

DRUGS USE AND RISK BEHAVIOR IN A UNIVERSITY COMMUNITY¹

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Piedra KAC, O'Brien B, Pillon SC. Drugs use and risk behavior in a university community. Rev Latino-am Enfermagem 2005 novembro-dezembro; 13(número especial):1194-200.

The purpose of this study is to evaluate drug use and risk behaviors among students of the University of Guayaquil in Ecuador. To evaluate this issue, we used the questionnaire "Youth Risk Behavior Survey" (YRBS). The study sample consisted of 751 undergraduate students: 328 (44%) male and 423 (56%) female. Average age was 20 years old and 85,5% of the students were single. Alcohol, tobacco and marihuana were the most consumed substances among students, who use them for entertainment. Drug consumption (legal or illegal) among students has become an issue for specialized research as well as an important field of intervention for public policies.

DESCRIPTORS: violence; students

USO DE DROGAS Y COMPORTAMIENTOS DE RIESGOS EN EL CONTEXTO DE LA COMUNIDAD UNIVERSITARIA

Este estudio tiene como objetivo evaluar el uso de drogas y comportamientos de riesgos entre estudiantes de la Universidad de Guayaquil-Ecuador. Fue utilizado el cuestionario de Comportamientos de Riesgos en Estudiantes Adolescentes (YRBS). La muestra fue constituida por 751 bachilleres - estudiantes del primer año: 328 (44%) eran hombres y 423 (56%) mujeres, con edad promedio de 20 años y el 88,5% era soltero. Las sustancias más utilizadas fueron el alcohol, el tabaco y la marihuana, que son usadas de forma recreacional entre los estudiantes. El uso de drogas (lícitas e ilícitas) entre los estudiantes se ha tornado un campo de estudio bastante favorable para el establecimiento de políticas preventivas.

DESCRIPTORES: violencia; estudiantes

USO DE DROGAS E COMPORTAMENTOS DE RISCO NO CONTEXTO DE UMA COMUNIDADE UNIVERSITÁRIA

Este estudo tem como objetivo avaliar o uso de drogas e os comportamentos de risco entre estudantes da Universidade de Guayaquil-Ecuador. Foi utilizado o questionário Youth Risk Behavior Survey (YRBS). A amostra foi composta por 751 estudantes de primeiro ano de graduação: 328 (44%) eram homens e 423 (56%) mulheres, com idade média 20 anos, e 88,5% solteiros. As substâncias mais utilizadas foram o álcool, o tabaco e a maconha, que são usados de forma recreacional entre os estudantes. O uso de drogas (lícitas e ilícitas) entre estudantes tem se tornado um campo de estudo bastante favorável para o estabelecimento de políticas preventivas.

DESCRITORES: violência; estudantes

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INTRODUCTION

According to International Organization⁽¹⁾, the use of alcohol, tobacco and of illegal drugs cause great problems to public health in several countries, mainly among youngsters. The results of several studies support the need of intervention work and of the increase in awareness of these problems as well as of the risk factors of the use of drugs. The use of such substances leads young people to early morbidity and mortality rates both in developed and in developing countries, since they are problems that can be prevented and that many in cases start in adolescence.

The relationship between the use of drugs and violence has created a lot of interest in several social disciplines including Epidemiology, Sociology, Medicine, Education and Psychology⁽²⁻³⁾. This relationship occurs at different levels - individual, familial, and at community level, and it is affected by the kind of drug used and the nature of behaviour exhibited. The use of tobacco, alcohol and of other illegal drugs have serious implications for health, including acute as well as chronic diseases that lead to high rates of early mortality. Therefore, the use of drugs accounts for one of the greatest Public Health problems⁽¹⁾.

In order to understand the complex relationship between the use of drugs and violence, it is essential to understand the pharmacological particularities of the drugs as well as the social context in which an individual is inserted. The use and the abuse of substances occur in social, situational and cultural contexts, that exponentially influence violent results⁽⁴⁾.

Among different kinds of violence, there is the pharmacological one that occurs as a result of the use in the short and the long run of certain drugs that produce behaviours.

According to the literature⁽⁴⁾ on kinds of violence, the violence most commonly found among groups of students is the pharmacological one. For example, students who drive after drinking account for higher risks of accidents. In other cases, students who drink and use drugs account for higher probability of unprotected sex and sex abuse⁽⁵⁾.

The presence of drugs in violent events does not necessarily imply that the substances affect perpetrators' or victims' behaviours⁽⁴⁾. Besides, different substances affect individuals in differentiated

ways, based on their physiology, psychology, history, gender and other personal and cultural factors⁽⁶⁾.

Almost all common illegal drugs can lead to violent behaviours however, it frequently happens by means of different mechanisms⁽⁷⁾. The types of violence depend on the use of legal and illegal drugs as we will see:

- The use of legal drugs

Alcohol is the most frequently cited substance as far as risk behaviours are concerned, due to the effects on behaviour, and it is apparently involved in the violence that occurs under the effect of the use. The direct and most common relationship between alcohol and aggression occurs by means of intoxication. Research indicates that the mechanisms that explain how alcohol induces to aggression occur because of the lack of fear inhibition by the anxiolytic action⁽⁷⁾. For example, alcohol can affect the cognitive function in such a way that the individual suffers a decrease of his/her capacity to plan actions in response to threatening situations.

Alcohol can also boost pain perception, which might be one of the causes of greater defensive aggression. The individual can hardly tolerate aggression and promptly starts fighting. Still it can serve as a triggering mechanism to promote aggression acts in those who really have an inclination to violence and when they find themselves exposed to vulnerable situations⁽⁸⁾. It has been reported in several studies, for example, that people who have a greater inclination to being aggressive, tend to exhibit high levels of aggression, but they do not drink.

- Nicotine

As far as the use of nicotine is concerned, nothing has been found in the literature that links it to violence, unless there are other addictions involved. Heavy use of tobacco has not been recognised as a producer of psychological disturbs, other than those who feel like giving up but experience difficulties in doing so. Smoking, however, as other addictive behaviours, is kept because it provides a way to minimize negative effects (that is to say, stress, rage, fear, shame, despise) and evokes the effects of excitement, pleasure and surprise.

- Sedatives - Hypnotic drugs

Hypnotic drugs can be associated with pharmacological violence due to irritability and anxiety, which many times are the results of intoxication and abstinence⁽⁷⁾. Hypnotic sedatives such as enzodiazepines, are normally found as tranquillizers,

commonly prescribed to minimize symptoms of insomnia and anxiety.

Although several users take these substances because of their sedative effects, people who use them frequently become shy. These are the first abuse drugs and they are usually taken with other substances

- The use of illegal drugs

The use of illegal drugs is connected with violent crimes, although there are rarely any data on the pattern of drug use and violence⁽⁶⁾. Criminals who use illegal drugs are more frequently into stealing and assaults than criminals who do not take drugs and they commit crimes more often in periods when they take drugs more heavily⁽⁶⁾.

- Marijuana

Marijuana is the illegal drug which is most commonly used and has been consumed for centuries for its alterations in mood⁽⁹⁾. The moderate use of marijuana has been found to temporarily inhibit violent and aggressive behaviour patterns in humans and animals⁽⁶⁾. In general, the use of marijuana has been found as a way to inhibit activities.

- Amphetamines and methamphetamines

There are considerable investigations of possible links between the use of amphetamines and violence. Amphetamines, especially methamphetamines are among the illegal stimulating drugs in several countries. Among the most important effects of amphetamines on behaviour is mood, which can occur with the administration of both chronic and acute use⁽¹⁰⁾. One of the greatest consequences of the chronic abuse of amphetamines is the development of pathologic behaviour⁽¹⁰⁾.

- Cocaine

The use of cocaine has been associated with crime and violence⁽⁹⁾. The intra-nasal use of cocaine and the use of the crack have been found to be associated with pharmacological violence⁽⁴⁾. Cocaine is one of the illegal stimulating drugs usually abused in the USA, with similar characteristics to amphetamines, regarding its mood changing properties and the development of conduct pathology⁽¹⁰⁾. Violence is present among drug users, the same way it is present among alcohol drinkers; aggressive behaviour is not only limited to addicted individuals, but also occasional users.

The abuse of psychoactive substances has

been painstakingly investigated, with the aim of specifically contributing to prevention actions towards the use of drugs⁽¹¹⁾. Information on the interaction of risk behaviours and the use of substances at schools is necessary so that prevention actions can be taken and environments can remain free from drugs and violence. Considerable efforts have been made in order to understand the causes of the use of drugs so that more effective prevention programs can be identified. Many of these works have been carried out especially at schools/universities, for these are places where a great number of individuals can have easy access to them. Schools/universities populations are considered ideal for prevention campaigns⁽¹²⁾.

In Ecuador there is a lack of studies in the literature that assess the relationship between the use of drugs and violence among youngsters, mainly in Latin America. This work proposes to increase our understanding of this relationship among university students. A bibliographic survey was carried out in the database of MedLine and CINADHL, in an attempt to assess existing studies, however, most of them have been conducted in developed countries.

The aim of this study is to characterize the use of psychoactive substances and risk behaviours among university students.

METHODOLOGY

Ecuador is a country which is inserted in the "International Route" of drugs between the north and the south. Without restrictions, it has programs, policies, and funds to handle the Use of Drugs among its citizens. However in clear disadvantage, since Ecuador is dependent on International Organizations. Due to the lack of information on this area, this study also aims to increase the knowledge of the nature and magnitude of the use of drugs and the relationship between the use and risk behaviours.

Data were collected between October 2003 and January 2004 using a (YRBS) Youth Risk Behaviours Questionnaire⁽¹³⁾ that identifies the use of psychoactive substances (experimental, moderate and heavy uses) on the last 30 days, in the last 6 months inside and outside university and general use in life, as well as violence defined by means of risk behaviours such as sexual intercourse without

protection, drunk driving, being under threatening and being caught by the police.

The samples consisted of students in the first year of graduate courses in the area of Humanities, Biological and Exact Sciences. An authorization for the utilization of the questionnaire was obtained from the Center for Disease Control - USA. The present project has been assessed and approved by the Ethics Committee of Alberta University and the Universidade de Guayaquil-Ecuador. This is a descriptive study.

From the two university scenarios, the selected one was Universidad de Guayaquil, that is situated in the area of Salado in the city of Guayaquil – Province of Guayas. The sample chosen for this study comprised 751 students during the first year in the colleges belonging to the university mentioned above. The results cannot be generalized because this study was conducted based on a sample that was not representative of students in their first year of graduate courses.

RESULTS

The (YRBS) questionnaire findings highlight demographic characteristics in a sample with n.=751 (100%) students. The distribution according to gender was as follow: 328 (44%) men and 423 (56%) women, with average age of 20.3 years, ranging from 18 to 31 (SD 2.74). No statistically significant difference found between age and sex. Among all the students, 665 (88.5%) are single, 491 (65,4%) live with relatives and 473 (63%) live in their own parents' homes. The average family members were 5.49 (SD = 2.03) minimum 1 and maximum 17 people in the family. As far as religion is concerned, the majority was catholic - 561 (73%). We found that for 356 (100%) students, the father of 165 (22%) drank alcohol and 165 (22%) smoked.

Five hundred and forty-one students (72%) have already had alcohol, and women turned out to be more abstemious than men, the latter abused of it, with statistically significant difference $X^2= 31,89$ p.000. The same was true of those who smoked, that is, 485 (64,5%) of students, where the gender distribution is 248 (51%)men and 237 (49%) women with statistically significant difference $X^2=31,22$ p.000.

When compared to the average age and the

use of alcohol and tobacco, we did not find significant relation for this sample.

Table 1 - Numerical and percentage representation of standards of psychoactive substances use among students (n.o =751) in the last 6 months

	Experimental Use		Moderate Use		Heavy Use		Total	
	N.o	%	N.o	%	N.o	%	N.o	%
Beer*	326	43	141	19	23	3	470	62.5
Wine*	236	31.4	28	4	6	.8	270	36
Whisky, Tequila*	187	25	43	6	10	1.3	240	32
Tranquilizers (Valium, lorax)	19	2.5	5	.7	-	-	24	3
Marijuana	13	2	3	.4	2	.3	18	2.4
Inhalants	6		1		-		7	0.9
Cocaine	4	.5	2	.3	1	.1	7	0.9

* Significant difference between genders p<005

Table 1 shows that most students "used alcohol experimentally" (wine, tequila, beer) in the last 6 months, when we compared genders, we found that men use alcohol more heavily than women, with statistically significant difference.

Table 2 - Representation of life use of psychoactive substances among university students

	Yes	
	N	%
One dose of alcohol (one beer can, a glass of wine, 40 ml of distilled drink)*	424	57
Cigarette, even being only inhaling once*	422	63.2
A whole cigarette*	297	45
Tobacco	33	6
Marijuana*	25	3
Some illegal drugs (medicine without prescription).	14	2.4
Inhalants (gasoline, glue, aerosol, paint)	13	2
Cocaine (crack)	10	1.7

* Significant difference between genders p<005

Table 2 represents life use of psychoactive substances among students, 424 (57%) had already had a dose of alcohol and 422 (63,2%) had inhaled a cigarette at least once. When genders were compared, men were found to have used cigarettes and marijuana more often.

In general, the use of drugs started on average at the age of 16 (Dp = 2.09), ranging from the age of 10 to 18.

As for the types of psychoactive substances used on the last 30 days at "university", we found tobacco 150 (20%) and alcohol 86 (11,5%).

Table 3 - Numerical and percentage representation of drugs used inside and outside university and the types of use. (n.o=751)

	Life use		Use in the last 6 months		Use on the last 30 days outside university		Use on the last 30 days inside university	
	N.o	%	N.o	%	N.o	%	N.o	%
Alcohol	524	83	420	56	252	33.5	86	11
Tobacco	485	65	360	48	52	7	150	20

Table 3 represents "life use" of tobacco and alcohol, which were used in higher proportion among students, and tobacco was more used at university.

Regarding "life use", 294 (39%) students used alcohol abusively, resulting in drunkenness. Among these, 188 (64%) got drunk from 1 to 2 times, men accounted for the majority of them. Drunkenness happened in lower proportion, to 25(3%) students.

As for the fact of enjoying drinking, 161 (21,4%) students pointed out that they enjoyed drinking from 1 to 2 doses, while 106 (14%) students enjoy drinking to get a little bit high, what shows that men get drunk more often than women.

Among the students, 177 (23,5%) drove after drinking and among these 30(17%) had been fined or got involved in accidents after having drunk.

As for sexual behaviours, 443 (59%) students had sexual intercourse and among these 245 (55,3%) had had alcohol before the sexual intercourse. Most of them were men and only 72 (16,2%) wore condoms.

Table 4 - Representation of types of risk behaviours as victims, and the use of psychoactive substances among university students in the last 12 months at university

	Yes	
	N.o	%
*Threatened or hurt with a gun, a knife or a razor.	193	25.7
* Saw someone with a gun, knife, razor/other weapons	158	21
*Were afraid of being beaten.	158	21
Got involved in fights.	124	16.5
* Were pulled, slapped, hit or kicked by someone who was not playing.	76	10
Were victims of gossip or lies	44	6
Were victims of jokes or sex related comments.	33	4.4
Were victims of bullying due to their looks or their way of speaking.	15	2

* Significant difference p<005

Table 4 represents (25,7%) students who were threatened or hurt with a gun, knife or razor, (21%) saw someone with a gun, knife or a razor and the same number of students were afraid of being

beaten when they used alcohol in the last months at university.

Comparing the students who used any kind of psychoactive substances, or used guns either to intimidate or threaten, or got involved in fights or had problems with the police, we found that (distilled or fermented) alcoholic beverages showed a relation between drinking and being a victim (p.000), which did not happened in relation to other drugs.

DISCUSSION

This is the first time that a study that investigates the use of drugs and risk behaviours has been conducted among students during their first college year at Universidad de Guayaquil, Ecuador. The present study has made it possible to point out that the use of alcohol and of other drugs is present not only on the college premises. However, it has been identified that once the age at which the beginning of the use of drugs happens lies between 10 and 18, age that precedes university entrance. The studied population is composed of youngsters, mainly women, single individuals, who live with their parents, where at least one member of the family uses substances, especially fathers.

The age at the beginning of the use and the presence of a member of the family who uses psychoactive substances can contribute directly or indirectly to the students' using of such substances through models and reinforcing behaviours.

Although the sample was composed mainly of women, abusive use of alcohol among students occurred more significantly among male individuals, as well as the relation between risk behaviours. Still, women drink within the limits of normal drinking, while men enjoy drinking to get the high of alcohol or to get slightly drunk. Such a fact is in accordance with international studies⁽¹⁴⁾ that state that in studies on gender, alcohol use is a predictor to such behaviours, and the kinds of behaviours are different between genders.

Several psychoactive substances have been associated with risk behaviours, however, for this sample, only alcohol exhibited an association with them, what the author⁽¹⁰⁾ puts as pharmacological violence.

Thinking of the environment in which psychoactive substances are taken, many students used alcohol outside university.

As for the use of tobacco, it took place more frequently inside the university when compared with alcohol. This fact can be associated with the permissiveness of its inside the university, although this variable has not been measured in this study. What leads us to think that alcohol is usually used in social occasions such as parties and other gatherings and one can suppose that the university campus poses restrictions or has control through the legislation over alcoholic drinks, regarding both their sales and their consumption, which does not happen in relation to cigarettes. Although the sales might be forbidden inside the campus, there is no restriction towards the use of cigarettes.

Among the drugs used by students are (distilled and fermented) alcoholic beverages, tranquillizers, tobacco and marijuana. Most students experience lifetime use, however this use decreases as time goes by. Not all cases develop into drug addiction, what can be observed is the gradual drop from life use to use in the last 6 months and in the last month, such results were found in international studies.

Studies⁽¹⁴⁾ show that during the phases of the involvement with psychoactive substances, individuals begin with legal drugs (alcohol and cigarettes), and then start using marijuana and later other illegal drugs.

Sexual activities can be considered risk activities among students since these youngsters hardly wear condoms under the effect of alcohol or after having used other drugs. Such a fact has been happening not only on the last 30 days, but also in the last 6 months. Therefore, unprotected sex can be putting these youngsters at the risks of contracting sexually transmitted diseases.

As for drunk driving is concerned, 1/3 of the students have already driven under the effects of alcohol and half of them have been fined or involved in accidents, this fact makes us re-think these youngsters' awareness of the risks of drunk driving and the accidents that may end up in deaths.

There is an association between using alcohol and being a victim (threats, fears, involvement with fights) in the last 12 months at university. The literature shows⁽⁵⁾ that the youngsters who use any kind of psychoactive substances are more prone to get involved in fights and become victims.

This study has some limitations, since it has

been carried out with a non-representative convenience sample, and although it is a study of characterization of the use of drugs and risk behaviours among students, the size of the sample might have influenced the assessment of some variables. Another question that might have been investigated are the laws in force, in relation to internal university policies geared towards the control over the use of alcohol and tobacco, which might have improved the level of discussion in relation to this problem.

CONCLUSION

In Ecuador, studies on the identification and association between the use of drugs and risk behaviours among students or among other groups are hardly conducted. However, there are several reasons that justify the presence of the use of drugs and risk behaviours at university. Studies like this are considered to be important and are seen as a way to develop educational programs that aim at the reduction of risk behaviours and also of the consumptions of psychoactive substances.

The nursing colleges at the Universidad de Guayaquil along with CICAD/OEA are in a privileged situation to urge the investigation in the area of drugs use and risk behaviours in order to develop educational and preventive skills to face this phenomenon.

The issue of alcohol and drugs use among university students must be faced as a top priority in all areas, with the aims of promoting prevention programs geared towards this population, in which professors' participation should be included. Both mandatory and optional subjects on the use of drugs and alcohol in the graduate and post-graduate course should comprise more hours. This research presents only part of the reality of the use of drugs in the university setting and it considers that this kind of study should be more widely conducted, taking into consideration more representative populations.

ACKNOWLEDGEMENTS

We are grateful to the Inter-American Drug Abuse Control Commission/CICAD, the OAS

Scholarship Program, the Government of Japan, all Faculty of the University of Alberta/Canada, and the eleven representatives from the seven Latin-

American countries that participated in the "International Research Program", implemented at the University of Alberta/Canada in 2003-2004.

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