

RELATIONSHIP BETWEEN RISK PERCEPTION AND ALCOHOL CONSUMPTION IN ADOLESCENTS

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The aim of the study was to discover the relationship between risk perception and alcohol consumption in adolescents in high school. This was a descriptive, correlational study. The sample was probabilistic, stratified by semester with allocation proportional to the size of each stratum, in a sample of 345 adolescents. We used identity cards, the Alcohol Risk Perception Questionnaire and the AUDIT instrument. The results showed a significant negative relationship between the risk perception rate and the AUDIT ($r_s = -.418$, $p = .001$). We can conclude that the higher the perceived risk, the lower the alcohol consumption among adolescents.

Descriptors: Perception; Risk; Adolescent; Alcoholic Beverages; Students.

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RELAÇÃO DE PERCEÇÃO DE RISCO E CONSUMO DE ÁLCOOL POR ADOLESCENTES

O propósito do estudo foi conhecer a relação entre percepção de risco e o consumo de álcool por adolescentes do ensino médio. O estudo foi descritivo, correlacional. A amostragem foi probabilística, estratificada por semestre com distribuição proporcional ao tamanho de cada estrato, com uma amostra de 345 adolescentes. Utilizou-se uma ficha de identificação, um questionário de percepção de risco sobre o consumo de álcool e o instrumento AUDIT. De acordo com os resultados, identificou-se uma relação negativa significativa entre o índice de percepção de risco e o índice AUDIT ($r_s = -.418$, $p = .001$). Concluiu-se que quanto maior for a percepção de risco, menor será o consumo de álcool por parte dos adolescentes.

Descritores: Percepção; Risco; Adolescente; Bebidas Alcoólicas; Estudantes.

RELACIÓN DE PERCEPCIÓN DE RIESGO Y CONSUMO DE ALCOHOL EN ADOLESCENTES

El propósito del estudio fue conocer la relación entre percepción de riesgo y el consumo de alcohol en adolescentes de preparatoria. El estudio fue descriptivo, correlacional. El muestreo fue probabilístico, estratificado por semestre con asignación proporcional al tamaño de cada estrato, con una muestra de 345 adolescentes. Se utilizó una Cédula de identificación, el Cuestionario de Percepción de Riesgo hacia el Consumo de Alcohol y el instrumento AUDIT. De acuerdo a los resultados, se identificó una relación negativa significativa entre el índice de percepción de riesgo con el índice de AUDIT ($r_s = -.418$, $p = .001$). Se concluye que a mayor percepción de riesgo, menor será el consumo de alcohol por parte de los adolescentes.

Descriptores: Percepción; Riesgo; Adolescente; Bebidas Alcohólicas; Estudiantes.

Introduction

Alcohol consumption is viewed as a current public health problem, given the scale of consumption and the multiple physical, psychological and social consequences it can provoke for the general population. Increased consumption, however, has been identified, particularly among adolescents and young people aged 14 to 19⁽¹⁾. On a global scale, this phenomenon has led to around 2 and a half million deaths annually among adolescents⁽²⁾.

In Mexico, the average age at which alcohol consumption begins is 16 years old. Consumption of alcoholic beverages increased significantly between 2008 and 2011. Thus, having consumed alcohol within the last year, went from 25.7% to

30.0%, having consumed alcohol within the last month went from 7.1% to 14.5% and within the last 7 days from 13.1% to 14.5%. As for gender, men consumed alcohol more frequently compared with women (31.8% vs. 28.1%, respectively)⁽³⁾.

The main consequences of alcohol use and abuse in young Mexicans are road accidents, accounting for 18.6% of all deaths in this age group, and chronic liver disease (5.1%), the main cause of loss of health life years⁽⁴⁾. Alcohol consumption is also frequently associated with family problems (10.8%), fights (6%), arrest for being under the influence (14.3%) and problems at school (3.7%)⁽⁵⁾.

There are many factors linked to alcohol consumption, including poor information about

alcohol, low self-esteem, anti-social behavior, dissatisfaction with use made of free time and lack of decision making ability, as well as attitude and behavior based on the idea that alcohol poses no risks and encourages enjoyment; in other words, low perception of the risks of alcohol consumption⁽⁶⁻⁸⁾.

Risk perception is having knowledge of the harm drug consumption can cause, and an idea of its severity⁽⁹⁾. Having poor risk perception can lead the adolescent to make the decision to act in a specific way, weighing up personal and environmental aspects. This perception forms a subjective barrier to substance use and thus a higher perception of risk probably leads to lower drug use⁽¹⁰⁻¹¹⁾.

According to the State Survey of Drug Use in Secondary School, Spain, consumption of legal drugs (alcohol) is associated with lower perceived risk, compared with that of illegal drugs. Females perceived greater risk for consuming all substances and perceived risk decreased as age increased⁽¹²⁾.

However, in Mexico, there remain few local studies that associate the variables of perceived risk with alcohol consumption in adolescents, and thus the variables are studied in a single sample. The aim of the present study, then, is to provide useful data for nursing professionals which will contribute to designing and implementing future strategies to prevent and reduce alcohol use aimed specifically at encouraging risk perception in adolescents. Thus, the objectives of this study are as follows.

Objectives

To identify the relationship between risk perception and the type of alcohol consumption (sensible, dependent, harmful) in adolescents at high school.

To identify risk perception according to type of alcohol consumption prevalence (within the last year, the last month and the last week) in adolescents at high school.

Materials and Methods

The study design was descriptive correlational⁽¹³⁾. The population consisted of 1985

adolescents (male and female), aged between 15 and 20 years old, attending a high school in the metropolitan area of Monterrey, Nuevo León.

The sample was probabilistic, stratified by semester with allocation proportional to the size of each stratum. The sample size was calculated with a 95% confidence level, a 5% no response rate and an estimation error limit of 0.5, giving an estimate sample size of 345 adolescents. To select participants, we used the official figures for students enrolled in the institution, from whom we randomly selected ten groups which formed the final sample: five groups from the second semester and five from the fourth semester.

Personal data were collected from Identity Cards and those concerning Prevalence of Alcohol Consumption using two instruments. The first instrument was the Alcohol Risk Perception Questionnaire⁽¹⁴⁾, which consists of 38 statements with Likert style response options ranging from 1 = Totally disagree to 5 = Totally agree. The scale was transformed into a global index with values from 0 to 100, in which the higher the score, the higher the adolescent's perception of risk. In this study, the scale showed acceptable internal consistency of .87. The second instrument was the Alcohol Use Disorders Identification Test (AUDIT)⁽¹⁵⁾, which examines the type of alcohol consumption (sensible, dependent or harmful). This instrument consists of 10 statements with multiple responses. The scale ranges from 0 to 40 points, and the higher the points the higher the alcohol consumption. In this study, the AUDIT instrument showed an acceptable internal consistency of .78.

The study was authorized by the Research Ethics Committee of the Faculty of Nursing of the Universidad Autónoma de Nuevo León, and at all times followed Health Research Regulations⁽¹⁶⁾, ensuring rights are protected and participants dignity and guaranteeing confidentiality and anonymity of the information. Before beginning data collection the lists of enrolled students per semester were requested and these were supplied after authorization by the Institution and the parents' association.

Once the sample was obtained, the selected groups were invited to participate in the study and the objectives, instruments and time required to fill out the questionnaires were explained to

them. Those who agreed to participate and were minors had to provide written consent from their parent or guardian, and a time and place to meet and obtain formal, signed consent and complete the questionnaires was arranged. The following day, the questionnaires were filled out by all authorized participants, taking no longer than 25 minutes.

Next, the data obtained were analyzed using the SPSS (Statistical Package for the Social Sciences) software version 20.0 for Mac OSX. Descriptive statistics (frequencies, proportions, measures of central and dispersion trends) and non-parametrical inferential statistics were used, as the variables did not show normality in the data distribution.

In order to meet the first objective, that of determining perception of risk according to the type of prevalence of alcohol consumption measures of central and dispersion trends were used and for the inferential statistics the Mann-Whitney U test was used.

In order to meet the second objective of identifying the relationship between perception of risk and alcohol consumption, Spearman's Coefficient of Correlation was used.

Results

With regards the socio-demographic characteristics, females predominated, 53.6%, the mean age of the adolescents was 16 ($SD= .83$) and 53.6% were in the first year of preparatory school. The majority (94.8%) on studied and they were all single (100%). As for the quantity of alcoholic drinks consumed on a typical day, participants reported a mean of 3.6 ($SD=3.3$) and the age at which they began to consume alcohol was, on average, at 15 ($SD=1.6$).

The results showed that 64.6% of participants reported having consumed alcohol within the last year (CI 95% [60-70]), 29.3% reported having consumed alcohol within the last month (CI 95% [24-34]) and only 13.9% reported consumption within the last 7 days (CI 95% [10-18]). As for the type of alcohol consumption reported in the Alcohol Use Disorders Identification Test, 36.8% of participants who consumed alcohol were sensible consumers, followed by dependent, 14.8% and only 13.1% harmful.

Regarding the first objective, the Risk Perception Questionnaire showed significant difference between the three types of prevalence of alcohol consumption, in which those adolescents who do not consume alcohol had higher scores for perception of risk, compared with those who did consume (Table 1).

Table 1 - Perception of risk according to the type of prevalence of alcohol consumption in adolescents

Perception of Risk Rate	n	\bar{X}	Mdn	U	p
Within the last year				8856.0	.001
Yes	223	72.6	72.4		
No	122	78.9	79.1		
Within the last month				6937.0	.001
Yes	101	69.6	68.7		
No	244	77.0	76.7		
Within the last 7 days				3785.0	.001
Yes	48	67.9	67.7		
No	297	76.0	75.1		

$n=345$, \bar{X} =mean, Mdn= median, U=Mann-Whitney, p=significance.

As for the second objective, that of identifying the relationship between perception of risk and alcohol consumption in adolescents, significant negative correlation was observed between the rate from the Perceived Risk Questionnaire and the AUDIT ($r_s=-.418$, $p=.001$), in all three subscales (sensible, dependent and harmful), with the highest negative correlation in the sensible consumption subscale ($r_s=-.440$, $p=.000$) as shown in Table 2.

Table 2 - Relation between perception of risk and type of alcohol consumption in adolescents

Variables	Perception of Risk Rate
	r_s (p)
AUDIT	-.418 ^(a) (.001)
Sensible Consumption	-.440 ^(a) (.000)
Dependent Consumption	-.243 ^(a) (.001)
Harmful Consumption	-.230 ^(a) (.001)

$n = 223$, r_s = Spearman's Coefficient of Correlation, p= significance
^(a) $p < .01$

Discussion

The demographic profile of the adolescents in this study showed a higher proportion of females and of those in the first year of prep school,

with a mean age of 16. As for the quantity of alcoholic beverages they reported drinking, the mean was 3.6 alcoholic drinks on a normal day, and on average, alcohol consumption began at age 15.

The above is in line with what was reported in the most recent ENA in Mexico, which reported that the mean age for beginning to consume alcohol was between 15 and 17 years old. These results indicate that the age at which alcohol consumption begins is growing earlier and earlier as a form of experimentation, reflected in our first year students. This finding may be explained by peer pressure, the desire for new experiences, the quest for social acceptance and the effect of alcohol tolerance⁽¹⁷⁻¹⁹⁾.

It was observed that the adolescents consumed more alcoholic beverages within the last year (64.6%), this was a higher figure than that reported in the ENA⁽⁵⁾ which reported that 30% of the adolescents had consumed alcohol within the last year. The most common type of consumption among the adolescents was sensible consumption (36.8%), followed by dependent consumption, and finally harmful consumption. This agrees with another study which reported that for 37% of young people in Monterrey consumption was sensible, followed by dependent and finally by harmful⁽²⁰⁾.

The above findings may be explained by the fact that the adolescents studied in public institutions, as there is less supervision by teachers and directors due to the large numbers enrolled, limiting their control of risk factors in the school context, as well as poor supervision on the part of parents and the tendency to follow social norms and examples of peers, all factors which may encourage consumption. This situation gives a glimpse of a future of alcohol dependence or involvement with consuming other psychoactive substances.

Regarding the first objective, it was found that the Perception of Risk rate showed significant differences in the three types of prevalence (within the last year, within the last month and within the last week), in which those adolescents who did not consume alcohol had higher scores for perceiving risk, compared to those who had consumed alcohol. These findings are in line with two other studies which identify that fear

of negative consequences from risky activities, such as consuming alcohol, is dominant in those who refrain; in other words, they have a negative attitude towards consumption^(9,21). This suggests that adolescents perceive greater negative consequences from alcohol consumption, resulting in a stronger negative attitude towards consumption of licit drugs.

As for the second objective, the results show that there is a significant negative correlation between the perception of risk rate and the AUDIT scores and the types of consumption (sensible, dependent and harmful). In other words, for adolescents, the higher the Perception of risk, the lower the alcohol consumption. The above findings are in agreement with what was shown in another study⁽¹⁴⁾ which reported significant negative correlations between perception of risk and alcohol consumption in Mexican students.

The above result may be explained by the fact that the adolescents in this study who perceived or were informed of the high risk attached to alcohol consumption, such as problems directly and indirectly derived from consuming these substances. Information on risk perception may be useful in designing health education and training programs for the secondary school curriculum in the area of drug addictions.

Conclusions

Females predominated, with 53.6% of participants, the mean age was 16 ($SD=.83$) and 53.6% were in the first year of preparatory school. As for the quantity of alcoholic drinks consumed on a normal day, participants reported a mean of 3.6 ($SD=3.3$) and on average alcohol consumption began at age 15 ($SD=1.6$).

Prevalence for consuming alcohol within the last year was 64.6% (CI 95% [60-70]), prevalence for within the last month was 29.3% (CI 95% [24-34]) and prevalence for within the last 7 days was 13.9% (CI 95% [10-18]). It was observed that for 36.8% of participants who consumed alcohol, consumption was sensible, for 14.8% consumption was dependent and for 13.1% consumption was harmful.

There were significant differences in the perception of risk rate for type of prevalence of alcohol consumption, in which the adolescents

who did not consume alcohol reported higher perception of the risks involved compared with those who did consume it. There was a significant negative relationship between the perception of risk rate and the AUDIT score, and in the subscales of sensible, dependent and harmful consumption, showing a higher negative correlation in the sensible subscale.

Final Considerations

It is recommended that the subject of perception of risk with regards alcohol, tobacco and illegal drug consumption continue to be studied. It is also recommended that different population types be studied, such as adolescents who study in public secondary schools, in private prep schools or those in suburban areas, in order to discover whether the findings of this study will be repeated.

In the future, conducting further nursing intervention studies for preventing and reducing alcohol consumption, reinforcing knowledge of the harmful effects and consequences of consuming this drug, so as to increase the level of risk perception. It is recommended that nurses working in primary care make use of the Risk Perception Questionnaire and the AUDIT as reliable instruments for measuring perception of risk and type of alcohol consumption, respectively.

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