



## **ESTUDO COMPARATIVO ENTRE CARACTERÍSTICAS DO REPERTÓRIO DE HABILIDADES SOCIAIS DE FUMANTES E EX- FUMANTES**

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### **ABSTRACT**

Goal: Deficits in social skills may predispose to the consumption on psychoactive substances; and among them, the tobacco. This paper present data obtained in a research about social skills in smokers and ex-smokers. Metho: 142 undergraduate students enrolled in 2010 (97 smokers and 45 ex-smokers), participated in the study. We used a questionnaire with socio-demographic data, the Social Skills Inventory and the Fagerström Test. Results: Significant difference was found between the means of the scores of smokers and ex-smokers in the F5 Factor from the IHS (Self-control of Aggression in aversive situations). Conclusion: We discuss the hypothesis that the constant use of cigarettes as a coping strategy in adverse social situations could lead smokers to overestimate their social skills. Research on the subject can help therapeutic intervention programs.

### **Keywords:**

Smoking, Social Skills, Smoking cessation

### **RESUMO**

Déficits em habilidades sociais podem predispor o individuo ao consumo de substâncias psicoativas; e dentre elas, o tabaco. Este trabalho apresenta resultados de uma pesquisa sobre habilidades sociais em fumantes e ex-fumantes. Participaram do estudo, 142 universitários matriculados no ano letivo de 2010 (97 fumantes e 45 ex-fumantes). Foi utilizado um questionário para dados sociodemograficos, o Inventário de Habilidades Sociais e o Teste de Fagerström. Houve diferença significante entre as médias dos escores de fumantes e ex-fumantes no Fator F5 do IHS (Autocontrole da Agressividade em Situações Aversivas). Supõe-se que a repetida utilização do tabaco em situações socialmente aversivas, possa levar fumantes a superestimarem suas habilidades sociais. Mais estudos são necessários, para confirmação deste resultado. Pesquisas sobre o assunto podem subsidiar programas de intervenção para tabagismo.

### **Palavras-chave:**

Tabagismo, Habilidades sociais, Cessação tabágica

## COMPARATIVE STUDY BETWEEN THE CHARACTERISTICS OF THE REPERTOIRE OF SOCIAL SKILLS FROM SMOKERS AND EX-SMOKERS

Studies suggest an association between deficits in social skills and disorders related to abuse and/or dependence on psychoactive substances (Caballo, 2003; Morales Sanchez & Ventura, 2011; Rodrigues, 2008; Wagner & Oliveira, 2007). One of the main hypotheses about the matter is that drug use would be a coping resource, used by the smoker before external pressures, and therefore an instrumental nature. Frames of abuse and/or substance dependence would be related somehow to failures in the development of social skills (Caballo, 2003; Rodrigues, 2008).

It is possible that the lack of skill in social situations also increase individual vulnerability, specifically for tobacco smoking behavior: "Clinical practice in attendance with smokers indicates that a lack of dexterity in varied social situations can be considered as a triggering factor for smoking" (Pinho & Oliva, 2007, p.5). Also tobacco consumption would be a resource used by the individual in an attempt to manage feelings of helplessness or lack of skills in times of interpersonal interaction (Epstein, Bang & Botvin, 2007; Pinho & Oliva 2007; Rodrigues, 2008). It also discusses the hypothesis that deficits in social skills facilitate relapse during treatment for quitting smoking. Tobacco relaxes and reduces stress in smokers, particularly in response to stress and feelings of anxiety, sadness and anger and may even increase their perception of control over stressful events. I.e., consumption can be perceived as an effective remedy in order to deal with stress and anxiety (Niaura, Shadel, Britt & Abrams, 2002).

Furthermore, recent studies suggest that there may be a complex interweaving of interpersonal difficulties, some psychopathological profiles and nicotine dependence, among other drugs (Mickens et al, 2011; Speranza et al, 2004; Watson, Vander Veen, Cohen, De Marree & Morrell, 2012). A study on motivational factors that predispose to nicotine dependence and depressive symptoms suggests that young smokers with interpersonal difficulties are more vulnerable to addiction than their counterparts with fewer difficulties in this area. In their study, the Interpersonal Dimension of depressive symptomatology was related to different motivations for smoking and also with the evaluation measures used nicotine dependence. The study found an association between the factor "affiliative connection" (strong emotional attachment to smoking and cigarettes - which represents the tendency of smokers to feel socially connected to tobacco)

and nicotine dependence. Moreover, the association detected in the mentioned work may have a bidirectional nature, resulting in something like a vicious circle. Individuals who feel socially and emotionally connected to the cigarette may perhaps get less interpersonal contacts, which would lead to social isolation and, consequently, a higher level of interpersonal difficulties (Mickens et al, 2011).

Other psychopathological profiles can also hamper the success during attempts to quit tobacco. It is possible that in some smokers, the symptoms related to Social Anxiety Disorder (SAD) plays a central role in the development and maintenance of addiction. Smokers with SAD may be likely to feel the craving during abstinence in social contexts, if they have a history of smoking as a coping strategy in such contexts. I.e., the assumption is that the symptoms of social anxiety and/or SAD can induce craving, favoring relapse and hampering quitting smoking (Watson et al, 2012).

Training in specific social skills can be used as a component in programs of preventive and/or therapeutic nature for smoking (Almanza & Pillon, 2004; Epstein, Botvin & Griffin, 2000; Mundim & Bueno, 2006). There seems to be a consensus on the need to develop research on the nature of the associations between smoking and social skills. Such studies can contribute to the development and/or improvement preventive and/or therapeutic actions for the problem (Almanza & Pillon, 2004; Carvajal, Dawn, Evans, Knee & Nash, 2000; Pinho & Oliva, 2007).

However, compared to other substances, there are still few studies focusing on the relationship between smoking and social skills. Some publications address (wholly or partly) to this theme (Carvajal et al, 2000; Epstein, Bang & Botvin, 2007; Epstein, Botvin & Spoth, 2003; Glaser, Shelton & Van Den Bree, 2010; Nichols, Graber, Brooks-Gunn & Botvin, 2006; Palos, Barrera, Martinez, Oviedo & Oca, 2009; Suelves & Sanches-Turet, 2001; Quing, et al., 2011). One of the major research topics in the research is the relationship between smoking and assertiveness. Assertiveness is considered one of the central dimensions of social skills and is directly related to quality of life (Almanza & Pillon, 2004; Furtado, Falcone & Clark, 2003; Rocha, Guerra & Maciel, 2010). However, research findings also suggest controversy regarding the association between smoking and assertiveness.

In Brazil, the studies on the associations between social skills and

smoking/nicotine dependence are quite rare (Pinho & Oliva 2007; Rodrigues, 2008, Rondina, Martins, Manzato & Terra, 2013). This paper presents study results of cross-sectional nature done with college students. It aims to compare the features of the repertoire of the social skills among smokers and ex-smokers academics.

### **Methodology**

This work was conducted with college students enrolled in undergraduate courses at a public university from the west of São Paulo, during the 2010 school year. Academic students from the courses of Philosophy, Education, International Relations, Social Sciences, Archival Science, Library Science, Occupational Therapy, Phonoaudiology and Physiotherapy were evaluated. These courses were grouped into two areas of expertise: Human and Health. For data collection, we used the following instruments:

Questionnaire to obtain data on sociodemographic characteristics and pattern of smoking among students, specifically designed for this study.

- Fagerström Test for Nicotine Dependence - Brazilian Version (Meneses-Gaya, Zuardi, Loureiro & Crippa, 2009) to assess the degree of nicotine dependence.

- Social Skills Inventory (SSI), (Del Prette & Del Prette, 2001) to assess social skills of students. The results of the SSI can be analyzed in the form of general social skills scores or factor scores (specific skills). The total score allows a first assessment of the existence of resources and deficits in social skills of the respondent. The factor scores are to be interpreted in situational behavioral terms (Del Prette & Del Prette, 2001). The SSI has the following factor scores: F1 = Coping with risk; F2 = self-assertion skills in expression of positive affect; F3 = conversation and social ease; F4 = skills of self exposure to unknown or new situations; F5 = self aggression in aversive situations.

All students enrolled in different undergraduate courses of the university during the 2010 school year were invited to participate voluntarily in the study. Each participant received a Free and Informed Consent Term (FICT), as foreseen in Resolution 196/96, for research involving humans. After signing the consent, the Questionnaire, the Fagerstrom Test and SSI were applied successively. Participants were classified as to the tobacco consumption, as follows: we considered "smoking" (S), who reported that they

currently smoke and have consumed at least 100 cigarettes during their lifetime and "ex-smokers" (ES) those who smoked and declared to have abandoned tobacco in the questionnaires.

Data were analyzed by calculating the prevalence of smoking, and then the associations between the results obtained by students in the SSI and the other variables included in the study were examined and analysis of the multivariate variance was performed. The scores of students in the SSI (total score and Factorial scores) were taken as dependent variables. Sociodemographic characteristics and information related to the pattern of smoking from the participants were considered independent variables.

### **Results**

During the year of data collection there were approximately 2,000 students enrolled in the investigated courses. Of these, 1,211 agreed to voluntarily fill out the instruments for data collection. After collection, 85 were excluded due to errors during the filling out of the forms. The final sample was composed of 1,126 participants, 75.55% female and 24.42% male. Among the 1,126 students evaluated, 97 reported being smokers, according to the criteria adopted in this study, representing 8.61% prevalence of smoking in the selected sample, and 45 ex-smokers. Thus, the study group consists of 142 subjects (68.3% of smokers and 31.7% ex-smokers).

Table 1 presents the sociodemographic characteristics of the study group, in which we highlight that 85.2% belong to the humanities. Among smokers most also belongs to this area (88.7%), but this difference is not significant for the percentage to be proportional to the number of participants in this area. Also there is a significant difference by gender, term the student is in the undergraduate course, work (besides studying) and study period (day or night), having virtually the same percentage of smokers.

The group has significant difference in age, in which the participants were divided into three age groups, and claiming to have a religion or not. Regarding the first variable, age, participants of the third age group (being 26 years old or older) had the largest number of ex-smokers ( $\chi^2 = 10,632, p \leq 0,005$ ). As for religion, those who reported having one are more prevalent among ex-smokers ( $\chi^2 = 5,931, p \leq 0,015$ ).

Table 1

*Frequency and percentage of smokers and ex-smokers by course, school year, working (besides studying), gender, study period, age and declaring whether having or not a religion.*

	Smokers		Ex-smokers		Total	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<b>SEX</b>						
Male	51	35,91	18	12,67	69	48,59
Female	46	32,39	27	19,01	73	51,4
<b>AREA</b>						
Health	11	07,74	10	07,04	21	14,78
Humanities	86	60,56	35	24,64	121	85,21
<b>WORK</b>						
Working	31	21,83	19	13,38	50	35,21
Not working	66	46,47	26	18,30	92	64,78
<b>PERIOD</b>						
Students from the morning period	45	31,69	21	14,78	66	46,47
Students from the evening period	52	36,61	24	16,90	76	53,52
<b>AGE</b>						
Aged from 17 to 20 years old	35	24,64	10	7,04	45	31,69*
Aged from 21 to 25 years old	44	30,98	15	10,56	59	41,54*
Aged from 26 to 62 years old	18	12,67	20	14,08	38	26,76*
<b>RELIGION</b>						
Having a religion	37	26,05	27	19,01	64	45,07**
Not having a religion	60	42,25	18	12,67	78	54,92**

\* Significant difference between percentage ( $p \leq 0.005$ );

\*\* significant difference between percentage ( $p \leq 0.015$ ).

Table 2

*Distribution of averages and standard deviation from the scores of smokers and ex-smokers in the SSI*

	Smokers (97 Subjects)		Ex-Smokers (45 Subjects)	
	Average	SD	Average	SD
<b>Total Escore</b>	98,76	16,261	97,38	16,655
<b>F1</b>	10,248	2,8524	10,131	3,0711
<b>F2</b>	8,762	1,7612	9,083	1,9159
<b>F3</b>	7,5172	1,81833	7,4767	1,65438
<b>F4</b>	3,6509	1,34792	3,3653	1,22818
<b>F5</b>	1,2615	0,78246	0,9596	0,76705*

\* Significant difference between averages in F5 ( $p \leq 0.005$ )

In order to test the existence of differences between smokers and ex-smokers in relation to the total score and the five factors of the SSI was conducted a multivariate analysis of variance (MANOVA), with the scores of the dependent variables with SSI and being a smoker or ex-smoker as an independent variable. Later we explored the interactions with the other categories (course, gender, school year, work, period, age, and religion). Results of the MANOVA showed significant difference for Factor 5 ( $F(1, 141) = 4.636, p \leq 0.033$ ). The total score of the SSI and other factors showed no significant differences, as well as interactions.

### **Discussion**

In this study, no difference was found between the performance of smokers and ex-smokers in the general score of the SSI. In the study by Pinho and Oliva (2007) made based on the application of the SSI, social skills were more developed among ex-smokers when compared to smokers, although the difference between the performance of the two groups did not reach statistical significance. Such work has no comparison between the factor scores of the subjects (Pinho & Oliva, 2007).

This study found a significant difference only in the factor score F5 of the SSI (Self-control of Aggression in Aversive Situations), smokers had on average higher scores. Factor F5 represents the SSI,

(...) Ability to react to aversive stimuli from interlocutor (aggression, joke, lack of control) with reasonable control of anger and aggression. It does not mean not express anger or displeasure, but do it in a socially competent way, at least in terms of control over their own negative feelings (Del Prette & Del Prette, 2001, p.28; our translation).

At first glance, this result is contrary to expectations. However, it is possible that college smokers in this study have been (wrongly) perceived as more socially competent (compared to ex-smokers), precisely because of the use of tobacco as a coping strategy. This is consistent with the assumption that smoking may increase the individual's perception of control over stressors, i.e., consumption can be perceived as an effective remedy in order to deal with stress and anxiety, since tobacco relaxes or reduces tension in smokers, particularly in response to stress and feelings of anxiety, sadness and anger (Niaura et al, 2002). In a Brazilian study conducted by Pinho and Oliva (2007), it was found a rate of more than 80% of

medium and elaborated repertoire of social skills among smokers. The authors suggest the possibility that this result is a reflection of smoking as a way to cope with social situations considered difficult or aversive:

For simple associative mechanisms, smokers spend perceive as more skilled than people really would. The constant use of cigarettes as a coping strategy in adverse social situations could lead many smokers to overestimate their social skills. This would need to be further investigated, as one cannot establish from these results that there is a relationship in which smoking would increase the social skills (Pinho & Oliva, 2007, p.9, our translation).

It is possible, therefore, that college smokers evaluated in this study to have self-assessed as more "competent" socially than those who reported having abandoned consumption due to a false perception of skill in specific occasions for social interaction, resulting from repeated use tobacco as a coping strategy, when facing aversive situations. As mentioned, for Niaura and colleagues (2002), when smokers are exposed to stress in periods during which smoking is restricted, their perceived control and coping with certain social situations may be impaired. According to the authors, this might explain, at least partially, as withdrawal symptoms after quitting smoking end up causing difficulties in dealing with socially stressful situations, in addition, it is possible that deficits in skills needed for skill in social situations (exacerbated by symptoms of withdrawal syndrome) contribute to the risk of relapse in socially challenging situations (Niaura et al, 2002).

In addition, you can also assume that a range of characteristics of smokers somehow hinders the daily confrontation in front of aversive social situations, resulting in the use of tobacco as a strategy for relief from negative feelings. The literature on the comorbidity between smoking and psychiatric disorders presents theoretical models compatible with this assumption. Recent research suggests an association between social anxiety disorder (SAD) and nicotine dependence (Watson et al, 2012). The main hypothesis about the nature of this association is that many smokers turn to tobacco to feel relaxed in social situations, which would favor the dependency. Furthermore, the symptoms present in SAD may induce disorder patients

with addiction (craving) to cigarettes and hinder the abandonment; socially anxious individuals may be more likely to experience craving during abstinence in social situations where they have a history of using tobacco as a coping resource or strategy in the face of such situations. Furthermore, the degree or severity of symptoms was also related to the onset of the addiction, in response to situations - triggers on occasions of social interaction that trigger the urge to smoke (Watson et al, 2012). The work of Watson et al (2012) showed that even subjects who did not meet all the diagnostic criteria for SAD also declared resorting to smoking as a coping strategy in specific social situations. I.e., research suggests that smokers with clinical and non-clinical levels of social anxiety are more vulnerable to relapse during attempts to quit smoking and the symptoms of the problem are predictors of increased craving for cigarettes, in response to situations - trigger, during periods of nicotine withdrawal. Finally, the study revealed that smokers with high levels of social anxiety reported needing more cigarettes believing they need to feel comfortable in social situations. According to the authors, individuals with this profile are in a high risk group for relapse among smokers in treatment, which suggests the need to develop specific intervention strategies targeting this population (Watson et al, 2012). The present study did not investigate the presence of symptoms of social anxiety disorder or other anxiety disorders among participants. However, it is important to note that the literature suggests a strong association between deficits in social skills diverse psychopathological profiles (and among them, related disorders and substance abuse) (Cunha, Peuker & Bizarro, 2012; Murta, 2005; Wagner & Oliveira, 2007). In addition, there is extensive literature on the comorbidity between smoking and psychiatric disorders (Urdapilleta – Herrera et al. 2010).

Everything indicates that the subject is complex. Currently there is consensus that the etiology of psychological disorders can only be properly understood through a multidimensional and integrated perspective. It is considered that biological, psychological and social factors interact, resulting in psychiatric disorders (Barlow & Durand, 2008). It is assumed that studies focusing on the inter-relationship between smoking, social skills and symptoms/anxiety disorders may contribute to the understanding of the subject.

Limitations of our study highlight the characteristics of the study population

(university) and the heterogeneity of the sample of ex-smokers (about the time since they quit smoking), as these are factors that complicate the comparison with other works. Further studies are needed involving populations with different characteristics, in order to confirm the results of this work.

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