The Impulsivity and Drinking Motives as Predictor of the Alcohol Consumption in College Students

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The main objective of this research is to determine the effect of the impulsivity as well as the causes of drinking alcohol in college. We selected a non-probabilistic sample of 36 students of a private college, 47.1% were male and 52.9 female, with an age range of 17-27 years and a mean of 20.66 years. To measure the alcohol consumption, we used an adapted version of the Drinking Motives Questionnaire, which consists of three dimensions: coping reasons, social reasons and conformity reasons. Impulsivity was evaluated with the adapted versions of the Plutchik scale consisting of 15 items in Likert scale with four response options ranging from never to always. These results showed that 93.6% of the participants reported the consumption of alcohol sometime in their lives. As for the effect of the causes for drinking and the impulsivity of the consumption in college students, the results showed that the three dimensions to drink explained 39% of the variance in the alcohol consumption among young people, however, impulsivity did not enter as a predictor variable.

Keywords: alcohol consumption, impulsivity, motives, college students, youth

Introduction

The results of the latest NSA (National Survey of Addictions) (Secretaría de Salud, Instituto de Salud Pública, 2011) show an increase in alcohol consumption in the population between 12 and 65 years of age, compared to consumption ever in life, which increased from 61.3% to 71.3%. Of this population, 51.4% have consumed over the past year and 31.6% last month. Regarding adolescents, the results showed a significant increase in both men and women, where consumption ever in life went from 35.6% to 42.9% in the last year of 25.7% to 30% and in the last month from 7.1% to 14.5%.

Regarding the most preferred drink, the results of the NSA (Secretaría de Salud, Instituto de Salud Pública, 2011) showed that beer remains the most preferred drink for the general population (53.6% for males and 29.3% for women). According to the NSA (2011), the second most preferred are drink distillates, where 23.6% of the general population consumes this and additionally it has gained market adolescent population. In third place were table wines (6.6%) and prepared drinks fourth (4.4%).

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However, survey data on student population (Villatoro et al., 2011) indicates that 71.4% of adolescents in Mexico City have consumed alcohol at some time in their lives and 40.9% have been consumed during the last month. In terms of consumption by age, 59.9% of adolescents aged 14 or less have consumed alcohol at least once in their life, and those who are 18 years old was 89.9%, in addition, more than half of teens aged 17 have drunk alcohol in the past month and 38.5% of these young people have abused alcohol.

The survey data shows a steady increase in alcohol consumption, although in Mexico consuetudinary consumption is not a significant problem if it is the consumption per occasion (sporadic-explosive). This is especially common in young population, which in many cases is associated with various risk behaviors such as car accidents, risky sexual behavior, violence, etc., so it is important to explore factors associated with alcohol consumption in order to have elements that contribute the design and development of prevention programs.

One factor that is reported in the international literature is the reasons or motives of individuals to consume alcohol. According to Cox and Klinger (1988; 1990), these reasons can be classified into those that can be characterized by its valence (positive or negative) and resource type (internal or external) that an individual expected to achieve consumption. The combination of these two dimensions results in four kinds of reasons: (1) those which are generated internally and give positive reinforcement (drink to feel good or to be in a good mood); (2) those that are externally generated, as reasons behind positive reinforcement (drinking to get social benefits); (3) those that are generated internally, such as negative reinforcement (drinking to reduce negative emotions); and (4) those that are generated externally, as negative reinforcement (drinking to avoid social rejection).

However, empirical data has focused mainly on two main ideas: alcohol as a way to regulate negative emotions and those reasons are intended to obtain social recognition (commonly referred to as coping and social motives, respectively). There is less research about the grounds in search of improvement and avoidance of social costs (understood as reasons for improvement and compliance).

Specifically, social reasons, refer to the type of grounds on which youth gain social rewards (e.g., as a way to celebrate, to be more sociable) and according to some studies (Carman, Fitzgerald, & Holmgren, 1983; Mann, Chassin, & Sher, 1987), they are more accepted than other grounds and are associated with light use, infrequent and problematic non-alcoholic beverages. Moreover, the reasons in accordance represent those to avoid social costs (e.g., to be accepted, to belong to a group you like), empirical evidence indicates that such reasons are related to adolescents (Brown & Finn, 1982; Johnston & O'Malley, 1986), plus they are predictors of alcohol use in this population (Gliksman, 1983). Regarding the reasons for enhancement (for example, because you like how you feel, to feel good), the findings in previous investigations report that predictor motifs are high consumption patterns of alcohol (Cooper, Russell, Skinner & Windle, 1992). As regards the grounds of coping, which refers to the reasons to regulate negative emotions (e.g., because it helps you when you get down, to forget your problems), the literature indicates that these problems predict consumption alcoholic beverages (Cutter & O'Farrell, 1984; McCarty & Kaye, 1984).

Cooper (1994) found that coping and enhancement motives were the most significant predictors of high alcohol consumption, where the improvement was the more important of the two. The author also found that these two categories of motives (coping and enhancement) were also important predictors of alcohol problems; however, coping motives were more important than enhancement.

Similarly, Grant, Stewart, O'Connor, Blackwell, and Conrod (2007) reported that the motives for consumption were predictors of frequent consumption and consumption-related problems. Siviroj, Peltzer,

Pengpid, Yungyen, and Chaichana (2012) found in a sample of adolescents that coping and social motives were predictors of the frequency of consumption and coping motives were predictors of excessive consumption.

Another variable that is associated with alcohol consumption is impulsivity, which is defined as the tendency to perform behaviors without anticipating the consequences thereof (Calvete & Estevez, 2009). Bravo, Echeburúa and Aizpiri (2007) performed a comparison among people with alcohol dependence and no dependence; the authors found that people with dependence showed greater impulsivity, increased motor activity, are improvisers and a lack of planning in daily life compared to the non-dependent.

In another study in adolescents, von Diemen, Garcia, Costa, Maciel, and Pechansky (2008) found that impulsivity was associated with a high consumption of alcohol, likewise, Adan (2012) reported significant associations between impulsivity and excessive alcohol consumption, both men and women, in university. A. J. Mateos and A. M. Mateos (2005) conducted a study comparing personality traits, including impulsivity among alcoholic patients and normal population, the authors found that alcoholic patients showed more impulsivity than the normal population.

As can be seen, there is evidence indicating an association between impulsivity and motives for drinking alcohol, however, Mexico has little research about these variables, hence, that the aim of the present research was to determine the effect of impulsivity and motives for drinking, consumption of alcohol in college. This in needed to have empirical evidence that could provide support in the development of prevention programs.

Method

Participants

We selected a nonrandom sample of 376 students of a private university, 47.1% were male and 52.9% female, with an age range of 17-27 years and a mean of 20.66 years.

Measures

To assess alcohol consumption, we used seven indicators of the NAS (Secretaría de Salud, Instituto de Salud Pública, 2008), which assesses quantity and frequency of consumption. We used the adapted version of the Drinking Motives Questionnaire (Betancourt et al., 2012), consisting of three dimensions: coping motives ($\alpha = 0.904$), social motives ($\alpha = 0.984$) and enhancement motives ($\alpha = 0.792$), is a Likert scale with four response options ranging from never to always. Impulsivity was assessed with the adapted version of the Plutchik scale (Paez et al., 1996), consisting of 15 items in Likert scale with four response options ranging from never to always ($\alpha = 0.760$).

Procedure

Permission was requested from school authorities to carry out the implementation of the instruments in the classroom. The purpose of the study was explained to the students and they were asked for their voluntary participation. They guaranteed confidentiality of information provided and answered questions from those who requested them.

Results

The results showed that 93.6% of participants reported that they have consumed alcohol at some time in their lives and the average age of first use was at 15.42 years ($SD = 2.29$). Regarding the most preferred drinks were distillates (72.97%), followed by beer (15.31%), table wine (10.51%), alcohol (0.30%), brandy (0.30%), prepared (0.30%) and fermented (0.30%). 27.1% of young people said they have been drunk at least once in the

past month, 25.2% reported that they have never been drunk, 24.4% have been drunk once in the past year, 13.1% from two or three times in the last month and 10.2% of one or more times in the last week.

In order to have an indicator of the level of consumption, the frequency and amount of consumption was combined, getting six groups (not consumed, has consumed but not been drunk in the last year, have used and got drunk once in the past year, have used and got drunk once in the past month, have used and been drunk two or three times in the last month and have used and been drunk a more times in the last week). We performed a frequency analysis to learn how participants were distributed in each of the consumer display options (see Table 1). As can be seen, about half of college students reported that they got drunk at least once in the last year and last month.

Table 1

Risk Indicator of Alcohol Consumption

Category	Percentage (%)
It has consumed	6.4
Have you used but has not been drunk in the last year	21.0
Have you used and got drunk once in the last year	24.0
Have you used and got drunk once in the last month	25.3
Have you consumed and has drunk two to three times in the last month	13.1
Have you consumed and has drunk a more times in the last week	10.1

In order to analyze the differences in motives for drinking and impulsivity by consumption level, analysis of variance was conducted one-way (see Table 2), where the results showed statistically significant differences in the three dimensions of motives and impulsivity.

Table 2

Differences in Reasons for Drinking and Impulsivity for Consumer Level

Consumption indicator	Social motives		Coping motives		Enhancement motives		Impulsivity	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
It has consumed ¹	1.32	0.48	1.21	0.47	1.19	0.50	30.29	5.22
Have you used but has not been drunk in the last year ²	1.54	0.43	1.17	0.29	1.21	0.36	29.12	5.52
Have you used and got drunk once in the last year ³	1.87	0.47	1.31	0.45	1.23	0.39	31.02	5.14
Have you used and got drunk once in the last month ⁴	1.97	0.55	1.50	0.53	1.38	0.56	32.93	5.83
Have you consumed and has drunk two to three times in the last month ⁵	2.35	0.48	1.84	.76	1.55	0.72	33.36	6.17
Have you consumed and has drunk a more times in the last week ⁶	2.62	0.35	2.03	0.67	1.49	0.72	34.63	3.49
<i>F</i>	41.11 ***		21.13 ***		4.41 ***		8.13 ***	
<i>Post Hoc</i>	1 = 2		1 = 2,3,4		1 = 2,3,4,5,6		1 = 2,3,4,5,6	
	1 < 3,4,5,6		1 < 5,6		2 = 3,4,6		2 = 3	
	2 < 3,4,5,6		2 = 3		2 < 5		2 < 4,5,6	
	3 = 4		2 < 4,5,6		3 = 4,6		3 = 4,5	
	3 < 5,6		3 = 4		3 < 5		3 < 6	
	4 < 5,6		3 < 5,6		4 = 5,6		4 = 5,6	
	5 = 6		4 < 5,6		5 = 6		5 = 6	

Note. *** $p < 0.001$.

Tests were conducted to determine post hoc Scheffé between groups and the differences. The findings indicated that generally in impulsivity, differences were found only between the group of young people

reported that if you have consumed but not been drunk in the past year compared to youth who have been drunk at least once in the last month up in the week prior to the survey. Similarly, differences were found between students who said they have been drunk in the past year compared with those who reported having done the week prior to the application of the instrument.

With respect to the three dimensions of motives for drinking, it can be seen in Table 2, in general, young people with higher levels of alcohol consumption had higher scores on the three dimensions of motives, and on the other hand, among the two groups increased consumption differences were not significant.

In order to analyze the relationship between the dimensions of motives and impulsivity with alcohol, we studied Pearson correlation analysis. The results indicated weak to moderate relationships, positive and significant. The strongest relationship of alcohol consumption with the other variables met the social motives ($r = 0.591, p < 0.001$), followed by coping motives ($r = 0.459, p < 0.001$), of impulsivity ($r = 0.293, p < 0.001$) and enhancement motives ($r = 0.210, p < 0.001$).

To determine the predictive level of motives for drinking and impulsivity, a linear regression analysis was performed step by step, where the consumption of alcohol entered as dependent variable and the dimensions of the reasons for drinking and impulsivity as independent variables.

As for the results, in the first step of the analysis entered the dimension of social motives ($F_{(1, 352)} = 196.94, p < 0.001$), in the second step entered into the equation coping motives ($F_{(2, 351)} = 103.97, p < 0.001$) and the third and final step, we added the dimension of enhancement motives ($F_{(3, 350)} = 76.03, p < 0.001$) (see Table 3).

Table 3

Regression Analysis Step by Step in Predicting Alcohol Consumption

Variable	<i>B</i>	<i>SD B</i>		R^2	ΔR^2
Step 1. Social motives	1.44	0.14	0.53**	0.36**	
Step 2. Coping motives	0.72	0.16	0.25**	0.37**	0.01*
Step 3. Enhancement motives	-0.56	0.15	-0.19**	0.39*	0.02**

Notes. * $p < 0.05$, ** $p < 0.001$.

Discussion

The results of this research showed that the vast majority of students whom information was reported, had consumed alcohol, which is a higher proportion than reported by the NSA (Secretaría de Salud, Instituto de Salud Pública, 2011). The NSA reported that 71.3% of the population between 12 and 65 have consumed alcohol and the proportion found in this study is higher than reported in adolescent population (Secretaría de Salud, Instituto de Salud Pública; Villatoro et al., 2011). While the results of this study cannot be entirely comparable with that reported in the aforementioned surveys because they handle different age ranges, it is noteworthy that the percentage of youth who reported having drank alcoholic beverages was higher than previously reported.

In addition, the NAS (Secretaría de Salud, Instituto de Salud Pública, 2011) reported that beer is still the most preferred drink, followed by distilled wines and mixed drinks table. The data differs from those found in the present investigation, where the most preferred drinks were distillates (tequila, vodka and rum) placing second beer, although, these findings are contrary to those reported in the NSA (Secretaría de Salud, Instituto de Salud Pública, 2011). Within this same survey it stressed that the distillates market has gained a young population. One factor that could explain why this group of students drank distillates as the most consumed

beverage could be the socioeconomic status of young people. The group belongs to a private university, which would give them greater purchasing power and therefore consume more expensive drinks. It is worth mentioning that another aspect that could explain the preferred beverage type may be the social environment, specifically the availability, because it is the type of alcohol to which the youth have access to (e.g., at home).

As for the differences in reasons for drinking and impulsivity by consumer group, the findings of this study generally indicated that youth with higher levels of consumption frequency and quantity were those who had higher impulsivity and higher scores in the three dimensions of the reasons for drinking. These findings are consistent with the literature (Bravo, Echeburúa, & Aizpiri, 2007; Cooper, Russell, Skinner, & Windle, 1992; A. J. Mateos & A. M. Mateos, 2005), however, this previous research reports differences between groups with and without alcohol dependence. In the present study we designed a consumption indicator, combining frequency and quantity, which gave us continuity in the dependent variable that yielded groups from youth who reported never having consumed even those who consume often high amounts. This could be considered an advantage because it offers a variety of categories, which can be located the subjects and not just finished.

The present study examined the effect of impulsivity and motives for drinking alcohol in a group of academics, the results showed that the three dimensions of the motives (social, coping, and enhancement) were the predictors of consumption youth, which explained significant variance percentage. Impulsiveness is not entered as a predictor; however, the results did show weak but significant alcohol consumption.

Regarding social motives, which refer to those with which young people get some kind of social reward, some authors (Carman et al., 1983; Mann, Chassin, & Sher, 1987) have found associations with low use rare spirits. However, Siviroj, Peltzer, Pengpid, Yungyen, and Chaichana (2012) found that this type of motives is related to the frequency of consumption. The results of this research showed that such motives were the highest percentage of variance explained on alcohol, which further agrees with the findings of Siviroj et al. (2012).

The coping motives were those who entered as a second predictor of alcohol consumption in college students and relates to the motives for regulating negative emotions (e.g., because it helps you when you get down, to forget your problems). Some studies indicate reasons that such problems are associated with alcohol use (Cooper, 1994; Cutter & O'Farrell, 1984; McCarty & Kaye, 1984), as well as frequent consumption (Siviroj et al., 2012), which corroborates the findings in this research.

As regards to the reasons for drinking that focus on the search to feel better (for example, because you like how you feel, to feel good), the last variable was entered as a predictor of alcohol consumption. The results of studies by Cooper et al. (1992) and Cooper (1994) showed specific reasons such as patterns associated with high consumption of alcohol. However, the investigation of Cooper (1994) showed improvement with consumption, which was the most important predictor.

Alcohol intake has much broader implications which can be observed in practice, as there are social and cultural references that influence the immediate construction of drinking. This could be understood as an instrument of socialization, covered with different meanings and symbolisms, sharing individuals, cultures and even nations where it not only influences its effects ("deshinibidores"), but also acts in more complex social relations that extend outside the social act of consumption (Míguez, 1987).

In conclusion, the perception or representation of the components of society is associated with young people in relation to alcohol. This is linked to the benefits and is from the need for young people to cover or to meet their social, communication with others, express and/or manage feelings and emotions, develop their sexuality, etc.. Therefore, more worrying is the belief that alcohol can help one obtain these desires, since this

substance is closely linked to social practices (González-González, López, Alcántara, Betancourt, & Reidl, 2011).

As such, it requires a global understanding of both the practice and the arguments of the young people to carry out such behavior in this way and contribute in addressing this problem in terms of measures that seek to prevent social and health burdens.

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