ARTIGO ORIGINAL DE TEMA LIVRE

CHARACTERIZATION OF USERS OF PSYCHOACTIVE SUBSTANCES AT THE CLINIC FOR ADDICTIVE DISORDER WITH EMPHASIS ON CHEMICAL DEPENDENCE

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Abstract

The objective of the present study was to outline the profile of psychoactive substance users treated at a clinic for chemical dependence. This is a transversal observational study developed with users of psychoactive substances treated at the Clinic for Addictive Disorder with Emphasis on Chemical Dependence of the Brazilian Red Cross, State of Rio Grande do Sul branch, from 2005 to 2010. Data collection was developed through the analysis of the patients' records (n=1,469), based on surveys on demographic, socio-economic and drug use data. Frequency, average, standard deviation and χ^2 test were used in the statistical analysis, with a significance level of p<0.05. The predominant profile of psychoactive substance users was: young, in the age range between 21 and 30 years, male gender, single, Caucasian, low school and socioeconomic levels, as well as unemployed. Among the licit drugs, the main one was tobacco (86.0%); and for illicit drugs, the main one was crack (83.3%). The use of tobacco, marijuana and inhaled drugs has shown to be significantly related to younger people. The results contribute for the development of intervention programs approaching a multidisciplinary articulation, as an offensive against the problem of drugs misuse.

Keywords: Demographic data. Socioeconomic factors. Substance abuse detection. Health profile. Street drugs.

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CARACTERIZAÇÃO DOS USUÁRIOS DE SUBSTÂNCIAS PSICOATIVAS ATENDIDOS NO AMBULATÓRIO DE TRANSTORNO ADITIVO COM ÊNFASE EM DEPENDÊNCIA QUÍMICA

Resumo

O objetivo do presente estudo foi traçar o perfil dos usuários de substâncias psicoativas atendidos em ambulatório de dependência química. Trata-se de estudo observacional transversal realizado com usuários de substâncias psicoativas atendidos no Ambulatório de Transtorno Aditivo com Ênfase em Dependência Química da Cruz Vermelha Brasileira, filial do Estado do Rio Grande do Sul, abrangendo o período de 2005 a 2010. A coleta de dados ocorreu através da análise dos prontuários de pacientes (n=1.469), com levantamento de dados demográficos, socioeconômicos e de uso de drogas. Na análise estatística, foi utilizada frequência, média, desvio padrão e teste do χ^2 , com um nível de significância de p < 0.05. O perfil predominante dos usuários de substâncias psicoativas foi de jovens, na faixa etária de 21 a 30 anos, sexo masculino, solteiros, cor branca, com baixo nível de escolaridade, baixa condição socioeconômica e sem vínculos empregatícios. Encontrouse maior consumo de tabaco (86,0%) entre as substâncias lícitas, e de crack (83,3%) entre as ilícitas. O uso de tabaco, maconha e inalantes demonstrou-se significativamente associado aos jovens. Os resultados contribuem para a elaboração de programas de intervenção, que abordem uma articulação multidisciplinar, numa ofensiva contra a problemática do uso indevido de drogas.

Palavras-chave: Dados demográficos. Fatores socioeconômicos. Detecção do abuso de substâncias. Perfil de saúde. Drogas ilícitas.

CARACTERIZACIÓN DE LOS USUARIOS DE SUSTANCIAS PSICOACTIVAS ATENDIDOS EN EL AMBULATORIO DE ADITIVO TRASTORNO CON UN ÉNFASIS EN DEPENDENCIA QUÍMICA

Resumen

El objetivo de este estudio fue determinar el perfil de los usuarios de sustancias psicoactivas atendidos en consultas externas dependencia de sustancias químicas. Este es un estudio observacional transversal realizado con los usuarios de sustancias psicoactivas tratadas en el Ambulatorio de trastorno aditivo con énfasis en dependencia de sustancias químicas de Cruz Roja Brasileña, una filial del Estado de Río Grande do Sul, que abarca el período de 2005 a 2010. La recogida de datos se ha producido a través del análisis de los registros

médicos de los pacientes (n=1.469), estudio de datos demográficos y socioeconómicos y el uso de drogas. En el análisis estadístico, se utilizan frecuencias, media, desviación estándar, y con el test de chi-cuadrado, con un nivel de significación de p<0,05. El perfil predominante de los usuarios de sustancias psicoactivas era joven, en el rango de edad de 21 a 30 años de edad, de sexo masculino, soltero, blanco, con bajo nivel de educación, el estado socioeconómico bajo y sin las relaciones de empleo. Encontramos que un mayor consumo de tabaco (86,0%) entre lo lícito y crack (83,3%) entre los ilícitos. El uso del tabaco, la marihuana y los inhalantes ha demostrado ser significativamente asociada con los jóvenes. Los resultados obtenidos contribuyen al desarrollo de los programas de intervención multidisciplinar que se dirigen a un link, una embestida contra el problema del uso indebido de drogas.

Palabras clave: Datos demográficos. Factores socioeconómicos. Detección de abuso de sustancias. Perfil de salud. Drogas ilícitas.

INTRODUCTION

On the last decades, the demand for utilization of psychoactive substances (PAS) has increased expressively.¹ The use of these substances has the capacity to modify the conscience and cognition statuses, altering also the behavior, and looks to be a usual phenomenon of the humanity.²

The undue use of psychoactive substances, as the licit and the illicit ones, brings endless problems for the individual and his collectivity,³⁻⁵ constituting so, more and more, a severe socioeconomic and public health problem that generates familial losses, expenses with hospital admissions and physicians, urban violence, increase of automotive accident indexes, antisocial behaviors and school abandonment, affecting the day to day of majority of people, in some form.⁵⁻⁸ Allied to these factors, there is a stigmatization of this problem by a significant part of population and a confrontation between the increasing demand of chemical dependents and their search for treatment, with the lack of public policies and services contemplating the attendance to this part of the society.⁶

The consumption of psychoactive substances is present all over the world; more than a half of world population has also tried alcohol beverages, in some moment of their lives⁶ and, approximately, a quarter is smoker, being the smoking habit one of the most important causes of premature death, diseases and incapacity in the world.^{9,10} The World Health Organization estimates that about 30% of adult male world population smokes.¹¹ Regarding illicit drugs abuse, the most utilized one is marijuana (144 million of people), followed by amphetamines (29 million), cocaine (14 million) and the opiates (13.5 million, being 9 million users of heroin).^{6,12} In Brazil, epidemiological surveys have been developed focusing the study of drugs use prevalence. A research developed in the year of 2005 by the Brazilian Center of Information About Psychotropic Drugs (*Centro Brasileiro de Informações sobre Drogas Psicotrópicas* — CEBRID)¹³ demonstrated that 22.8% of searched population had already used PAS on their lives, with exception for tobacco and alcohol. The estimate for alcohol dependents was of 12.3% and for tobacco dependents, 10.1%, which corresponds to populations of 5,799,005 and 4,700,635 persons, respectively. The marijuana dependence is among the most common dependences of illicit drugs; out of those who used marijuana in their lives, 1 in 10 became dependent.⁶

The PAS endowed of some potential for abuse are commonly targets of apprehension in the Brazilian society, due to significant increase in their consumption, which becomes progressively earlier among teenagers and even children.⁶ In an approach regarding the use of psychotropic drugs by children and teenagers of Fundação Estadual do Bem-Estar do Menor (FEBEM) of the State of Rio Grande do Sul (RS), 80.9% of interviewed people stated to have already tried some illicit drugs.¹⁴ Another study demonstrates that some of young people starting early the use of cigarettes have maintained its use along the life and, inclusively, started to use other drugs as well.¹⁶ However, the risk factors for drugs abuse by teenagers in Brazil has been little studied; researches indicate that, besides socio-demographic factors (gender, age, social class), the association of drugs use with the parental or familial involvement in consumption of alcohol or other drugs effectively occurs.¹⁷

The present study intended to outline the profile of users of PAS being treated in the Clinic of Addictive Disorder with Emphasis on Chemical Dependence of the Brazilian Red Cross, State of Rio Grande do Sul branch (*Cruz Vermelha Brasileira, filial do Estado do Rio Grande do Sul* — CVB/RS), between the years of 2005 and 2010, approaching for this purpose the demographic and socio-economic characteristics, as well as the standard of use of PAS; and, thus, to know better such population.

MATERIAL AND METHODS

The methodological design utilized in this work is referred to a transversal observational lineation, embracing the period of 2005 to 2010. The study population comes from the Clinic of Addictive Disorder with Emphasis on Chemical Dependence of CVB/RS. The study was approved by the Research Ethics Committee (130/2008).

The CVB/RS attends cases related to undue use of PAS, because it considers chemical dependence as a public calamity case, and has opted to focus its works on the prevention and treatment of such population.

The data collection occurred through the analysis of all medical histories (n=1,469) from patients attended in the referred institution along the years of 2005 to 2010, with lifting of their demographic and socioeconomic data, as well as information about their current or past use of drugs. This data collection was preceded by authorization from the Institutional Review Board/Independent Ethics Committee of Centro Universitário Metodista – IPA, under the protocol number 340/2008, with the presentation of a responsibility term for consultations of medical histories. Such term was signed by the responsible investigators, with the acquaintance of the Clinic of Addictive Disorder with Emphasis on Chemical Dependence of CVB/RS, in which they compromised themselves with the anonymity of patients and the strict use of data for the anticipated study.

After collection, which was intensively developed during March to June 2008, data were organized in a Microsoft[®] Access databank and further converted into a Microsoft[®] Excel 2003 file. The data analysis was developed through simple and crossed tables, graphics and χ^2 statistical test, according to following steps:

- descriptive analysis was developed by the presentation of results as frequencies (qualitative variables), average and standard deviation (quantitative variables);
- 2. the inter-groups comparison was developed by χ^2 test, which was utilized to verify the existence of a significant association between the use of drugs and the study's demographic variables.

The analyses were developed with the help of the Statistical Package for the Social Sciences' (SPSS) software for Windows, version 13.0. The established level of significance was of p < 0.05.

RESULTS

For this study, the data obtained from the medical histories of 1,469 patients attended at CVB/RS were utilized. The sample distribution concerning demographic and socio-economic variables is described in Tables 1 and 2, respectively. The prevalent age range for the PAS users was from 21 to 30 years; 82.5% of them are male and 17.5% female; the majority are single (62.1%) and have white skin color (64.1%). Regarding school level, 42.7% presented incomplete Elementary School, which demonstrates a low learning level among users.

Concerning socio-economic conditions, 12% of interviewed people stated familial income from R\$ 501.00 to R\$ 1,000.00 and 21.4% mentioned their own income in the range

Characteristics	n	%	
Age range (years)			
Up to 20	211	14.4	
21 to 30	531	36.1	
31 to 40	331	22.5	
41 to 50	259	17.6	
Older than 50	132	9.0	
NR	5	0.3	
Gender			
Male	1.212	82.5	
Female	257	17.5	
Scholarship			
Illiterate	21	1.4	
Incomplete Elementary School	627	42.7	
Complete Elementary School	273	18.6	
Incomplete High School	164	11.2	
Complete High School	293	19.9	
Incomplete Higher Education	54	3.7	
Complete Higher Education	30	2.0	
NR	7	0.5	
Skin color			
White	941	64.1	
Black	404	27.5	
Crossbreed	87	5.9	
NR	37	2.6	
Civil status			
Married	406	27.6	
Divorced	96	6.5	
Single	912	62.1	
Stable union	2	0.1	
Widow	28	1.9	
NR	25	1.7	

 Table 1 – Demographic characteristics according to age, gender, scholarship, skin color and civil status

NR: no response.

up to R\$ 500.00; so that, respectively, 70.1 and 60.8% did not provide these data. Regarding the type of dwelling, 60.7% have their own home, being under non-remuneration situation in the moment they sought for assistance in the referred institution.

According to consumption of PAS along their life (Figure 1), 86.0 and 83.8% of addicts, respectively, stated the current use of tobacco and alcohol (licit substances); that is, a predominance of tobacco consumption by these people was verified. Among the illicit drugs, crack occupied the most prevalent position (83.3%), followed by marijuana (60.1%), cocaine (42.3%), benzodiazepines (40.5%), opioids (21.4%), inhaled agents (18.7%), amphetamines (11.3%) and

 Table 2 – Socio-economic characteristics according to type of dwelling, situation, family income and own income

Characteristic	n	%				
Type of dwelling						
Own	892	60.7				
Rented	232	15.8				
Hostel	61	4.2				
Street	6	0.4				
Borrowed	153	10.4				
Other	33	2.2				
NR	92	6.3				
Situation						
Employed	411	28.0				
Unemployed	537	36.6				
Retired	41	2.8				
Having license	78	5.3				
Student	89	6.1				
Others	110	7.5				
NR	203	13.8				
Familiar income (R\$)						
Up to 500	177	12.0				
501 to 1,000	178	12.1				
1,001 to 1,500	46	3.1				
Above 1,500	38	2.6				
NR	1,030	70.1				
Own income (R\$)						
Up to 500	314	21.4				
501 to 1,000	206	14.0				
1,001 to 1,500	36	2.5				
Above 1,500	20	1.4				
NR	893	60.8				

NR: no response.

hallucinogenics agents (9.1%). It is important to emphasize that most part of users stated past use of some psychoactive substance, being the most prevalent ones the inhaled and amphetamines.

Table 3 evidences the relationship between age and use of drugs through the χ^2 test, being verified that tobacco, marijuana and inhaled agents present their respective abuses significantly associated to age. Tobacco is predominantly used by subjects aged up to 30 years, being that 20.6% of individuals older than 50 years reported a past history of its consumption. However, the abuse of marijuana and inhaled agents is reported by younger individuals, aged up to 20 years. In a similar manner, the current consumption of alcohol is almost constant in the different age ranges.

The analysis of data, as found at Figure 2, allows indicating the prevalent use of illicit substances, with exception of inhaled agents, by the male gender. Percentages of 84.3 and 43.3%,



BZD: benzodiazepines.

Figure 1 – Distribution of cases according to utilized drug.

respectively, depict the current utilization of crack and cocaine, and there is no significant data difference regarding the abuse of tobacco and alcohol by both genders, being the current use of tobacco stated by 88.7% of female subjects and 85.6% of male subjects, and the current use of alcohol by 84.7% of female subjects and 83.6% of male subjects. Taking into account the past use of different PAS, it is possible to visualize the significant percentage of female subjects in use of marijuana.

According to criteria determining the relationship between school level and use of PAS (Figure 3), crack, cocaine and inhaled agents are demonstrated as significantly associated to this variable. The current use of crack is reported in the medical history of individuals having school level up to High School; however, its past use is reported by users that are currently studying or have already completed Higher Education. This same relationship for cocaine use looks to be opposite, presenting the current use of this drug linked to individuals with higher school level (with 58.1% still studying or having already completed Higher Education). It was still referred the current use of inhaled agents by subjects with Elementary School and past use associated to High School.

Table 3 – Analysis of the relationship of psychotropic drugs use and age of individuals attended at the Clinic of Additive Disturb Emphasis in Chemical Dependence of Brazilian Red Cross, State of Rio Grande do Sul branch

Drugs	Age (years)					
	Up to 20	21 to 30	31 to 40	41 to 50	Above 50	p-value
Tobacco						
Current	91.2	90.9	85.3	80.9	66.2	< 0.05
Past	7.3	6.6	8.6	11.2	20.6	
Did not use	1.5	2.5	6.1	7.9	13.2	
Alcohol						
Current	87.1	81.4	84.0	86.4	82.5	0.42
Past	10.9	17.6	15.1	13.6	17.5	
Did not use	2.0	1.0	0.8	0	0	
Marijuana						
Current	72.7	62.3	51.2	46.7	28.6	< 0.05
Past	26.7	37.2	46.4	53.3	42.9	
Did not use	0.6	0.6	2.4	0	28.6	
Cocaine						
Current	36.2	41.6	52.9	30.4	33.3	0.05
Past	62.8	57.5	46.0	69.6	66.7	
Did not use	1.1	0.9	1.1	0	0	
Crack						
Current	84.9	83.0	84.7	78.6	50.0	0.44
Past	14.4	16.2	13.2	19.0	50.0	
Did not use	0.7	0.8	2.1	2.4	0	
Inhaled						
Current	34.4	13.0	11.9	0	50.0	< 0.05
Past	65.6	83.0	83.3	100.0	0	
Did not use	0	4.0	4.8	0	50.0	



Figure 2 – Use of psychotropic substances per gender of individuals attended at the Clinic of Additive Disturb Emphasis in Chemical Dependence of the Brazilian Red Cross, State of Rio Grande do Sul branch (CVB/RS)



Figure 3 – Comparison between uses (current, past, no use) of psychotropic substances in association with school level of individuals attended at the Clinic of Additive Disturb Emphasis in Chemical Dependence of Brazilian Red Cross, State of Rio Grande do Sul branch (CVB/RS)

DISCUSSION

The present study demonstrates the profile of drugs use, demographic and socioeconomic characteristics of addicts attended at the Clinic for Addictive Disorder with Emphasis on Chemical Dependence of CVB/RS, providing data that could help healthcare professionals to approach individuals and causes that are similar to those included in this referred sample.¹⁸

DEMOGRAPHIC CHARACTERISTICS

The data analysis allowed us to verify that the mean age of individuals seeking for assistance at our institution is of 33±12 years, being the drugs abuse a common practice in lower age ranges,¹⁸ as the prevalent age found in our study includes users aged from 21 to 30 years. Similar age ranges have been approached in diverse studies^{13,18}, indicating the possibility of factors, such as higher exposition and entrance of drugs in the young ambit, to be related to low age users.¹⁸

According to gender, a clear predominance of male users in the search for attendance was verified. Consequently, the demand from female gender was lower. This outcome demonstrates

the need for a deeper understanding about the motivations inducing individuals to search for treatment, which, probably, are different for both genders and could be pertinent to socio-cultural conditions given the way the concepts of male and female are established.^{17,19}

A high percentage of PAS users had white skin color. Similar data are found in other studies. $^{\rm 18,20}$

In a previous approach, Carlini¹³ verified a balance between married and single people (44.6 and 43.0%, respectively). When comparing these results with data obtained in this work, it is noticed a divergence due to predominance of single subjects (62.1%) as compared to married ones (27.6%). The approached conclusion could be motivated by a series of factors, such as: users' young age range, social losses caused by drug use, familial disaggregation, reflexes from their day to day environment, among others.^{17,18,21,22}

Regarding school level, it was verified that some individuals were illiterate and the major part had incomplete Elementary School. It is supposed that this evidence is related with the assumption that regular drugs use affects all cognitive activities exerted by users, mainly those requiring attention, responsibility and comprehension.¹⁸ These alterations reflect the neurobiological action of drugs in specific brain regions; as an example, we could mention the symptoms of mild euphoria evolving for dizziness, ataxia and motor incoordination, passing to confusion, disorientation and achieving variable grades of anesthesia induced by alcohol consumption.²³ Other examples that should be referred are the damages from marijuana abuse: short term memory deterioration, attention deterioration, judgment and other cognitive functions impairment, coordination and balance damage.^{24,25}

SOCIOECONOMIC CHARACTERISTICS

Respecting to socioeconomic characteristics, about 12% of addicts present familial income between R\$ 501.00 and R\$ 1,000.00 and 21.4% refer their own income as R\$ 500.00. These data are similar to information obtained by the II Domiciliary Lifting about Psychotropic Drugs Use in Brazil,¹³ which indicates that the consumption of psychoactive substances is higher between lower socio-economic levels. According to studies, the low socio-economic condition is a risk factor for drugs consumption, being the poverty a great stress and motivation agent for delinquency between youngsters.²⁶

Through the analysis of dwelling conditions, it was possible to observe that 60.7% of drug users possess their own home and 15.8%, a rented home. A prevalence of 36.6% of all users seeking for attendance is unemployed. This episode could be connected to the low age of this population and the image passed by drug users, of somebody inept to adequately function

within society.^{18,27} Souza and Silveira Filho²⁸ describe, in a research with worker and non-worker students, that only the worker teenagers of less-favored families have shown to be associated to recent use of tobacco.

PREVALENCE OF DRUGS USE

Tobacco and alcohol, licit drugs, are the psychoactive substances of larger consumption in the life (86.0 and 83.8%, respectively) of current users. In the United States, every year, more than 400,000 American citizens die due to utilization of cigarettes, being one out of five deaths related with smoking and similar habits.²⁹ According to CEBRID,¹³ it is estimated that the in-life use of tobacco totalized 44.0%, a percentage that is lower than that of Chile (72.0%) and the United States (67.3%). According the same study, the higher percentage of tobacco-dependent individuals appears in the Central-Western region of Brazil, with 11.5%. On the other hand, the alcohol abuse is an old problem, because its consumption is licit and well-accepted by society.³⁰ Alcohol dependence affects from 10 to 12% of world population.⁶ The in-life use of alcohol, in the 108 larger cities of Brazil,¹³ was of 74.6%, a percentage lower than that of other countries (Chile with 86.5% and the United States with 82.4%); the lower in-life use of alcohol has occurred in the northern region (53.9%) and the higher one in the southeastern region, the percentages achieved almost 14%.⁶ Numberless studies identify as the main risk factors for alcohol consumption starting, the familial disaggregation and social networks utilizing it.^{29,31}

Listing the illicit drugs of higher prevalence of use, in decreasing order, we have: crack (83.3%), followed by marijuana (60.1%), cocaine (42.3%), benzodiazepines (40.5%), opioids (21.4%), inhaled agents (18.7%), amphetamines (11.3%) and hallucinogens (9.1%), observing that many users have already made past use of some PAS, being the most prevalent ones the inhaled agents and amphetamines.

The crack consumption should receive special attention. It is an ascending occurrence in the recent years, with severe repercussions.³² Crack is the name given to cocaine crystals resulting from the mix of cocaine paste with sodium bicarbonate, which are smocked in pipes. Because it is a smocked substance, the user experiences euphoria in less than ten seconds, a fact that became crack very popular in the last decades.^{33,34} The user starts the crack use based on, essentially, three motives: difficulty to find pure or little mixed cocaine, the low cost, and the faster and more intense drug effect.³³ Cocaine and crack are consumed by 0.3% of population; the major part of users is concentrated in America (70%).⁶ As clarified by CEBRID,¹³ in Brazil, the prevalence of in-life use of crack was of 1.5% for the main 108 cities in the country.

RELATIONSHIP OF PSYCHOACTIVE SUBSTANCES USE AND AGE

Studies in different socio-cultural ambits highlight the consumption precocity of diverse psychoactive substances.¹⁸ In the approach developed by this research, respecting to age and psychotropic drugs use, the current use of tobacco was demonstrated to be significantly associated to subjects aged up to 30 years; however, individuals older than 50 years reported a past history of this substance, suggesting that even with a series of anti-smoking campaigns, young people are involving themselves with this drug, possibly because they are not informed yet about the consequent malefactions to health, or by disposition from their everyday environment.^{17,18,21,22,35} The current consumption for younger individuals is still expressive for marijuana and inhaled agents (aged up to 20 years), in accordance with the results obtained by Ferigolo et al.¹⁴ It is important to emphasize that the current use of alcohol has maintained itself almost constant in different age ranges, highlighting so, the society controversial situation respecting the growing repression to use of illegal drugs, and the insidious instigation to consumption of legal drugs.

RELATIONSHIP OF PSYCHOACTIVE SUBSTANCES USE AND GENDER

Even though studies indicate higher prevalence of tobacco and alcohol use by the male gender,^{13,36} our findings do not demonstrate significant difference of these substances utilization by both genders, being it predominant in the female gender. Horta et al.¹⁹ pointed out that a superior standard of tobacco consumption by women than by men could be established in future generations; they mentioned also that smoking women present higher chances to consume alcoholic beverages.

Our data indicate a prevalent use of illicit substances by men, mainly crack and cocaine, indicating a possible search for heavier drugs by the male gender. Besides, approaching the past use of different psychoactive substances, it is possible to highlight the significant percentage of women having made use of marijuana and, although non-significant, a decrease in the use of inhaled agents, suggesting the current and, possibly, future search for substances with higher power of action.^{19,30}

RELATIONSHIP BETWEEN SCHOOL LEVEL AND AGE OF USERS

The data found by this study demonstrate a significant relationship between the use of crack, cocaine and inhaled agents and the level of scholarship; proposing so the hypothesis that current users of crack an inhaled agents, referred by our research as having lower grade of scholarship, are less studious due to neurobiological action of these substances in the brain, which act reinforcing the aggravating effects.³² It is observed that PAS users focus their energies and money on the acquisition and consumption of drugs, decreasing so their performance in school activities.^{26,37} It is still reported the significant past consumption of crack by individuals with higher educational grade (higher education), however, these results are considered divergent from those found in literature, being supposed that the abandonment or non-incidence in this drug consumption by this referred group, is due to the fact of possible toxic effects leading to behavior changes or permutation for other drugs.³²

Regarding the use of cocaine by individuals with higher educational grade, it is possible presuppose the relationship of this variable with the accessibility of more favored classes to this drug, as a function of costs.³⁸

It was mentioned yet the current use of inhaled agents by subjects with elementary school, and past use associated to High School. As described by Soldera,³⁹ who analyzed a students' population, it is very common the use of inhaled agents due to their lower cost and easy acquisition, as the responsible organs to repress their use are not efficient.

CONCLUSION

The consumption of PAS, licit or illicit, is a complex problem, a historic and cultural phenomenon, embracing a series of topics of social and individual life, becoming so a current social problem. The approach of this issue is wrongly dimensioned in many aspects, and due to be a very relevant theme, it deserves higher attention from diverse society subsystems.

Some characteristics, such as those approached in this study, increase the capacity to monitor markers associated to drugs use. Our results demonstrate that the search for PAS looks to be higher between younger populations, presenting higher levels of unemployment and limited educational opportunities. In this sense, it is expected that the results obtained in this research effectively contribute for the elaboration of intervention programs, prevention and treatment strategies, and the approach of an articulation between educational, social and health services, constituting a concrete offensive against the undue use of drugs, as well as serve to encourage the constitution of public, institutional and sector policies.

It is worthy to emphasize that these data reflect the studied sample reality, so that they should not be extrapolated for populations with divergent characteristics. The present study has not exhausted the possibility of future investigations with this thematic, considering the replication of similar approaches a contribution for the comprehension of this biopsychosocial phenomenon.

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REFERENCES

Revista Baiana de Saúde Pública

- 1. Blowey DL. Nephrotoxicity of over-the-counter analgesics, natural medicines, and drugs. Adolesc Med Clin. 2005;16(1):31-43.
- 2. Shahrooz B, Mazda M, Saied MN. Cocaine-induced renal infarction: report of a case and review of the literature. BMC Nephrol. 2005;6(10):1-6.
- 3. Carrera MRC, Meijler MM, Janda KD. Cocaine pharmacology and current pharcotherapies for its abuse. Bioorg Med Chem. 2004;12(19):5019-30.
- 4. Compton WM, Thomas YF, Conway KP, Colliver JD. Developments in the epidemiology of drug use and drug use disorders. Am J Psychiatry. 2005;162(8):1494-1502.
- 5. Silva LVER, Malbergier A, Stempliuk VA, Andrade AG. Fatores associados ao consumo de álcool e drogas entre estudantes universitários. Rev Saúde Pública. 2006;40(2):280-8.
- 6. Laranjeira R, coordinator. Usuários de substâncias psicoativas: abordagem, diagnóstico e tratamento. 2nd edition. São Paulo: Conselho Regional de Medicina do Estado de São Paulo/Associação Médica Brasileira; 2003.
- 7. Carlini EA, Galduróz JCF, Noto AR, Nappo SAI. Levantamento Domiciliar sobre o Uso de Drogas Psicotrópicas no Brasil: estudo envolvendo as 107 maiores cidades do País – 2001. Brasília: Centro Brasileiro de Informações sobre Drogas Psicotrópicas; Departamento de Psicobiologia da Escola Paulista de Medicina; Secretaria Nacional Antidrogas, Presidência da República, Gabinete de Segurança Nacional; 2002.
- 8. Martins MC, Pillon SC. A relação entre a iniciação do uso de drogas e o primeiro ato infracional entre os adolescentes em conflito com a lei. Cad Saúde Pública. 2008;24(5):1112-20.
- 9. Kyrlesi A, Soteriades ES, Warren CW, Kremastinou J, Papastergiou P, Jones NR, et al. Tobacco use among students aged 13–15 years in Greece: the GYTS project. BMC Public Health. 2007;7:3.
- 10. Faeh D, Viswanathan B, Chiolero A, Warren W, Bovet P. Clustering of smoking, alcohol drinking and cannabis use in adolescents in a rapidly developing country. BMC Public Health. 2006;6:169.
- 11. Rudatsikira E, Abdo A, Muula AS. Prevalence and determinants of adolescent tobacco smoking in Addis Ababa, Ethiopia. BMC Public Health. 2007;7:176.
- 12. Chavez KPA, O'Brien B, Pillon SC. Uso de drogas e comportamentos de risco no contexto de uma comunidade universitária. Rev Latino-Am Enfermagem. 2005;13(número especial on-line).

- Carlini EA. II Levantamento Domiciliar sobre Uso de Psicotrópicas no Brasil – 2005. São Paulo: Universidade Federal de São Paulo; Departamento de Psicobiologia; CEBRID; 2005.
- 14. Ferigolo M, Barbosa FS, Arbo E, Malysz AS, Stein AT, Barros HMT. Prevalência do consumo de drogas na FEBEM, Porto Alegre. Rev Bras Psiquiatr. 2004;26(1):10-6.
- 15. Periago MR. Mental health: a public health priority in the Americas. Rev Panam Salud Públ. 2005;18(4-5):226-8.
- Henríquez PC, Carvalho AMP. Percepção dos benefícios do consumo de drogas e das barreiras para seu abandono entre estudantes da saúde. Rev Latino-Am Enfermagem. 2008;6:621-6.
- 17. Bahl FRC, Ingbermann YK. Desenvolvimento escolar e abuso de drogas na adolescência. Estud Pscicol. 2005;22(4):395-402.
- Ferreira Filho OF, Turchi MD, Laranjeira R, Castelo A. Perfil sociodemográfico e de padrões de uso entre dependentes de cocaína hospitalizados. Rev Saúde Pública. 2003;37(6):751-9.
- 19. Horta RL, Horta BL, Pinheiro RT, Morales B, Strey MN. Tabaco, álcool e outras drogas entre adolescentes em Pelotas, Rio Grande do Sul, Brasil: uma perspectiva de gênero. Cad Saúde Pública. 2007;23(4):775-83.
- 20. Laranjeira R, Dunn J, Silveira DX, Formigoni ML, Ferri CP. Crack Cocaine: an increase in use among patients attending clinics in São Paulo: 1990-1993. Subst Use Misuse. 1996;31(4):519-27.
- 21. Horta RL, Horta BL, Pinheiro RT. Drogas: famílias que protegem e que expõem adolescentes ao risco. J Bras Psiquiatr. 2006;55(4):268-72.
- 22. Schenker M, Minayo MCS. Fatores de risco e proteção para o uso de drogas na adolescência. Ciênc Saúde Coletiva. 2005;10(3):707-17.
- 23. Dias AC, Araújo MR, Laranjeira R. Evolução do consumo de crack em coorte com histórico de tratamento. Rev Saúde Pública. 2011;45(5):938-48.
- 24. Tetrault JM, Crothers K, Moore B, Mehra R, Concato J, Fiellin D. Effects of marijuana smoking on pulmonary function and respiratory complications: a systematic review. Arch Intern Med. 2007;16(3):221-8.
- 25. Aldington S, Williams M, Nowitz M, Weatherall M, Pritchard A, McNaughton A, et al. Effects of cannabis on pulmonary structure, function and symptoms. Thorax. 2007;62(12):1058-63.
- Sanchez ZVM, Oliveira LG, Nappo SA. Fatores protetores de adolescentes contra o uso de drogas com ênfase na religiosidade. Ciênc Saúde Coletiva. 2004;9(1):43-55.

- 27. Tavares BF, Béria JU, Lima MS. Prevalência do uso de drogas e desempenho escolar entre adolescentes. Rev Saúde Pública. 2001;35(2):150-8.
- Souza DPO, Silveira Filho DX. Uso recente de álcool, tabaco e outras drogas entre estudantes adolescentes trabalhadores e não trabalhadores. Rev Bras Epidemiol. 2007;10(2):276-87.
- 29. Galea S, Nandi A, Vlahov D. The social epidemiology of substance use. Epidemiol Rev. 2004;26(1):36-52.
- Elbreder MF, Laranjeira R, Siquiera MM, Barbosa DA. Perfil de mulheres usuárias de álcool em ambulatório especializado em dependência química. J Bras Psiquiatr. 2008;57(1):9-15.
- Schenker M, Minayo MCS. A implicação da família no uso abusivo de drogas: uma revisão crítica. Ciênc Saúde Coletiva. 2003;8(1):299-306.
- 32. Oliveira LG, Nappo SA. Caracterização da cultura de crack na cidade de São Paulo: padrão de uso controlado. Rev Saúde Pública. 2008;42(4):664-71.
- 33. De Micheli D, Fisberg M, Formigoni ML. Estudo da efeitividade da intervenção breve parágrafo o uso de álcool e crack: o outras drogas em adolescente atendidos num serviço de assistência primária à saúde. Rev Assoc Med Bras. 2004;50(3):305-13.
- 34. National Institute on Drog Abuse. Serie de reportes de investigación: cocaína abuso y adicción. NIH Publicación. 2005.
- 35. Zanini R, Moraes AB, Trindade AC, Riboldi J, Medeiros LR. Prevalência e fatores associados ao consumo de cigarros entre estudantes de escolas estaduais do ensino médio de Santa Maria, Rio Grande do Sul, 2002. Cad Saúde Pública. 2006;22(8):1619-27.
- 36. Wagner GA, Andrade AG. Uso de álcool, tabaco e outras drogas entre estudantes universitários brasileiros. Rev Psiq Clín. 2008;35(supl 1):48-54.
- 37. Oliveira LG, Nappo SA. Caracterização da cultura de crack na cidade de São Paulo: padrão de uso controlado. Rev Saúde Pública. 2008;42(4):664-71.
- 38. Baús J, Kupek E, Pires M. Prevalência e fatores de risco relacionados ao uso de drogas entre escolares. Rev Saúde Pública. 2002;36(1):40-6.
- 39. Soldera M. Uso de drogas psicotrópicas por estudantes: prevalência e fatores sociais associados. Rev Saúde Pública. 2004;38(2):277-83.

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