

## CHARACTERIZATION OF TOBACCO CONSUMPTION AND DEPENDENCE AMONG WORKERS AT A HIGHER EDUCATION INSTITUTION<sup>1</sup>

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Cross-sectional quantitative study to characterize the profile of tobacco consumption and dependence among non-teaching staff at a public university, conducted between February and August 2008. A self-administered questionnaire was used, comprising socio-demographic data, data on smoking and the Fagerström Questionnaire. The sample consisted of 149 employees. The results indicate the prevalence of smoking in 12.1% of respondents; 88.8% of smokers wish to quit smoking, but few of them are able to without appropriate support, which demonstrates the need to offer formal support for these workers to successfully achieve quitting. Also, educative prevention actions in this area need to be set up.

Descriptors: Nursing; Substance-Related Disorders; Tobacco; Work.

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## **CARACTERIZAÇÃO DE CONSUMO E DEPENDÊNCIA DE TABACO ENTRE TRABALHADORES DE UMA INSTITUIÇÃO DE NÍVEL SUPERIOR**

Trata-se de estudo quantitativo de corte transversal, cujo objetivo foi caracterizar o perfil de consumo e dependência de tabaco entre funcionários não docentes de uma universidade pública, realizado no período de fevereiro a agosto de 2008. Utilizou-se questionário autoaplicável, composto por dados sociodemográficos, dados sobre tabagismo e questionário de Fagerström. A amostra foi constituída por 149 funcionários. Os resultados indicam prevalência do consumo de tabaco de 12,1% dos entrevistados, sendo que 88,8% dos fumantes anseiam por parar de fumar, mas poucos conseguem sem ajuda adequada, o que demonstra a necessidade de oferecer apoio formal para o sucesso desse anseio a esses trabalhadores, assim como a inserção de ações educativas de prevenção nessa temática.

Descritores: Enfermagem; Transtornos Relacionados ao Uso de Substâncias; Tabaco; Trabalho.

## **CARACTERIZACIÓN DEL CONSUMO Y DEPENDENCIA DEL TABACO ENTRE TRABAJADORES EN UNA INSTITUCIÓN DE NIVEL SUPERIOR**

Estudio cuantitativo de corte transversal que tuvo como objetivo caracterizar el perfil de consumo y dependencia al tabaco entre el personal no docente de una universidad pública, realizado entre febrero y agosto de 2008. Se utilizó un cuestionario auto-administrado que incluye datos socio-demográficos, datos sobre el tabaquismo y el Cuestionario de Fagerström. La muestra comprendió a 149 empleados. Los resultados indican la prevalencia de tabaquismo en el 12.1% de los encuestados, con el 88.8% de los fumadores que anhelan dejar de fumar, pero muy pocos consiguen sin el apoyo adecuado, lo que demuestra la necesidad de ofrecer apoyo formal al éxito de este anhelo entre estos trabajadores, así como la necesidad de incluir acciones educativas de prevención en este ámbito.

Descriptores: Enfermería; Trastornos Relacionados con Sustancias; Tabaco; Trabajo.

### **Introduction**

Tobacco is one of the most used legal drugs, its consumption one of the largest public healthcare problems, nationally as well as internationally. The plant, of American origin, arrived in Europe in the 16<sup>th</sup> century and its consumption has been associated to social behavior representing from glamour to rebelliousness <sup>(1)</sup>.

One billion two hundred million people currently smoke worldwide <sup>(2-4)</sup>, with a prevalence of 25% in the adult North-American population, approximately the same prevalence found in a study made in São Paulo, observing a prevalence of 24%<sup>(2)</sup>. According to estimates

of the National Cancer Institute (Inca), in Brazil there are 200,000 deaths/year associated to smoking, that means 23 people die every hour from tobacco use <sup>(5)</sup>.

The average starting age for consuming tobacco is between 13 and 14 years old, however, the vulnerability dependency is not related only to age, but also, other aspects like tobacco use by the parents, older peers and the media's influence, they are considered predicting factors for consumption. The life expectancy of a mass-quantity smoker is 25% less than the non-smoker <sup>(1)</sup>. Among the 25 death-causing diseases, related to smoking are:

cardiovascular (43%), cancer (36%), respiratory diseases (20%) and others (1%)<sup>(2)</sup>.

Nicotine, the psychoactive component of tobacco, present positive properties of addiction re-enforcements, which contributes to the basic stimulating effects of nicotine in the central nervous system. In behavioral terms, these stimulating effects of nicotine result in better attention, learning, reaction time and capacity for problem solving, as well as the habit of smoking improves the mood and decreases tension. However, the side effects, due to the toxicity of the substance include nausea, vomit, pale complexion, dizziness, headaches, increase in blood pressure and tachycardia, among others<sup>(6)</sup>.

In long-term smokers, the absence of nicotine in the body can cause some characteristics like tension, difficulty concentrating, sleepiness, sleeping disorders, low blood pressure, weight gain, diminished motor skills and higher muscle tension<sup>(6)</sup>.

A study made by the Federal University of São Paulo showed that the prevalence in tobacco use was higher among non-teaching employees when compared to the students and teaching staff in the institution. Since World War I, a significant increase in tobacco consumption began, being that the consumption per capita increased from 5% to 15% per year, during the first half of the 20<sup>th</sup> century<sup>(7)</sup>.

According to the authors, in Brazil, cigarette consumption increased in 7% during the 70's, but, in the 1980's, this rhythm decreased the consumption per capita to levels of 1% per year, in the population 15 years old or older. However, between 1970 and 1990, while the population increased in 61.5%, the consumption of cigarettes increased 125.7%. With a survey made by IBGE, in 1989, it was estimated in almost 31 million the number of smokers, representing 32.6% of the population above 15 years old. In the age range from 15 to 19 years old there are 2.4 million smokers, being that 75% of smokers start consuming tobacco between the ages of 10 and 18 years old. Although more rigorous and broad politics are needed, anti-tobacco campaigns have influenced the behavior of smokers; and the main efforts of anti-smoking action in under-developed countries, according to the consideration of the World Health Organization (WHO), must be aimed at the healthcare professionals.

Highlighted in a study made with workers in companies located in Rio de Janeiro, that among the possible risks in tobacco use are: work stress, rivalry between peers and dissatisfaction with work and the duties they perform. The suggestion of the researchers is the execution of preventive strategies in the workplace, the awareness on the consumption of substances and encouraging sports<sup>(8)</sup>.

Facing the studies and the frequent requests by the workers for information in the use of tobacco, it was considered to develop a research on the consumption and dependency of tobacco among employees of a public university in the countryside of the State of São Paulo, through raising information on the standard of tobacco consumption and the socio-demographic characterization of this population.

## Material and Methods

### *Type of study*

It is a quantitative, descriptive and exploratory study, in which the objective was to observe, describe and explore aspects of a research situation.

### *Location, sample and period*

A study was made with the non-teaching staff of a superior teaching unit located in university campus in the countryside of the State of São Paulo, which posses 14 departments, comprised of the administrative, academic and financial areas. The choice of this unit for the data collection was due to the higher number of employees compared to the other units in campus, besides having the highest variability of job descriptions among other socio-demographic characteristics.

The unit contains a population of 488 non-teaching employees. Considering only the selected departments for the collection by the interviewers, they got a total number of 355 employees. Of those, 149 (41.94%) agreed to take part in the research, answering the questionnaires. Of the total 355, 70 employees did not want to participate and 136 were not located, that is, employees that was on vacation, changed units or was not in the institution anymore. Therefore, the inclusion criterion in the research was to be a non-teaching member of the unit's staff. The data was collected between the months from February to August of 2008.

### *Data collection*

The data collection was made using a questionnaire comprised by questions of identification (age, gender, who they live with, marital status, if they have children, family income, number of people under the same roof, degree of education, religion, occupation, job description, time working at the institution)<sup>(9)</sup> and information related to tobacco consumption, in which question were included regarding their smoking habits and tobacco dependency.

To track the intensity of tobacco dependency questions were used from the Fagerström Test for Nicotine Dependence (FTNQ), comprised by 6 items, which have different weights with scores varying from 0 to 10<sup>(10)</sup>. This instrument originated from the Fagerström Tolerance Questionnaire (FTQ), made in 1978<sup>(11)</sup>, containing initially 8 questions, that after being revised due to the psychometric disadvantages of the FTQ<sup>(12)</sup>, it was reduced to the 6 questions current known, regarding smoking habits. Therefore, the suggestion to change name of the test to Fagerström questionnaire of nicotine dependency (FTND)<sup>(10)</sup>. Such instrument was validated in Brazil, in 1991 by Carmo and Pueyo (2002)<sup>(13)</sup>. Both of them elaborated by Fagerström et al.<sup>(14-15)</sup>. In Brazil, this instrument has been used in several studies<sup>(10,16-17)</sup>, especially due to its psychometric properties that suggest the FTND as a reliable instrument to assess smokers in different populations<sup>(12)</sup>.

### *Ethical considerations*

The project was submitted and approved by the Ethics Committee in Research of the School of Nursing of Ribeirão Preto (CEP), under Protocol nº0846/2007.

The participants signed an informed consent, respecting the procedures of Resolution 196/96<sup>(18)</sup>, of the National Healthcare Council.

### *Data Analyses*

The collected information was recorded and stored in Microsoft Excel 2007 spreadsheet, for later migration to a data base of the Statistical Package Social Science (SPSS, version 16.0, of 2007) program, in which the descriptive statistical analysis was made.

## **Results**

The sample contained 149 subjects that agreed to take part in the research. Among the participants, 74.3% were females, 59.2% residing with their current families, 63.8% were married or cohabitating, 64.5% had live-in children, 52.6% had a university degree, 62.5% were Catholic and 48.7% had occupations that demanded at least a High School diploma. The average age of the sample was 44.3 years old ( $dp=8.54$ ;  $min=23$ ,  $max=61$ ). The average family income was R\$ 4,238 ( $dp=2,231$ ;  $min=800$ ,  $max=12,000$ ).

The results of the applied questionnaire on smoking showed that 29.5% of the subjects have smoked at some point in their lives; 12.1% currently smoked; 16.1% were former smokers; 8.7% have reported having problems with the use of cigarettes and 2.0% claimed to have sought out help to quit smoking. Of the 13 subjects that reported having problems caused by cigarettes, 69.2% were identified as having physical problems, 23.1% social problems, and only 7.7% answered having emotional problems due to the use of cigarettes. The three subjects that asked for help to quit using tobacco reported the use of nicotine patches, participation of specific group therapy to quit smoking and the use of medication to help the objective in question.

Regarding the former smokers, 16 interviewees reported that they have decided to quit smoking due to the harm smoking causes or could cause to their health, 5 people said that cigarette meant nothing in their lives and 4 reported that they had quit smoking due to social reasons, that is, by request of the spouse and children.

The application of the questionnaire on smoking habits, including the question on dependency from the Fagerström questionnaire, the 18 participants that were considered currently smokers, 61.1% reported having their first cigarette 60 minutes after waking-up; 16.7% said having difficulties avoiding smoking in forbidden locations; 61.1% reported that any cigarette of the day is hard to quit or not smoke it; 61.1% reported smoking up to 10 cigarettes a day; 33.3% said that they smoked more during the first hours of the day than during the rest of the day; 38.9% smoked even when sick or bed ridden; 88.8% would like to quit smoking; 50% could not determine

when they would like to quit smoking; 72.2% have already tried to quit smoking; 72.2% have tried to quit, but kept going. The subjects that wanted to quit smoking (16) reported reasons related to health (81.4%), social (12.4%) and psychological state (6.2%). Among the factor that make quitting difficult are: the habit they have, the urge to smoke, anxiety, nervousness, lack of adaptation to the support medication, family problems, emotional state and peer pressure and social environments.

Among the former smokers (24), 91.6% answered that they quit all at once and only 8.4% said that they decreased the number of cigarettes until quitting. In relation to how long these people are former smokers, 41.7% had quit for 21-31 years, 25% were in the period of 11 to 20 years, 20.8% had quit for 10 years or less and 12.5% did not answer this question. In being questioned if they had relapses after quitting, 95.8% of the interviewees among the former smokers, answered no.

## **Discussion**

The data in the present study enabled the exploration of an issue with the objective of increasing to larger population contingents, seen the importance of studies considering the problems of public health according to the World Health Organization: tobacco use, especially among workers.

The prevalence of tobacco consumption found in this study was 12.1%, lower rate than the one found in a study made in the city of São Paulo, which had 24%<sup>(2)</sup>. Taking into consideration that the sample was mostly females, 74.3% against 26.7% males, it was expected that the prevalence in tobacco use in this sample was lower, compared to the data mentioned in similar studies<sup>(19-20)</sup>. An important data to observe is the elevated percentage of people that have never smoked (55.7%), the percentage found in other studies were very close<sup>(19-20)</sup>.

Regarding the problems from the use of tobacco, most of the 13 interviewees had a positive answer, declaring that they had suffered physical problems from the use of the substance in question, confirming the data from a similar study<sup>(1)</sup>, regarding death dealing diseases due to the smoking habit, like cardiovascular diseases, cancer, respiratory diseases and others.

Another item related to physical problems, caused by tobacco use, refer to the reasons why quit smoking declared by the smokers in this sample. Among the ones considered smokers, 88.8% would like to quit due to the harm smoking causes to their physical health. The same way, the former smokers in this study had the same motivation to cease using tobacco. Such findings indicate the importance of including this issue in educational preventive actions, conveying the harm consuming tobacco brings to the physical health as well as emotional and social.

In the smokers sample of this study, 72.2% have tried to quit at some point and the difficulties reported regarding quitting were; the smoking habit they have, the urge to smoke, anxiety, nervousness, lack of adaptation to the support medicine, family problems, emotional state

and peer pressure and social environments. This data corroborates to similar studies, in which they point out that quitting tobacco definitively occurs, usually, after several attempts and the relapse rates are high<sup>(21)</sup>. On the other hand, the difficulty in quitting due to the influence of friends and social environment reflect in the attitudes that re-enforce the continuity of the addiction by the smokers, therefore finding it difficult to quit the habit<sup>(22)</sup>.

Among the population that sought out help to quit smoking, there was a demonstration in the several methods there are to reach that objective like the use of nicotine patch, participating in specific group therapy to quit smoking and the use of medication. These methods are similar to the ones found in another study<sup>(20)</sup>.

Among the former smokers, 22 interviewees quit smoking all at once and only 2 subjects decreased the number of cigarettes until they had reached their goal. This small sample is due to the fact that a smoker is reluctant to seek help, as well as the lack of specialized services in the identification of patients at risk, they become barriers in the search for proper treatment<sup>(2)</sup>.

### Final Considerations

Tobacco consumption is considered one of the largest public healthcare problems since its use is in second place according to national researches on the use and abuse of psychoactive substances, only behind alcohol abuse. Having this knowledge, along with the data obtained in the present study, it is worth mentioning that most of the smokers want to quit, but only a few manage to do so without proper help, therefore, it is necessary to provide formal assistance to the rest of the smoking population to obtain success, becoming important that healthcare professionals develop some kind of effective approach towards these smokers. It also must be considered that the success in quitting will depend on identifying the disabling factors involved in quitting the habit.

Over the last 20 years, education and persuasion were not enough to promote political, cultural and social changes related to smoking behavior. Interventions to interrupt tobacco use are not integrated to the routine of worldwide healthcare services.

The results of this sample lead us to reflect that the work environment can act as a disabling factor as well as enabling factor in initiating or quitting the habit, considering the interaction with other smokers and the tensions from the workplace. Therefore, we believe in the viability of studies that contributes to the development of interventions articulated to the workplace, in order to support employees with problems related to tobacco use, identify the risks and propose the related proper treatment.

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