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# Profile of smokers not searching for smoking cessation intervention in Rio de Janeiro, Brazil

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## ABSTRACT

It is essential to understand that not all smokers are equal, and that certain smokers need to be “won” as “potential clients” of an intervention program aimed at addressing their specific needs. Thus, the objective of the article was to compare the profile of smokers recruited for a smoking cessation clinical trial with that of the general smoking population in the city of Rio de Janeiro, in the years 2002-2003. Heterogeneities observed may indicate the need for adopting different recruitment strategies, associated with the existing interventions, to encourage as many and as diverse eligible individuals as possible.

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## INTRODUCTION

Although there has been a decrease in the prevalence of smokers in Brazil, from 32% in 1989 to 20% in 2002, there is a growing need to address Tobacco Control intervention programs more broadly. In order to be more effective, these programs need to encompass the complexity of socioeconomic and cultural situations that are part of smokers' context, through directed strategies for capture and intervention for smoking cessation.<sup>a</sup>

It is vital to understand that smokers are not equal and some smokers need to be “won” as “potential clients” of an intervention program tailored to their specific needs. Encouraging smokers to change their behavior goes through the main idea that their current risk perceptions affect the respective future behavior, as well as their current behavior affects the current risk perceptions and health state.<sup>1</sup>

Comparison between smokers captured to a specific intervention for smoke cessation and the general population may help to understand the characteristics of smokers seeking treatment and, especially, enable to know the profile of those who are not sensible to the intervention strategies designed to help smoke cessation. There are few studies available in Brazil, and for the considerations made here, there are no records in the indexed literature up to the present. The objective of the present study was to assess the profile of smokers captured to a specific intervention study for smoke cessation, and the profile of the general population of smokers.

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<sup>a</sup> Centers for Disease Control and Prevention. Best practices for comprehensive tobacco control programs—August 1999. Atlanta; 1999 [Acesso em 16/4/2007]. Disponível em: [http://cdc.gov/tobacco/tobacco\\_control\\_programs/stateandcommunity/best\\_practices/index.htm](http://cdc.gov/tobacco/tobacco_control_programs/stateandcommunity/best_practices/index.htm)

## METHODS

The randomized clinical trial assessed the effectiveness of the cognitive-behavioral approach and the use of nicotine-replacement therapy with patches for smoking cessation, it was performed in 2002, in the city of Rio de Janeiro. The study was advertised in the written (news-papers) and spoken media (radio programs). Eligibility criteria were: being a smoker at the time and living in Rio de Janeiro, in addition to being between 18 and 59. After exclusion of those who did not meet these criteria during enrollment, the interviews were performed and 1.560 volunteers answered questions of sociodemographic data and smoking history. Details on random allocation, calculation of sample size and intervention can be observed in a previous publication.<sup>3</sup>

Data of the randomized trial have been compared to those of the "Household survey on risk behaviors and reported morbidity for non communicable diseases", a cross-sectional population-based study conducted in 2002/2003. The target population of the survey was formed by individuals 15 or older, living in the Federal District and 15 Brazilian capitals. The sample model

adopted for the research was that of self-weighted clusters with two-stage selection. Primary sample units were census tracts and the secondary units were households. We have selected 470 smokers for the city of Rio de Janeiro, and 415 were between 18 and 59 years old. Further details of this study may be found in a previous publication.<sup>3</sup>

Among smokers that sought treatment and smokers of the general population, we have calculated respectively: simple and estimated proportions according to gender, age over 39, schooling equal to conclusion of elementary school or more, smoke the first cigarette within five minutes after waking up, having 21 cigarettes or over a day, perception of health state as excellent, and marital status. To calculate the respective confidence intervals we have considered a 5% type I error; for the interval of proportions of the Population survey the *Svy* command of the Stata application was used to deal properly with the clustering sample structure and to enable incorporating expansion fractions in the analyses; to calculate confidence interval of the clinical trial, it was taken into account that the data followed an exact binomial distribution from a simple random sample.

**Table.** Characteristics of smokers searching for smoking cessation treatment and of smokers of the general population. City of Rio de Janeiro, Southeastern Brazil, 2002.

Variable	Searched for treatment* (N=1.560)***		General Population** (N=415)***	
	%	95% CI	%	95% CI
Female gender	63.5	61.1;65.9	54.9	50.3;59.5
Age ≥ 40	68.5	66.2;70.9	59.0	54.2;63.9
Schooling				
Elementary school or +	89.0	87.4;90.5	71.0	64.5;77.4
Marital status				
Single	22.1	20.1;24.3	55.2	50.3;59.9
Married	55.9	53.3;58.3	36.4	31.9;41.1
Widow/er	3.5	2.7;4.6	2.4	1.1;5.1
Divorced	18.5	16.6;20.5	6.02	4.2;8.6
Smoke within the first 5 minutes after waking up	47.3	44.8;49.9	25.3	20.5;30.1
Average age of initiation****	15,6	15.4;15.8	18.5	17.8;19.3
Number of cigarettes smoked per day equal to or more than 21 cigarettes	46.9	44.4;49.4	14.1	10.2;18.1
Perception of the health state as "excellent"	7.4	6.1;8.8	13.5	10.0;16.9

\* Participants of the randomized clinical trial

\*\* Participants of the household survey

\*\*\* Number of losses per variable in the clinical trial and on the survey, respectively: gender and age: no losses; schooling: 0 and 5; marital status: no losses; smoking a cigarette within the first 5 minutes after waking up: 14 and 0; mean age of initiation; average: 5 and 2; number of cigarettes smoked/day – equal to or higher than 21 cigarettes: 21 and 47; perception of the health state: excellent: 1 and 0.

\*\*\*\* Results presented correspond to the mean age of initiation

## RESULTS

According to sociodemographic data (Table), among individuals who sought specialized treatment, the proportion of women, of individuals over 39, and of individuals who had at least finished elementary school was greater than that of the smoking population in the city of Rio de Janeiro.

Regarding variables indicating the dependence on smoke, the proportions observed in the group of individuals seeking treatment were practically two times that observed in the general population of smokers in the variables “smoking the first cigarette in the first five minutes of the day” and “smoking more than 20 cigarettes on average per day”. Mean age of smoking initiation was approximately 3 years younger for smokers who went to treatment clinics.

It was also observed that the proportion of smokers who reported their health perceptions as excellent and the proportion of single individuals was practically two times greater in the general population when compared to those who looked for help.

For all the comparison previously mentioned, the confidence intervals calculated for the proportions of both study did not match.

## DISCUSSION

Data from two surveys using different methodologies to attract smokers were used – one was active (household survey whose capture reached a sample of the eligible population), the other was reactive (clinical trial whose capture reached all the eligible population). Some questions made and used as an outcome can be added to this initial limitation (Table), they had slightly different ways of asking and answer options, as well as a different order in the questionnaire, such as that involving the perception of the health state. Some additional questions that define level of dependence of smokers looking for treatment in the clinical trial were not present in the population survey. On the other hand, questions involving opinions on the current *Política Nacional de Controle do Tabagismo* (PNCT – National Policy on Tobacco Control), present on the survey, were not present on the clinical trial. This made it difficult to raise hypotheses on the several and real reasons that made smokers seek treatment.

It was observed, in the present study, that the characteristics of smokers seeking treatment differed from the characteristics of the general population of smokers

(Table). These results are in agreement with those from the literature regarding the greater participation of women, of older individuals, and of smokers in later stage of dependence. These last were identified by smoking initiation at younger age, smaller time for smoking the first cigarette after getting up, and greater number of cigarettes smoked per day. This greater search may reflect their greater perceptions of the benefits of interventions for smoking cessation, as well as worse perceptions of the respective health state, when compared to men, youngsters, and to less dependent smokers.<sup>2</sup>

Greater participation of smokers with higher schooling may reflect that they read newspapers more often, one of the recruitment strategies used. Finally, greater proportion of married individuals recruited for the clinical trial may indicate family pressure, together with affective support to seek for treatment. Therefore, overall, the profile of the recruited population may be due to the recruitment strategy used, associated with the proposed intervention and the specific sociocultural and/or organizational contexts, determining the motivation of the smoker to take part in the study.

The actions of PNCT include broad spread of information regarding the harmful effects of smoking and the hazards of passive smoking among smokers of both genders, in several dependence stages. However, it was observed that probably for the most dependent smokers, the perception of risk assumes a characteristic related to the closer risk. Such a perception is closely linked with that of the regular or poor current health state of the individual, increasing the interest of smokers in searching for help in order to avoid an imminent loss. The change in risk perception and, consequently, the behavioral change in light smokers, may go through the assessment of an exchange of something that gives pleasure for something that will give the same or more pleasure at a lower cost/risk. Therefore, to obtain a population impact together with the existing multi-directed interventions, different recruitment strategies must be designed to encourage as many and as diverse eligible individuals.<sup>1</sup>

When heterogeneities of smokers are incorporated through directed public health policies, we may be able for example to achieve more efficiently less dependent smokers, who represent about 90% of the total population of smokers. Additionally to these ones, smokers of the lower levels of society are included; they are currently less often recruited by tobacco control intervention programs.

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