

## RISK FACTORS FOR ALCOHOL USE IN THE LIFE AND IN THE YEAR AMONG HIGH SCHOOL TEENAGERS

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This study aimed to evaluate the risk factors associated with alcohol use in life and in the year for high school teenagers. The study included 568 teenagers between 14 and 20 years. Data were collected through an anonymous self-completion questionnaire. The analyzes included: a) description of the distribution of the variables in the sample, b) chi-square test, c) logistic regression. Regarding the use of alcohol, the risk factors observed were: gender, education, socioeconomic status, frequent bars, hanging out with friends and not play sports. These factors identified can directly assist in the development of preventive actions in relation to drug use among teenagers.

Descriptors: Adolescent; Substance Related-Disorders; Risk Factors.

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## **FATORES DE RISCO PARA O USO NA VIDA E NO ANO DE ÁLCOOL ENTRE ADOLESCENTES DO ENSINO MÉDIO**

Buscou-se, neste estudo, verificar os fatores de risco associados ao uso na vida e no ano de álcool por adolescentes do ensino médio. Participaram deste estudo 568 adolescentes entre 14 e 20 anos. Os dados foram coletados por meio de questionário anônimo, de autopreenchimento. As análises envolveram: a) descrição da distribuição das variáveis na amostra estudada, b) teste qui-quadrado e c) regressão logística. Em relação ao uso de álcool, os fatores de risco observados foram sexo, escolaridade, nível socioeconômico, frequentar bares, sair com amigos e não praticar esportes. Esses fatores identificados podem auxiliar diretamente na elaboração de ações preventivas em relação ao uso de drogas entre adolescentes.

Descritores: Adolescente; Transtornos Relacionados ao Uso de Substâncias; Fatores de Risco.

## **FACTORES DE RIESGO PARA EL USO EN LA VIDA Y EN EL AÑO DE ALCOHOL ENTRE ADOLESCENTES DE LA ENSEÑANZA MEDIA**

Este estudio buscó verificar los factores de riesgo asociados al uso en la vida y en el año de alcohol por adolescentes de la enseñanza media. Participaron de ese 568 adolescentes entre 14 y 20 años. Los datos fueron colectados a través de cuestionario anónimo de auto-relleno. Los análisis involucraron: a) descripción de la distribución de las variables en la muestra estudiada; b) prueba Jue-cuadrado; c) regresión logística. Con relación al uso de alcohol, los factores de riesgo observados fueron sexo, escolaridad, nivel socioeconómico, frecuentar bares, salir con amigos y no practicar deportes. Estos factores identificados pueden auxiliar directamente en la elaboración de acciones preventivas con relación al uso de drogas entre adolescentes.

Descriptores: Adolescente; Trastornos Relacionados con Sustancias; Factores de Riesgo.

### **Introduction**

Although there is great concern about the consumption of illicit drugs, studies show that alcohol and tobacco are the most used drugs among teenagers<sup>(1-3)</sup> and they present early use because they are legalized, then the access to the same is facilitated, besides they are socially accepted in all social levels<sup>(4)</sup>. Although alcohol is the drug responsible for the majority of admissions for addiction, its emphasis is less, for example, in the media (in terms of prevention campaigns) than the emphasis of cocaine<sup>(2)</sup>. In the case of alcohol, for example, you can see the opposite in the media, since many campaigns end up encouraging the consumption of these substances, fact that can exert influence in teenager behavior<sup>(5)</sup>.

Teenagers are considered a risk group in relation to the use of psychoactive substances, since they are going through a period of great and intense transformations which generate a series of contradictory feelings<sup>(6-7)</sup>. Due to the own characteristics of this stage there is much talk about the issue of vulnerability of adolescents. These are more vulnerable, especially to pressure from the group of friends during this period and in function of the own need to experience new sensations and the unusual they may engage in destructive activities, such as drug use<sup>(8)</sup>.

Therefore, it is important to emphasize that at this stage of development the individual ceases to live only in the family and goes to live according to the friends too,

seeking social insertion as a form of personal identification, fact that places him in front of diverse situations among these the contact with alcohol<sup>(9)</sup>.

Alcohol is a substance present in the social context in both situations of celebration or suffering because it helps to release emotions besides providing initial reactions of instant welfare as a way of resolving conflicts and uncertainties. Thus, the preference for alcohol consumption by adolescents occurs by initial effects caused by it as well as for easy insertion in the peer group that it allows<sup>(9)</sup>.

However, the use of alcohol has physical, mental and social consequences of short, medium and long term. Early contact with this substance before age 16 makes the individual more vulnerable as it increases significantly the risk of consuming too much alcohol in adulthood<sup>(10)</sup>. Furthermore, contact with alcohol can bring to the teenagers losses related to violence including sexual abuse, STDs contamination, unwanted pregnancies, behavioral and conduct disorders, school absenteeism, learning disabilities, family problems, job loss, financial loss and death from traffic accidents and homicides, which represent the leading cause of death among young people<sup>(9-10)</sup>.

However, despite the teenagers being seen as a risk group regarding the use of psychoactive substances, literature, in general, indicates that the factors that may lead them to drugs use are varied. The main of them are related to individual and social characteristics, including in this last, society as a whole, the family and the peer group. Considering this aspect, it can be said that there is a set of factors that when acting in the context in which there is a determined teenager, eventually leads him to the use of drugs<sup>(6)</sup>.

Due to this fact, many researchers today are trying to identify and understand the factors that may contribute to drug use (called risk factors) and those that can help prevent the use of psychoactive substances (called protective factors). In this regard, current studies have identified common aspects that contribute to or take away the young of the abuse of psychoactive substances.

With regard specifically to the use of alcohol, the literature indicates that the risk factors associated with the use of this substance refers to the absence of parental interaction, to study in public school, school failure<sup>(11)</sup> as well as variables such as age, male gender, economic level, not living with parents, history of alcohol use in the family, start to work, do not have religion, use of tobacco and illicit drugs and depression<sup>(9)</sup>.

Thus, from this point of view the present study sought to highlight the main risk factors associated with alcohol use in life and in the year by teenagers of high school, since these are the drugs most used by them.

## Materials and Methods

This study had as population the adolescents inserted in high school in the city of São Carlos. For its realization

a sample of these adolescents was selected from the drawn of schools and classes present in order to compose a representative sample. Thus, participants of this study were 568 adolescents of both sexes aged between 14 and 20 years from different socio-economic levels who were attending high school in previously drawn schools and classes.

For data collection was used an anonymous and self-completion questionnaire consists of 62 closed questions addressing general data relating to the participant (demographic data such as gender, age, education level, etc.) and relating to the organization of his family (education level, economic status, etc.), as well as questions that assessed the level of knowledge and opinions of the adolescent about drug use and the pattern of consumption of psychoactive substances by the same. This questionnaire was developed from a literature review of the area based on instruments that have been standardized for the Brazilian reality. To obtain data on the use of drugs was used the instrument model proposed by WHO, which was adapted to the Brazilian context by Carlini-Cotrim and Barbosa<sup>(12)</sup>. This instrument was tested in a pilot study in order to correct the imperfections and check the collection procedure.

The collection was carried out in the classroom on days previously marked with the school, teachers and students. To participate in this study, adolescents were authorized by parents or guardians who signed a Statement of Consent. Stands out that even in possession of parental consent, adolescent participation in the survey was voluntary. Furthermore, adolescents were informed about the research and the contribution of the same in the study emphasizing that the data was confidential. It is noteworthy that this study was approved by the Ethics Committee in Research of the Faculty of Philosophy, Sciences and Letters of Ribeirão Preto, University of São Paulo.

The data analysis was performed with the assistance of SPSS (Statistical Package for the Social Sciences). First, descriptive analyzes were conducted which involved: a) description of the distribution of the variables in the sample, b) Chi-square test. After, the multiple logistic regression was performed in order to verify the estimates of the odds ratios which measure the risk of a certain group of individuals exposed to a factor to use or not to use a particular psychoactive substance compared to another group not exposed.

## Results

From the data collected in relation to alcohol use, the risk factors observed in this study were: gender, education, socioeconomic status, frequent bars, hanging out with friends and not play sports. Table 1 shows the statistically significant variables considering as dependent variable the alcohol use in life.

Table 1 - Assessment of factors associated with alcohol use in life among high school adolescents in the city of São Carlos, SP, Brazil (n=568)

Associated factors	Groups	p value	RP*	IC 95%**
Gender	F x M	0,025	1,64	1,06 - 2,54
Socioeconomic status	Low x high	0,033	5,37	1,14 - 25,26
	Low x average	0,002	2,19	1,34 - 3,59
Hanging out with friends	Yes x no	0,007	2,16	1,23-3,79
Abandon studies	Yes x no	0,017	0,43	0,22 - 0,86
Watch TV	Yes x no	0,012	1,88	1,15-3,07
Frequent bars	Yes x no	0,035	2,33	1,06-5,12
Date	Yes x no	0,004	2,12	1,26-3,55

\*odds ratios; \*\*confidence interval

Analyzing the above submitted data it can be said that:

a) the group consisting of female adolescents had 1.64 times more likely (IC 95% 1,06; 2,54) than males to use alcohol in life;

b) the adolescent of the low social level group had 5.37 times (IC 95% 1,14; 6,26) more likely than upper and upper middle classes and 2.19 times more likely (IC 95% 1,34; 3,59) than adolescents from middle class to use alcohol in life;

c) the group of teenagers who usually hang out with friends of the opposite sex presented 2.30 times more likely (IC95% 1,41; 3,76) to use alcohol in life than those who do not usually go out.

d) the group of adolescents who have thought about abandon their studies had a chance 0.43 times higher (IC

95% 0,22; 0,86) to use alcohol in life compared to the group who never thought about abandon their studies;

e) the group who stated watching TV in their free time presented 1.88 times more likely (IC 95% 1,15; 3,07) to use alcohol in life than the group that did not watch;

f) the group of teenagers who usually frequent bars during their leisure time presented 2.33 times more likely (IC 95% 1.06; 5,12) than those who did not frequent with regard to use of alcohol in life, while the group of teenagers who dates presented 2.12 times more likely (IC 95% 1,26; 3,55) than those who do not date in this same aspect (use of alcohol in life).

Table 2 presents the statistically significant variables considering as the dependent variable the use of alcohol in year.

Table 2 - Assessment of factors associated with alcohol use in the year among high school adolescents in the city of São Carlos, SP, Brazil (n=568)

Associated factors	Groups	p value	RP*	IC 95%**
Gender	F x M	0,000	2,13	1,42-3,20
Education	High school 1st year x 3rd year	0,008	2,95	1,32-6,58
Socioeconomic status	High x average	0,000	2,50	1,59-3,92
Hanging out with friends	Yes x no	0,001	2,30	1,41-3,76
Play sports	No x yes	0,004	1,79	1,20-2,67
Going to the movies	No x yes	0,013	1,94	1,5-3,26
Date	Yes x no	0,004	1,86	1,25-3,08

\*odds ratios; \*\*confidence interval

From the data described in above table it can be said that:

a) the group of females had 2.13 times more likely (IC 95% 1,42; 3,20) than males to use alcohol in the year;

b) the first year group of high school had 2.95 (IC 95% 1,32; 6,58) more likely than the third year of using alcohol in the year;

c) the low social group presented 2.50 times more likely (IC 95% 1,59; 3,92) than the middle class group to use alcohol in the year.

d) the group of teenagers who hang out with friends in their free time presented 2.30 times more likely (IC95% 1,41; 3,76) to use alcohol in the year than those who do not usually go out;

e) the group of teenagers who said they did not play

sports during their leisure time presented 1.79 times more likely (IC 95% 1,20; 2,67) to use alcohol in the year than the group of teenagers who claimed to perform some sports activity;

f) the group that did not go to the movies presented 1.94 times more likely (IC 95% 1,15; 3,26) for alcohol use than the group who go to the movies, and the group who dates had 1.86 (IC 95% 1,25; 3,08) more likely to use the psychoactive substance in question in the year than the group that does not date.

## Discussion

In general, it is possible to say that the use of alcohol by adolescents in each of the targeted consumption

patterns (use in life and year) seems to be associated with specific variables. It is interesting to note that specific school indicators appear in the two patterns of alcohol consumption particularly the variable “ever thought about abandon studies” (which was associated with use in life) and education level (which was associated with the use of alcohol in the year). This indicates, in some form, the importance of considering aspects related to the school context as factors that may influence in the substance use by adolescents. However, it is important to note that the variable “ever thought about abandon studies” may be related to a number of other aspects since teenagers can think about abandon studies because they are not doing well in school, because they have to work, because they do not like to study or even because they are using psychoactive substances, particularly alcohol.

It is interesting to note also that the variable “school performance” was not associated with alcohol use in any of consumption patterns. However, other studies have found an association between these aspects. In this sense, specifically with regard to massive use of alcohol, for example, several studies have found a strong association between the use of psychotropic substances and poor school performance, including massive use of alcohol<sup>(13)</sup>.

Thus, future research would need to assess other aspects related to the school context allowing a more accurate analysis of the role of school indicators as factors that may prevent or influence the adolescents’ involvement with psychoactive substances.

In relation to alcohol use and the “gender” variable some considerations are also necessary. Both with regard to use in life as compared to use in year it was found that women had more chances to use of this substance compared to males, ie, showed an increased risk of consuming it. However, studies that worked with the use of alcohol by teenagers considering the gender distribution do not found association between these variables<sup>(7)</sup>, while others, despite showing the controversies with regard to gender, highlight an increased risk for males (9 to 10.14). In one of these studies the authors found that 37.8% of respondents said they had used alcohol at least once during the last week and these adolescents were generally male (RR=1,2 IC95%1,0-1,4; p<0,005)<sup>(14)</sup>.

Regarding the use of alcohol and gender it considers differences between gender with regard to the occurrence of drunkenness sometime in life whose percentages were higher for males. Furthermore, according to the authors, “males had a risk about three times higher for the occurrence of two or more cases of drunkenness in the last month (RP=3,10 IC95% 2,08-4,62)”<sup>(7)</sup>.

Therefore, it is important to highlight that the data obtained in this study may indicate some gender changes with respect to both the use of psychoactive substances and the type of drug used, an issue that needs to be explored in future research, since alcohol consumption among female adolescents has increased.

Also in relation to use of alcohol in life, the data relating to the activities performed by adolescents in their leisure time deserve attention. These data show that

the group of teenagers who hang out with friends of the opposite sex had 2.16 (IC 95% 1,23; 3,79) times more likely to use alcohol in life than the group of adolescents who do not hang out. This pattern was also observed with regard to the use of alcohol in year by adolescents.

This finding emerges the question about influence of the group of friends in the use of psychoactive substances. So, if the teenager hang out with friends who use alcohol, for example, he can start using this substance by the pressure of the group, to feel integrated into the same and not be seen, for example, as a conservative person among his friends. However, the influence of the group of friends can not be seen in a simplistic way, since the affiliation with peers who approve or tolerate the use of psychoactive substances corresponds to the end of a journey in which many factors fit together increasing the likelihood of abusive use. However, it is necessary to indicate the other side since friends can have a positive influence when they have goals and expectations for lifetime achievement and movements that lead to youth participation and solidarity<sup>(15)</sup>.

Another interesting finding observed regards to the “watch TV” activity. Verifying the results it is noted that the group that said watching TV in their free time presented 1.88 times more likely (IC 95% 1,15; 3,07) to use alcohol in the life than the group who do not watch. This finding is consistent with the literature of the area about the media’s influence on adolescent behavior. In the case of television, it is possible to raise a series of advertisements for alcoholic beverages, particularly beer, which are daily displayed by it. These commercials are often flashy and bring generally interesting situations involving youth and recreation. The teenager, who is in search of an identity, can be directly influenced by this type of stimulus. Thus, the consumption of alcohol among adolescents was associated with media directed to drink advertisements, since it contributes to the formation of habits and consumption stimulus<sup>(11)</sup>.

However, the advertisement itself does not have a devastating effect in terms of persuasion. Furthermore, the information transmitted can generate a critical reflection moderating the potential risk of exposure<sup>(15)</sup> and this vehicle can be used in primary prevention and to invite teenagers to diverse and interesting activities in outdoors<sup>(16)</sup>.

The data also show that the group of teenagers who usually frequent bars during their leisure time presented 2.33 times more likely (IC 95% 1.06; 5,12) than those who did not frequent bars with regard to use of alcohol in life, while the group of teenagers who dates presented 2.12 times more likely (IC 95% 1,26; 3,55) than those who do not date in this same aspect (use of alcohol in life).

In the specific case of “frequent bars” it can be said that the fact of the teenager be in a public environment in which this substance is available can take him to use the same, because despite being forbidden to sell alcoholic beverages to minors, this, in most cases, is not fulfilled. Moreover, even if there is control, if the teenager is in a group with older individuals, they may request the drink and share with the teenager. Thus, the easy access and availability of the substance can conduce the individual to use it.

Finally, the teenager who “date” may have an influence on the use of substances. This is because if the teenager is dating a person who usually use this substance (in this case alcohol), it can start to use it to accompany the mate or to not feel too much conservative, since the evaluation of the other has a strong influence on the adolescent.

Thus, for example, the consumption of alcohol among Spanish adolescents is consistent in the use of beer and combined, preferably in public places, with friends [and / or boyfriend/girlfriend] and on weekends<sup>(17)</sup>. This is an interesting finding, since the weekend is the period that adolescents have greater availability to undertake leisure activities.

On the other hand, regarding the use of alcohol in the year the results of the analysis showed that the statistically significant variables with respect to activities performed by adolescents during their leisure time were: go out with friends of the opposite sex, not play sports, not go to the movies and date.

The group of teenagers who said they did not play sports during their leisure time showed 1.79 times more likely (IC95% 1,20; 2,67) of use alcohol in the year than the group of teenagers who said do some sports activity. This is an important finding, since it portrays the importance of sports in everyday of the teenager. This is because if the individual usually individual performs some kind of sporting activity this can lead him to present a greater health concern that can actually contribute to the non-use of psychoactive substances, in this particular case, the use of alcohol. This finding draws attention to the evaluation of the possibilities of sports offered to the individual in the city that the same lies. Sports incentives should be a constant concern since the sports activities can function as a protective factor in relation to the use of psychoactive substances.

However this finding needs to be further explored in future research, evaluating, for example, individuals who do not play sports as well as the type of sports activity performed and the use and non-use of psychoactive substances.

### Final considerations

From the data presented and discussed above, it can be said, then, that the use of alcohol by adolescents, as well as any other type of substance is an issue that needs more focus in the current social context, since abusive consumption of these substances can cause a lot of problems for the individual, both in the present moment of his life as later in adulthood.

Thus, the data obtained in this study can be used as a basis for the development of preventive work with adolescents with regard to the use of drugs, especially alcohol. It is emphasized that preventive actions are possible when there are actually trained professionals who assist this age group individually and / or in groups in order to intervene in risk factors related to both the familiar and psychological and social aspects<sup>(9)</sup>.

However, this issue is complex and requires further research in order to broaden the knowledge on this

issue, since addressing the issues of the use / abuse of psychoactive substances is not a simple task and certainly a single discipline never give account of the phenomenon is not addressed from the perspective of interdisciplinarity<sup>(18)</sup>.

### References

1. Guimarães JL, Godinho PH, Cruz, R, Kappann J, Tosta LA Junior. Consumo de drogas psicoativas por adolescentes escolares de Assis, SP. *Rev Saúde Pública*. 2004; 38(1):130-2.
2. Galduróz JCF, Noto AR, Carlini EA. IV Levantamento sobre o uso de drogas entre estudantes do 1o e do 2o graus em 10 capitais brasileiras. São Paulo: CEBRID; 1997.
3. Rebolledo EAO, Medina NMO, Pillon SC. Risk factors associated with drugs abuse among adolescent students. *Rev. Latino-Am. Enfermagem*. 2004;12:369-75.
4. Sáiz PA, González M<sup>a</sup>P, Jiménez L, Delgado Y, Liboreiro M<sup>a</sup>J, Granda B, et al. Consumo de alcohol, tabaco y outras drogas y rasgos de personalidad en jóvenes de enseñanza secundaria. *Adicciones*. 1999;11:209–20.
5. Ribeiro TW, Pergher NK, Torossian SD. Drogas e adolescência: uma análise da ideologia presente na mídia escrita destinada ao grande público. *Psicol Reflexão e Crítica*. 1998; 11:421-30.
6. Pratta EMM, Santos MA. Adolescence and the consumption of psychoactive substances: the impact of the socioeconomic status. *Rev. Latino-Am. Enfermagem*. 2007;15(n. esp): 806-11.
7. Tavares BF, Béria JU, Lima MS. Prevalência do uso de drogas e desempenho escolar entre adolescentes. *Rev Saúde Pública*. 2001;35:150-8.
8. Ferriani MGC, Cano MAT, Spagnol C, Silva, S. Assessment of knowledge on drugs and contact with drugs among first-grade schoolchildren from private and public educational institutions in Ribeirao Preto. *Rev. Latino-Am. Enfermagem*. 1994;2:55–72.
9. Rozin L, Zagonel IPS. Fatores de risco para dependencia de álcool em adolescentes. *Acta Paul Enferm*. 2012;25(2):314-8.
10. Strauch ES, Pinheiro RT, Silva RA, Horta BL. Uso de álcool entre adolescentes: estudo de base populacional. *Rev Saúde Pública*. 2009;43(4):647-55.
11. Malta DC, Mascarenhas MDM, Porto DL, Duarte EA, Sardinha LM, Barreto SM, et al. Prevalência do consumo de álcool e drogas entre adolescentes: análise dos dados da Pesquisa Nacional de Saúde Escolar. *Rev Bras Epidemiol*. 2011; 14(1):136-46.
12. Carlini-Cotrim B, Barbosa M. Pesquisas epidemiológicas sobre o uso de drogas entre estudantes: um manual de orientações gerais. São Paulo: CEBRID/ Escola Paulista de Medicina – EPM; 1993.
13. Galduróz JCF, Noto AR. Uso pesado de álcool entre estudantes de 1o e 2o graus da rede pública de ensino em dez capitais brasileiras. *J Bras Dependência Quím*. 2000;1:25-32.
14. Deitos FT, Santos RP, Pasqualotto AC, Segat FM, Guillande S, Benvegnú LA. Prevalência do consumo de tabaco, álcool e drogas ilícitas em estudantes de uma

cidade de médio porte no sul do Brasil. *Inf Psiquiatr* 1998;17:11-6.

15. Schenker M, Minayo MCS. Fatores de risco e de proteção para o uso de drogas na adolescência. *Ciênc Saúde Coletiva*. 2005;10:707-17.

16. Barros R, Coscarelli P, Coutinho MFG, Fonseca AF. O uso do tempo livre por adolescentes em uma comunidade metropolitana no Brasil. *Adolesc Latinoam*. 2002; 3:22-7.

17. Jano On-Line Barcelona. Crece el consumo de tabaco, alcohol y drogas entre los jóvenes de Barcelona [Internet]. abril 2000 [acesso 12 fev 2003]. Disponível em: <http://doyma.es/cgi-bin/wdbcgi.exe/doyma>

18. Muza GM, Bettiol H, Muchillo G, Barbieri MA. Consumo de substâncias psicoativas por adolescentes escolares de Ribeirão Preto, SP (Brasil). II - Distribuição do consumo por classes sociais. *Rev Saúde Pública*. 1997;31:163-70.