Tobacco related knowledge among students in medical schools before and after a lecture on nicotine dependence and treatment

M.C. Grassi[1], M. Baraldo[2], C. Chiamulera[3], F. Culasso[4], A.K. Ferketich[5], T. Raupach[6,7], C. Patrono[8], P. Nencini[1]

[1] Dept of Physiology and Pharmacology, School of Medicine, Sapienza University of Rome, Italy
[2] Dept of Experimental and Clinical Medicine, School of Medicine, University of Udine, Italy
[3] Dept of Public Health and Community Medicine, Sect. Pharmacology, University of Verona, Italy
[4] Dept of Public Health and Infectious Diseases, School of Medicine, Sapienza University of Rome, Italy
[5] Division of Epidemiology, The Ohio State University College of Public Health, Columbus, Ohio
[6] Dept of Cardiology and Pneumology, University Hospital Göttingen, Germany
[7] Dept of Epidemiology and Public Health, Health-Behaviour Research Centre, University College, London, UK
[8] Dept of Pharmacology, School of Medicine, Catholic University, Rome, Italy

Tobacco smoking is the leading cause of preventable death in the developed countries (Jha et al. 2013; Thun et al.2013). Medical advice and assistance help smokers to quit but little attention has been paid to tobacco dependence in the curricula of medical schools. Administering a questionnaire addressing different aspects of tobacco dependence, we recently showed that fourth year Italian medical students have limited knowledge about the issue (Grassi et al. 2012).

Here we assessed: i) consistency of our previous results, by administering the questionnaire to a new group of medical students of the fourth year; ii) improvement of student knowledge on tobacco dependence one year following an educational intervention; iii) whether non medical students of the same age have different perceptions and knowledge about smoking compared to medical students.

The study was conducted on 859 Medical School students (62% female), on two groups of 122 (57% female) and 107 (72% female) students attending architecture and law schools, respectively. Students were asked to complete a 60-item questionnaire whereby two scores were computed: 'Score 1' that included epidemiology of smoking and related risks, as well as benefits of stop smoking; 'Score 2' that included tobacco dependence treatments and their effectiveness. A score < 60 indicated insufficient knowledge. We classified medical students in: Group 1 (*n=439),* fourth year students (year 2010) and Group 2 (*n=203)* fourth year students (year 2011); Group 3, fifth year students (year 2011), was divided in two subgroups: Group 3A (*n=113),* students that neither attended to the lecture of the previous year nor filled the questionnaire and Group 3B (*n=104),* students that already filled the questionnaire and attended to the lecture of the previous year; Group 4 (*n=122),* and Group 5 (*n=107)* included fourth year architecture and law students, respectively.

Self-reported smoking prevalence was higher among architecture (26.2%) and law (26.2%) students compared to medical students (16.1%). Overall, 67.4% of students reported they wanted to stop smoking with no significant differences between groups. Medical students had limited knowledge of the epidemiology of smoking, attributable morbidity and mortality, and the benefits of stop smoking, since 70% of Groups 1, 2, 3A had a total score 1 < 60 with no differences between groups (mean 49.1±11.5). Knowledge of clinical guidelines, perceived competence in counselling and treating smokers was also insufficient, as 75% of students of the same groups achieved a total score 2 < 60 (mean 48.4±10.8). Students in Group 3B, who had previously been exposed to an educational intervention, improved their knowledge since the percentage of subjects who scored < 60 dropped from 70% of the previous year to the present 55% (score *1*: 55.0±12.7 and score 2: 55.4±13.7, $p<0.01$ vs. Gr 1, 2, 3A) with significant differences by gender and smoking status. Almost 90% of architecture and law students scored less than 60 (score 1: 40.5±11.4, score 2: 42.4±11.0).

Our data confirm that Italian medical students know more about tobacco dependence and its treatment than law and architecture students, but knowledge is still inadequate. However, knowledge may be substantially improved by appropriate educational interventions.

Jha et al. (2013). *New Engl J Med.* 368, 341-50.
Thun et al. (2013). *New Engl J Med.* 368, 351-64.
Grassi et al. (2012). *Nicotine Tob Res.* 14, 1065-72.