

RESEARCH PAPER (ORIGINAL)

Alcohol and tobacco use among young people with human immunodeficiency virus

Consumo de alcohol y tabaco en jóvenes portadores del virus de la inmunodeficiencia humana

Consumo de álcool e tabaco em jovens portadores do vírus de imunodeficiência humana

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Abstract

Background: Alcohol and tobacco use among young people with human immunodeficiency virus represents a problem due to its impact on their health.

Objectives: To determine the prevalence of alcohol and tobacco use among young people with human immunodeficiency virus.

Methodology: Cross-sectional descriptive study. The sample included 70 young people with human immunodeficiency virus registered in an outpatient center for prevention and care of AIDS and sexually transmitted diseases. A confidence level of 95% was used.

Results: We found that 100% of young people had drunk alcohol at some point in their life, with a harmful consumption of 95.7%. Similarly, 81.4% of young people had smoked at some point in their life, with a predominance of experimental smokers (50%).

Conclusion: A high prevalence of alcohol and tobacco use was observed among young people with human immunodeficiency virus. Therefore, nursing interventions should be implemented with a view to effectively reducing, delaying or avoiding the consumption of these substances.

Keywords: alcohol drinking; tobacco use; young adult; nursing; HIV

Resumen

Marco Contextual: El consumo de alcohol y tabaco en jóvenes portadores del virus de la inmunodeficiencia humana representa un problema debido al impacto que tiene en la salud de estas personas.

Objetivos: Determinar la prevalencia de consumo de alcohol y tabaco en jóvenes portadores del virus de la inmunodeficiencia humana.

Metodología: Diseño descriptivo transversal, la muestra se estimó bajo un nivel de confianza del 95%, incluyéndose 70 jóvenes portadores del virus de la inmunodeficiencia humana adscritos a un centro ambulatorio de prevención y atención en sida e infecciones de transmisión sexual.

Resultados: El 100% de los jóvenes han consumido alcohol alguna vez en la vida, presentando un consumo dañino el 95,7%. Asimismo el 81,4% de los jóvenes han consumido tabaco alguna vez en la vida, predominando el tipo de fumador experimental con un 50%.

Conclusión: Se presentó alta prevalencia de consumo de alcohol y tabaco en los jóvenes portadores del virus de la inmunodeficiencia humana. Por ello es indispensable implementar intervenciones de enfermería que contribuyan de manera eficaz y oportuna a reducir, retrasar o evitar el consumo de estas sustancias.

Palabras Clave: consumo de bebidas alcohólicas; uso de tabaco; adulto joven; enfermería; VIH

Resumo

Enquadramento: O consumo de álcool e tabaco em jovens portadores do vírus da imunodeficiência humana representa um crescente problema devido ao impacto na saúde destas pessoas.

Objetivos: Determinar a prevalência de consumo de álcool e tabaco em jovens portadores do vírus de imunodeficiência humana.

Metodologia: Desenho descritivo transversal, incluiu 70 jovens portadores do vírus da imunodeficiência humana, inscritos num centro ambulatorio de prevenção e atenção em sida e infeções de transmissão sexual.

Resultados: Cem por cento dos jovens têm consumido álcool alguma vez na vida, apresentando um consumo nocivo de 95,7%. Assim mesmo o 81,4% dos jovens que têm consumido tabaco alguma vez na vida, predominando o tipo de fumador experimental com 50%.

Conclusão: Verificou-se uma elevada prevalência de consumo de álcool e tabaco nos jovens portadores do vírus de imunodeficiência humana, sendo indispensável implementar intervenções de enfermagem que contribuam de maneira eficaz a reduzir ou evitar o consumo destas substâncias.

Palavras-Chave: consumo de bebidas alcoólicas; uso de tabaco; adulto jovem; enfermagem; HIV

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Received for publication: 30.11.16

Accepted for publication: 22.01.17

Introduction

According to the World Health Organization (Organización Mundial de la Salud, 2015a), the human immunodeficiency virus (HIV) is a public health issue causing approximately 36 million deaths worldwide. There are approximately 35.3 million people infected with HIV, of whom 5 million are young people aged between 15 and 24. It is estimated that around 6,000 young people are infected every day (Programa Conjunto de las Naciones Unidas sobre el VIH/SIDA, 2013).

In Mexico, there are about 174,000 people living with HIV, of whom more than 20,000 (11.9%) are young people aged between 15 and 24. It should be noted that 48.6% of people became HIV infected during youth and 99% through sexual contact. These data show that this stage of growth and development brings about not only biological changes, but also psychological and cognitive changes, representing a crucial moment for the onset of sexual maturity, which leads to sexual risk behaviors (Gamarria-Tenorio & Lannacone, 2010; Secretaría de Salud, Dirección General de Epidemiología, & Centro Nacional para la Prevención y Control del VIH/SIDA, 2014). Several studies have shown an association between sexual risk behaviors and tobacco and alcohol consumption, with young people being a vulnerable population group due to the multiple changes in behaviors and social relationships that they experience during this stage. Addiction is a serious and growing problem in people living with HIV, particularly the consumption of licit substances such as alcohol and tobacco, which are responsible for serious complications that have an impact on the health of the individual, group, family and/or community (Gamarria-Tenorio & Lannacone, 2010; Secretaría de Salud, Dirección General de Epidemiología, & Centro Nacional para la Prevención y Control del VIH/SIDA, 2014). Alcohol is the most commonly consumed legal substance and occupies the third place as a risk factor for multiple diseases and disabilities worldwide. In addition, it is responsible for the death of approximately 320,000 young people aged between 15 and 29, which is equivalent to 9% of deaths by excessive consumption in this population group (Secretaría de Salud, Direc-

ción General de Epidemiología, & Centro Nacional para la Prevención y Control del VIH/SIDA, 2014). Tobacco consumption is responsible for 6 million deaths per year, among which more than 6 million are direct consumers and more than 600,000 are non-smokers exposed to secondhand smoke (Organización Mundial de la Salud, 2015b).

In Mexico, the National Addiction Survey 2011 reported that lifetime alcohol consumption, consumption over the past year and over the past month in adolescents aged between 12 and 17 years was 42.9%, 30%, and 14.5%, respectively (Medina-Mora et al., 2012a). It also reported that less than 1% of young people drink alcohol on a daily basis, 5.8% on a monthly basis, 2.3% on a weekly basis 2.3%, and 7.2% occasionally (Medina-Mora et al., 2012b). With regard to tobacco use, the prevalence of active adolescents was 9.2%, the prevalence of former smokers was 9.9%, and 77.8% reported never having smoked (Medina-Mora et al., 2012b). Similarly, the National Survey of Health and Nutrition (Pablo-Gutierrez et al., 2012) indicates that young people smoke an average of 3.7 cigarettes per day, and 6.6% reported smoking their first cigarette in the first 30 minutes after waking up. It should be noted that between 50 and 80% of the population younger than 20 years old have smoked or drank alcohol at some point in their lifetime and that this consumption increases with age (Medina-Mora et al., 2012a, 2012b; Pablo-Gutierrez et al., 2012). In view of the above, the aim of this study is to determine the prevalence of alcohol and tobacco use in young people with HIV.

Background

In the discipline of Nursing, Roy's Adaptation Model describes people as holistic human beings. During this process, people are influenced by stimuli from the internal and/or external environment. These stimuli act upon the coping mechanisms that preserve the life processes, resulting in adaptive behaviors. However, in order to achieve these adaptive behaviors, people should use effective coping processes (Roy & Andrews, 1999). In the case of young people with HIV, this diagnosis represents

an internal stimulus which is interpreted as a threat in several areas of their lives, such as integrity, autonomy, well-being, family relationships, friends, among others (Ceballos Ospino, Echeverri Arias, & Jiménez Villamizar, 2015). Some studies (Ceballos et al., 2015) indicate that people with HIV-AIDS often have isolation behaviors, low self-esteem, and depression due to their health condition, which contributes to the lack of adaptive coping strategies. It also fosters the development of unhealthy behaviors, such as alcohol and tobacco use with the purpose of trying to forget the disease or reduce stress. However, these coping strategies only have a short-term impact, and, as a result of these behaviors, their health condition is even more threatened.

Alcohol consumption provides a feeling of excitement because it affects some brain centers, reducing tensions and inhibitions and producing sensations of greater socialization and euphoria. However, the excessive consumption of this substance, especially among these young people, can have a major impact on the liver and cardiovascular functions. Similarly, nicotine, as an active tobacco product, activates brain cells that regulate the sensation of pleasure by increasing the release of dopamine into the brain. Nevertheless, this effect is momentary and can cause addiction, leading to negative effects on the health of young users (Organización Mundial de la Salud, Organización Panamericana de la Salud, 2005).

Research question

What is the prevalence of alcohol and tobacco use in young people with HIV?

Methodology

Design

This study had a descriptive and cross-sectional design. The population was composed of 324 young patients aged between 16 and 24 years with HIV and who were registered in the Outpatient Center for Prevention and Care of AIDS and Sexually Transmitted Diseases (*Centro Ambulatorio para la Prevención y Atención en Sida e Infecciones de Transmisión Sexual - CAPASITS*) located in Ciudad del Carmen,

Campeche. A nonprobability convenience sample was used. It was analyzed using the statistical package STATA, with a 5% margin of error, a 95% power, and a 95% level of significance. We obtained a non-response rate of 10%, resulting in a total of 70 participants.

Measuring instruments

Data were collected using a Questionnaire about Personal Data and Prevalence of Tobacco and Alcohol Consumption, which was created by the authors of this study, the Alcohol Use Disorders Identification Test developed by a group of WHO experts (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001), and the Fagerström Test for Nicotine Dependence (Fagerström & Schneider, 1989).

The Questionnaire about Personal Data and Prevalence of Tobacco and Alcohol Consumption consisted of three sections. The first section collected identification data about gender and age, as well as demographic data such as marital status and occupation. The second section corresponded to the prevalence of alcohol consumption: lifetime use, in the past year, in the past month, and in the past week. Participants were also asked about their age of onset of alcohol consumption, the number of alcoholic drinks consumed on a typical day, and their favorite alcoholic beverage.

In the third section, they were asked about tobacco lifetime use, use in the past year, in the past month, and in the past week, as well as about their age of smoking initiation and the number of cigarettes smoked per occasion. To identify the type of smoker (former, experimental, user or dependent), we asked a question with four answer choices: If the participant smoked in the past but (does not smoke anymore, he/she was considered to be a former smoker); (if the participant had smoked less than 100 cigarettes in his/her life and smokes occasionally, he/she was considered to be an experimental smoker); (if the participant had smoked more than 100 cigarettes during his/her life and smokes on a daily basis, he/she was considered to be a user); (and if the participant currently smokes on a daily basis and smokes the first cigarette of the day within 30 minutes after waking up, he/she was considered to be a dependent smoker).

With regard to alcohol consumption, the Al-

cohol Use Disorders Identification Test (AUDIT) was used. It consists of 10 items that examine alcohol consumption during the past twelve months and its consequences. The AUDIT consists of three domains: items 1, 2, and 3 analyze the amount and frequency of drinking, items 4, 5, and 6 assess the possibility of alcohol dependence, and items 7, 8, 9, and 10 explore the harmful consumption of alcohol. The minimum score of the questionnaire is 0 and the maximum is 40. The scores are interpreted as follows: 0-3, wise consumption; 4-7, dependent consumption, and 8-40, harmful consumption. The authors of this instrument reported a sensitivity of 80% and a specificity of 89%. This questionnaire has been used specifically in young Mexicans under these cut-off points because they are the ones who best describe the consumption behavior in this population, where a Cronbach's alpha of 0.87 was obtained (Telumbre-Terrero & Sánchez-Jaimes, 2015). In this study, a Cronbach's alpha of 0.81 was obtained, which is considered an acceptable internal consistency.

Moreover, the Fagerström Test for Nicotine Dependence was used to assess the nicotine dependence related to cigarette smoking. The questionnaire consists of six items, which are answered in two different ways: three of them have dichotomous answers (*yes* or *no*) and the other three items are answered on a four-point scale (0 to 3 points). The total score is obtained by summing the results obtained in each item and ranges from 0 to 10 points: 0-2, non-dependence; 3-4, low dependence; 5-6, moderate dependence; 7-8, strong dependence; and 9-10 very strong dependence. This instrument obtained a Cronbach's alpha of 0.70, which is considered an acceptable internal consistency.

Data collection

Before data collection, the favorable approval of the Research and Ethics Committees of the Faculty of Nursing of the Autonomous University of Carmen was obtained. Then, we requested permission to conduct the study to the directors of the institutions where the study would be conducted, as well as the list of the participants.

Once the participants were identified, the

director's office was contacted to provide the schedules and classes where we could find the young people with HIV/AIDS. Subsequently, each participant was visited in the schedule provided by the institution, so as not to interfere with care delivery. The person responsible was asked to control the authorizations to speak with the participants and invite them to participate in the study and explain the study objectives in a clear and simple manner. Young people above the age of majority who agreed to participate in the study were given an informed consent. They were asked to read and sign it and to answer the instruments at that time.

Young people under the age of majority were given an informed consent for their parents or legal guardians. A date, place and time to pick them up were established. Those who agreed to participate were explained again the purpose of the study and given the informed assent to be read and signed so that they could participate in the study. An envelope with the instruments was given to each participant. The mean time for completion of the questionnaires was 20 minutes. Once completed, the participants were asked to place them inside the envelope and leave them in a box. Finally, they were thanked for their participation.

This study complied with the Regulation of the General Law of Health in the Field of Health Research (Secretaría de Salud, 1987). Data were processed using the statistical software Statistical Package for the Social Sciences (SPSS), version 17.0 for Windows. The instrument's internal consistency was assessed through Cronbach's alpha coefficient. Descriptive statistics were used: frequencies, proportions, and measure of central tendency (mean) and variability (standard deviation, minimum and maximum values).

Results

With regard to the sociodemographic characteristics of the study participants, we found a predominance of women (67.1%). With regard to age, 58.6% of participants were aged between 22 and 24 years. In addition, 44.3% of them lived with their partners and 55.7% reported being heterosexual.

With regard to their occupation, only 72.9% worked, of whom 43.5% worked in shops, restaurants, accommodation, transports, social events, masonry, among others. It should be noted that the most prevalent type of education was the technical career (75%).

Table 1

Descriptive statistics for the continuous variables of alcohol and tobacco consumption

Variables	n	\bar{x}	SD	Value	
				Minimum	Maximum
Age of participants	70	21.6	2.1	16	24
Age of onset of alcohol consumption	70	14.4	2.0	12	22
Alcoholic drinks consumed on a typical day	70	11.2	4.4	4	25
Age of smoking initiation	57	15.7	2.1	16	24
Cigarettes smoked on a typical day	50	11.2	4.0	6	22

Note. n = sample, \bar{x} = mean, SD = standard deviation.

Table 2 shows that 100% of the participants had consumed alcohol at some point in their life and in the past year, 85.7% in the past month, and 37.1% in the past 7 days. Mo-

The participants' mean age was 21.6 years ($SD = 2.1$). The mean age of onset of alcohol consumption was 14.4 years ($SD = 2.0$). On the other hand, the mean age of smoking initiation was 15.7 years ($SD = 2.1$; Table 1).

reover, 81.4% had smoked at some point in their life, 71.4% in the past year, 65.7% in the past month, and 38.6% in the past 7 days.

Table 2

Global, lapsed, current, and instantaneous prevalence of alcohol and tobacco consumption

	f	%
Alcohol consumption		
Lifetime use	70	100
In the past year	70	100
In the past month	60	85.7
In the past week	26	37.1
Tobacco consumption		
Lifetime use	57	81.4
In the past year	50	71.4
In the past month	46	65.7
In the past week	27	38.6

Note. f = frequencies

With regard to the types of alcohol consumption according to the AUDIT, 95.7% of the participants had a harmful alcohol consumption, followed by dependent consumption with 4.3%. In relation to the types of tobacco

use, we observed that 20% of young people had never smoked, 11.4% were former smokers, 50% were experimental smokers, 15.7% were users, and 2.9% were tobacco dependent.

Discussion

On average, young people with HIV start using alcohol and tobacco at the age of 15, which is consistent with the data from the 2011 National Addiction Survey (Medina-Mora et al., 2012a, 2012b). This survey is applied to the adult and youth population in order to identify relevant information related to the consumption of addictive substances. This particular survey identified that adolescents and young people start using alcohol and tobacco at the age of 17 or under. This is perhaps explained based on the various psychosocial and behavioral changes affecting young people and the curiosity that emerges at this stage to experience new habits that facilitate social interaction, leading to risk behaviors, such as the consumption of legal drugs at increasingly early ages.

On the other hand, participants drink an average of 11 alcoholic drinks and smoke cigarettes per occasion. This result differs from the results of the National Survey of Health and Nutrition (Pablo-Gutierrez et al., 2012) on the consumption of alcohol among young people, and from a study conducted with young people in the state of Guerrero, Mexico (Telumbre-Terrero & Sánchez-Jaimes, 2015), which concluded that adolescents and young people smoke on average 3.7 cigarettes and drink 2.4 alcoholic beverages per occasion. This situation is worrying because participants have HIV and are expected to have a healthy lifestyle. However, this allows us to confirm that this is a highly vulnerable population for the acquisition of unhealthy lifestyles, such as alcohol and tobacco use (Ceballos et al., 2015).

With regard to alcohol consumption, we found that the lifetime use, the use in the past year and in the past month is similar to the results found by Armendáriz-García, Villar, Alonso-Castillo, Alonso-Castillo, and Oliva (2012) in a study with young people. However, the consumption of alcohol in the past 7 days is higher than that reported by Armendáriz-García et al. (2012), who suggested a prevalence of 31.8%. The findings show a serious situation which should be given special attention due to the characteristics of these young people. Similarly, from

the perspective of Nursing, we should consider that young people with HIV face several family, emotional, and social situations that can cause stress, irritability, and depression, which are, in turn, risk factors for the use of alcohol and other drugs as a way to minimize negative emotional states (Fuster, Torrens, Tor, & Muga, 2009).

Tobacco use in young people with HIV is higher than that found in studies in other cities in the north of Mexico (Villegas-Pantoja, Alonso-Castillo, Alonso-Castillo, & Guzmán-Facundo, 2014), which reported a global consumption of 33.6%, a consumption in the past year of 17.2%; in the past month of 6.6%, and in the past week of 11.3%. This could be associated with the fact that young people with HIV have a higher level of anxiety, frustration, and anger because of the various emotional and social stimuli related to the disease. These internal and external stimuli affect their mechanisms to cope with their health situation. Since these resources are not the ideal ones to cope with the health situation, they adopt adaptive behaviors such as tobacco use. Moreover, this substance is more available now in shops regardless of age and it is known that, although the adverse effects of nicotine are published, the education about its negative impact on the health of patients with HIV should be intensified (Del Castillo Martín, Róman Hernández, Amador Romero, Perdomo Hernández, & Pulido Díaz, 2013).

With regard to the type of alcohol consumption, our results are higher than those found by other authors (Telumbre-Terrero & Sánchez-Jaimes, 2015), who reported that 7.3% to 38% of young people have a harmful alcohol consumption, followed by 31.1% and 24.8% with a dependent consumption. With regard to the type of smokers, the results found in this study differ from the data reported by the National Addiction Survey 2011 (Medina-Mora et al., 2012a), which reported that consumption is lower among young people.

This may be associated with the presence of negative mood states, as well as with the quality of the relationships with the people surrounding them, who may stigmatize and prevent young people with HIV from im-

plementing effective coping strategies and, consequently, acquire adaptive behaviors to their disease. This is reflected in an increase in both the prevalence and amount of alcohol and tobacco consumption in this population (Reis et al., 2011). This information is more relevant to this study because harmful alcohol consumption and tobacco use increase the possibility of negative health consequences. The consumption of these substances may even lead to disability and death among these young people.

Limitations of the study

Longitudinal studies should be conducted for a broader identification of the prevalence and types of consumption among the participants. Moreover, a larger sample size should be used and other concepts should be analyzed that can explain this issue and allow designing the best care interventions.

Conclusion

We concluded that 100% of the total number of adolescents and young people with HIV/AIDS had consumed alcohol at some point in their life and during the past year, 85.7% in the past month, and 37.1% in the past 7 days. There is a predominance of harmful alcohol consumption, followed by dependent consumption.

With regard to tobacco use, 81.4% had smoked at some point in their life, 71.4% in the past year, 65.7% in the past month, and 38.6% in the past 7 days. With regard to the type of consumption, there is a prevalence of experimental smokers, followed by non-smokers, users, and dependent smokers. These data indicate that these young people use ineffective coping strategies to deal with potential problems in their daily lives, especially those related to their illness. Subsequently, this has a direct impact on their health status, even more so because, due to their health diagnosis, they should abstain from using these substances, which are harmful to their physical well-being.

Based on our results, we suggest that nurses should design and implement psychoeducational programs to strengthen healthy coping strategies in these patients with a view to re-

ducing alcohol and tobacco use, as well as the negative health effects. On the other hand, it is important to identify young people with problems of alcohol dependence at an early stage, so that they can be referred to specific programs for a specialized diagnosis and adequate treatment of the dependence on this substance and try to reduce alcohol-related health risks.

However, it is important to further explore the most challenging situations faced by young people with HIV, as well as identify the coping strategies used to reduce stress. Subsequently, specific interventions should be designed with the purpose of providing tools for young people with HIV to use effective and healthy coping strategies.

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