RESEARCH PAPER

Consumption of alcohol, tobacco and other drugs among adolescents from an elementary school in a brazilian city

Consumo de álcool, tabaco e outras drogas entre adolescentes do ensino fundamental de um município brasileiro
Consumo de alcohol, tabaco y otras drogas entre adolescentes de la escuela primaria en un municipio brasileño

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Abstract

Background: Drug use among adolescents is an urgent public health concern worldwide.
Objectives: To assess the consumption of alcohol, tobacco and illicit drugs among 7th and 8th graders of a municipal school in Uberaba, Brazil.
Methodology: Cross-sectional exploratory study. Sample of 189 students. Semi-structured and self-administered questionnaire.
Results: Most students were boys (52.9%), with a mean age of 14.3 ± 1.1 years and a household income between 1 and 3 minimum wages (88.9%). Alcohol consumption was significantly higher among approved students (84.2%; $p < 0.0001$) and among those with incomes above three minimum wages (100%; $p < 0.0001$). Tobacco consumption was associated with the 7th grade (79.5%; $p = 0.0004$) and incomes inferior to one minimum wage (67.5%; $p < 0.0001$). There was a significant predominance of illicit drug use only among students with incomes above three minimum wages (66.7%; $p = 0.0176$).
Conclusion: This study points out the need for health education interventions related to alcohol and drugs among adolescents, as well as a better and more effective continuous training of their teachers.

Keywords: adolescent; alcoholic beverages; smoking habit; illicit drugs.

Resumo

Enquadramento: O consumo de drogas entre adolescentes é premente preocupação para a saúde pública em nível mundial.
Objetivos: Avaliar o consumo de álcool, tabaco e drogas ilícitas entre estudantes das 7ªs e 8ªs séries de uma escola municipal de Uberaba, Brasil.
Metodologia: Estudo exploratório de corte transversal. Amostra de 189 estudantes. Questionário semiestruturado, auto aplicável.
Resultados: Predominou o sexo masculino (52,9%), com idade média de $14,3 \pm 1,1$ anos e renda familiar entre 1 a 3 salários mínimos (88,9%). O consumo de álcool foi significativamente superior nos aprovados na escola (84,2%; $p < 0,0001$) e naqueles com renda superior a três sálarios minimos (100%; $p < 0,0001$). O consumo de tabaco foi associado à 7ª série (79,5%; $p = 0,0004$) e à renda inferior a um salário mínimo (67,5%; $p < 0,0001$). Quanto ao consumo de drogas ilícitas houve predominio significativo somente naqueles com renda superior a três salários mínímos (66,7%; $p = 0,0176$).
Conclusão: Esta pesquisa mostra a necessidade de ações de educação em saúde para adolescentes na temática álcool e drogas, bem como uma melhor e mais efetiva educação permanente de seus professores.

Palavras-chave: adolescente; bebidas alcoólicas; hábito de fumar; drogas ilícitas.

Resumen

Marco contextual: El consumo de drogas entre adolescentes es un relevante problema de salud pública relevante en todo el mundo.
Objetivos: La presente investigación tiene como objetivo evaluar el consumo de alcohol, tabaco y drogas ilícitas entre estudiantes de los cursos séptimo y octavo series de una escuela municipal de Uberaba, Brasil.
Metodología: Estudio exploratorio y transversal. Muestra de 189 estudiantes. Cuestionario semiestructurado autoaplicable.
Resultados: Predominaron los varones (52,9%), con una edad media de $14,3 \pm 1,1$ años y una renta familiar entre 1 y 3 salarios mínimos (88,9%). El consumo de alcohol fue significativamente superior en aquellos aprobados en la escuela (84,2%; $p < 0,0001$) y con una renta superior tres salarios mínimos (100%; $p < 0,0001$). El consumo de tabaco fue más frecuente en el séptimo curso (79,5%; $p = 0,0004$) y en aquellos con una renta inferior a un salario mínimo (67,5%; $p < 0,0001$). En cuanto al consumo de drogas ilícitas, se asoció a los jóvenes con una renta superior a tres salarios mínimos (66,7%; $p = 0,0176$).
Conclusión: Esta investigación muestra la necesidad de realizar acciones de educación para la salud para adolescentes enfocadas en los temas alcohol y drogas, así como una educación permanente de sus profesores mejor y más eficaz.

Palabras clave: adolescente; bebidas alcohólicas; hábito de fumar; drogas ilícitas.

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Introduction

This study presents the results of a research carried out within the scope of the Outreach Project "Youth Involvement as a Family and Community Intervention Strategy in Residential 2000", which had the support of the Uberaba Teaching and Research Foundation, Minas Gerais, Brazil (FUNEPU). This research aimed to build bridges between the University and Health Education and Research in school context.

During the outreach interventions, many risk situations were observed involving the adolescents from that community, namely with regard to the consumption of licit and illicit drugs both within and outside the school premises. In addition, adverse situations of interpersonal relationships and living conditions within and outside the classroom encouraged the study researchers to pose the following question: "What is the profile of use of licit and illicit drugs among adolescents enrolled in elementary school?"

Adolescence is understood as one of the most significant stages in human development, carrying with it countless situations in which the individual opens up to new experiences in the search for his/her identity and expression, as well as situations which provide a sense of freedom. It is the phase of discovery and affirmation of their own gender identity and other functions, such as eroticism, pleasure, intimacy and reproduction, together with biological, psychological and social changes (Silveira, Reis, Santos, & Borges, 2011).

Additionally, psychoactive substance industries make huge investments in the dissemination of these substances and seduction for the consumption of their products - licit drugs, such as alcoholic beverages and cigarettes - thus attracting the attention of thousands of young people in the search for pleasure. Moreover, it is important to consider the large-scale introduction of illicit drugs in Brazil, with higher prevalence in underprivileged communities, and easily accessed by vulnerable and at-risk groups, such as the adolescent population (Jesus, Lima, Martins, Matos, & Souza, 2011). Therefore, it is essential to identify and quantify these high-risk situations, as well as explain the determinants or associated factors of such behaviours so as to guide interventions to prevent and treat problems arising from the use of psychoactive substances, which are still insufficient.

Objective

This research study aimed to identify and analyse the consumption of alcohol, tobacco and illicit drugs among adolescents based on gender, school year, grade failure and household income of 7th and 8th graders of a municipal school in Uberaba, Minas Gerais, Brazil.

Background

The high prevalence and consequences associated with licit and illicit drug use among adolescents have stimulated the conduction of several studies in every populated continent. These studies show a high prevalence of consumption of alcohol, tobacco and other drugs among young people, for instance, in Spain (Inglés et al., 2007), Japan (Suzuki, Kimura, Takeda, & Matsushita, 2008), South Africa (Naude, Senekal, Laubscher, Carey, & Fein, 2011) and Australia and the United States (Coomber, Toumbourou, Miller, Staiger, Hemphill, & Catalano, 2012).

In recent decades, the drug use phenomenon has acquired paramount importance due to its dissemination, large-scale consumption among young people, social and health consequences, and the increased crime and violence rates. From the adolescents' perspective, drugs are mechanisms which promote socialisation and well-being, in addition to providing a 'feeling' of freedom and relief from their concerns and fears. On the other hand, there is a heavy price to pay, involving a series of physical, psychological and social problems, which may even end up consuming the lives of adolescents (Jinez, Souza, & Pillón, 2009).

Similar to illicit drug use, alcohol is also one of the main triggers of vulnerability situations in adolescence. According to the World Health Organization (WHO), alcohol is the most commonly used psychoactive substance worldwide and the main drug of choice for children and adolescents. In Brazil, alcohol is the most commonly used drug among adults and its consumption has increased among young people over the last decades, particularly among 12- to 15-year olds (Horta, Horta, Pinheiro, Morales, & Strey, 2007).

The consumption of alcoholic beverages may be associated with tobacco consumption and risk sexual behaviours, leading to situations of vulnerability

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among adolescents, which hinder the intervention of social protection agencies when the young person does not have an adequate family support (Pedrosa, Camacho, Passos, & Oliveira, 2011; Silveira & Santos, 2012). Recent studies indicate that there are no differences between the consumption of these substances according to gender, i.e. drug use tends to be equivalent between boys and girls. In a study using a sample of 971 adolescents aged between 10 and 18 years, of which 55% of participants were male, 33.8% reported having consumed alcoholic beverages in the previous month, 13.5% had used cigarettes, and 6.4% had used illicit drugs (Malbergier, Cardoso, Amaral, & Santos, 2012).

Living with both parents, as well as having their support and supervision and sharing leisure moments, meals and recreational activities are considered protective factors for smoking, drinking, and drug use. In a national study with more than 60 000 Brazilian students, it was observed that students who missed classes without telling their parents had a higher likelihood of consuming tobacco, alcohol, and drugs, whose consumption has been associated with a negative assessment of the family relationship, lack of support/supervision, and substance use by family members (Malta et al., 2011; Malbergier et al., 2012).

This research study was structured to take into account the above mentioned perspectives, together with the characteristics of the local reality, with multiple situations of violence and social, structural and psychological vulnerability within the family. Structural deficiencies in education within this community were also pointed out, such as the lack of venues for recreation, sports and leisure activities, and the fact that teachers are constantly exposed to stressful factors associated with the social and economic contexts (Silveira et al., 2011).

Methodology

A prospective cross-sectional exploratory study was carried out, using a convenience sample, which included 7th and 8th graders of a public municipal school, in Uberaba, Minas Gerais. Of the 203 students,

189 were included in the study. The participants returned the Free and Informed Consent Form which had been signed by their parents or tutors as they were under 18 years of age.

Data were collected between September 2010 and March 2011, using a semi-structured and self-administered questionnaire on health behaviours, which had been previously adjusted in a pilot test at a different school from that in which the study was conducted.

The variables of interest were: use, frequency and age of onset of alcohol, tobacco and illicit drug consumption. Possible explanatory variables were: age, gender, school year, grade failure and household income.

Data were analysed using the Statistica 6.0 software. Firstly, a descriptive analysis was performed using absolute frequencies and percentages for categorical variables, and measures of centrality and dispersion for numeric variables. The chi-square test and the Odds-Ratio (OR) calculation were used to analyse the associations of interest between categorical variables. The ANOVA-F was used to compare ages of onset of licit and illicit drug use. A level of significance of 5% ($p < 0.05$) was adopted for all tests (Agresti, 2007; Govindarajuju, 2007).

This research study was submitted to the Human Research Ethics Committee of the Universidade Federal do Triângulo Mineiro and approved by protocol no. 1764/2011. The directing board of the school where the study took place also approved the study.

Results

The study sample consisted of 189 adolescents: 100 (52.9%) were males and 89 (47.1%) were females. Table 1 shows that 52 boys (52.0%) were in the 7th grade, 31 (31%) had already failed, 40 (40.0%) had a household income below the minimum wage, and a mean age of 14.3±1.2 years, while 55 girls (61.8 %) were in the 8th grade, 35 (39.3%) had already failed, 33 (37.1%) had a household income below the minimum wage, and a mean age of 14.3±1.0 years.

Table 1

Distribution of adolescents from a public school according to the school year, grade failure, household income and age, Uberaba, 2011.

		Male		Female	
		N	%	N	%
School Year	7th grade	52	52.0	34	38.2
	8th grade	48	48.0	55	61.8
Grade Failure	Yes	31	31.0	35	39.3
	No	69	69.0	54	60.7
Household Income (in MW*)	≤ 1 MW	40	40.0	33	37.1
	1 to 2 MW	43	43.0	52	58.4
	≥ 3 MW	17	17.0	4	4.5
Age (years)	13	27	27.0	23	25.8
	14	43	43.0	30	33.7
	15	15	15.0	27	30.3
	16	6	6.0	8	9.0
	17	9	9.0	1	1.1
Total		100	100	89	100

MW: Minimum Wage, equivalent to R$ 540, approximately €180 at the time the study was conducted.

Table 2 shows the consumption of alcohol, tobacco and illicit drugs according to gender, school year, grade failure and household income. A total of 115 respondents had consumed alcoholic beverages: (a) 66 (77.7%) of 85 male adolescents and 49 (63.6%) of 77 female adolescents; (b) 76 (80.9%) of 94 adolescents in the 8th grade and 39 (57.4%) of 68 adolescents in the 7th grade, this being a significant association (p=0.0011) with a 3.1 times higher likelihood of alcohol consumption in the 8th grade than in the 7th grade (OR= 3.1); (c) 96 (84.2%) of the 114 adolescents who had not failed school and 19 (39.6%) of those who had failed, with a significant association (p<0.0001) and a 8.1 times higher likelihood of alcohol consumption among approved adolescents than those who had not been approved (OR=8.1); and (d) 21 (100%) of the adolescents with household incomes equal to or above three minimum wages, 69 (78.4%) with incomes between one and two minimum wages and 25 (47.2%) with incomes inferior to one minimum wage, with a significant association (p<0.0001) and a higher likelihood of alcohol consumption among those with higher household incomes, as shown in Table 2.

Table 2

Distribution of adolescents from a public school regarding the consumption of alcohol, tobacco and illicit drugs according to gender, school year, grade failure and household income. Uberaba, 2011.

		N	%	P#	OR
Alcohol Consumption					
Gender	Male (n= 85)	66	77.7	0.05	1.99
	Fem. (n= 77)	49	63.6		1
School year	7th (n= 68)	39	57.4	0.0011 *	1
	8th (n= 94)	76	80.9		3.1
Grade Failure	Yes (n= 48)	19	39.6	<0.0001 *	1
	No (n= 114)	96	84.2		8.1
Household Income	≤ 1 MW (n= 53)	25	47.2	<0.0001 *	1
	1 to 2 MW (n= 88)	69	78.4		4.1
	≥ 3 MW (n= 21)	21	100		48.1
Tobacco Consumption					
Gender	Male (n= 80)	41	51.3	0.2385	1
	Fem. (n= 57)	35	61.4		1.5

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School year	7th (n= 39)	31	79.5	0.0004 *	4.6
	8th (n= 98)	45	45.9		1
Grade Failure	Yes (n= 19)	10	52.6	0.7882	1
	No (n= 118)	66	55.9		1.1
Household Income	≤ 1 MW (n= 40)	27	67.5	<0.0001 *	71.3
	1 to 2 MW (n= 80)	49	61.3		55
	≥ 3 MW (n= 17)	0	0		1
Illicit Drug Consumption					
Gender	Male (n= 81)	38	46.9	0.0542	1.9
	Fem. (n= 67)	21	31.3		1
School year	7th (n= 59)	22	37.3	0.6021	1
	8th (n= 89)	37	41.6		1.2
Grade Failure	Yes (n= 46)	14	30.4	0.1156	1
	No (n= 102)	45	44.1		1.8
Household Income	≤ 1 MW (n= 46)	14	30.4	0.0176 *	1
	1 to 2 MW (n= 81)	31	38.3		1.4
	≥ 3 MW (n= 21)	14	66.7		4.6

MW: Minimum Wage; #: Chi-square test; *: significant association; OR: Odds-Ratio; 27 adolescents did not answer about their alcohol consumption; 52 did not answer about their tobacco consumption, and 41 did not answer about their illicit drug consumption.

As for tobacco consumption, a significant association was found in the 8th grade (p=0.0004), which had a 4.6 times higher likelihood of consumption than in the 7th grade (OR=4.6) and a significant prevalence among adolescents with lower household incomes (p< 0.0001), with a 71.3 and a 55 times higher likelihood of consumption among adolescents with household incomes inferior to a minimum wage and between one and two minimum wages, respectively, than those with household incomes above three minimum wages. The prevalence rates were similar for both genders, because, despite the higher prevalence among females, no statistically significant difference was observed.

Statistical significance for illicit drug consumption was only observed with respect to household incomes, in that 14 (66.7%) of the adolescents with household incomes equal to or above three minimum wages had a 4.6 times higher likelihood of consumption than adolescents with incomes inferior to a minimum wage (p=0,0176).

Table 3

Distribution of adolescents from a public school regarding the frequency of consumption of alcohol, tobacco and illicit drugs according to gender, school year, grade failure and household income. Uberaba, 2011.

Frequency of consumption		Daily or Weekly		Monthly or Occasional			
Alcohol		n	%	N	%	p#	OR
Gender	Male	28	57.1	21	42.9	0.2383	1.7
	Fem.	14	43.8	18	56.3		1
School Year	7th	30	76.9	9	23.1	0.0001 *	8.3
	8th	12	28.6	30	71.4		1.0
Grade Failure	Yes	19	100	0	0	<0.0001 *	65.6
	No	23	37.1	39	62.9		1
Household Income	≤ 1 MW	22	91.7	2	8.3	<0.0001 *	24.8
	1 to 2 MW	16	30.8	36	69.2		1
	≥ 3 MW	4	80	1	20		9.0
Tobacco							
Gender	Male	17	45.9	20	54.1	0.0689	4.3
	Fem.	3	16.7	15	83.3		1

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						p#	OR
School Year	7th	14	53.8	12	46.2	0.0107 *	4.8
	8th	6	20.7	23	79.3		1.0
Grade Failure	Yes	4	57.1	3	42.9	0.4221	2.7
	No	16	33.3	32	66.7		1
Household Income	≤ 1 MW	10	47.6	11	52.4	0.3946	2.2
	1 to 2 MW	10	29.4	24	70.6		1
	≥ 3 MW	0	0	0	0		-
Illicit Drugs							
Gender	Male	3	13.6	19	86.4	0.5375	3.4
	Fem.	0	0	9	100		1
School Year	7th	0	0	13	100	0.2452	1
	8th	3	16.7	15	83.3		6.1
Grade Failure	Yes	0	0	9	100	0.5375	1
	No	3	13.6	19	86.4		3.4
Household Income	≤ 1 MW	0	0	10	100	0.0267 *	1
	1 to 2 MW	0	0	11	100		-
	≥ 3 MW	3	30	7	70		9.8

MW: Minimum Wage; #: Chi-square test; *: significant association; OR: Odds-Ratio; 34 adolescents did not answer about their frequency of alcohol consumption; 21 did not answer about their tobacco consumption, and 28 did not answer about their illicit drug consumption.

Table 3 shows the distribution of the studied variables according to the frequencies of alcohol, tobacco and drug consumption. There was a higher predominance in the frequency of alcohol consumption (daily or weekly) among adolescents in the 7th grade (p=0.0001; OR=8.3), who had not failed at school (p<0.0001; OR=65.6), and had household incomes up to one minimum wage (p<0.0001; OR=24.8). In turn, the higher frequency of tobacco consumption (daily or weekly) found only in 7th grade adolescents (p=0.0107; OR=4.8) was significant. There was a higher frequency of illicit drug consumption (daily or weekly) among adolescents with household incomes above three minimum wages (p=0.0267; OR=9.8).

Table 4

Descriptive and comparative summary of the age of onset of alcohol, tobacco and illicit drug consumption according to gender, school year, grade failure and household income in adolescents from a public school. Uberaba, 2011.

Alcohol		N	Mean	SEM	p#
Gender	Male.	66	14.23	0.09	0.7408
	Fem.	49	14.18	0.10	
School Year	7th	39	13.64	0.09	<0.0001*
	8th	76	14.50	0.06	
Grade Failure	Yes	19	13.21	0.12	<0.0001 *
	No	96	14.41	0.05	
Household Income	≤ 1 MW	25	13.80	0.13	0.002 *
	1 to 2 MW	69	14.23	0.08	
	≥ 3 MW	21	14.62	0.14	
Tobacco					
Gender	Male.	41	13.83	0.11	0.5904
	Fem.	35	13.91	0.11	
School Year	7th	31	13.65	0.12	0.0165 *
	8th	45	14.02	0.10	
Grade Failure	Yes	10	13.60	0.21	0.1822
	No	66	13.91	0.08	
Household Income	≤ 1 MW	27	13.70	0.13	0.1177

	1 to 2 MW	49	13.96	0.10	
	≥ 3 MW	0	-	-	
Illicit Drugs					
Gender	Male	38	13.92	0.12	0.9371
	Fem.	21	13.90	0.16	
School Year	7th	22	13.59	0.15	0.0092 *
	8th	37	14.11	0.12	
Grade Failure	Yes	14	13.64	0.20	0.1203
	No	45	14.00	0.11	
Household Income	≤ 1 MW	14	13.64	0.20	0.1293
	1 to 2 MW	31	13.90	0.13	
	≥ 3 MW	14	14.21	0.20	

*: Significant Difference; SEM: Standard Error of the Mean; #: ANOVA-f test; MW: Minimum Wage.

According to Table 4, the variable mean age of onset of substance use showed a significant difference: among the 115 adolescents who had consumed alcohol, the mean age of onset was significantly higher in 8th grade adolescents ($p < 0.0001$), who had not failed school ($p < 0.0001$) and had household incomes equal to or above three minimum wages than in those with incomes lower than one minimum wage ($p = 0.0003$).

Discussion

According to Silveira and Santos (2012), greater social vulnerability is associated to low socioeconomic status, as observed in these data, as a factor which can contribute to higher exposure to risk situations, such as school dropout, teenage pregnancy, violence, and alcohol, tobacco and drug use.

It should be highlighted that the following are associated with the consumption of alcoholic beverages: increased violence within and outside the family, the occurrence of traffic accidents, school deficit and dropout, risk behaviours such as STD transmission, aggressions, clinical depressions and unplanned pregnancies. In a qualitative study conducted with adolescents aged between 12 and 20 years, a self-care deficit was identified among adolescents associated with greater exposure to life-threatening situations related to abusive alcohol consumption. This mostly occurred when young people went out with groups of friends (Silva, Padilha, & Santos, 2011). Thus, we recommend the implementation of health education interventions which stimulate self-care behaviours among adolescents so as to keep them away from such risks. In a study that analysed data from adolescents residing

in 27 Brazilian capital cities, it was observed that approximately three-quarters of adolescents between the ages of 13 and 15 years had already experimented with alcohol, approximately a quarter had drunk on a regular basis over the past 30 days with episodes of drunkenness and 9% reported having had alcohol issues. As for drugs, 8.7% reported having already experimented with these substances. Alcohol and drug consumption had occurred early in life (Malta et al., 2011).

The results found regarding the consumption of tobacco are in line with the literature which shows a slight predominance among girls (Horta et al., 2007; Malbergier et al., 2012). A study which was carried out on a population of adolescents aged between 10 and 19 years of the southern region of Brazil identified that the prevalence of smoking in the sample was 12.1%. According to the multivariate logistic regression analysis, risk factors for smoking were: increased age, odds ratio (OR) of 28.7, smoking older siblings, OR of 2.4, three or more friends who smoke, OR of 17.5, and low education level, OR of 3.5 (Malcon, Menezes, & Chatkin, 2003).

Some issues relating to gender and other variables should be considered when analysing the consumption of psychoactive substances, as well as other human behaviours. There is the assumption that respondents from both genders were exposed to different family, social and other situations, which established distinct patterns of substance use. This may be related to historical and social conditions determined by how the concepts of male and female are built. In addition, the consumption of such substances is becoming increasingly similar between boys and girls, which confirms it as threat to public health (Malbergier et al., 2012).

To better measure the individuals' behavioural indicators regarding alcohol consumption, the variables "lifetime use" and "regular use" (drinking at least three days a week) have been integrated into the studies in this area. In this study, we analysed the pattern of consumption in the month prior to the interviews. Our results corroborate those found by Horta et al. (2007), who found a prevalence of 49% for males and 37.9% for females. Another study, which included 499 adolescents from Cuiabá (Brazil), found different results, i.e. girls (52.4%) drank more alcoholic beverages than boys (45.2%); however, the age of onset and the most common type of beverage were in line with our results (Jesus et al., 2011).

A review study, which assessed the effectiveness of intervention programs for the prevention of psychoactive substance use aimed at adolescents aged between 10 and 16 years in school settings, found a wide variety of interventions and implementation strategies, although the conceptual basis of the programs was relatively homogenous. However, most programs were effective in increasing knowledge about alcohol consumption and some of them promoted safer attitudes and expectations about its use among young people (Barroso, Barbosa, & Mendes, 2006).

Several factors influencing alcohol consumption at this age may be highlighted, namely: fragile family and social context - consumption by parents or relatives, low cost and easy access -, media influence that associates alcohol with situations of pleasure and well-being, and the fact that alcohol is widely spread in stores, parties, nightclubs, gas stations and kiosks near the school. These factors may contribute to alcohol dependence in adulthood (Vieira, Ribeiro, Romano, & Laranjeira, 2007).

As for smoking in adolescence, and taking into account the 76 respondents, results showed that 7th grade and 8th grade adolescents had started smoking in the 7th and 8th grades, respectively. These results are in line with the results found in the literature, which indicate that the age of onset of tobacco consumption is between 13 and 15 years and that there is a higher prevalence of use in the 17-19 age range in both genders (Malco et al., 2003).

The same relation that indicates a significantly higher mean age of onset in 8th grade adolescents is also found in the case of illicit drugs. A study of Jesus et al. (2011) which analysed illicit drug use among adolescents showed that 10.5% of boys (age of onset at 15 years) and 5.8% of girls (age of onset at 16 years) had used drugs. Of these, 28.9% had already used cocaine, as well as more than one drug, and 15.7% had used marijuana. Most boys (60.0%) and 33.3% of girls had used drugs occasionally (p=0.0162).

Among the drugs used in the analysis of this study, a similar distribution between genders was observed, in which females had a lower mean age of onset of alcohol and illicit drug consumption. This fact may indicate an earlier contact of girls with these substances or it may start to be perceived as a movement that would lead to more intense drug use patterns among females in future generations. Both scenarios, which seem not to be mutually exclusive, imply immediate concern from the point of view of public health and, more specifically, from the point of view of women's health. Particular attention is drawn to the need for family support and adequate school supervision for these young people so as to eliminate the situations of vulnerability to which they exposed, especially within the community analysed in this study (Cavalcante, Alves, & Barroso, 2008).

Another important factor relates to drug use by family members which, associated with other (psychological and socio-cultural) risk factors among adolescents, such as their family's socioeconomic situation, difficulties in family involvement (relationship problems, conflicts, absence and lack of parents' support), domestic violence, friends who use drugs, evasion, school failure and drop-out, lack of leisure and recreation activities, lack of social and religious support, among others, lead to a higher prevalence of drug use among young students, in various sociocultural contexts, as it is highlighted by several authors (Inglés et al., 2007; Suzuki et al., 2008; Jinez et al., 2009; Naude et al., 2011; Coomber et al., 2012). Some initiatives have focused on such issues (alcohol, tobacco and drug consumption, and other risk situations) by implementing health education strategies in schools aimed at adolescents, such as the outreach project that is associated with this study (Silveira et al., 2011).

The teachers' continuous education to deal with such adolescents is also being consolidated as a strategy to prevent these risk behaviours. This strategy is generally implemented by professional nurses, who are also highly responsible for Self-Care Health Education (Silveira, Reis, Santos, Borges, & Fonseca, 2012).

Conclusion

In relation to the objectives of this research, we have identified that the consumption of alcohol and tobacco is directly and significantly associated with 8th graders, school success and higher household incomes. Regarding drug use, a significant association was found only in the group with greater purchasing power. Similar results were obtained in the associations of variables that compared the frequency and the age of onset of licit or illicit drug use. No statistically significant difference was observed in gender variables, which suggests a similar consumption pattern between boys and girls for the types of drugs under analysis. The high percentage of students who did not answer the specific questions on drug use should be highlighted. This fact may indicate that the results described are underestimated.

The results of this study reflect the need for health education strategies aimed at adolescents, including more inclusive, directed and entertaining methodologies, and stimulating these students' critical reflection on the risk and vulnerable situations related to their sexual behaviour and alcohol, tobacco and illicit drug consumption. It is worth mentioning that the results found on vulnerabilities are part of a research study conducted during the abovementioned outreach project and that preceded the approach to these issues in prevention workshops. The capacity building of the teacher who is in direct contact with these students should also be a priority. The teacher should be provided with specific tools for addressing these issues, among others, and receive the support of the teams in primary health care units of local reference.

The limitations of this study are related to the fact that it was carried out in a single school of a specific city from a Brazilian state. However, some conclusions may be drawn from these results as the local reality is similar to the scenario found in many Brazilian regions and cities.

Finally, when considering the social, economic and cultural deficits of the population under analysis, there is a clear need for greater coordination between the Safety, Social Security, Education and Health sectors. These sectors must work together to reduce the risks of vulnerability inherent in the complexity of adolescence-related issues. Thus, the role of the University is explained. By developing research, it allows for an understanding of the local reality that may lead to intervention strategies in the form of university outreach programs.

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