

THE RELATIONSHIP BETWEEN DRUGS USE AND RISK BEHAVIORS IN BRAZILIAN UNIVERSITY STUDENTS¹

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The aim was to describe relationships between gender and drug use as well as risk behaviors that may be associated with drug use among first-year students at the University of São Paulo-Ribeirão Preto. The Youth Risk Behavior Survey (YRBS) is an anonymous survey that was used for this descriptive correlational study. It was developed by the Centers for Disease Control and Prevention in the United States. The sample (n=200) included (50%) males and (50%) females. Their ages ranged from 18 to 26 years. Results showed that more female than male students use alcohol and tobacco, but that the probability of heavy consumption is higher among men. There was a low incidence of illicit drug use for both groups. Male students were more likely to drive under the influence of alcohol than female students and more men were involved in violent behaviors such as fights with friends and police. In relation to sexual behavior, male students were likely to have more partners and less protection while under influence of alcohol. It was concluded that gender is associated with recreational drug use, specifically tobacco and alcohol, as well as other risk behaviors in university students.

DESCRIPTORS: students; risk factors; street drugs

LA RELACIÓN ENTRE EL USO DE DROGAS Y COMPORTAMIENTOS DE RIESGO ENTRE ESTUDIANTES BRASILEÑOS

El uso de sustancias psicoactivas entre estudiantes ha sido muy investigado en las últimas décadas con objeto de fortalecer campañas preventivas de drogas. La finalidad de este estudio es describir la relación existente entre el uso de drogas y comportamientos de riesgo entre los universitarios del primer año de pregrado de la Universidad de São Paulo-Ribeirão Preto, Brasil. El Youth Risk Behavior Survey (YRBS) es un cuestionario anónimo que fue utilizado para la recopilación de datos. La muestra fue compuesta por 200 (100%) alumnos del primer año. El 50% de estos eran hombres y el 50% mujeres, con edad de 18 a 26 años. Los resultados mostraron la presencia del uso recreativo de sustancias psicoactivas. Las mujeres beben dentro de los límites de bajo riesgo, mientras los hombres tienen consumo más pesado. Para el uso de drogas ilícitas, los resultados fueron en menor proporción para ambos sexos. Los hombres dirigen más bajo el efecto del alcohol que las mujeres y se involucran más en peleas con amigos y con policía en comparación con las mujeres. En relación a los comportamientos sexuales, los resultados apuntan que los hombres también mantuvieron mayor número de relaciones, con un número mayor de parejas, con poca protección y bajo el efecto del alcohol. Este estudio demuestra que el género es asociado al uso recreativo de droga, bien como otros comportamientos de riesgo entre estudiantes universitarios.

DESCRIPTORES: estudiantes; factores de riesgos, drogas ilícitas

A RELAÇÃO ENTRE O USO DE DROGAS E COMPORTAMENTOS DE RISCO ENTRE UNIVERSITÁRIOS BRASILEIROS

O objetivo desse artigo é descrever a relação existente entre o uso de drogas e comportamentos de risco entre universitários do primeiro ano de graduação da Universidade de São Paulo-Ribeirão Preto. O Youth Risk Behavior Survey (YRBS) é um questionário anônimo que foi utilizado para a coleta de dados. A amostra foi composta por 200 (100%) alunos de primeiro ano. Destes, (50%) eram homens e (50%) mulheres, com idade entre 18 e 26 anos. Os resultados mostraram a presença do uso recreacional de substâncias psicoativas, com as mulheres bebendo dentro dos limites de baixo risco e os homens mais pesadamente. Para o uso de drogas ilícitas, os resultados foram em menor proporção para ambos os sexos. Os homens dirigem mais sob efeito do álcool que as mulheres e estiveram mais envolvidos em brigas com amigos e polícia do que as mulheres. Em relação aos comportamentos sexuais, os homens tiveram relações em maior número, com um número maior de parceiras e com menor proteção e sob efeito de álcool. Este estudo conclui que o gênero está associado com o uso recreacional de drogas, bem como outros comportamentos de riscos entre estudantes universitários.

DESCRIPTORES: estudantes; fatores de risco; drogas ilícitas

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INTRODUCTION

Substances misuse among students has been investigated for a long time, with the aim of specifically identifying and studying interventions that will minimize drug use in this group⁽¹⁾. Information on the relationship between risk behavior and use of substances in school environments is necessary for the development of effective preventive programs and to promote environment that are free of drugs and the violence generated by them. The maturing of this idea comes up with the growing recognition on the researchers' part of the high prevalence of the health problems and attendant risks to society associated with drug use by adolescents and young adults. Many of studies where this topic can be explored are conducted in schools/universities as they are places that present easy access to a large number of individuals and where these people are considered a target population for preventive campaigns⁽²⁾.

The use of recreational drugs among this population is worrisome. University students are considered one of the special groups for scientific investigation in the country, mainly due to their importance for the future development of our society in an increasingly complex world⁽³⁾.

Studies of the predominance of the use of drugs among students are frequently done in Brazilian universities and mainly in the State of São Paulo, for the planning of preventive campaigns and to inform university policy in relation to drug use. Since the 1980's Brazil is the Latin-American country that has generated the most data on addiction, as well as standards of drug and alcohol consumption in specific populations⁽⁴⁾, including junior school and high school students⁽⁵⁻⁷⁾, university students⁽³⁾ and undergraduate students of medicine⁽³⁻⁴⁾.

The use of alcohol by different populations has been receiving special consideration due to the increased availability and low cost of alcohol as well as the social permissibility of its use and the more uninhibited emotions of those who use it. Studies make it evident that alcohol is the substance that is most associated with specific risks⁽⁸⁾ due to its effects on the behavior⁽⁹⁾.

The direct and very common relationship between alcohol and aggression is through intoxication or consumption of too much alcohol. The aggression is explained by lack of fear due to the tranquilizing action if alcohol and an increase the offensive

perception, which can be one of the causes of a higher defensive aggression. However, this can serve as a trigger to demonstrate acts of aggression for those who really have the inclination in relation to violence and that find themselves in situations of "aggressiveness"⁽¹⁰⁾. For example there are alterations in the cognitive functions, thus decreasing the individual's capacity to plan actions in response to menacing situations (i.e., acting without thinking).

Various attempts to formulate a comprehensive theory of the relationship between the use of psycho-active substances, and associated violent and/or aggressive behaviours have been generated. To understand this relationship, the author⁽⁸⁾ revised previous research based on concepts of biological, psycho-pharmacological, psychological and psychiatric models as well as social and cultural perspectives in an attempt to develop and present a model of this relationship that would be relevant for adolescents and young adults in Latin America. Most investigators note that the most important area of agreement from these different perspectives is that intoxication has a significant impact on cognitive abilities and functioning. The nature of this impact varies according to the intoxicating substance used, but it is moderate in the context in which the behavior occurs.

For instance, the cultural and social significance, how the person functions under the influence of the psycho-active substances, the impact of intoxication on the judgment, the ability to perceive social situations are extremely important factors that determine whether the intoxicating situation in which drug use is present will result in violence. The presence or escalation of violence is also influenced by the intoxicated individual's ability to focus on short term results and desires.

Through an investigation of the literature and practical experience, it is deemed that university students are a vulnerable group when exposed to the presence and use of psychoactive substances. The use of these substances are associated with developing result behaviors which motivated us to develop the current study.

Our focus is students' who were recently admitted to university as during this time the cultural activities are usually celebrated with parties and in the majority of the times alcohol is present. This may be the first time that many of the young people have been exposed to alcohol and at this phase few students

have had experience with the use of other psychoactive substances. Therefore the situation of beginning university, which often includes separation from the family and making new friends is part of a new phase in the development of an individual that can put them in a greater risk for the use of illicit or psychoactive substances. Peer pressure and the acquisition of independence may create an increased potential for such behaviors. In summary, the environment is favorable to experiment with drugs, which could well lead to becoming involved in other unexpected behaviors (e.g., drunken driving, sexual practice without protection).

The aim of this study is to describe the predominance of the use of drugs among students soon after they arrive at university; to further understand, to understand which substances are used and to describe the relationship between the use of drugs, associated risk behaviors and the gender.

METHODOLOGY

This is a descriptive quantitative study which is part of the CICAD/OEA Project, with the participation of 13 Latin American countries. These countries are working together to further inform and prepare nurse researchers to address the problem of drug use in their countries.

The data were collected among the freshmen or first year university students at the University de São Paulo-Campus Ribeirão Preto. A non-probability sample was recruited in that all participants were volunteers.

The Youth Risk Behavior Survey (YRBS) is a questionnaire that can be used in anonymous and voluntary surveys. It was developed by the Center for Disease Control (CDC) and Prevention in the United States⁽¹¹⁾ to monitor the prevalence of specific behaviors among young people, such as engaging in risk, including the use of psychoactive. Even though the questionnaire is in the public domain, a request to use and adapt the questionnaire for its use in Brazil was made to the CDC. This organization approved request.

The original YRBS questionnaire monitors six behavioral categories: a) behaviors without intention that contribute to vandalism and violence, b) the use of alcohol, c) the use of tobacco and other drugs, d) sexual behaviors, e) physical activity, and f) diet. The

categories physical activity and diet were excluded since they are not relevant to this investigation. Categories related to the use of substances, perception of risk (availability of drugs, risks to the use of drugs), and the perception in relation to violence and aggressive behaviors (violence, rebellious aggression, anti-social behavior) were adapted for this study.

Prior to beginning the study, permission was asked of the directors of the faculties involved. This led to a clarification of study aims. Also, prior to beginning data collection, formal approval from the Ethics Committee for Research of FMRP.USP and the University of Alberta was obtained. The analysis of the data was done using a statistical program, i.e., Statistical Program for the Social Sciences; v.11 for Windows (SPSS).

RESULTS

The questionnaire was distributed to the first year students in the areas of biology, science and arts (n=200) This non probability sample consisted of 20 percent of the student population for the participating faculties. Among these 100 (50%) were female and 100 (50%) were male. The average age was 19 years old (SD 2) with a minimum age of 18 and a maximum age of 27. The majority of students were single (n=197 or 98%) and Catholic N=110 or 55%). A majority also lived with their parents (n= 69, 34.5%) and were from a family of four people. Ninety-three (46.5%) had never lived in more than one residence.

We found that the psycho-active substances used by the family were 75 (37.5%) of the fathers use alcohol and 25 (12.5%) of the mothers smoke. The use of psychoactive substances within the past 6 months for this sample is presented in Table 1.

Table 1 - Frequency of standard use of psycho-active substances within the last 6 months (n=200)

	Never		Experimental Use		Moderate Use		Heavy Use	
	N	%	N	%	N	%	N	%
Beer*	58	29	63	31.5	54	27	25	12.5
Wine*	60	30	109	54.5	22	11	9	4.5
Whisky, Vodka*	86	43	68	34	45	22.5	1	0.5
Marijuana*	164	82	23	11.5	12	6	1	0.5
Inhalants*	178	89	21	10.5	1	0.5	-	-
Cocaine*	190	95.5	9	4.5	-	-	-	-
Merla*	192	96	8	4.0	-	-	-	-

In this sample, male students reported more intense use in the three categories (i.e., experimental, moderate and heavy use) than did the female students. The frequency of every using psychoactive substance for males and females in this sample is presented in Table 2.

Table 2 - Frequency of ever using psychoactive substances for male and female students (n=200)

	Male		Female		Total	
	N	%	N	%	N	%
One dose of alcohol (1 can of beer, 1 glass of wine, 40 ml of cachaça)*	92	53	81	47	173	86.5
*Cigarrets smoked	86	66	44	34	130	65
A whole cigarette*	67	75	22	25	89	44.5
Marijuana*	48	84	9	16	57	28.5
Some kind of illegal drug (medicine without a doctor's prescription)*	39	36	14	39	53	26.5
Smokeless tabaco (Chew or Snuff)*	26	86	4	14	30	15
Inhalants (gasoline, glue, aerosol, paint)*	21	72	8	28	29	14.5
Metamphetamine / Amphetamine*	17	85	3	1.5	20	10
Cocaine (crack)*	8	4	3	1.5	11	5.5
LSD (acids, peyote)	8	4	3	1.5	11	5.5
Extasy (MDMA)	8	4	3	1.5	11	5.5
Merla	2	1	0	0	2	1

Significant differences among the class for p.<0.005

Differences were noted between males and females but it must be noted that while this sample is large, it is a not necessarily representative of the this particular student at population.

In relation to the age when alcohol was used for the first time, the average age was of 13 (SD = 2 years) with a range of 10 to18 years of age, When asked about experimental use of drugs (except alcohol) the average was of 16 (SD = 1.64 years) with a range of 10 to18 years old. These results indicate that some students experimented with or used both alcohol and drugs prior to entering university.

Of the male students, 36 (18%) reported that they drove 7 or more times under the influence of alcohol. Of the female students, 14 (7%) reported that they drove while intoxicated on at least once occasion.

In this sample, 150 (75%) students reported being in a state of drunkenness on at least one occasion. Of the males, 66 (33%) reported being drunk on 7 or more occasions, whereas, of the females, 24 (13.5%) reported being drunk once or twice. Among the males 55 (27.5%) reported the experience of "being high or intoxicated by the use of drugs", and 47 (23.5%) being drunk in the university. The male students in this sample were more likely to report intoxication than were the females.

When evaluating the use of substances in the last 30 days, we found that 35 (17.5%) smoked cigarettes from 1 to 19 days, and that 24 (68.6%) of these were male students. As for the use of alcohol 175, (75%) had at least one drink and this include 100 (100%) of the male students. Of the 100 males, 30 (30%) had or currently used marijuana. The male students reported more frequent use of these substances than did the female students.

In the 30 days prior to completing the questionnaire, 5(2.5%) of students reported that they had used inhalants on at least one occasion. One student (0.5%) reported use of cocaine and 8(4%) the use of LSD. The reported use across gender appeared to be equivalent.

When asked about the use of psychoactive substances during the past month while attending university, 11(5.5%) of the male students reported smoking (marijuana?) for at least 1 to 2 days and 21(10.5%) had at least one dose of alcohol. The same number reported that they had smoked marijuana over the same time period.

Of the male students, 53(26.5%) reported that they enjoyed alcoholic drinks enough to become a bit high, while of the female students 37(18.5%) reported that they did not drink at all. Among those who did drink 30(15%) reported that they liked to have one or two sips, a drinking habit within the limits considered of low risk.

In reference to drinking and driving, 95(47.5%) reported that they drove on at least one occasion under the influence of alcohol. Of these, 21(10.5%) female students reported that they did this once or twice, whereas 36(18%) of the male students reported that they did this 7 or more times.

When asked about their perception of the damaging use of substances we found that 39(19.5%) male students consider the occasional use of cigarettes to be extremely harmful, while 45(22.5%) female students consider this harmful. For the occasional use of alcohol, of the male students 30(15%) reported that they considered this harmful and of the female students 40(20%) consider this harmful. As to their perception about the harm in using marijuana, both the sexes 58 (29%) consider this practice extremely harmful. For amphetamine and ecstasy use, both genders unanimously reported that they considered this practice extremely harmful.

We also found that 68(34%)of the female students reported that the use of cigarettes was very

wrong and 66(33%) reported that the use of marijuana was very wrong. Fewer female students i.e., 36(18%) reported that the use of alcoholic drink was not totally wrong.

More female students reported that they perceived a higher risk for smoking one or more packets of cigarettes per day (80; 40%), smoking marijuana once or twice (46; 23%), smoking marijuana occasionally (59; 29.5%) and consuming alcoholic drinks (68; 34%) than did male students.

Both male and female students considered it very easy to obtain cigarettes and alcoholic drinks.

In this sample, 72 (144%) of the students reported that it is possible to obtain drugs at parties or events outside the university and 131 (65.5%) reported that it was possible to find these substances within the university, through contacts with friends (n=119; 59.5%) and drug dealers (n=91; 46%). The reasons that students reported for using alcoholic drinks was to have fun (n=48; 74%), escape from their problems (n=118; 59%) and because their friends use them (n=108; 54%).

The students estimated that on average 22% (SD 14%) of the students in their course smoke less than once a month. The range was 10 to 60%. In relation to estimating the number of the classmates that have tried marijuana, students reported that about 35% (SD 23%) of the students in their course had tried it. The range in their estimates was from 10 to 80%. When asked about their perception of punishment for the use of substances in the university, 95 (47.5%) of the students replied that it is possible for a student to be suspended, expelled or transferred if they were caught using or possessing alcohol or other drugs in the university. As to the possibility of finding help for the problems related to the use of substances, we found that 99 (49.5%) of the students found that it is possible for a student to find help in the university.

The students reported aggressive or violent behaviours that they experienced at the university over the past 12 months. Of 200, 61 (30.5%) students reported that they were victims of mockery (bullying) due to their physical appearance or the way they spoke and were afraid of being physically hit. Forty-eight (24%) reported that they were victims of gossips and 39 (19.5%) reported that they were victims of lies on 4 or more occasions.

In reference to sexual activity, 128 (64%) of

the students reported that they have or had had sexual relationships. Of these, 87 (68%) were males.

In describing sexual behavior reported by both males and females, we found that 55 (27.5%) of the female students had never had a sexual relationship. Of the male students, 35 (17.5%) reported that they have had more than one sexual partner and 20(10%) reported that they used alcohol or drug before engaging in sexual activity. Of the students, 66 (33%) reported that they used condoms and 43 (65%) of these responses were from males.

In relation to the problems caused by the use of substance, 56 (28%) of the students forgot what had happened or passed out following the ingestion of alcohol. Among the students that had used alcohol, 56 (28%) reported that they never had problems. When using marijuana, 9 reported that they had had other problems. The problems related to the use of alcohol were more numerous than those reported due to the use of marijuana. Male students were more likely to report problems with substance abuse.

In reference to honesty in answering the questions, we found that the majority of the students, 141 (70.5%) responded that they were honest in replying to all the questions. Of these, 92 were female students.

DISCUSSION

The association between the use of drugs and the presence of risk behaviors among freshmen students in a public Brazilian university was evaluated. The use of drugs in this population is disturbing. This study was preliminary and the intent was to describe drug using, related behaviours and possible predisposing factors in both male and female students.

The volunteer sample for this study was composed of young students in their first year of university. The majority considered themselves to be a member of a religious denomination, lived with their parents and had moved house very little in their formative years. These characteristics are considered to be protective factors against the use of psychoactive substances, although the use of drugs, such as alcohol and cigarette may be present in the family unit (i.e., father, mother, brother or sister). This can also favor the use of these substances. Data are similar to those found in other Brazilian universities⁽⁴⁾.

It was not possible to obtain a representative

sample for this study but participants included a substantial proportion (i.e., about 20%) of the eligible population. There did not appear to be great difference in how male and female students in this study used drugs or in how they dealt with their own or others aggression or violence. For the majority of the variables, males reported more use of various types of licit and illicit psycho-active substances, consumption standard (frequent and "heavy" use).

Alcohol was the psychoactive substance that was reported to be most used by the students, with 86 percent reporting some use in their lifetime, 71 percent reporting some use in the last 6 months, and 78.6% reporting some use within the last few days.

In the last 30 days in the university 46.5% of the sample had used a psychoactive substance which is consistent with findings in previous studies of students in Brazil^(3,12).

The use of one drink of alcohol among the majority of the students is in consonance with an American study that shows that more than half the students used alcohol excessively and 40% of the students reported that on at least one occasion in the last 2 weeks they were intoxicated⁽¹³⁾.

The reasons that the students reported for "why young people use alcoholic drinks" are to have fun and to escape their problems. The reason that the students gave for why they like to use the substances was to become "high" or "drunk".

Experimental researchers have reported that many of the behavioural changes are not only due to the pharmacological use of alcohol, but also through the beliefs of the those who use it⁽¹⁴⁾. The relationship between alcohol and use of higher risk behaviors are not only related to the consequences of drinking, but also to what people believe in different cultural contexts, i.e. drinkers can have different expectations when experiencing the effects of alcohol.

More male students reported that they drove while drunk than did the female students. Driving under the influence of alcohol is one of the most common high risk factors among young people and has been related to increased fatality rates in this age group.

Tobacco use was also reported by study participants. There was a perception that use was harmful, although the prevalence was still considerable. The number of days per month that students smoked was low (the majority was between 1 and 2 days) which would suggest that use was not habitual. For the use of cigarettes 65 percent reported

that they had smoked at least once in their life; 44.5 percent reported that they had smoked on at least one occasion in the last 6 months; 17.5 percent reported that they had smoked at least once in the last few days (17.5%); and 14 percent reported that they had smoked in the last 30 days while at the university. Such results indicate that the students of this sample have smoked more frequently in life compared to reported in another Brazilian study (12). Comparing with another relevant study⁽¹⁵⁾ involving the students from the USP Campus of São Paulo, it was reported that the prevalence of tobacco use was 50.5 percent in the student's lifetime and 20.16 percent in the last few days. The age of reported experimental use of alcohol and drugs (i.e., 13 & 16 respectively) was very young so not associated with university life.

In this study we found that male students were more likely to report that they used alcohol, inhalants, anabolic substances, crack, cocaine, hallucinogens and marijuana. The female students were more likely to report that they used tranquilizers, amphetamines and opiates. The differentiation was very little in this study, as the drug use that was most frequently reported was alcohol, tobacco and marijuana.

The third type of drug most used among students was marijuana. This drug is considered to be the illicit drug most used among teenagers of developed countries and the frequency of marijuana use continues to increase. A possible explanation for this is the perception that marijuana is a "light drug", without many consequences to the individual's health, in contrast to other illicit drugs⁽⁸⁾.

The use and abuse of alcohol establishes a significant problem among students in the various campuses. Researcher relate that approximately 90 percent of the students use alcohol and 25 to 50 percent use it "heavily"⁽¹³⁾. Students that drink heavily are more likely to engage in high risk physical, emotional, and sexual behaviours with negative consequences such as being in accidents, injured at school and impaired sexual health.

The majority of the students think it possible to obtain drugs at parties or events out of the university (72%) within the university (65%), or through friends (59.5%). The use of drugs and other high risk behaviors at the campuses can be strongly related, although many young people who are not university students report that they use of alcohol. Very often these activities can be related to their link with their group of friends, which increases even more

the probability of using these substances. There are various reasons and purposes for drinking, which have been shown to be influential in making a decision about whether or not to use of alcohol. The purposes of drinking are often not related to heavy drinking but to social drinking which is present among the young people.

Not all the undergraduate courses offer information with respect to the use of drugs. It is necessary to discuss the necessity of including information about the use of illicit drug within the university curriculum. Less than half of the students reported that they thought it possible for a student to be suspended, expelled or transferred if caught using or possessing alcohol or other drugs at university. This finding can be related to the lack of specific policies about the use of drugs on the campus. Researchers indicate that the gender can be an indicator of violence reported in schools. Men probably get involved more in violent incidents related and these are usually more threatening or damaging than those in which women become involved.

In studies about young people who use psychoactive substances and engage in aggressive behavior, there has been an emphasis physical violence⁽⁹⁾. However, these behaviors are only some of the aggressive responses to interpersonal conflicts. During an argument, for instance, young people can engage in aggressiveness such as pushing and hitting as a response to feelings of hostility. These answers do not contribute to solving the problem or resolving interpersonal conflicts.

The use of psycho-active substances leads to a higher probability of engaging in other higher risk behaviors such as not using condoms or having more sexual partners. One of the factors that contribute to the risk of acquiring sexually transmitted diseases is the behavior related to the use of alcohol and psychoactive drugs prior to engaging in sexual activity. Even people who do not inject drugs but consume them in another way can be infected by means of sexual relationships without condoms. Various studies have shown that people under the effect of alcohol frequently get involved in sexual activity without protection.

CONCLUSION

Although this study has been done with a non-representative sample it was possible to identify the

characteristics of the freshmen undergraduate students at this university. It was also possible to identify the standard use of drugs within and outside of the university environment and to evaluate some of the high risk behaviors for both males and females. The relationship between the use of psycho-active substances and violence is multidimensional and conditioned by social factors.

We identified the presence of recreational drug use among the students. Alcohol continues to be the drug which is most frequently used by students, followed by tobacco and marijuana. The male students most often reported higher consumption and frequency in psychoactive drug use and also use of a greater variety of substances than did the female students. The female students were more likely to report light use alcohol within the limits of social drinking, while their male counterparts were more likely to report that they drank to get drunk or high and also as a form of escapism. The "heavy-drinking" episodes are a phenomenon among students and students that drink excessively were at increased risk for a variety of consequences.

The male students reported higher frequencies of sexual activities, with more partners, while the female students who had used psychoactive substances were more likely to report engaging in sexual activity with less protection. The university can be a vulnerable environment because of the availability and use of psycho-active substances, although many student had used these substance experimentally prior to attending university.

Findings from this study can be used to design a study with a larger and representative sample of university students. This fact can be a way to discuss the insertion of the drug thematic in the various courses offered at the USP Campus, besides the planning of policies for the prevention in the university context.

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REFERENCES

1. Lange, JE, Clapp JD, Turrisi R, Reavy RL, Jaccard J, Johnson MB, et al. College Binge Drinking: What Is It? Who Does It? *Alcoholism: Clin Exp Res* 2002; 26(5):723-30.
2. Botvin GJ, Botvin EM, Ruchlin H. School-based approaches to drug abuse prevention: evidence for effectiveness and suggestions for determining cost-effectiveness. In: National Institute on Drug Abuse. Cost-benefit/cost-effectiveness research of drug abuse prevention: implications for programming and policy. Washington; Govt Print Off.; 1998. (NIDA Research Monogr. n. 176.).
3. Andrade AG, Queiroz S, Villaboim RCM, César F, Alves MCGP, Bassit AZ, et al. Uso de álcool e drogas entre alunos de graduação da Universidade de São Paulo (1996). *Rev ABP-APAL* 1997; (19):53-9.
4. Kerr-Corrêa F, Andrade, AG, Bassit, AZ, Boccuto, NMVF. Uso de álcool e por estudantes de medicina da UNESP. *Rev Bras Psiquiatria* 1999; 21(2):95-100.
5. Carlini-Cotrin B, Carlini EA, Silva ARF, Barbosa MTS. O uso de drogas psicotrópicas por estudantes de 1º. e 2º. graus da rede estadual, em dez capitais brasileiras, 1987. In: Centro de Documentação do Ministério da Saúde. Brasília (DF): MS: 1989. n.9-84. (Série C: Estudos e Projetos Consumo de drogas psicotrópicas no Brasil em 1987).
6. Galduróz JCF, D'Almeida V, Carvalho V, Carlini EA. 3. Levantamento sobre uso de drogas entre estudantes de 1o. e 2o. graus em 10 capitais brasileiras (1993). São Paulo: CEBRID/Escola Paulista de Medicina (UNIFESP); 1994.
7. Scivoletto S, Tsuji RK, Carmita HNA, Queiróz S, Andrade, AG, Gattaz WF. Relação entre consumo de drogas e comportamento sexual de estudantes de 2º grau de São Paulo. *Rev Bras Psiquiatria* 1999; 21(2):87-94.
8. Fagan J. Intoxicacao and aggression in drugs and crime. In *Crime and Justice: a review of reserch*. Chicago: Univ Chicago Press; 1990.
9. Lavine R. Psychopharmacological treatment of aggression and violence in the substance using population. *J Psychoactive Drugs* 1997; 29(4):321-9.
10. Feldman M. *Criminal behavior: a psychological analysis*. London: Wiley; 1977.
11. Youth violence in the United States. Center for Disease Control and Prevention. [serial online] 2000 [cited 2004 Set 3]; (1): [24 screens]. Available from: URL:<http://www.cdc.gov/ncipc/factsheets/yvfacts.htm>
12. Kerr-Corrêa F, Dalben I, Trinca L, Simão MO, Mattos PF, Cerqueira ATAR, Mendes AA. I Levantamento do uso de álcool e drogas por estudantes da UNESP. SãoPaulo (SP): Publicação VUNESP 14; 2001.
13. Wechsler H, Dowdall GW, Maenner G, Gledhill-Hoyt J, Lee H. Changes in binge drinking and related problems among American college students between 1993 and 1997. *J Am Coll Health* 1998; 47:57-68.
14. Marlatt GA, Baer JS, Kivlahan DR, Dimeff LA, Larimer ME, Quigley LA, et al. Screening and brief intervention for high-risk college student drinkers: Results from a two-year follow-up assessment. *J Consult Clin Psychol* 1998; 66(4):604-15.
15. Stempliuk VA. *Uso de drogas entre alunos da Universidade de São Paulo: 1996 versus 2001*. [Tese]. São Paulo (SP): Faculdade de Medicina/USP; 2004.