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Article

Protocol of a training course for Healthcare Professions Students: the SISMA project

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Abstract. *Background:* Tobacco use is responsible for the death of about six million people and it is still the leading cause of preventable diseases according to WHO. Students Intervention on Smoking Attitudes (SISMA) will be a pilot intervention about tobacco, its health consequences, and training of tobacco cessation techniques delivered to healthcare professions students. *Methods:* the intervention will be an optional online course developed over 5 days about tobacco smoking delivered to course of healthcare professions students. Before attending the course knowledge, attitudes, and smoking behavior will be investigated through the Italian validated version of Global Health Professions Student Survey (GHPSS) questionnaire. At the end of the course students will fill out a questionnaire about their satisfaction and evaluation of the course. For the follow up, after 3-4 months smoking attitude and behavior, lifestyle habits, variation about stress and anxiety will be investigated through a telephone interview to students involved. *Conclusions*: Healthcare professions students need an adequate training about tobacco cessation technique in the core curriculum during university. The course should be delivered for the health of students, moreover, they are fundamental for both care and prevention, and will represent role model for their patients.

Keywords: Healthcare profession students, training, smoking cessation, health education, online course.

Introduction

According to WHO estimation, tobacco use is responsible for the death of about six million people across the world each year, many of which occur prematurely (1); tobacco is still the leading cause of preventable diseases (2).

In Italy, there are 11.5 million smokers (22% of the population), men 27.3% men and 17.2% women, according to Doxa-Iss survey (3). University students are at risk of smoking initiation (4) or to continue and increase the consumption of tobacco products (5).

Surprisingly, tobacco has high percentage of use among biomedical students: La Torre et al. found almost 30% of smokers among medical students (6). Comparing the situation with students of other nationalities, in Latin American Tamí-Maury et al. describes a percentage of current smokers among dental students of 33% and 45% were exposed to secondhand smoke. Moreover, the study found that smoking status was significantly associated with sex, higher among males. (7) Jradi H. et al. reported 26.3% of current smokers among medical students in six medical school of Lebanon and no difference by sex and socioeconomic status were revealed (8) 3.4-13.4% in Indian healthcare schools. (9) Comparing healthcare profession to the general population, smoking rates are lower in the United States, Great Britain, and Brazil, but higher in Hungary, Italy, Japan, Saudi Arabia, and Spain (10).

These percentages from all over the world are far from what can be considered acceptable, considering healthcare professions, including students, are expected to be aware about health consequences of tobacco.

Moreover, a minority of students received a formal training in treatment approaches for tobacco dependence. (7) (8)

High rate of smoking and limited training on cessation methods may comprise the ability of physicians to help patients who smoke. (11) (12) Primary care professionals, both physicians and nurses face directly patients every day, therefore it is essential that primary care providers are nonsmokers and are trained to give advices (10); several studies demonstrated the efficacy of smoking cessation interventions and the role of healthcare professions to help patient who smoke (13).

Students Intervention on Smoking Attitudes (SISMA) will be a pilot intervention about tobacco, its health consequences, and training of tobacco cessation techniques delivered to healthcare professions students.

Objective

SISMA project will have three main objectives:

1. To increase knowledge on the damage caused by smoking and the change attitude to healthy lifestyles, to reduce the number of smokers, and to avoid new smokers;
2. To examine knowledge, attitude and smoking behaviors among healthcare profession students according to the GHPSS (Global Health Profession Students Survey) approach;
3. To explore differences between smokers and non-smokers and between males and females.

Methods

Study design, setting and participants

The SISMA project will be an experimental intervention about tobacco smoking delivered to health professions. Students involved will be nurses, dental technicians, medical radiology technicians, prevention technicians of the Faculty of Pharmacy and Medicine of Sapienza University of Rome, for all three years of their courses. Resident health care profession representatives will be informed and students will receive informed consent to join the survey.

The intervention

The intervention will be an optional online course developed on the Moodle 2 platform. The course will be delivered over 5 days: the first four days lecture of 60 minutes each, instead, the last day a short debate among experts about topics of the course.

The topics of four lessons will be:

1. Epidemiology of smoking-related diseases, in particular chronic obstructive pulmonary disease (COPD), lung tumor and cardiovascular diseases;
2. Motivations to start smoking. Effects of nicotine. Electronic cigarettes;
3. Nicotine addiction and motivation to quit. Smoking-related diseases;
4. Ask Advise Refer. Pharmacological treatment and not of nicotine addiction.

The online debate will involve oncologist, pulmonologist, cardiologist, hygienist and pharmacologist about severity of the damage to health caused by tobacco and other problems that smoking cause to modern society.

The course will be held during the end of academic course in May. The material will be proposed in digital format through PowerPoint or multimedia presentations. The student will have specific times to access the individual modules, and complete the activity as each module/lesson will be available for 24 hours and will be preparatory to the next one.

Pre-course assessment

Before attending the course knowledge, attitudes, and smoking behavior of health professional students will be investigated through the Global Health Professions Student Survey (GHPSS) questionnaire, carried out by the Tobacco Free Initiative (TFI), World Health Organization (WHO) and the Office on Smoking and Health (OSH), Centers for Disease Control and Prevention (CDC).

The Italian validated version of GHPSS will be used (11).

The final form of the Italian questionnaire is composed of 44 questions, distributed in six sections on the following:

1. Prevalence of tobacco use (Questions 1–9);
2. Exposure to environmental tobacco smoke (i.e., time spent with people who smoke in places other than home) (Questions 10–13);
3. Attitudes (i.e., opinions about no-smoking policies and laws, and about the role of healthcare professionals in smoking cessation) (Questions 14–24);
4. Behavior/cessation (i.e., smoking habit, willingness to stop, and opinions about healthcare professionals who used to smoke) (Questions 25–32);
5. Curriculum/training (i.e., formal training in smoking cessation techniques on the medical curriculum and knowledge about methods (pharmacological or counseling techniques) for helping smokers to quit) (Questions 33–41—in the original version previous adding the two new therapies. So in the new version the 5 section resulted form 33–41);
6. Demographics (age, gender, and course year) (Questions 42–44).

Post-course evaluation

At the end students will fill out a questionnaire about their satisfaction and evaluation of the course. A final learning evaluation will be also administered.

Students will be asked about what they consider to be points of strength and weakness of the course.

The following questions will be proposed as point of strength:

1. Contents of the course
2. Clear exposition
3. Importance give to danger caused by tobacco
4. Motivation and involvement in the course
5. Organizational structure of the course
6. Course ad practical experience
7. Online course
8. Reporting of the smoke-free centers
9. Methods to quit smoking

Considering point of weakness students will be able to choose among the followings:

1. Lack of material
2. Miss of live class
3. Online course
4. Repeated contents
5. Timing
6. Length
7. The questionnaire

Follow-up: post-course assessment

After 3-4 months from the end of the course students participating in the project will be contacted through a telephone interview and will complete a questionnaire about some questions regarding smoking attitude and behavior, their lifestyle habits, presence or stressor variations.

In particular, following data will be collected:

1. Smoking status and change in smoking status
2. Lifestyle changes (work, physical activity, nutrition, family, removal)
3. Stress and anxiety
4. Alcohol consumption

Outcome measure

The outcome variable concerning smoking status will be 'to be a current smoker' (Do you smoke?) and (How many days did you smoke in the last month?).

Statistical analysis

Data will be analyzed with the software SPSS 25.0 for Windows. A descriptive analysis of the sociodemographic characteristics of the study participants will be carried out, with the evaluation of association between knowledge, attitudes, smoking behavior and gender, smoking status using the Chi square test for qualitative variables. The statistical significance was set at $p < 0,05$.

The McNemar test will be used to evaluate the variation in smoking behavior after attending the course. The differences between groups with respect to the quantitative variables will be

analyzed using the Mann-Whitney test (for two groups) and Kruskal-Wallis (for more than two groups).

Logistic regression models to evaluate the factors associated with the dichotomous variable "fitness" (Yes vs No), the results of which will be presented in the form of OR (95% Confidence Interval, 95% CI). The significance level will be set at $P < 0.05$.

Funding

No funding will be received to perform the study.

Conflict of interest

None

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