Smoking control at the School of Public Health, Universidade de São Paulo

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Summary

Introduction: schools of Public Health, by their nature, have increased responsibility in the development of health promotion programs, focusing on tobacco control. The participation of groups of health professionals in educational actions helps to convey information about smoking to the population.
Objective: to evaluate the prevalence of smoking and the effectiveness of control programs among the teaching and non-teaching staff of the School of Public Health of the Universidade de São Paulo (FSP-USP). They were monitored by surveys conducted from 1980 to 2013.
Methods: application of a questionnaire, containing the variables: identity, gender, smoking habit (are you a smoker, former smoker or non-smoker), which was answered in a private interview. Data analysis was done using absolute and relative frequencies.
Results: the prevalence of smokers had a reduction from 50.3%, in 1980, to 13.4%, in 2013; among males, prevalence fell from 56.9% to 12.8%, and among females from 45.9% to 13.7%. As for the teaching staff, there was a fall from 10.2% (2006) to 5.9% (2013); the decrease among non-teaching employees was from 21.6% to 16.3%.
Conclusion: knowledge by health professionals of the harms caused by tobacco smoking contributed to their participation in anti-smoking programs, and led to a decline in the number of smokers at FSP-USP. The creation of 100% tobacco-free environments and programs to treat smokers who want to cease their addiction should be encouraged.

Keywords: smoking, prevention, prevalence.

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Introduction

Smoking is regarded as the greatest preventable single cause of illness and early death, accounting for 80% of the cases of lung cancer, 85% of chronic obstructive pulmonary disease (COPD), 25% of coronary ischemic disease, 72% of Alzheimer's disease, and 30% of extrapulmonary cancer.[1,2]

Prevalence of smokers in the world is 1.3 billion (1/3 of the global population), including people aged 15 years or older.[3] Of these, 70% live in developing countries, and 250 million (19.2%) are women. In Brazil, the estimate is 24.6 million smokers (1/8 or approximately 11.3% of the total population), including 14.4% of the men and 8.6% of the women.[4]

The annual consumption of cigarettes in the world is 7.3 trillion (20 billion/day), and 110 billion in Brazil, plus 40 billion derived from cross-border smuggling.[2]

The annual mortality related to tobacco in the world totals 6 million (14.6% of all causes of death), with 33 deaths per hour and one death for every 10 adults, of which 70% live in developing countries.[3] In Brazil, 178 to 200 thousand deaths per year (19% of all causes of death) are related to smoking, and 3000 are passive smokers.[2]

The forecast for 2030 is that 8 million deaths will occur worldwide, 80% in developing countries. If the trend continues, 110 million deaths would have occurred in the 20th century and up to one billion will occur in the 21st century.[1]

Since smoking is a pandemic and therefore a public health problem, it demonstrably affects the health of smokers, as well as those who spend time with them in environments polluted by tobacco smoke.

Schools of Public Health, by their very nature, have great responsibility in the development of health promotion programs,[5] especially smoking control.

Different groups of health professionals can participate and convey information about smoking to the population. This can be an influence to decrease the number of smokers and those who tend to get into the vice of smoking, as well as to intervene in smoking cessation.

Nevertheless, the credibility of these programs also depends on the example given by these professionals, i.e., not smoking.

The School of Public Health of the Universidade de São Paulo (FSP-USP) has been concerned with the control of smoking since 1975, and attempted to structure a program materialized decades later.[6] The first concrete measure was taken in 1988, when cigarette smoking was banned from classrooms.

In 1998, in a political decision of the faculty's director, a commission that would be responsible for the anti-smoking program was created and actually formed a year later.[6]

The program implemented in 1999 followed the guidelines of the Smoking Control Program of the Brazilian Ministry of Health (INCSA/CONPREV). The program's main goals are to increase awareness in the community that includes students, teaching and non-teaching staff of the importance of the smoking epidemic, sensitizing smokers not to smoke in the workplace, as well as to quit smoking, encourage all administrative, teaching and scientific meetings to be free of environmental pollution and, also, provide smoking cessation treatment to all participants interested in quitting.

The strategy adopted followed a series of steps: a. Awareness (creation of an internal committee, involvement of leaders and key groups); b. Information system (quantitative assessment – smoking prevalence surveys – qualitative assessment); c. Support with educational activities (ordinance restricting the use of tobacco, campaign disclosure, training security guards and receptionists); d. Intervention in the physical structure (delimitation of areas for smoking – only outdoor areas, signaling – no smoking signs – removing ashtrays and promotional materials (advertising on furniture) and ban the sale of cigarettes and similar products in the physical areas of the cafeteria and restaurant; e. Educational intervention (promoting the implementation of program steps, celebrating special dates – World No Tobacco Day – May 31, National Day Against Tobacco – August 29, publishing studies (journals such as revista *Saúde e Sociedade*, *Revista das Sociedades Brasileiras de Câncer*, *Revista Brasileira de Crescimento e Desenvolvimento Humano* and production of academic studies), distributing educational material, debates, lectures and seminars, keeping the subject in evidence, media coverage of the FSP-USP, requesting visitors not to smoke during their stay in the building of FSP-USP ("Welcome" card), implementing a Tobacco Treatment Center at the Geraldo de Paula Souza Health & Teaching Center.

The Smoking Prevention and Control Commission was consolidated due to the support of successive directors of the Faculty.

In order to know the profile of FSP-USP with respect to smoking since 1980, surveys were conducted to measure the prevalence of smokers among teaching and non-teaching staff.

Objective

Presentation and analysis of the various surveys conducted from 1980 to 2013 in order to evaluate the behavior of smoking prevalence among teaching and non-teaching staff of the School of Public Health/USP during this period and the effectiveness of the Tobacco Control Program.

Methods

In order to know the profile of FSP-USP with respect to smoking and to prepare the implementation of a control program, a first survey on the prevalence of smoking among teaching and non-teaching staff, and students of specialization and graduate courses was held in 1980.[7] At the inaugural class of the specialization course in Public Health on smoking, a questionnaire was applied with the following variables: gender, age, occupation, smoking addiction (categorized as smokers, former smokers or non-smokers), age at start of smoking habit and number of cigarettes smoked per day, which was answered in individual interviews.

The study population consisted of 181 people; of these, 72 (39.8%) were male and 109 (60.2%) were female.

A second survey on the prevalence of smoking was conducted in 1995, using an identical questionnaire, with the same variables.[7]

The number of subjects was 128 people, of which 38 (29.7%) were male and 90 (70.3%) female.

Data analysis was performed, based on absolute and relative frequencies, and chi-square test, in both surveys.

In 2006 and 2008, the third and fourth surveys were conducted to assess the prevalence of smoking among teaching and non-teaching staff.[8] The methodology was based on individual interviews with identification of gender and a single question: "Are you a smoker, former smoker or non-smoker?" Data analysis was performed supported by absolute and relative frequencies.

The survey's study population in 2006 consisted of 353 people, of which 135 (38.2%) were male and 218 (61.8%) were female. The teaching staff included 98 (27.8%) individuals, of whom 44 (44.9%) were male and 54 (55.1%) female. Non-teaching staff comprised 255 (72, 2%) individuals, of which 91 (35.7%) were male and 164 (64.3%) female.

In the 2008 survey, the population totaled 348, with 132 (37.9%) males and 216 (62.1%) females. 102 (29.3%) were teaching staff, with 44 (43.1%) male and 58 (56.9%) female respondents. Non-teaching staff included 246 (70.7%) individuals, with 88 (35.8%) male and 158 (64.2%) female respondents.

In 2013 a fifth survey[9] was conducted, including 352 respondents, of which 133 (37.8%) were male and 219 (62.2%) female. Teaching staff totaled 101 (28.7%), with 43 (42.6%) male and 58 (57.4%) female respondents. Non-teaching staff included 251 (71.3%) individuals, with 90 (35.9%) male and 161 (64.1%) female respondents. Methodology and data analysis were identical to the previous two surveys.

Results

The distribution of students and teaching and non-teaching staff, as a whole, was the following in the survey of 1980: smokers (S): 91 (50.3%), non-smokers (NS): 64 (35.3%) and former smokers (FS: 26 (14.4%). Among males, S: 41 (56.9%), NS: 19 (26.4%) and FS: 14 (16.7%), and among females, S: 50 (45.9), NS: 45 (41.3%) and FS: 14 (12.8%).

In the 1995 survey, considering all students, teaching and non-teaching staff: S: 30 (23.4%), NS: 70 (54.7%) and FS: 28 (21.9%). Among males, S: 10 (26.3%), NS: 17 (44.8%) and FS: 11 (28.9%), and among females, S: 20 (22.2), NS: 53 (58.9%) and FS: 17 (18.9%).

There were significant differences in males for the age group 30-39 years and in females for age groups 20-29 years and 30-39 years. In 1980, there was a higher prevalence of smokers among males in the following professions: physicians and dentists (43.8%), engineers, veterinarians and lawyers (61.5%), and educators (33.3%); among the non-teaching staff, 64.3% were in the group of plumbers, carpenters, painters, graphic designers, drivers, equipment technicians, attendants and copy boys; 50.0% were administrative workers, clerks, secretaries, accounting officers, librarians and statisticians. For females, the highest prevalence of smoking occurred among physicians and dentists (75.0%), nurses (60.0%), social workers, psychologists, pedagogues and health agents (41.3%), occupational therapists and nutritionists (50.0%); among the support staff, seamstresses and servants (50.0%). In 1995, for males, physicians and dentists (28.6%), agricultural engineers, and veterinarians (36.8%); as for females, physicians and dentists (38.8%), physiotherapists, occupational therapists, speech therapists, psychologists and nutritionists (33.3%) and educators (30.0%), agricultural engineers, veterinarians, geologists, lawyers (50.0%). In both surveys, the age of onset of smoking was in the range of 10 to 14 years, and the number of cigarettes smoked per day showed no significant differences.

In the 2006 survey, the totality of the staff was divided into S: 65 (18.4%), NS: 244 (69.1%) and FS: 44 (12.5%). Among males, S: 24 (17.8%), NS: 88 (65.2%) and FS: 23 (17.0%) and among females, S: 41 (18.8%), NS: 156 (71.6%) and FS: 21 (9.6%). Considering both teaching and non-teaching staff, the first, as a whole, included S: 10 (10.2%), NS: 81 (82.7%) and FS: 7 (7.1%). Among males, S: 6 (13.6%), NS: 33 (75.0%) and FS: 5 (11.4%), and among females, S: 4 (7.4%), NS: 48 (88.9%) and FS: 2 (3.7%). The second (non-teaching), as a whole, included S: 55 (21.6%) NS: 163 (63.9%) and FS: 37 (14.5%). For males, S: 18 (19.8%), NS: 55 (60.4%) and FS: 18 (19.8%), and females, S: 37 (22.6%), NS: 108 (65.8%) and FS: 19 (11.6%).

In the 2008 survey, the distribution of employees, as a whole, showed S: 56 (16.1%), NS: 252 (72.4%) and FS: 40 (11.5%). Considering the teaching staff separately, as a whole, S: 10 (9.8%), NS: 84 (82.4%) and FS: 8 (7.8%). Among males, S: 6 (13.6%), NS: 32 (72.8%) and FS: 6 (13.6%), and among females, S: 4 (6.9%), NS: 52 (89.7%) and FS: 2 (3.4%). The non-teaching staff, as a whole, included S: 46 (18.7%) NS: 168 (68.3%) and FS: 32 (13.0%). Males were, S: 13 (14.8%), NS: 59 (67.0%) and FS: 16 (18.2%), and females, S: 33 (20.9%), NS: 109 (69.0%) and FS: 16 (10.1%).

In the 2013 survey, the distribution of employees, as a whole, showed S: 47 (13.4%), NS: 249 (70.7%) and FS: 56 (15.9%). Among males, S: 17 (12.8%), NS: 83 (62.4%) and FS: 33 (24.8%), and among females, S: 30 (13.7%), NS: 166 (75.8%) and FS: 23 (10.5%).

Considering separately teaching and non-teaching staff, in 2013 the distribution according to gender and category as smoker, non-smoker and former smoker is shown in Tables 1 and 2.

TABLE 1 Distribution of teaching staff, according to gender and categorization as smoker, non-smoker and former smoker, in 2013 (n and %).

Year	2013					
Gender	M		F		T	
	N	%	N	%	N	%
Smokers	3	7.0	3	5.2	6	5.9
Non-smokers	33	76.7	52	89.6	85	84.2
Former smokers	7	16.3	3	5.2	10	9.9
Total	**43**	**100.0**	**58**	**100.0**	**101**	**100.0**

TABLE 2 Distribution of non-teaching staff, according to gender and categorization as smoker, non-smoker and former smoker, in 2013 (n and %).

Year	2013					
Gender	M		F		T	
	N	%	N	%	N	%
Smoker	14	15.5	27	16.8	41	16.3
Non-smoker	50	55.6	114	70.8	164	65.4
Former smoker	26	28.9	20	12.4	46	18.3
Total	**90**	**100.0**	**161**	**100.0**	**251**	**100.0**

The prevalence of smokers in 1980-2013, according to sex is given by Figures 1 and 2.

Discussion and conclusion

In tobacco control programs, health professionals have an important role, being responsible for its success due to their ability to easily convey relevant information. Thus, information about smoking that is passed on to this group of professionals, as well as their good example of not smoking, are factors that have very great importance, giving credibility to these programs.

Public health and medical schools have an important role in this regard, as they receive in their undergraduate, specialization and graduate courses professionals involved in activities that are not related to the area of community health. The School of Public Health at the Universidade de São Paulo stands out in this respect.

In order to assess tobacco control programs, the surveys on smoking prevalence among students and teaching and non-teaching staff are crucial, must be conducted from time to time.

The surveys done at USP's School of Public Health in 1980, 1995, 2006, 2008 and 2013 show a sharp decrease in the prevalence of regular smokers among teaching and non-teaching staff, with results of 50.3% in 1980, down to 13.4% in 2013. As for gender, 56.9% (1980) and 12.8% (2013) were male; and 45.9% (1980) and 13.7% (2013) were female. Analyzing a possible difference in prevalence among teaching and non-teaching staff in 2006, 2008 and 2013, a decrease has also been seen. Smokers were 10.2% (2006) and 5.9% (2013) among the teaching staff, and 21.6% (2006) and 16.3% (2013) among the non-teaching staff.

Few surveys have been conducted in medical science schools. Most of them took place in medical schools, and the smoking frequencies ranged between 4.0 and 54.8% considering the 1st and 6th year of medical school, with a decrease of 41.3% to 12.1% among males and 34.8% to 11.2% among females.[10-17]

In 1966 a survey including 1236 employees at the Escola Paulista de Medicina, Universidade Federal de São Paulo was conducted. The prevalence of smokers of both genders was estimated at 23.6%, with a higher proportion among employees with primary level of education, compared to third level qualification.[18] A census held in 2006 and 2007, which included university students in the health area in Rio de Janeiro, from public and private courses of medicine, dentistry, pharmacy and nursing, totaling 1525 people, revealed a smoking prevalence of 14.6%; 18.2% among males and 12.6% among women.[19]

A limitation on the analysis of results obtained in the surveys should be clarified. The individuals participating in the five studies are not the same, because, over the years, there has been hiring of new servers and dismissal of other; therefore, prevalence rates show cross-sectional patterns from 1980, 1995, 2006, 2008 and 2013. Changes in prevalence coexist with probable changes in both size and composition of the populations according to age, gender and job category.

The decrease in prevalence of smoking that has been taking place at FSP-USP can be explained by increased access to knowledge on the harms caused by tobacco, which is taught to the health professionals. To constantly pass on this information is crucial to increase awareness among health professionals in order to participate in anti-smoking programs with an emphasis on prevention.

Since people spend a greater number of hours per day in their working environment, preservation against tobacco pollution is mandatory. The creation and maintenance of 100% tobacco-free environments should always be present, and the existence of designated smoking areas is no longer acceptable. Also, programs for the treatment of smokers who want to cease their addiction should be encouraged.

Not only the creation of environments 100% tobacco-free should be emphasized, but also the work of the Smoking Prevention and Control Commission of FSP-

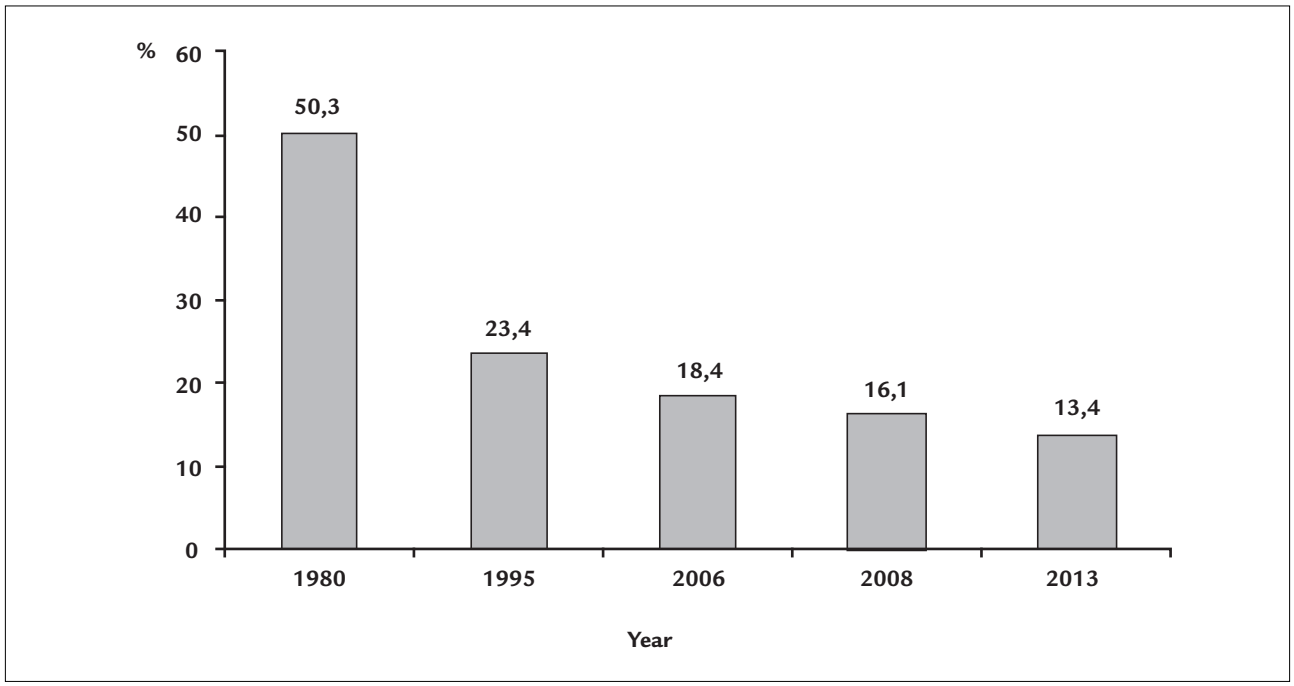

FIGURE 1 Prevalence (%) of smoking among USP's School of Public Health employees in 1980, 1995, 2006, 2008 and 2013.

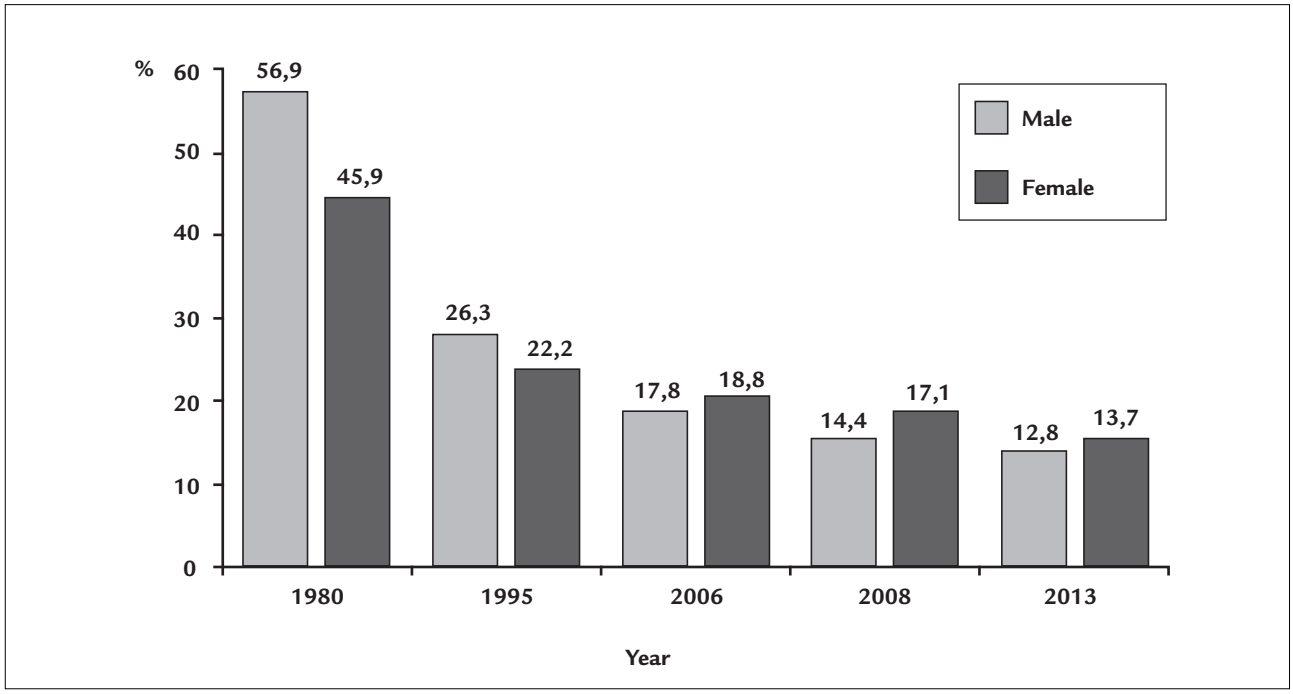

FIGURE 2 Prevalence (%) of smoking among USP's School of Public Health employees according to gender in 1980, 1995, 2006, 2008 and 2013.

-USP that led to the creation of one of the first smoke-free environments in a unit of the Universidade de São Paulo.

Today, health promotion does not belong to the exclusive domain and sole responsibility of health professionals and institutions, but requires the participation of the whole society in the fight against smoking.

Resumo

O controle do tabagismo na Faculdade de Saúde Pública da Universidade de São Paulo

Introdução: as escolas de saúde pública, por sua própria natureza, têm responsabilidade muito grande na elaboração de programas de promoção da saúde, com destaque o controle do tabagismo. A participação de diversos grupos de profissionais ligados à saúde em ações educativas favorece a transmissão de inúmeras informações sobre tabagismo à população.
Objetivo: avaliar prevalência do tabagismo e efetividade de programa de controle, entre docentes e funcionários não docentes, na Faculdade de Saúde Pública da Universidade de São Paulo, por monitoração dos inquéritos realizados de 1980 a 2013.
Métodos: aplicação de um questionário, contendo as variáveis identidade, sexo, se a pessoa é fumante, ex-fumante e não fumante, que foi respondido em entrevista individual. A análise dos dados foi realizada utilizando-se frequências absolutas e relativas.
Resultados: a prevalência de fumantes sofreu uma redução de 50,3% (1980) para 13,4% (2013); entre os homens, esse decréscimo foi de 56,9% para 12,8% e entre as mulheres, de 45,9% para 13,7%. Entre os docentes, houve uma queda de 10,2% (2006) para 5,9% (2013); entre os funcionários não docentes, esse decréscimo foi de 21,6% para 16,3%.
Conclusão: o conhecimento dos malefícios do tabaco à saúde pelos profissionais de saúde é de importância para participação nos programas antitabagismo, bem como é responsável pelo decréscimo de fumantes na FSP/USP. A criação de ambientes 100% livres do tabaco e de programas para tratamento dos tabagistas que desejam cessar o vício deve ser incentivada.

Palavras-chave: tabagismo, prevenção, inquéritos.

References

1. Associação Médica Brasileira. Ministério da Saúde/Instituto Nacional de Câncer José Alencar Gomes da Silva. Aliança de Controle do Tabagismo. Evidências Científicas sobre Tabagismo para Subsídio ao Poder Judiciário. AMB, São Paulo, 2013.
2. Mirra AP. Tabagismo e câncer. In: Antunes RCP, Perdicaris AD, Gomes R. Prevenção do câncer. 2.ed. Barueri: Manole, 2015.
3. World Health Organization. Report on the global tobacco evidence 2008. The M Power Pachage. Geneva: WHO, 2008.
4. Brasil, Ministério da Saúde. Secretaria de Vigilância em Saúde. Secretaria de Gestão Estratégica e Participativa. Vigitel, Brasil 2013: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico. Brasília: Ministério da Saúde, 2013.
5. Pereira IMTB, Penteado R, Macedo OC. Promoção da saúde e educação em saúde, uma parceria saudável. O Mundo da Saúde. 2000; 24(1):39-45.
6. Mirra AP, Marcondes RS, Pereira IMTP, Stewien GTM. Resgate histórico do tabagismo na Faculdade de Saúde Pública da Universidade de São Paulo: relato de uma experiência. Saúde Sociedade. 2009; 18(1):164-70.
7. Mirra AP, Marcondes RS, Souza JMP, Stewien GTM. Tabagismo entre alunos e funcionários da Faculdade de Saúde Pública da Universidade de São Paulo. Saúde Sociedade. 1999; 8(2):93-108.
8. Mirra AP, Pereira IMTB, Stewien GTM, Gotlieb SLD. As escolas de saúde pública e o controle do tabagismo: experiência da Faculdade de Saúde Pública da Universidade de São Paulo, Brasil. Rev Soc Bras Câncer. 2008; 10(36):71-4.
9. Mirra AP, Pereira IMTP, Stewien GTM. Inquérito sobre prevalência do tabagismo na Faculdade de Saúde Pública da Universidade de São Paulo no ano 2013. (Comunicação Pessoal). São Paulo: FSPUSP, 2013.
10. Ruffino-Netto A, Ruffino MC, Gruber CA, Izuzuki EF, Caramaschi FR. Tabagismo entre acadêmicos de Ribeirão Preto. J Pneumol. 1981; 7:164-70.
11. Ruffino-Netto A, Ruffino MC, Passos ADC, Silva CL, Madeira NA.Tendência do tabagismo em acadêmicos de Ribeirão Preto. Estudo prospectivo. J Pneumol. 1988; 14:163-9.
12. Szego T, Bechara MJ, Gama-Rodrigues J. Levantamento epidemiológico sobre o vício de fumar entre estudantes de medicina no Estado de São Paulo. Rev Ass Med Brasil. 1985; 31:13-6.
13. Rigatto M. Inquéritos sobre tabagismo entre estudantes com participação de T. Szego na Escola Paulista de Medicina e de P. Câmara na Faculdade de Medicina de Fortaleza. (Comunicação Pessoal). Porto Alegre: UFRGS, 1989.
14. Rodrigues EMS, Tabagismo entre estudantes da Universidade de São Paulo, Campus Ribeirão Preto, no período de 1980/1981. [Dissertação de Mestrado]. Ribeirão Preto: Faculdade de Medicina de Ribeirão Preto, 1989.
15. Rigatto M, Kauer CL. Influência do ensino médico da UFRGS sobre seus alunos em relação ao tabagismo. Anais Semana do Hospital das Clínicas de Porto Alegre. Porto Alegre, 1989.
16. Rosemberg J, Perón S. Tabagismo entre estudantes da Faculdade de Ciências Médicas de Sorocaba. Tabagismo nos acadêmicos de medicina e nos médicos. J Peumol. 1990; 18(1):13-22.
17. The GTSS Collaborative Group. Tobacco use and cessation counselling: Global Heath Professionals Survey Pilot Study, 10 countries, 2005/ Brazil (Joao Pessoa), Medical Students (3rd Year Students Only)/ Brazil (Juiz de Fora), Medical Students (3rd Year Students Only)/ Brazil (Florianopolis), Medical Students (3rd Year Students Only). Tobacco Control. 2006; 15:ii31-4.
18. Hamamoto RS, Matsuda M, Ribeiro SA, Laranjeira R. O comportamento tabágico na população de funcionários da Universidade Federal de São Paulo. Medicina e Cultura. 1997; 11(1):11-4.
19. 19. Szklo AS, Sampaio MMR, Martins LF, Fernandes EM, Almeida LM. O tabagismo no contexto dos futuros profissionais de saúde do Rio de Janeiro. Rev Bras Cancerol. 2011; 57(3):321-7.