RESEARCH

Dating violence associated with alcohol consumption in female high school students in Matamoros, Tamaulipas

Violencia en el noviazgo asociada al consumo de alcohol en mujeres estudiantes de preparatoria en Matamoros, Tamaulipas

Violência no namoro associada ao consumo de álcool em estudantes do ensino médio em Matamoros, Tamaulipas

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Abstract

Introduction: As a consequence of harmful alcohol consumption, 3 million deaths occur each year worldwide. Although historically in America and in the rest of the world men drink more alcohol, in frequency and intensity, alcohol misuse among women is increasing. A close relationship has been linked between excessive alcohol consumption and episodes of verbal, physical and sexual violence in couples. Objective: To measure the prevalence of alcohol consumption, identify types of violence and determine the association between alcohol consumption and dating violence in female high school students. Methodology: A descriptive correlational design was used. 206 adolescents between 15 and 18 years old who were in final exams were excluded, using a non-probabilistic sampling. A survey including personal data, alcohol consumption, and the Dating Violence Scale, prior settlement and informed consent, descriptive and inferential statistical analysis with Spearman's test was used. Results: 59.2 had a partner and showed an average alcohol consumption of 14.7 years; 70.9% drank alcohol at some point in their lives; and 37.7% drank alcohol in the last week. 88.3% suffered psychological violence, 7.8% physical violence, and 3.9% sexual violence; a significant positive statistical correlation was found between the number of drinks consumed on a typical day and psychological violence. Conclusions: Alcohol consumption is present in the adolescent population, with an increase in alcohol consumption among females. The relationship between alcohol consumption and psychological, physical, and sexual violence is proven.

Keywords: Alcohol; Violence; Students; Teenagers (DeCS).

Resumen

Introducción: Cada año se originan 3 millones de muertes en el mundo, como consecuencia del consumo dañino de alcohol, históricamente en América y el resto del mundo los hombres beben más alcohol en frecuencia e intensidad, sin embargo, el consumo indebido de alcohol entre mujeres va en aumento. Se ha vinculado una estrecha relación entre el consumo excesivo de alcohol y episodios de violencia verbal, física y sexual en las parejas. Objetivo: Medir la prevalencia de consumo de alcohol, identificar tipos de violencia y determinar la asociación entre consumo de alcohol y violencia en el noviazgo en mujeres estudiantes de preparatoria. Metodología: Diseño descriptivo correlacional, en 206 adolescentes de 15 a 18 años se excluyeron quienes estaban en exámenes finales, con muestreo no probabilístico. Se utilizó encuesta con datos personales, consumo de alcohol, y Escala de Violencia en el Noviazgo, previo asentamiento y consentimiento informado, análisis estadístico descriptivo e inferencial con prueba de Spearman. Resultados: 59.2 tenía pareja, promedio de consumo de alcohol 14.7 años, 70.9 % consumió alcohol en algún momento de su vida y 37.7 % en la última semana. Un 88.3 % sufrió violencia psicológica, 7.8 % física y 3.9 % sexual, se evidenció correlación estadística positiva significativa entre número de bebidas consumidas en un día típico con violencia psicológica. Conclusiones: El consumo de alcohol está presente en la población adolescente, observándose un incremento en el género femenino, se corrobora relación entre el consumo de alcohol y la violencia psicológica, física y sexual.

Palabras clave: Alcohol; Violencia; Estudiantes; Adolescentes (DeCS).
Abstrato

Introdução: Como consequência do consumo nocivo de álcool, ocorrem 3 milhões de mortes por ano em todo o mundo. Embora historicamente, nos Estados Unidos e no resto do mundo, os homens bebam mais álcool, em termos de frequência e intensidade, o uso indevido de álcool entre as mulheres está aumentando. Uma estreita relação tem sido associada entre o consumo excessivo de álcool e episódios de violência verbal, física e sexual em casais. Objetivo: Medir a prevalência do consumo de álcool, identificar os tipos de violência e determinar a associação entre o consumo de álcool e a violência no namoro em estudantes do ensino médio. Metodologia: Foi utilizado um projeto correlacional descritivo. Foram excluídos 206 adolescentes entre 15 e 18 anos de idade que estavam fazendo exames finais, usando uma amostragem não probabilística. Utilizou-se inquérito com dados pessoais, consumo de álcool e escala de violência no namoro, acordo prévio e consentimento informado, análise estatística descritiva e inferencial com teste de Spearman. Resultados: 59,2% tinham um parceiro e apresentaram uma média de consumo de álcool de 14,7 anos; 70,9% consumiram álcool em algum momento de suas vidas; e 37,7% consumiram álcool na última semana. 88,3% sofreram violência psicológica, 7,8% física e 3,9% sexual. Foi encontrada uma correlação estatística positiva e significativa entre o número de bebidas consumidas em um dia típico e a violência psicológica. Conclusões: O consumo de álcool está presente na população adolescente, com um aumento no consumo de álcool entre as mulheres. A relação entre o consumo de álcool e a violência psicológica, física e sexual é comprovada.

Palavras-chave: Álcool; Violência; Estudantes; Adolescentes (DeCS).

Introduction

The World Health Organization (WHO) reported that worldwide 3 million deaths occur as a consequence of harmful alcohol consumption every year, in addition to documenting that this type of consumption is related to a series of mental and behavioral disorders. The National Survey on Drug, Alcohol and Tobacco Consumption (ENCODAT for its acronym in Spanish) revealed that alcohol consumption is the most widespread substance use and abuse problem in Mexico, with very severe social consequences, in addition to being directly associated with the origin of more than 64 diseases \(^{(1,2)}\).

In Mexico, it was seen that 39.8% of the adolescent population aged 12 to 17 years had consumed alcohol at some time in their lives (41.7% males and 37.9% females) and 28% (4 million) had consumed alcohol in the last year (28.8% males and 27.2% females), showing a decrease in consumption among genders. Specifically in the state of Tamaulipas, it was shown that 44.2 % of
the student population has consumed alcohol at some time in their lives (44.8 % males and 43.7 % females) and 10.5 % have had excessive alcohol consumption (11 % males and 9.9 % females), thus persisting the same trend (2).

According to the Pan American Health Organization (PAHO), historically in the Americas and in the rest of the world, men drink more alcohol, in frequency and intensity, than women. However, this trend has been changing in recent years, as the gender gap appears to be narrowing among young people. (3). Researchers (4) have noted that in recent years girls have been drinking more frequently and more heavily than boys, moving from moderate to more intense consumption known as binge drinking, a situation that is worrying since this type of consumption produces negative changes in behavior, which inevitably increases vulnerability and endangers the physical integrity of both young women and young men. With respect to the Northern Border of Tamaulipas, a study performed among 138 university women documented a lifetime prevalence of alcohol consumption of 92.8%, that is, at the time of this interview (5) almost all the participants had experienced alcohol consumption.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) (6) also reported that alcohol use and misuse among women is increasing, adding that there are important gender differences due to biological differences such as weight, body water, including differences in the pharmacokinetics of alcohol, as well as its effect on brain function and sex hormone levels. Therefore, as a consequence, blood alcohol levels in women will be higher and will place them at a greater risk of suffering damage to their health (7). With regard to the effects it has on the organism, Arias stated that the central nervous system is the most sensitive to alcohol, modifying the behavior of those who consume it, not only at the level of motor coordination, but also affecting perception and cognition and clearly influencing people's performance. Thus, behaviors such as sexual conduct and aggressiveness are severely affected by alcohol consumption (8).
Current available literature has established a close relationship between excessive alcohol consumption and episodes of verbal, physical and even sexual violence in couples\(^4,9,10\). These violent behaviors usually initiate since the courtship stage, where the aggressor is usually the male figure and the victim the female\(^11\); however, this is not consistent in all researches. In this regard, one research\(^12\) found that both genders are victimized during dating, while others\(^13\) identified that young people recognize violence as an event that is experienced in everyday dating relationships and that it occurs reciprocally. In the same vein, a research carried out in order to understand the connection between alcohol consumption and the expression of violence in the relationship revealed that violence in the relationship was perpetrated by the couple, and that it worsened with time and with the increase in the amount of alcohol intake\(^10\). In relation to these behaviors, Veloso and De Sousa\(^14\) mentioned that alcohol consumption increases by 2.2 times the probability that the woman will be raped by the intimate partner. They also reported that the overall prevalence of intimate partner violence against women was 64 %, with 61.5 % of the sample being victims of psychological violence, 33.6 % of physical violence, and 17.1 % of sexual violence.

The main object of the nursing professional is care and its purpose is to promote the health and growth of the individual, family, and community. These results provide the opportunity for the creation of nursing strategies such as the implementation of timely and effective preventive measures that can prevent violence in women and delay, prevent or reduce the use and abuse of alcohol in this population. Therefore, and after reviewing the existing literature, it is considered pertinent to go deeper into the relationship between these phenomena, for which the research question “What is the relationship between alcohol consumption and dating violence in female high school students?” was raised, establishing as objectives: Measurement of the prevalence of
alcohol consumption, to identify the types of violence, and to determine the relationship between alcohol consumption and dating violence in female high school students.

**Methodology**

A descriptive, cross-sectional and correlational research was conducted. The population consisted of adolescent female students from a public high school in the city of Matamoros, Tamaulipas, Mexico. The sample was non-probabilistic (15), which consisted of 206 students within an age range of 15 to 18 years enrolled in school at the time of the interview, who agreed to participate in the research, in addition to presenting the signed consent, because they were minors. Students who were in final exams were excluded, as well as those who did not wish to participate in the research.

A personal data and alcohol consumption prevalence questionnaire (CDPPCA) was used, which consisted of a section containing five open-ended questions that included age, marital status, semester in which they were studying and occupation, whether only studying or studying and working. The second section investigated the prevalence of alcohol consumption by means of four dichotomous questions with yes and no answers and three open-ended questions. The first question asked about lifetime alcohol consumption, consumption in the last year, consumption in the last month, consumption in the last week; the second question asked about age at onset of consumption; while the third question asked about the amount consumed in a typical day and the type of drink consumed.

The Dating Violence Scale (EVN for its acronym in Spanish), adapted by Reyes (16) from the National Dating Violence Survey, was used to evaluate violence. The original questionnaire consisted of 14 sections. For this study, only 3 sections were used to assess the prevalence of the different indicators of physical, psychological, and sexual violence perceived by the adolescents in their dating relationships. The psychological violence section consisted of 11 items, the physical violence section consisted of 12 items, and the sexual violence section consisted of 8 items, which
are answered with a Likert-type measurement scale where (0) is never, (1) is once, and (2) is several times, having an overall score with a minimum of 0 and a maximum of 62. In the present research, a Cronbach's Alpha internal consistency of .97 was reported, while for the psychological, physical, and sexual violence subscales the Cronbach's Alpha was .91 to .98, respectively.

Prior to this, the approval of the Research and Ethics Committee of the Multidisciplinary Academic Unit (registration number 116) and authorization for data collection was requested from the educational institution's management. The research was performed pursuant to the Regulations of the General Health Law, in its section on research on human beings (17), which establishes that, for the implementation of health research, ethical aspects that guarantee the dignity, consent, confidentiality, anonymity, and well-being of the people must be considered.

The Statistical Package for Social Sciences (SPSS) version 23 for Windows was used for data analysis. The internal consistency of the instruments was checked through Cronbach's Alpha reliability coefficient, descriptive statistics through frequencies and percentages, and inferential statistics through Spearman's correlation test.

**Results**

The socio-demographic analysis revealed that 59.2% were with a partner at the time of the interview, 84.2% lived with both parents, 73.3% were full-time students, and 26.7% were studying and working, distributed in two school periods (42.2% third and 57.8% fifth).

To determine the prevalence of alcohol consumption, 70.9% reported having drank alcoholic drinks. The average (mean) age of onset of alcohol consumption was 14.7 years (SD=1.8). The average (mean) consumption in a typical day was 4.9 (SD=6.9) drinks; among the participants beer has the highest percentage of consumption (58.2 %), prepared drinks were in second place with 30.8%, while wine had the lowest preference (2.1 %). The prevalence of alcohol consumption at some time in their lives was 70.9% and 37.4% in the last week (Table 1).
Concerning the types of violence, 88.3% reported suffering psychological violence, 7.8% reported having experienced physical violence with their partner, and 3.9% suffered sexual violence (Table 2).

Table 2. Violence types, 2022 (n= 206).

<table>
<thead>
<tr>
<th>Violence</th>
<th>fr</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>182</td>
<td>88.3</td>
</tr>
<tr>
<td>Physical</td>
<td>16</td>
<td>7.8</td>
</tr>
<tr>
<td>Sexual</td>
<td>8</td>
<td>3.9</td>
</tr>
</tbody>
</table>

In terms of psychological violence, 49.5% of the participants reported that their partner wanted to be with them all the time, 36.6% reported that they were not allowed to have friends, and 34% reported that they were called on the phone regardless of the time of day or night. Physical violence included slapping (13.1%), being scratched several times by their partner and being hit at least once by their partner (12.1%), biting (10.2%), and hair pulling (8.3%). In terms of sexual violence, what stood out the most were talking to them about sexual matters that they did not like and were ashamed of (11.7%), telling offensive jokes about the relationship to their friends (10.2%), telling their friends that they had sex, even if it was not true (5.3%), and receiving threats saying that they would end the relationship if they did not have sex (3.9%).

Statistically significant differences in psychological violence were found for prevalence of alcohol consumption in the last year (U= 4128.0, p= .015) and last month (U= 4428.0, p= .048). The data
indicate higher means and medians of psychological violence in adolescents who had consumed alcohol in the past year and in the past month compared to those who had not consumed alcohol (Table 3).

Table 3. Central tendency contrast of the psychological violence index scores between the prevalence of alcohol consumption in the last year and last month, according to the Mann-Whitney U test, 2022 (n=206).

<table>
<thead>
<tr>
<th>Alcohol consumption prevalence</th>
<th>n</th>
<th>X̅</th>
<th>Mdn</th>
<th>SD</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over the past year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>85</td>
<td>21.28</td>
<td>18.18</td>
<td>18.75</td>
<td>4128.0</td>
<td>0.015</td>
</tr>
<tr>
<td>Yes</td>
<td>121</td>
<td>26.71</td>
<td>22.73</td>
<td>16.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over the past month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>94</td>
<td>22.05</td>
<td>18.18</td>
<td>18.71</td>
<td>4428.0</td>
<td>0.048</td>
</tr>
<tr>
<td>Yes</td>
<td>112</td>
<td>26.50</td>
<td>22.73</td>
<td>16.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own development; X̅=mean, Mdn=median, SD=standard deviation, U=Mann-Whitney U, p=significance.

Concerning the relationship between alcohol consumption and type of violence, a significant positive statistical relationship was found between the number of drinks consumed in a typical day and psychological violence (rs=.148, p<.034). It should be noted that the higher the number of drinks consumed in a typical day, the higher the index of psychological violence (Table 4).

Table 4. Spearman correlation for the variables beverages consumed in a typical day and types of violence, 2022 (n=206).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Typical day drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological violence</td>
<td>.148*</td>
</tr>
<tr>
<td>Physical violence</td>
<td>.112</td>
</tr>
<tr>
<td>Sexual violence</td>
<td>-.018</td>
</tr>
</tbody>
</table>

Source: Own development
* p < .05

Discussion
The current research provided a measure of the prevalence of alcohol consumption, identified types of violence and determined the relationship between alcohol consumption and dating violence in adolescent female high school students, identifying that the age of onset of alcohol consumption
of the participants was 14.7 years, very similar figures found in previous studies, such as the one carried out in a sample of high school students in Nuevo Laredo, Tamaulipas (18), as well as in a research performed in Mexico City (19), where it was reported that consumption started at 13.7 and 13.4 years, respectively. These data are consistent with those reported by the 2011 National Addictions Survey (20), which stated that in Mexico, adolescents start using drugs at an average (mean) age of 14 years. However, this differs from a study performed on Cuban adolescents (21), where they found that the age of onset of consumption was much lower, starting at 10 years of age and extending the range up to 16 years of age. These differences in the age of onset may be due to socio-cultural differences, since these adolescents live in completely different contexts.

In terms of the prevalence of alcohol consumption, it was found that almost three quarters of the adolescents admitted having consumed alcohol at some time in their lives, a figure that agrees with that reported by Colombian researchers (22), who found that more than three fifths of the adolescents admitted having consumed alcohol at some time in their lives prior to the research. However, when measuring consumption in the last week, both in this research and in the one carried out in Colombia (22), a considerable reduction in the percentage of adolescents who reported continued consumption was seen. This could be due to the fact that since adolescence is a transitional stage between childhood and adulthood, it is also a stage of experimentation where many young people, out of curiosity to experience new sensations, have their first contact with substances. However, since some protective factors are present, such as living with both parents in a functional family (23) or have higher self-esteem, not everyone gets “hooked” or continues with consumption (24).

A high percentage of the women interviewed admitted to having suffered some type of violence, with psychological violence being the most common, followed by physical violence. Likewise, a significant percentage of the adolescents mentioned having suffered sexual violence. These results are consistent with those reported in previous studies, such as the one carried out in Brazil (10),
where the participants reported having received verbal, psychological and physical violence from their partners. Another investigation conducted among female high school students in the state of Coahuila, Mexico (25), reported that the most common types of dating violence among adolescents were psychological and physical, with half and nearly a quarter, respectively, of the adolescents admitting to having experienced it. Similarly, when investigating a sample of university women in Mexico City (11), it was documented that almost three quarters of those interviewed reported having suffered episodes of abuse and emotional, physical and sexual violence by their romantic partners. This type of behavior seems to be a constant in many relationships, repeating pre-established patterns and becoming a way of life. Dating violence may have a multicausal origin, and a series of factors that predict it may be present, such as age, assuming a victim position with the partner, low self-esteem and the use of psychoactive substances (25). In this respect, an association has been identified between having suffered physical or psychological abuse in childhood and the use of dating violence (26). Moreover, having suffered psychological abuse in childhood increases the probability that an adolescent will be a perpetrator of verbal dating violence (27). It is important to point out that violence is not always perpetrated solely by the male sex, since, according to existing literature, violence is perpetrated in both directions, by both men and women (13,28).

A significant positive statistical correlation was found between the number of drinks consumed in a typical day and psychological violence, i.e., the greater the number of drinks consumed, the greater the psychological violence. This result supports the results reported by Spanish researchers (29), who, when analyzing alcohol consumption and violence in adolescents, revealed that higher levels of alcohol and illegal drug consumption increased the probability of physical, psychological and sexual violence against a partner. In addition, in a study conducted among high school students in the state of Sinaloa, Mexico, a significant association was found between the use of violence in relationships and alcohol consumption, indicating that adolescents who showed a tendency to use
more violence against their partners also consumed more alcohol (28). The existing relationship between violence and the consumption of addictive substances such as alcohol and other drugs is evident (30), and these episodes of violence may increase with the time spent together and the increase in alcohol intake, which supports the hypothesis that alcohol consumption is a predictor for the use or receipt of different types of violence (10). Some limitations of the research were due to the fact that it was conducted exclusively on women and not on couples or dyads, which limited our knowledge of the feelings of male adolescents regarding the phenomenon studied. Since this was a cross-sectional research, the results should be interpreted with caution, without making inferences of causality, in addition to the fact that, since non-probabilistic sampling was used, the sample should not be considered representative of the population. Another limitation could be that, by using self-applicable instruments, the participants may not be completely truthful when answering or, in the case of adolescents, may give erroneous answers because they do not fully understand the questions. Therefore, the results of the research do not necessarily allow for generalization.

Conclusions

Furthermore, it is important to note that a high percentage of the female population under study reported having had contact with alcohol at some time in their lives, as well as the presence of the three types of violence (physical, psychological and sexual) perceived by the participants, the most common being psychological violence. A statistically significant positive relationship was also found between the number of drinks consumed in a typical day and psychological violence. The results of this research regarding the close relationship between alcohol consumption and dating violence could serve as a basis for implementing nursing and multidisciplinary health team interventions focused on the prevention of violence and alcohol consumption that promote and reinforce healthy behaviors in adolescents. Similarly, to continue conducting research on the
phenomenon with a qualitative orientation, in order to deepen on the subject, considering adolescents as a vulnerable population.

**Conflict of interest**

The authors stated that there was no conflict of interest.

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