0.109$, $p < 0.001$). We didn't find any significant statistical differences relatively to the effects of the variable «sex» over the variable «having ever smoked or consumed tobacco products». This finding allows us to conclude that the greater the number of hours devoted to the prevention and treatment of smoking, the most favorable are the perceptions of Nursing students about the practical training received during the course and the greater will be the confidence in personal skills to intervene in this field. There is room for improvement in the undergraduate nursing education in tobacco control. A nation-wide assessment involving students is a crucial step to engage decision makers and stress the need for curriculum planning and organizational change.

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