



## DOCENCIA - INVESTIGACIÓN

### Self-esteem as an intrapersonal stress factor on alcohol use in female prostitutes

La autoestima como factor estresor intrapersonal para el consumo de alcohol en trabajadoras sexuales

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Palabras clave: sexoservidoras; autoestima; consumo de alcohol

Keywords: Prostitutes; self-esteem; alcohol use/abuse

### ABSTRACT

**Introduction** Alcoholism is a worldwide health issue, and female consumers are increasing. Prostitution could be linked to alcohol abuse.

**Objective** To evaluate the effect of self-esteem as an intrapersonal stress factor on alcohol use in female prostitutes.

**Material and methods** An approved study by the Research Committee. Cross-sectional, analytical study of prostitutes from Cosoleacaque, Veracruz, Mexico. For alcohol use the AUDIT questionnaire was used and for self-esteem, the Coopersmith inventory.

**Statistical analysis** The Odds Ratio between low self-esteem and alcohol use, 95% confidence intervals and Attributable Fraction in Exposed were calculated. An attempt was made to generate a logistic regression model.

**Results** The trial sample was made up by 50 prostitutes. The Odds Ratio between low self-esteem and alcohol use was 5.08 (95% CI 0.59 a 43.95), and an Attributable Fraction in Exposed of 80.3%. The logistic model was not built because no variable of the study demonstrated an improvement in the model using the probability ratio test.

**Conclusions** According to Betty Neuman's system model, low self-esteem has a strong effect and impact in the use and abuse of alcohol.

## RESUMEN

**Introducción.** El alcoholismo es un problema mundial de salud y en las mujeres consumidoras se está incrementando. El sexo servicio podría estar ligado al consumo de alcohol.

**Objetivo.** Medir la relación entre autoestima como factor estresor intrapersonal y el consumo de alcohol en las trabajadoras sexuales.

**Material y métodos.** Estudio aprobado por el Comité de Investigación. Estudio transversal analítico en sexoservidoras en Cosoleacaque, Veracruz. Para consumo de alcohol se utilizó el cuestionario AUDIT y para la autoestima el inventario de Coopersmith.

**Análisis estadístico.** Se calculó Razón de Momios entre autoestima baja y consumo de alcohol, intervalos de confianza al 95% y la Fracción Atribuible en los Expuestos. Se intentó generar un modelo de regresión logística.

**Resultados.** La muestra fueron 50 sexoservidoras. La Razón de Momios entre autoestima baja y consumo de alcohol fue de 5.08, con una Fracción Atribuible en Expuestos de 80.3%. No se construyó el modelo logístico ya que ninguna variable de estudio mostró mejorar el modelo con el Test de Razón de Probabilidad.

## INTRODUCTION

Alcohol abuse is a worldwide health issue according to the experts of the World Health Association (WHO). It is a more prominent problem among men, although it is increasing among females <sup>(1)</sup>.

The highest alcohol consumption is found in Central Europe and Central Asia <sup>(1)</sup>. In America, alcohol abuse is in 5<sup>th</sup> place among health risks <sup>(2)</sup>. The second report made by the Experts Committee of the WHO informs that by 2002, alcohol abuse was accountable for 3.7% of the deaths in the country and 14.4% in the world <sup>(1)</sup>. The direct expenses of alcohol related issues cost the United States Health System 19,000 million dollars annually.

The use of alcohol causes dependency, stimulation or depression of the central nervous system, occasional hallucinations, a decreased control of motor skills and poor judgment <sup>(3)</sup>. An alcoholic affects his life causing both family and interpersonal problems, which can lead to a separation of the family unit, he/she can generate a social marginalization, traffic accidents, work problems, unemployment and crime; thus the social cost may even be greater than the health costs <sup>(1)</sup>.

In Mexico, The National Addictions Survey (NAS), reports that more than 32 million people between the ages of 12 and 65 consume alcohol and 13 million of them were active consumers a year prior to the survey. 72% of the male population are consumers of alcohol, whereas in the female population only 42.7% use alcohol <sup>(4)</sup>. Mariño, in Mexico City, reported that 60.7% of men and 52% of women consumed alcohol on a daily basis, and women consumed on average 4.2 drinks at a time <sup>(5)</sup>.

In Valencia, Spain, female survey respondents started consuming alcohol at an early age, and progressively developed dependency, using alcohol to cover an unpleasant reality, fill voids and ease tension. These women reported feelings of guilt and low self-

esteem, isolating themselves from their environment, lowering their ability to relate to others and not fulfill their duties and role as women <sup>(6)</sup>.

In Mexico, it was reported that women drinkers, engaged in drinking because alcohol allowed them to experience feelings of happiness, joy, and freedom. Alcohol gave them courage to act provocatively or show their body; since consuming alcohol made them feel attractive. For other women, drinking allows them to escape from reality, escape their problems; but, once the effect of the alcohol wore off, they experienced guilt <sup>(7)</sup>. Among alcoholic women, the ones that had the highest levels of alcoholism also reported a low self-esteem <sup>(8)</sup>.

Prostitution is a situation as old as humanity and there are no exact figures for the number of women who are dedicated to this service worldwide, in Germany alone, it was estimated that in 2005 there were 400,000 prostitutes <sup>(9)</sup>.

In Brazil, it was reported that 70.7% of survey respondent prostitutes, consumed alcohol <sup>(10)</sup>. In Latin-America during 2008, it was reported that 44% of female prostitutes had had 4 drinks in at least 4 occasions or more in the last 30 days; 26.9% of them said to have consumed alcohol with their most recent client <sup>(11)</sup>.

In Colombia, it was reported that 70.5% of prostitutes used alcohol, 56.8% did so occasionally and 13.65% on a regular basis <sup>(12)</sup>.

In prostitution, in order to have a higher income, it is important to induce clients to consume alcohol, as was reported in Colombia <sup>(13)</sup>. The prostitution circle in Latin America and The Caribbean has 35 groups of prostitutes in Mexico and it is estimated that in Mexico City there are at least 2,500 women who engage in prostitution <sup>(14)</sup>. Veracruz is the state which is reported to have more people in the field of prostitution; 13,278 people of which 11,991 are women <sup>(15)</sup>.

According to the Betty Neuman model the individual, when viewed as a system, can be affected by intrapersonal, extra-personal and interpersonal factors. Self-esteem is considered an intrapersonal stress factor, a psychological variable that can affect the system and create instability, which can lead to alcohol abuse <sup>(16)</sup>.

Prostitutes are a vulnerable group of the female population because of the work that they have. They are marginalized, they don't have access to integral health programs, since the only medical care they receive is to undergo a monthly test for sexually transmitted diseases and HIV/AIDS <sup>(17)</sup>.

The objective was to measure the impact of self-esteem on alcohol consumption in prostitutes in Cosoleacaque, Veracruz.

## **MATERIAL AND METHODS**

The study was approved by the Research Committee of the Health Science and Engineering Department in the Celaya - Salvatierra Campus, Universidad de Guanajuato and authorized by the City Hall of Cosoleacaque, Veracruz in México.

**Type of study:** It was a cross-sectional analytical study, based in the community.

**Study subjects.** Registered prostitutes in the Cosoleacaque Municipality in Veracruz, Mexico, a total of 98.

**Inclusion criteria.** Women over the age of 18 who engage in prostitution and agree to participate by written consent.

**Exclusion criteria.** Pregnant prostitutes.

**Sample:** all 98 prostitutes were invited to participate in the study, of which 53 agreed (58.89%) and only 50 (51.02%) came to the interview.

**Procedures.** Measured Variables: age in years; schooling in years studied from elementary education, income in Mexican pesos per month, the age at which they had their first alcoholic drink, the number of children they had and how long they had been prostituting themselves measured in months.

To know the consumption of alcohol, the Alcohol Use Disorders Identification Test, (AUDIT) was used. This test was designed by the WHO in 1992 and used to identify and categorize the patterns of drinker as risky, dangerous or dependent on alcohol <sup>(18)</sup>; Scores between 8 and 40 pts. were categorized as drinkers and scores of 0 to 7 were categorized as non-drinkers. It is a 10-item instrument with responses using a scale of 0-4. Reliability has been measured in the Mexican population with a Cronbach's alpha coefficient of 0.87.

To measure the self-esteem, the Coopersmith self-esteem inventory was used, with a Cronbach Alpha reliability of 0.81 in the Mexican population. The instrument consists of 25 questions with dichotomous responses; a score of 0-10 was classified as low self-esteem, a score of 11-22 points was considered as average self-esteem <sup>(19)</sup>.

**Sample size.** Expecting that 80% of alcohol drinkers had low self-esteem and 55% of non-users had low self-esteem, with an expected Odds Ratio (OR) of 3.2 with 95% precision and 80% power. The minimum sample size was 16 alcohol users and 16 non-users (3.1 Epidat, 2008, Xunta de Galicia and the Pan-American Health Organization).

**Statistical Analysis.** Descriptive statistics was used for the socio-demographic variables; in order to know the effect of self-esteem on alcohol consumption, the OR and 95% confidence intervals was calculated. To know the impact that low self-esteem has on alcohol consumption, the Attributable fraction in exposed (AFE) was calculated.

A regression logistics model was attempted between the consumption of alcohol, self-esteem and socio-demographic variables using the Likelihood Ratio Test (LRT) to know if the model is improved by using more variables. For statistical analysis the STATA 10.1 (StataCorp LP, College Station, TX, USA) was used.

## RESULTS

The sample consisted of 50 prostitutes of the 98 prostitutes registered in the municipality of Cosoleacaque, Veracruz.

Table I shows the categorical characteristics of the participating prostitutes. 62% of the prostitutes were single, 40% did not have another profession and 66% of them professed the catholic faith.

**Table I. Categorical socio-demographic characteristics of the sample, Cosoleacaque, Veracruz, 2011 (n = 50)**

<b>Variable</b>	<b>N</b>	<b>%</b>
<b>Marital Status</b>		
<b>Single</b>	31	62.00
<b>Married</b>	8	16.00
<b>Divorced</b>	3	6.00
<b>Separated</b>	6	12.00
<b>Living with a partner</b>	2	4.00
<b>Occupation</b>		
<b>Student</b>	1	2.00
<b>House Wife</b>	18	36.00
<b>Worker</b>	4	8.00
<b>Sales</b>	7	14.00
<b>None</b>	20	40.00
<b>Religion</b>		
<b>Catholic</b>	33	66.00
<b>None</b>	17	34.00

Source: Study questionnaire

The quantitative characteristics of the sample are reported in Table II. The average age was 31 years old, 6 years schooling, an income of 2,900 pesos per month, on average they consumed their first alcoholic drink at 21, they have two children and have engaged in prostitution for at least 29 months.

**Table II. Discrete Characteristics of sample members, Cosoleacaque, Veracruz. 2011 (n = 50)**

<b>Variables</b>	<b>Range</b>	<b>Mean ± s</b>
<b>Age (years)</b>	18 a 60	31.04 ± 8.5
<b>Schooling (years of study)</b>	1 a 12	6.16 ± 3.10
<b>Monthly income</b>	800 a 8000	2900 ± 1490.80
<b>Age at which they had their first alcoholic drink (years)</b>	9 a 48	21.5 ± 7.20
<b>Number of children</b>	0 a 5	2.20 ± 1.21
<b>How long they have engaged in prostitution (months).</b>	1 a 120	29.94 ± 30.08

Source: Study questionnaire

Table III shows the diagnoses of alcohol consumption and the category of self-esteem. An OR = 5.08 with confidence intervals at 95% from 0.59 to 43.95 and an Attributable Fraction in Exposed (AFE) = 80.3% is found, therefore, there is a significant effect of low self-esteem on alcohol consumption and AFE shows that the 80.3% of alcohol user participants say they would not have tried alcohol if their confidence level had been average or high.

**Table III. Tabulation between self-esteem and alcohol consumption, Cosoleacaque, 2011 (n=50)**

COOPERSMITH	AUDIT					
	Alcohol consumption		No alcohol consumption		Total	
	n	%	n	%	n	%
<b>Low self-esteem</b>	11	22.00	1	2.00	12	24.00
<b>Average self-esteem</b>	26	52.00	12	24.00	38	76.00
<b>Total</b>	37	74.00	13	26.00	50	100.00

Source: AUDIT and Coopersmith surveys

A logistics model of regression between low self-esteem and low alcohol consumption was generated, adding age (TRP,  $p > 0.05$ ), occupation (TRP,  $p > 0.05$ ), religion (TRP,  $p > 0.05$ ), schooling (TRP,  $p > 0.05$ ), monthly income (TRP,  $p > 0.05$ ), length of time engaging in prostitution (TRP,  $p > 0.05$ ), number of children (TRP,  $p > 0.05$ ), thus none of these variables act as distracters nor modifiers of the effect.

## DISCUSSION

The sample consisted of 50 prostitutes from the 98 prostitutes registered at City Hall in Cosoleacaque, Veracruz.

In the study sample, 14% of the women worked selling something and 8% were workers in addition to prostitution. The results are similar to the study made about prostitution in Colombia. In our study, 86.4% of the prostitutes were single and in the study of Colombia it was 62% of the sample <sup>(12)</sup>.

In Brazil, it was reported that 84% of the prostitutes who consumed alcohol were Catholic and 77% of them had children (20). Similarly, in Cosoleacaque, 66% profess the Catholic religion and 76% have children (Table I).

In terms of the age at which they had their first alcoholic drink, the results obtained in the sample of prostitutes in Cosoleacaque (age range 9-48) (Table II) are consistent with those reported by the National Survey of Addictions <sup>(21)</sup>, which states that the onset of alcohol consumption is during adolescence.

An OR of 5.08, indicates that the prostitutes who consumed alcohol, were five times more likely to have low self-esteem than those who did not consume alcohol (Table III), indicating that low self esteem is an intrapersonal stress factor that leads to the use of alcohol.

People with low self-esteem expect to be deceived, belittled and as a defense mechanism they hide behind mistrust. This leads to loneliness and isolation, as well

as apathy, indifference toward themselves and others which allows them to find refuge in alcohol <sup>(22)</sup>

It was found that the prostitutes in the study have some similar psychological traits and characteristics: unstructured families, lack of role models, feelings of abandonment at a young age, early deprivation of affection, feelings of worthlessness, as well as insecurity and inferiority. With these traits it is difficult for them to establish satisfactory interpersonal relationships, they live in a state of constant frustration, they are sensitive to rejection and experience feelings of guilt for engaging in prostitution which leads to the consumption of alcohol as an inhibitor of their dissatisfaction and discomfort <sup>(17)</sup>.

According to the Neuman model, low self-esteem could be going through the defense lines of the system causing destabilization, provoking as a reaction the consumption of alcohol, creating a protective environment from the reality they live <sup>(16)</sup>.

## CONCLUSION

According to Betty Newman's system model, low self-esteem acts as an intrapersonal stress factor leading to alcohol consumption among prostitutes.

There are other epidemiologic studies that should be done which study other inter/intra-personal stress factors, such as the fact that they receive a higher income by inducing clients to alcohol consumption.

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