Original Article

# Consumption of alcohol and tobacco in adolescentes[1]

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The aim was to identify the alcohol consumption and tobacco consumption among adolescents. The design was descriptive, the population consisted of 386 subjects aged 15 to 20 years old of Monterrey, Nuevo León high school. Participants responded to a questionary of data and AUDIT. The results show that the number of drinks consumed on a typical day was 6 standard drinks (SD= 6.6) and consumed an average of 2 cigarettes per drinking occasion (SD= 2.4). Alcoholic beverages index U= 15682; = 2.4 (p= 0.006) and the number of cigarettes U = 16197; = .42 (p = .007) is higher in men than in women.

Descriptors: Alcohol Drinking; Tobacco Use; Adolescent.

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# Consumo álcool e tabaco entre os adolescentes

O objetivo foi identificar o consumo de álcool e o tabaco entre os adolescentes. Trata-se de um estudo descritivo e a população foi constituída por 386 indivíduos com 15 a 20 anos de uma escola de ensino médio de Monterrey, Nuevo León. Os participantes responderam a um questionário sociodemográfico e o AUDIT. Os resultados mostram que o número de bebidas consumidas em um dia típico foi de 6 bebidas padrão (DE= 6.6) e consumiu uma média de 2 cigarros por ocasião de beber (DE= 2.4). Índice de bebidas alcoólicas U= 15682; = 4.33 (p= 0.006) e o número de cigarros U= 16197; = 1.01 (p= 0.007) é maior em homens do que em mulheres.

Descritores: Consumo de Bebidas Alcoólicas; Uso de Tabaco; Adolescente.

# Consumo de alcohol y tabaco en adolescentes

El objetivo fue identificar el consumo de alcohol y tabaco en los adolescentes. El diseño fue descriptivo, la población estuvo conformada por 386 sujetos de entre 15 años a 20 años de una preparatoria Monterrey, Nuevo León. Los participantes respondieron una Cédula de Datos y el AUDIT. Los resultados muestran que la cantidad de bebidas consumidas en un día típico fue de 6 bebidas estándar (DE= 6.6) y consumen en promedio 2 cigarrillos por ocasión de consumo (DE= 2.4). El índice de bebidas alcohólicas U= 15682; = 4.33 (p= .006) y la cantidad de cigarrillos U= 16197; = 1.01 (p= .007) es mayor en hombres que en mujeres.

Descriptores: Consumo de Bebidas Alcoholicas; Uso de Tabaco; Adolescente.

## Introduction

Drug use is a public health issue worldwide which has increased in the last twenty years and is one of the main causes disturbing living in communities and altering the harmony in families and society[1]. The consumption of alcohol and tobacco as licit drugs is a serious problem for health systems in the world[2]. In 2014, the World Health Organization [WHO] indicated that approximately 3.3 million people died due to causes related to alcohol in the world, including 320,000 young people between 15-29 years old. According to these numbers the harmful use of alcohol generates 5.9% of global mortality as well as 4.5% of the global number of morbidity expressed as loss of years of life adjusted due to inability[3-4].

As the National Addictions Survey (2011)[5], about 27 million Mexicans consume alcohol between 12 and 65 years old; although consumption is not daily it was reported that close to 4,000,000 people in Mexico drink excessively once a week or more frequently. The age group with the highest levels of consumption is 18-29 years in both men and women. This habit is not exclusive of the adult population; more and more adolescents are involved in the consumption and abuse of alcohol, becoming a major concern for the health care [6].

Meanwhile, tobacco consumption is one of the main susceptible causes of preventing diseases, and death and is a risk factor for various coronary and pulmonary diseases such as pulmonary emphysema, lung cancer, hypertension, angina pectoris, among

others. Currently, 17.3 million Mexicans aged 12 to 65 are active smokers, representing 21.7% of the population; 12,000,000 are men (31.4%) and 5,200,000 are women (12.6%). Approximately 8.9% of this population smokes daily (7,100,000), 13.2% of men and 4.8% of women[5].

In Mexico approximately 122 people die every day from causes linked to tobacco addiction; it is the probable cause of more than 25 diseases, and it is estimated that chronic smokers may lose between 20 and 25 years. This consumption has generated disabilities in the short, medium and long term, which affects the economy and in the workplace, reflecting high costs for the health sector due to secondary diseases to tobacco consumption and decreased productivity of the affected population, causing death at the production age [7]. Studies show that in Mexico more than 60% of smokers start their consumption before 16 years of age, and over 90% have started it before age 20, which leads us to suppose that the most important preventive period is at early ages, since it is hardly reported in the beginning of addiction in adult ages [5,7].

Moreover, adolescents are in a stage of growth and development, which makes them vulnerable to the consumption of alcohol and tobacco because they have a tendency to challenge what has been established and challenge social norms. That is why there is a need to continue studying consumption patterns in adolescents, the age of onset of consumption and differences between the genders. The ward professional has a very important role in achieving timely preventive measures that may delay, prevent or reduce this consumption.

Therefore, the purpose of this study was to identify the consumption of alcohol and tobacco among adolescents.

## Material and Methods

This was a descriptive study. The population comprised 386 subjects between 15-20 years, of both genders belonging to a preparatory school of a Public University in a suburban area of the state of Nuevo León. A census was conducted in a moment in time. Therefore, the sample consisted of the total students enrolled in the preparatory school (Studies after secondary education to entry University) between the first and the third year (*n*=386).

A Personal Data Collection, Licit Drug Use Prevalence and the Alcohol Use Disorders Identification Test [AUDIT][8] were used, which assess the type of alcohol consumption in the last 12 months. Results vary from zero to forty points, qualification from one to three points is considered sensible consumption (no risk), result from four to seven points is considered dependent consumption (risk) and the result from eight or more points is considered harmful consumption.

Data was electronically processed with the Statistical Package program for Social Sciences (SPSS) version 18.0 for Windows. Descriptive statistics was used in relation to frequencies, proportions, measures of central tendency and variability. We used the Kolmogorov-Smirnov Goodness-of-Fit Test with Lilliefors correction and we determined the internal consistency of the instrument through the Cronbach's Alpha Reliability Coefficient (*a*=0.83)

This study was based on the provisions by the General Health Law Regulation on Health Research (1987)[9] which establishes that for the development of health research, ethical aspects that ensure the dignity and the well-being of individuals should be considered. This study had the approval of the Ethics Committee and Research of the Nursing School of the Autonomous University of Nuevo León, and obtained written authorization of the institution's directors for the development of this research. The students were contacted and once they agreed to participate they received the informed consent. Each participant received a sealed envelope with the instruments, confirmed the anonymity and confidentiality of information.

## Results

The sociodemographic characteristics showed that, regarding gender, prevailed females with 53.9%; 100% of students were single, 48.7% attended the first year of preparatory school, and 91.2% had no jobs.

Students had an average age of alcohol consumption onset of 14.1 years and an average of 14 (*SD*= 1.2), the age of tobacco consumption onset was 14.2 years and an average of 14 years (*SD*=1.3). According to the number of beverage consumed on a typical day, participants consume on average six standard drinks (*SD*=6.6) and consume on average two cigarettes during consumption(*SD*=2.4).

Table 1 shows the prevalence of alcohol and tobacco consumption, in which 60.6% of participants consumed alcohol and 33.4% consumed cigarettes at least once in life.

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Table 1 - Global prevalence, period, current and instantaneous photo of alcohol and tobacco consumption

| Prevalence of Consumption | Alcohol | | | | Tobacco | | | |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | |
| | f | % | f | % | f | % | f | % |
| Sometime in life | 234 | 60.6 | 152 | 39.4 | 129 | 33.4 | 257 | 66.6 |
| In the last year | 196 | 50.8 | 190 | 49.2 | 104 | 26.9 | 282 | 73.1 |
| In the last month | 138 | 35.8 | 248 | 64.2 | 74 | 19.2 | 312 | 80.8 |
| In the last seven days | 73 | 18.9 | 313 | 81.1 | 55 | 14.2 | 331 | 85.8 |

*n*= 386

Table 2 shows the types of alcohol consumption reported in the Alcohol Use Disorders Identification Test AUDIT, where 21% of participants who consume alcohol show a harmful consumption.

Table 2 - Frequencies and proportions by type of alcohol consumption according to AUDIT

| Type of Consumption | f | % |
|---|---|---|
| Sensible consumption | 75 | 19.4 |
| Dependent consumption | 40 | 10.4 |
| Harmful consumption | 81 | 21.0 |

*Score: n*= 196

Table 3 shows significant differences in AUDIT rate by gender; most are males than females (*p*= .009). There are significant differences between women and men in frequency and quantity rate (*p*= .003) and in the dependent consumption rate (*p*= .006), with most males than females. Regarding the amount of alcoholic beverage consumed on a typical day, men consumed more than women, showing a significant difference (*p*= .006).

Table 3 - U test of Mann-Whitney for AUDIT consumption rate per gender

| | n[a] | $\overline{X}$[b] | Mdn[c] | U[d] | p[e] |
|---|---|---|---|---|---|
| AUDIT rate | | | | | |
| Female | 95 | 15.50 | 10.00 | 3771.5 | .009 |
| Male | 101 | 21.56 | 20.00 | | |
| Sensible Consumption Rate | | | | | |
| Female | 95 | 29.12 | 16.61 | 3642.5 | .003 |
| Male | 101 | 39.36 | 33.33 | | |
| Dependent Consumption Rate | | | | | |
| Female | 95 | 7.02 | 0.00 | 3819.0 | .006 |
| Male | 101 | 13.78 | 8.33 | | |
| Harmful Consumption Rate | | | | | |
| Female | 95 | 11.63 | 0.00 | 4480.0 | .393 |
| Male | 101 | 14.05 | 6.25 | | |
| Number of alcoholic beverage consumed on a typical day | | | | | |
| Female | | | | | |
| Male | 208 | 2.24 | 0.00 | 15682.0 | .006 |
| | 178 | 4.33 | 1.00 | | |

*(a)n*=196
*(b)*$\overline{X}$= average
*(c)Mdn* = median
*(d)U*= U of Mann-Whitney
*(e)p*= significance

Table 4 shows the types of tobacco consumption, in which has been reported that 66.6% of participants had never smoked, 14.2% are Experimenters, 11.1% of the participants are users, 4.7% are former smokers and 3,4% are Tobacco dependents.

Table 4 - Frequencies and proportions of types of tobacco consumption

| Types of Tobacco Consumption | f | % |
|---|---|---|
| Non-smokers | 257 | 66.6 |
| Former smokers | 18 | 4.7 |
| Experimenters | 55 | 14.2 |
| Users | 43 | 11.1 |
| Dependents | 13 | 3.4 |

$n$= 386

Table 5 shows a significant difference in the number of cigarettes consumed in a typical day by gender, most males than females ($p$= .007).

Table 5 - U test of Mann-Whitney to the number of cigarettes consumed on a typical day by gender

| Number of cigarettes consumed On a typical day | $n^{(a)}$ | $\overline{X}^{(b)}$ | $Mdn^{(c)}$ | $U^{(d)}$ | $p^{(e)}$ |
|---|---|---|---|---|---|
| Gender | | | | | |
| Female | 208 | .42 | .00 | 16197.0 | .007 |
| Male | 178 | 1.0$\overline{1}$ | .00 | | |

(a)$n$= 386,
(b)$\overline{X}$= average
(c)$Mdn$ = median
(d)$U$= U of Mann-Whitney
(e)$p$= significance

## Discussion

The age of alcohol and tobacco consumption onset was at 14 years of age, the average for alcoholic beverage consumed on a typical day was 6.3 ($SD$ = 6.6), indicating a dependent consumption for men and harmful consumption to women[8]; probably this high alcohol consumption can be explained by the area they live, as they are limited to other forms of distraction where they can hold recreational activities. These data are extremely alarming because in this age group any amount of consumption is considered excessive due to the possibility of causing severe short-term damage and develop faster tolerance and dependence on this substance due to the development stage they are in[10]. Villatoro et al. (2011)[11] indicate that there is evidence that the drugs at the beginning of consumption are usually alcohol and tobacco, and after that time they may change to illicit substance use. Also, the sooner they start the consumption of these substances, the more likely to increase the amount of consumption and then change to the use of illicit drug use.

Regarding the number of cigarettes consumed on a typical day, the average consumption was 2.5 ($SD$ = 2.4), classifying them into the category of experimenters, and this result is probably explained by the influence of friends, the desire to experience risks, and the characteristics of their age that lead them to challenge the established social norms[12].

Regarding the global prevalence, period, current and present consumption of alcohol and tobacco among adolescents in preparatory school, it shows that the substance of higher consumption is alcohol and then tobacco. The proportions of consumption at any point in life are 60.6% and 33.4% respectively.

Regarding the consumption of alcohol and tobacco by gender, there are significant differences in AUDIT index, the averages were higher in men than

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in women, which can be explained by the social and cultural patterns, where is more accepted alcohol consumption by men than by women [13], even so, due to the probable association of the substance as socialization vehicle, and because male adolescents associated this consumer with the challenge to what has been established, however for women alcohol consumption can be socially not accepted or stigmatized [14].

Regarding tobacco consumption, the amount of cigarettes shows significant differences by gender, the highest average occur in men; this result is probably explained by the deep-seated beliefs in suburban areas, where tobacco consumption among women is not accepted and criticized socially.

The data from this study supports the facts that the alcohol and tobacco consumption onset occurs increasingly in the early ages, moreover, men adolescents consume more alcohol than women adolescents and more quantity and frequency.

## Final remarks

Female predominated in 53.9%. The average age of alcohol consumption onset was 14.1 years considering the start of smoking age 14.2. The number of beverage consumed on a typical day was six drinks per occasion and two cigarettes on the occasion. About 60% of adolescents had consumed alcohol at least once in their lifetime and 33.4% had consumed tobacco at least once in lifetime. About 21% of drinkers presented harmful consumption, the AUDIT index showed significant difference and was higher in men than in women, the frequency and quantity rate, the dependency rate and the amount of beverage ingested on a typical day also presented significant differences, being higher in men than in women. About 66% of adolescents had smoked at least once in their lifetime, 3.4% of smokers presented dependence and men consumed more cigarettes per occasion than women.

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