Consumption of psychoactive substances and the relation with vulnerability and poverty in Argentina

Roberto Ariel Abeldaño[1]
Alicia Ruth Fernández[2]
Juan Carlos Estario[3]
Carla Aparecida Arena Ventura[4]

A total of 6,122 cases taken from the National Survey of Psychoactive Substance Prevalence - Encuesta Nacional de Prevalencia de Consumo de Sustancias Psicoactivas (ENPreCoSP-2.008) were analyzed in order to determine the prevalence of consumption of legal and illegal psychoactive substances in the 18-34 year old population group in 10 Argentinian provinces and the relationship with Unsatisfied Basic Needs and level of income. Consumption was more prevalent among males and those aged 18-24. Logistic regression of consumption of legal substances in the preceding month showed that Unsatisfied Basic Needs and being male to be risk factors, whereas income above the poverty line was a protection factor (p<0,05).

Descriptors: Street Drugs; Alcohol Drinking; Smoking; Risk Factors; Poverty.

[1] PhD, Post-doctoral fellow, Escuela de Salud Pública, Universidad Nacional de Córdoba, Córdoba, Argentina.

[2] PhD, Profesora Titular, Escuela de Salud Pública, Universidad Nacional de Córdoba, Córdoba, Argentina.

[3] PhD, Profesor, Escuela de Salud Pública, Universidad Nacional de Córdoba, Córdoba, Argentina.

[4] PhD, Profesor Asociado, Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, Centro Colaborador de la OMS para el Desarrollo de la Investigación en Enfermería, Ribeirão Preto, SP, Brasil.

Correspondence

Carla Aparecida Arena Ventura
Universidade de São Paulo. Escola de Enfermagem de Ribeirão Preto
Departamento de Enfermagem Psiquiátrica e Ciências Humanas
Av. Bandeirantes, 3900
Bairro: Monte Alegre
CEP: 14040-902, Ribeirão Preto, SP, Brasil
E-mail: caaventu@gmail.com

SMAD, Rev. Eletrônica Saúde Mental Álcool Drog. Sept.-Dec. 2014;10(3):111-8.

112

O consumo de substâncias psicoativas e sua relação com condições de vulnerabilidade e pobreza na Argentina

Foram analisados 6.122 casos da base de dados da Pesquisa Nacional de Prevalência de Consumo de Substâncias Psicoativas (sigla em espanhol: ENPreCoSP-2.008) para determinar prevalências de consumo de substâncias psicoativas legais e ilegais em pessoas de 18-34 anos de 10 províncias argentinas, e sua relação com Necessidades Básicas Insatisfeitas e nível de renda. O consumo foi mais prevalente entre os 18-24 anos e em homens. A regressão logística sobre o consumo de substâncias legais no último mês evidenciou as Necessidades Básicas Insatisfeitas e o sexo masculino como fatores de risco, enquanto ter renda superior à linha da pobreza foi um fator de proteção (p<0,05).

Descritores: Drogas Ilícitas; Consumo de Bebidas Alcoólicas; Tabagismo; Fatores de Risco; Pobreza.

El consumo de sustancias psicoactivas y su relación con condiciones de vulnerabilidad y pobreza en Argentina

Se analizaron 6.122 casos de la base de datos de la Encuesta Nacional de Prevalencia de Consumo de Sustancias Psicoactivas (ENPreCoSP-2.008) para determinar prevalencias de consumo de sustancias psicoactivas legales e ilegales en población de 18-34 años de 10 provincias argentinas, y su relación con Necesidades Básicas Insatisfechas y nivel de ingresos. El consumo fue más prevalente entre los 18-24 años y en varones. La regresión logística sobre el consumo de sustancias legales en el último mes evidenció como factores de riesgo a las Necesidades Básicas Insatisfechas y el sexo masculino, mientras que tener ingresos superiores a la línea de la pobreza fue un factor de protección (p<0,05).

Descriptores: Drogas Ilícitas; Consumo de Bebidas Alcohólicas; Hábito de Fumar; Factores de Riesgo; Pobreza.

Introduction

The multi-dimensional phenomenon of poverty can be measured and quantified in different methods that take account of the different dimensions that characterize it. On the one hand, the *direct method*, also known as Unsatisfied Basic Needs (UBN), consists of identifying the set of households in which any basic need is not met. On the other hand, the indirect method, also known as "income focus", consisting of calculating minimum income, the poverty line (PL), above which all basic needs are met and identifying those households or individuals whose incomes are below this line. According to this method, a household is considered poor if its income (the sum of income received by all household members) is below the "poverty line"[1].

Psycho-social phenomena stemming from situations of vulnerability, poverty and marginalization include overcrowded living conditions lacking privacy, high alcohol, or other drug, consumption, violence as a way of resolving differences, becoming sexually active at an early age, teenage pregnancy in adolescents with little access to family planning and abandonment, among others[2]. Hence, the main victims of deprivation are usually women, children and the elderly[3].

Consuming psycho-active substances is a complex problem linked to a wide variety of factors, such as social tolerance, lack of law enforcement, the availability of the substances, crime and social violence, family and social breakdown, social deprivation linked to poverty and other factors intrinsic to the consumption of such substances[4-5]. In line with this, some Latin American studies have shown that adolescents whose families live in poverty and social exclusion are vulnerable in regard to alcohol and other psychoactive substances[6-7].

Thus, in addition to causing health problems in those who consume them, legal and illegal drugs also have social effects, as identified by certain authors[8-9]. Consumption of legal and illegal drugs, then, constitutes a growing global and national concern in the political, social and academic areas, as well as in health, not only because of their implications for the individual, but for their impact on families and on society.

The notion of vulnerability can characterize objective and subjective situations involving living conditions of individuals and families in terms of lack of social protection. Social vulnerability is understood as exposure to a risk originating in socio-economic events at a macro level, a notion that includes aspects of being defenseless against a risk, as well as ability to mobilize resources and strategies with which to face adverse events. Vulnerability regarding conditions of poverty and exclusion can translate in different ways and on different levels within the country, within society and even within social groups a single region[10]. This situation can be exemplified based on the socio-economic situation deriving from the 2001 crisis in Argentina in which, according to data from the second semester of the 2003 Permanent Household Survey, almost 50% of the population found themselves below the poverty line, a percentage which grew to 60% in the north of the country.

Material and Method

An analysis was conducted of secondary source data from a database accessible to the public through the website of the Argentinian National Institute of Statistics and Censuses (INDEC) collected in the National Survey of Psychoactive Substance Prevalence (ENPreCoSP-2.008) which surveyed 34,203 individuals in 24 jurisdictions in 2008.

The methodology used cluster sampling, followed by stratification (by geographical location, jurisdiction and housing), three-stage sampling being used in this final step, selecting blocks, then houses, then one individual per household in the final stage.

The sample used for this study was composed of 6,122 individuals corresponding to the statistical regions of the Northeast and Northwest, including the provinces of: Corrientes, Chaco, Formosa, Jujuy, La Rioja, Misiones, Salta, Santiago del Estero and Tucumán.

The instrument used by the institution that carried out the population census consisted of structural clocks: the first block dealt with socio-demographic aspects of all household members, as well as the household structure and material of the housing; the second block dealt with variables concerning socio-demographic aspects, complementary to the first block, education, activity and variables on consumption of psycho-active substances involving the participant selected in the third stage of sampling.

The UBN variable was established according to the methodology used by INDEC in "Poverty in Argentina - *La Pobreza en la Argentina*"[11]. Households with Unsatisfied Basic Needs are those with at least one of the following indicators of privation: Overcrowding, Inadequate Housing, Sanitary conditions or School attendance. Household income was the total monthly household income in Argentinian pesos. The substances were established as: Legal (tobacco, alcohol, solvents, medication) and illegal (marihuana, cocaine, freebase, ecstasy).

Exploratory analysis of the frequencies for the categorical variables and summary measures for the measurable variables were conducted. Logistical regression models were defined to identify risk factors for the dependent variable prevalence of consumption of legal psychoactive substances, with a 95% confidence interval and p value < 0.05. The data were processed using SPSS 18 software. Concerning ethical considerations, the EnPreCoSP-2 008 database is available to the public through the Argentinian National Institute of Statistics and Censuses

SMAD, Rev. Eletrônica Saúde Mental Álcool Drog. Sept.-Dec. 2014;10(3):111-8.

114

website. The project on which this study was based was approved by the Ethical Committee of the Hospital de Clínicas, Córdoba, Argentina.

Results

The total sample analyzed in this study consisted of 6,122 individuals residing in the 10 provinces of the Argentinian Northeast and Northwest, the age range analyzed was from 18 to 34 years old, with a mean age of 26.06 (SD ± 4.878).The population was distributed into 54.67% females and 45.33% males. Age was distributed as follows: 40.40% between ages 18 and 24, the remaining 59.60% aged between 25 and 34. Of the socio-economic variables, the predominant activity was in the Working category (62.72%), while 6.03% of the sample were unemployed. Of the population, 51.62% declared total monthly household income of under $1,000, followed by 28.81% with income between $1,001 and $2,000. As for the indicators of Unsatisfied Basic Needs, in 16.81% of the population there was a lack of a basic sewerage system, this being the most frequently found need in the sample studied. At the time of the study, 77.15% of the sample analyzed did not find themselves living in poverty, as they had no indicator of UBN, whereas 17.71% were living in poverty, with at least one indicator of UBN, according to the above mentioned criteria for measuring poverty (Table 1).

Table 1 – Socio-economic characteristics of the population surveyed. ENPreCoSP-2008. N: 6,122

Variables	Categories	N	%
Activity	Employed	3,840	62.72
	Unemployed	369	6.03
	Not working	1,913	31.25
Total monthly household in pesos	No income	17	0.28
	1 to 1,000	3,160	51.62
	1,001 to 2,000	1,764	28.81
	2,001 to 3,000	534	8.72
	3,001 to 4,000	188	3.07
	4,001 to 5,000	108	1.76
	5,001 to 7,500	40	0.65
	7,501 to 10,000	21	0.34
	10,001 and over	4	0.07
UBN 1–Inadequate housing	No	5,847	95.51
	Yes	275	4.49

continues...

Table 1 – Continuation

Variables	Categories	N	%
UBN 2 – Overcrowding	No	5,714	93.34
	Yes	408	6.66
UBN 3 – No plumbing	No	5,093	83.19
	Yes	1,029	16.81
UBN 4 – Education	No	6,070	99.15
	Yes	52	0.85
UBN Total	No indicator	4,723	77.15
	At least one indicator	1,084	17.71
	2 indicators	265	4.33
	3 or more indicators	50	0.82

With regards to the prevalence of the consumption of psychoactive substances in the sample analyzed, 78.32% reported having consumed a legal substance "at some time in their life", while 69.16% reported having consumed a legal psychoactive substance within the last year; and 54.21% of the sample had consumed a substance of this kind within the last 30 days. Of this group of substances, alcohol was that which had the highest prevalence of use ever, within the last year and within the last month (73.24%, 63% and 42.37% respectively), followed by tobacco (48.68%, 35.82% and 31.51% respectively). Of the illegal substances (marihuana, cocaine, freebase and ecstasy), the prevalence of use was 5.08% at some time in their life, 1.16 in the last year and 0.47 in the last month. In this category, marihuana was the most frequently reported, with a prevalence of 4.85% at some time in life. Table 2 shows the prevalence for each substance analyzed

Regarding the consumption of psychoactive substances according to age, it can be seen that the prevalence is slightly higher in the 18 to 24 age group, in which values for having consumed legal substances at some time in life were 78.57% in the younger group and 78.16% in the older group; consumption in the last year was 69.59% and 68.87% respectively, and 54.51% and 54.01% respectively for the last month (Figure 1). For illegal psychoactive substances, the prevalence was also greater in the 18 to 24 age group. The variables behaved in the same way for having consumed the substance in the last year and in the last month in relation to gender, that is to say, there was a higher prevalence among males than among females for both legal and illegal substances (Figure 2).

Table 2 – Prevalence of consumption of legal and illegal substances. ENPreCoSP-2008. N: 6,122

| Prevalence of consumption	Ever		In the last year		In the last month	
	N	%	N	%	N	%
Legal substances	4 795	78.32	4 234	69.16	3 319	54.21
Alcohol	4 484	73.24	3 857	63.00	2 594	42.37
Tobacco	2 980	48.68	2 193	35.82	1 929	31.51
Tranquilizers	224	3.66	97	1.58	43	0.70
Stimulants	34	0.56	15	0.25	3	0.05
Solvents	46	0.75	9	0.15	3	0.05
Illegal substances	311	5.08	71	1.16	29	0.47
Marihuana	297	4.85	64	1.05	24	0.39
Cocaine	74	1.21	15	0.25	6	0.10
Freebase	22	0.36	5	0.08	2	0.03
Ecstasy	11	0.18	0	0.00	0	0.00
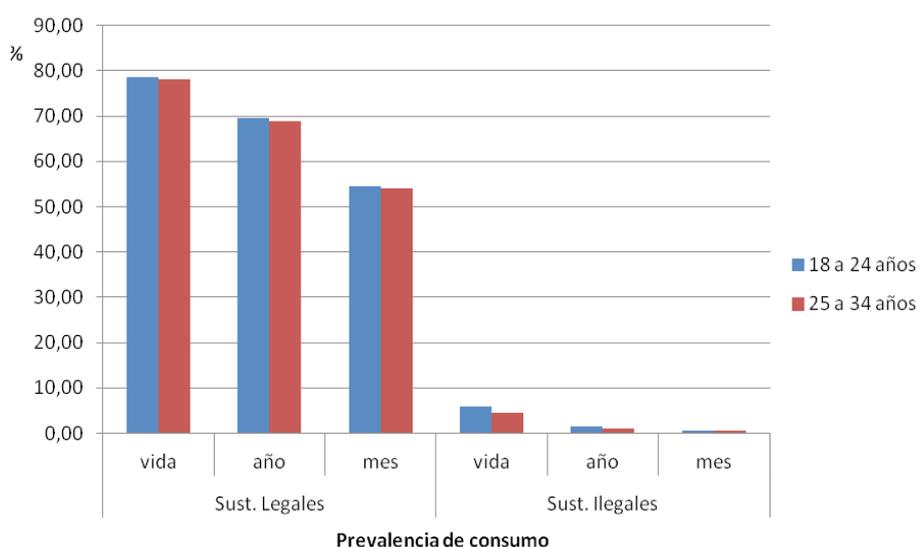
Figure 1- Prevalence of consuming legal and illegal substances according to age group. ENPreCoSP-2.008. N: 6,122
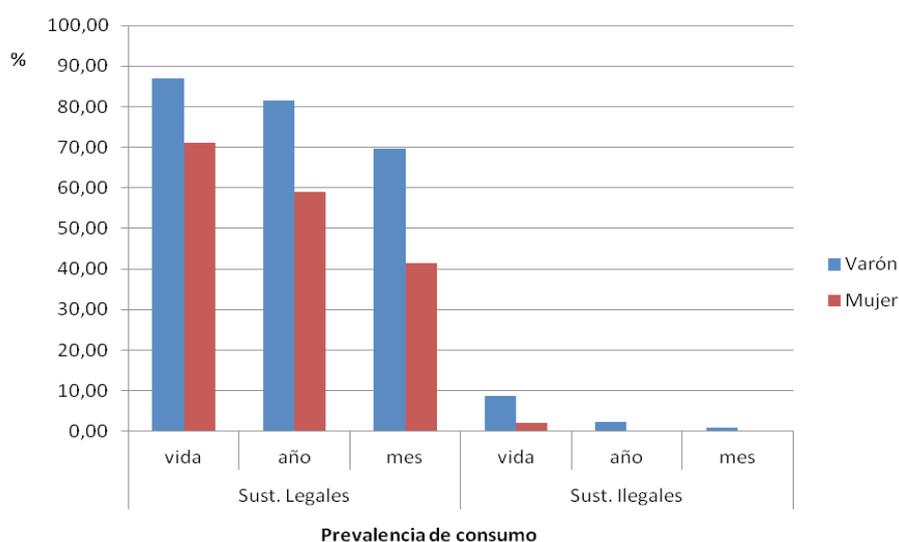

Figure 2 - Prevalence of consuming legal and illegal substances according to gender. ENPreCoSP-2.008. N: 6,122

SMAD, Rev. Eletrônica Saúde Mental Álcool Drog. Sept.-Dec. 2014;10(3):111-8.

116

Table 3 – Binary logistic regression model

Independent variables	B	E.T.	Wald	GI	Sig.	Exp(B)	C.I 95% for Exp(B)	
							Inferior	Superior
Accumulated UBNs	0.245	0.112	4.819	1	0.028	1.278	1.027	1.590
Gender	1.176	0.056	446.238	1	.0000	3.240	2.905	3.614
Age	0.000	0.006	0.000	1	0.985	1.000	0.989	1.011
Poverty line	-0.176	0.081	4.718	1	0.030	0.839	0.716	0.983
Constant	-0.713	0.211	11.474	1	0.001	0.490		

Dependent variable: Prevalence of consumption in the last month (Legal substances)
Sig. of the model: Chi2=486.600 (p = 0.000)
R2 Cox and Snell = 0.080
Hosmer –Lemeshow Test: Chi2 = 18.700 (p = 0.017)

In order to identify the risk factors for consuming legal psychoactive substances, a binary logistic regression model was designed, with the following regressor variables: Unsatisfied Basic Needs, Gender, Age, Poverty Line. Table 3 shows the logistic model defining prevalence of legal psychoactive substances in the last month (y = 1) versus "no prevalence" (y = 0), which proved to be significant in the set (p = 0.001). The variables which can augment risk of consumption are accumulated Unsatisfied Basic Needs (OR: 1.278; C.I: 1.027-1.590) and gender (male) (OR: 3.240; C.I: 2.905-3.614), whereas having an income above the poverty line can be considered a protection factor (OR: 0.839; C.I: 0.716-0.983).

Discussion

The rates found regarding poverty based on unsatisfied basic needs coincide with the findings [7] estimating poverty at 17.3% considering the population that accumulated at least one UBN indicator in 2008, according to the criteria used by INDEC. These estimates are in contrast to those reported by CEPAL researchers who have been reporting the jurisdictions in the north of the country to be socio-economically disadvantaged compared with metropolitan jurisdictions since the 1990s, when the multi-dimensional indicators of poverty are analyzed[12].

The prevalence indicators for consuming legal substances, especially alcohol and tobacco - the most prevalent psychoactive substances, observed in this study are compatible with the data from the

Brazilian Drug report; moreover, this 2005 report published a similar prevalence to that of this study for alcohol consumption, in the case of tobacco it differed as the Argentinian provinces showed higher prevalence. This same report showed that marihuana and cocaine were the most commonly consumed illegal substances in Brazil, similar to the situation in the sample analyzed here, although with both substances being less prevalent in Brazil [13]. On the other hand, in the data obtained in this investigation the consumption of alcohol and tobacco were also lower than those reported by Peruvian researchers, who found prevalence of 94% of the university students sampled had consumed alcohol at some time in their life and 81.9% had used tobacco. In that study, marihuana was also the most prevalent illegal substance that the sample had tried at some time in their life, and freebase was the second most prevalent, whereas in this study it takes third place.

Concerning the consumption of substances in socio-economically vulnerable sectors, the findings of this investigation coincide with those of other studies associating poverty – households with UBNs – as a risk factor for consuming substances [7], as well as with research revealing higher prevalence of tobacco and alcohol consumption in those living in economically disadvantaged geographic sectors [14]. As for the risk factors described here, the observations agree with those found in studies on legal psychoactive studies in Mexico, in which more frequent consumption of alcoholic beverages is found in

males (although that study found no differences in tobacco consumption), whereas in Spain the same authors observed the opposite, i.e., consuming alcoholic beverages and tobacco was more frequent among women[15].

Final considerations

The results of this study suggest the desirability of conducting more complex studies to highlight the relationships between the variables determining the consumption of psycho-active substances, looking into the relationship between poverty indicators from a different technical point of view and indicators of consumption of legal and illegal psychoactive substances in different communities. The utility of the results observed in this study lie in a greater knowledge of the aspects, providing input for decision makers when designing policies for prevalence in poor, vulnerable and excluded groups.

References

1. Instituto Nacional de Estadísticas y Censos. Acerca del método utilizado para la medición de la pobreza en argentina. Documento metodológico de la Encuesta Permanente de Hogares [Internet]. [acesso 1 ago 2011. Disponível em: www.indec. gov.ar

2. Galea S, Vlahov D. Social Determinants and the Health of Drug Users: Socioeconomic Status, Homelessness, and Incarceration. Public Health Reports. 2002;117:S135-S45.

3. Harkonmaki K, Korkeila K, Vahtera J, Kivimaki M, Suominen S, Sillanmaki L, Koskenvuo M. Childhood adversities as a predictor of disability retirement. J Epidemiol Community Health. 2007;61:479–84.

4. Ripple C, Luthar S. Familial factors in illicit drug abuse: an interdisciplinary perspective. Am J Drug Alcohol Abuse. 1996;22(2):147–72.

5. Díaz Negrete B, García-Aurrecoechea R. Factores psicosociales de riesgo de consumo de drogas ilícitas en una muestra de estudiantes mexicanos de educación media. Rev Panam Salud Pública. 2008;24(4):223–32.

6. Martins M, Santos M, Pillon S. Low-income families' perceptions on the use of drugs by one of their members. Rev. Latino-Am. Enfermagem. 2008;16(2):293-8.

7. Acosta L, Fernández R, Pillon S. Factores sociales para el uso de alcohol en adolescentes y jóvenes Rev. Latino-Am. Enfermagem. 2011;19:771-81.

8. Leiva Diaz M, Pereira Vasters G, Lobo da Costa Jr. M. Caracterización de estudiantes de la carrera de enfermería sobre consumo de drogas lícitas e ilícitas. Rev. Latino-Am. Enfermagem, 2010;18:565-72.

9. Fairbairn N, Small W, Van Borek N, Wood E, Kerr T. Social structural factors that shape assisted injecting practices among injection drug users in Vancouver, Canada: a qualitative study. Harm Reduct J. 2010;7:20. doi:10.1186/1477-7517-7-20

10. Fitoussi JP, Rosanvallon P. La nueva era de las desigualdades. Buenos Aires: Manantial; 1997.

11. Instituto Nacional de Estadísticas y Censos (AR). La Pobreza en la Argentina. Buenos Aires; 1984. Serie Estudios INDEC, 1.

12. Hicks N. Latin America and Caribbean Region World Bank. An analysis of the index of unsatisfied basic needs (NBI) of Argentina with suggestions for improvements. En: La Medición de la Pobreza: Métodos y Aplicaciones. Documentos de talleres regionales MECOVI. México: CEPAL; 2000.

13. Vieira Duarte P, De Andrade Stempliuk V, Pereira Barroso L, organizadores. Informe brasileño sobre drogas/Secretaría Nacional de Políticas sobre Drogas. Brasil. Presidencia de la República. Secretaría Nacional de Políticas sobre Drogas. IME USP. Brasília: SENAD; 2009.

14. Mbatia J, Jenkins R, Singleton N, White B. Prevalence of Alcohol Consumption and Hazardous Drinking, Tobacco and Drug Use in Urban Tanzania, and Their Associated Risk Factors. Int J Environ Res Public Health. 2009;6:1991-2006.

SMAD, Rev. Eletrônica Saúde Mental Álcool Drog. Sept.-Dec. 2014;10(3):111-8.

118

15. Ruiz-Risueño AJ, Ruiz JF, Zamarripa Rivera J. Alcohol y tabaco en adolescentes españoles y mexicanos y su relación con la actividad físico-deportiva y la familia. Rev Panam Salud Pública. 2012;31(3):211-20.