

Characteristics of smokers enrolled in a public smoking cessation program*

Perfil de fumantes atendidos em serviço público para tratamento do tabagismo

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Abstract

Objective: To evaluate the characteristics of smokers seeking treatment in a public smoking cessation program. **Methods:** This was a retrospective evaluation of data collected during the interview for enrollment in the smoking cessation program of the Smoking Outpatient Clinic of the Paulista State University School of Medicine in the city of Botucatu, Brazil, between April of 2003 and April of 2007. Demographic variables; previous use of the behavioral approach, medications or alternative treatments for smoking cessation; degree of nicotine dependence; and history of comorbidities were evaluated in 387 smokers. **Results:** In our sample, 63% of the smokers were female. The mean age of the subjects was 50 ± 25 years. More than half of the subjects (61%) had up to eight years of schooling, and 66% had a monthly income of less than twice the national minimum wage. The degree of nicotine dependence was high/very high in 59%, medium in 17% and low/very low in 24% of the subjects. Although 95% of the patients presented comorbidities, only 35% had been referred to the program by a physician. More than half of the subjects (68%) had made at least one smoking-cessation attempt, 83% of whom did so without the help of a structured program. **Conclusions:** Smokers seeking assistance for smoking cessation were socially disadvantaged, presented a high degree of nicotine dependence and had previously made smoking-cessation attempts without the benefit of a structured program. Therefore, in order to be effective, smoking control interventions should take into consideration the general characteristics of the smokers treated via the public health care system.

Keywords: Smoking; Tobacco use disorder; Smoking cessation.

Resumo

Objetivo: Avaliar o perfil dos fumantes que procuraram serviço público de cessação do tabagismo. **Métodos:** Foram avaliados retrospectivamente os dados coletados durante a avaliação para a admissão no programa de cessação do tabagismo do Ambulatório de Tabagismo da Faculdade de Medicina de Botucatu/Universidade Estadual Paulista, na cidade de Botucatu (SP) entre abril de 2003 e abril de 2007. Variáveis demográficas, uso prévio de abordagem comportamental e/ou farmacológica e/ou tratamentos alternativos para o tabagismo, grau de dependência à nicotina e comorbidades foram avaliados em 387 fumantes. **Resultados:** Em nossa casuística, 63% dos tabagistas eram do sexo feminino. A idade média dos sujeitos foi de 50 ± 25 anos. Mais da metade dos fumantes (61%) não tinha cursado o ensino médio, e 66% tinham renda mensal menor que dois salários mínimos. O grau de dependência foi elevado/muito elevado em 59%, médio em 17% e baixo/muito baixo em 24%. Embora 95% dos pacientes apresentavam comorbidades, apenas 35% foram encaminhados ao programa por um médico. Mais da metade (68%) tinha feito pelo menos uma tentativa de cessação, 83% sem um programa de tratamento estruturado. **Conclusões:** Os tabagistas que procuraram assistência para cessar o tabagismo apresentaram desvantagem social, dependência à nicotina alta e tentativas anteriores de cessação sem tratamento estruturado. Portanto, a intervenção para o controle do tabagismo deve contemplar as características gerais dos fumantes nos serviços públicos para que seja eficaz.

Descritores: Tabagismo; Transtorno por uso de tabaco; Abandono do hábito de fumar.

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Introduction

Smoking is considered a global epidemic. According to the World Health Organization, approximately five million people die each year from smoking-related diseases. The total number of deaths/year is expected to reach 10 million by 2030. In Brazil, 200 thousand deaths/year due to smoking are estimated.^(1,2) For this reason, various actions have been implemented by the National Program for Smoking Control to reduce the prevalence of smoking, as well as the morbidity and mortality associated with smoking-related diseases.⁽³⁾ Such measures have caused a reduction in the acceptance of smoking, an increase in the number of Brazilian smokers who are willing to stop smoking and a decline of approximately 42% in the annual consumption of cigarettes per capita between 1989 and 2003 (from 34.8% to 22.4%).^(3,4) However, the number of smokers is still high, and various obstacles to reducing the prevalence of smoking and to increasing smoking cessation rates have been identified worldwide.⁽⁵⁾

The level of education, socioeconomic status and degree of nicotine dependence are some of the conditions associated with a higher prevalence of smoking and with the difficulty in quitting.^(6,7) Smoking is consistently more prevalent in socioeconomically disadvantaged groups, in Brazil and in other countries.⁽⁶⁾ In addition, individual smoking-cessation attempts have shown low success rates in developed countries and very low success rates in countries with average and low income rates; China, for instance, has a smoking-cessation rate of approximately 10%.⁽⁷⁾ Another factor that contributes to the maintenance of smoking is nicotine dependence, and it is likely that persistent smokers exhibit higher levels of nicotine dependence.

In Brazil, few public health care facilities are specialized in intensive smoking treatment. In addition, data on the characteristics of patients who seek treatment at such facilities are scarce. Awareness of the target audience is essential for the structuring of programs design to meet the specific needs of this population. Therefore, the objective of the present study was to evaluate the patients seeking treatment via a smoking cessation program at the Botucatu School of Medicine, between 2003 and 2007, considering the level of education, socioeconomic status and characteristics of nicotine dependence.

Methods

This was a retrospective evaluation of data collected during the interview for enrollment in the smoking cessation program of the Smoking Outpatient Clinic of the Botucatu School of Medicine, São Paulo State University, Botucatu, Brazil, between April of 2003 and April of 2007. All 387 individuals who sought the public smoking cessation program during the study period were included in the present study. Patient forms were analyzed, and the following information was collected: demographic data (gender, level of education and monthly income), type of referral, comorbidities, history of smoking, degree of nicotine dependence based on the Fagerström test (very low: 0-2; low: 3-4, moderate: 5; high: 6-7 and very high: 8-10),⁽⁸⁾ level of motivation to abandon the dependence based on the Transtheoretical model,⁽⁹⁾ previous smoking-cessation attempts and resources used during smoking-cessation attempts.

The data were collected using a standardized questionnaire, and the study was approved by research ethics committee of the institution. Patients were informed about the study and gave written informed consent.

Results

Of the 387 smokers investigated, 30% were from the city of Botucatu, 48% were from nearby cities and 22% were from other cities in the state of São Paulo. Mean age was 50 ± 25 years (age bracket: 19-74 years). The demographic characteristics of the studied population are shown in Table 1. Most patients were female (63%), married (50%) and had only eight or fewer years of schooling (61%). In addition, more than half of the subjects had a monthly income of less than two times the national minimum wage. The degree of nicotine dependence was high or very high (Fagerström score ≥ 6) in more than half of the subjects.

The general characteristics of the studied population are shown in Table 2.

Most of the patients sought treatment voluntarily, or were referred by physicians or other health professionals. Mean duration of smoking was 31 ± 12 years. When the level of motivation to quit smoking was assessed, more than half of the patients were classified as being in the

Table 1 - Demographic characteristics of the population studied.

Variable	%
Gender	
Female	63
Male	37
Marital status	
Married	50
Single	16
Other ^a	34
Level of education	
Illiterate	5
≤ 9 years of schooling	56
≤ 12 years of schooling	27
Higher education	10
No response	2
Monthly income	
≤ the minimum wage	37
> 1-2 × the minimum wage	28
> 2-3 × the minimum wage	14
> 3 × the minimum wage	21

^aDivorced, widow/widower, etc.

contemplative phase. Most of the patients (78%) reported always inhaling the cigarette smoke, 14% reported inhaling the smoke sometimes or never, and 8% did not answer this question. Most of the subjects investigated in the present study (68%) had made at least one smoking-cessation attempt (Mean smoking-cessation attempts: 1.2 ± 1.2). Only 17% of the patients had received pharmacological treatment during previous smoking-cessation attempts.

Discussion

The results of the present study show that most of the subjects who sought treatment for nicotine dependence were female and had a low level of education, as well as presenting a low monthly income, a high or very high level of nicotine dependence and a long history of smoking. Although a large proportion of the patients had made prior smoking-cessation attempts, they had most often done so without participating in structured counseling sessions or receiving medication to treat the dependence, which is in discordance with the smoking cessation guidelines. In addition, the results of the present study show that most of the subjects

presented comorbidities, which underscores the importance of smoking cessation.

The most common social characteristics among the subjects included in the present study are, with regard to certain aspects, different from those observed in a recent study conducted at a specialized clinic in the city of São Paulo, Brazil.⁽¹⁰⁾ By means of a self-administered questionnaire, the authors evaluated 203 smokers enrolled in a public smoking cessation program and, in contrast with our results, observed that over 50% of the patients had higher economic status and level of education.⁽¹⁰⁾ However, 95% of the patients investigated in the present study had other comorbidities, whereas in the study carried out in São Paulo only the prevalence of depression was reported.⁽¹⁰⁾ In addition, the mean age of the individuals included in the present study was higher (50.0 ± 25.0 years *vs.* 45.3 ± 12.0 years). Other characteristics, such as the predominance of female patients and prior smoking-cessation attempts, were similar.⁽¹⁰⁾

National and international data have shown that lower economic status and level of education are associated with the prevalence of smoking, smoking initiation and the maintenance of nicotine dependence.^(7,11-18) One study conducted in China showed that individuals with no schooling have a seven-fold higher probability of becoming smokers than do individuals with higher education, compared with a five-fold higher probability in Brazil.⁽⁷⁾ Social factors and market expansion strategies of the tobacco industry, which stimulate consumption of and access to cigarettes, contribute to greater tobacco consumption by low-income populations of individuals with little education.⁽¹²⁾ Therefore, in addition to avoiding the impact of smoking on the health of smokers, the programs for dependence control aim to reduce the short-term economic impact on nicotine-dependent individuals and their families.⁽⁷⁾ Fortunately, the relationship between tobacco consumption and socioeconomic status can be changed, and tobacco control policies, such as an increase in prices and campaigns aimed at populations with a low level of education, might reduce the prevalence of smoking.^(19,20) In fact, one study that investigated the importance of economic policies in the reduction of tobacco consumption showed that half of the smokers reported smoking-related behavioral changes due to the

Table 2 - General characteristics of the smokers investigated.

Variable	%
Degree of nicotine dependence	
High or very high	59
Moderate	17
Low or very low	24
Comorbidities	
Systolic arterial hypertension	33
Respiratory disease	20
Obesity	14
Psychiatric diseases	12
Diabetes mellitus	9
Heart failure	7
Epilepsy	5
Sought treatment	
Voluntarily	40
Referred by physician	35
Referred by other health professionals	18
Failed to answer	7
Motivation level	
Precontemplative phase	8
Contemplative phase	64
Action	21
Failed to respond	7
Use of medication during prior smoking-cessation attempts	
Use of no medication	63
Use of some medication	17
Failed to answer	20

increase in cigarette prices, underscoring the importance of economic policies for the reduction in tobacco use.⁽²¹⁾

In the present study, we observed that most of the smokers presented a high level of nicotine dependence. Chemical dependence on nicotine, which was observed in over 80% of the smokers, associated with the economically accessible price of cigarettes, limits the acquisition of foods, health care and leisure activities.^(12,22) Studies carried out in Brazil have shown that a higher level of nicotine dependence is associated with a greater risk of failure of the treatment of smoking.^(23,24) Pharmacological and non-pharmacological approaches are effective in increasing the rates of smoking cessation, and the combination of the two types of treatment yields better results.^(5,25-27) In the present study, although most of the subjects had made at least

one smoking-cessation attempt in the past, only a small number of smokers had benefited from structured treatment. Therefore, there should be an increase in the number of specialized clinics, and medication should be made more widely available in order to increase the abstinence rates and break this vicious cycle.

We believe that the principal factors associated with smoking and with the low rate of specialized treatment observed in the present study are associated with the socioeconomic status, level of education and level of dependence of the individuals analyzed.

Most of the smokers investigated in the present study were female, and the mean age of the sample as a whole was 50 ± 25 years. The predominance of female smokers among the patients enrolled in smoking cessation programs has also been reported in other studies carried out in Brazil: 65.6% in a study conducted in the state of Ceará; 62% in a study conducted in the state of Rio Grande do Sul; and 58% in a study conducted in the state of São Paulo.^(10,23,28) In the present study, most of the smokers presented comorbidities, especially cardiovascular diseases, which is in accordance with the role of smoking as a risk factor for the principal causes of death worldwide.⁽¹⁹⁾ However, most of the smokers sought the center voluntarily, which shows that health professionals should become more involved in smoking control. Studies have shown that physicians frequently have opportunities to address smoking cessation and to advise patients regarding cessation, through instructions and clarifications. However, smoking control is not yet part of routine medical treatment; nor is it part of the training of students in most medical schools in Brazil and in other countries.^(29,30)

The present study was observational, and, therefore, our results cannot be extrapolated to other populations. Although we did not profile smokers who seek treatment at supplementary health care facilities, our data are useful to other public health care facilities.

In conclusion, the results of the present study show that most of the smokers who sought treatment for nicotine dependence were female, had a low level of education, were economically disadvantaged, presented a high or very high dependence level and had a long history of smoking. Therefore, public smoking cessation

programs should be structured in a way that targets smokers with a low level of education, low income and high level of dependence, which underscores the need for free pharmacological treatment. In addition, alternative treatment approaches should be offered to increase the participation of male smokers. Activities to raise the awareness of health professionals regarding the importance of effectively participating in the control of the smoking pandemic are necessary during the professional training of medical students and through professional advancement and continuing education.

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