# Women and alcohol in developing countries 

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#### Abstract

Summary

Women around the world seem to be at an important risk of developing alcohol problems. In most drinking cultures, females are expected to abstain or drink less than males and as a consequence they actually drink less. However when they develop alcohol problems, they are often more rejected, experience more problems and hide more their addiction, which in turn difficult early detection and treatment. Females that do not drink alcohol are also affected in their social role of mothers or wives of alcohol addicts, which include violence and an increased burden in their role as providers, among others. In spite of these important differences, social and health research has traditionally focused on male drinking habits and problems, and the current measures to study this problem as well as the prevention and treatment alternatives, have been developed disregarding the special conditions and needs of females. This paper focused on the developing nations, describes the physiological, psychological, and socio-cultural gender differences; describes the position of females and the special way in which they are affected by alcohol; illustrates gender differences in drinking practices, drinking norms, alcohol related problems and treatment alternatives, and presents some considerations leading to a more comprehensive policy.


Key words: alcohol, gender, developing nations.

## Resumen

Las mujeres alrededor del mundo corren un gran riesgo de presentar problemas relacionados con el alcohol. En las culturas en las que se consume alcohol se espera que las mujeres se abstengan o beban menos que los hombres y, como resultado, de hecho beben menos; sin embargo cuando desarrollan un problema derivado de su forma de beber las rechazan, tienen más problemas y ocultan más su adicción, lo que dificulta detectarlas y tratarlas oportunamente. A las mujeres que no beben alcohol también les afecta en su papel de madres o esposas de personas dependientes, quienes las hacen víctimas de su adicción y de su incapacidad para proveer al hogar. A pesar de estas importantes diferencias entre los géneros, la investigación social y en salud, tradicionalmente se ha enfocado en los hábitos de consumo de los varones, y las unidades para medir su consumo y los problemas, así como las alternativas de prevención y tratamiento, no han considerado las condiciones y necesidades especiales de las mujeres. Este trabajo, enfocado a los países en desarrollo, describe


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las diferencias fisiológicas, psicológicas y socioculturales de género, describe la posición de la mujer en los países en vías de desarrollo, y la forma especial en que resultan afectadas por el consumo de alcohol. Ilustra las diferencias de género en las prácticas, las normas y los problemas relacionados con el consumo de alcohol, y las alternativas de tratamiento, y presenta algunas consideraciones que llevarán a una política más comprensiva de este problema.


Palabras clave: alcohol, género, países en vías de desarrollo.

## INTRODUCTION

Women around the world seem at an important risk of developing alcohol problems, but it seems to vary considerably from that of men, as it is related to physiological and psychological susceptibilities and social and cultural norms that establish marked differences between genders. This differentiation, with strong historical roots, influences the way in which males and females perceive themselves and the world around them, and thus behave in consequence.
In general, in drinking cultures, females are expected to abstain or drink less than males and as a consequence they actually drink less, but when they develop an alcohol problem, they are often more rejected, experience more problems and hide more their addiction, which difficults early detection and treatment.
This position of women has also been described in many developed societies such as Japan or the United States (Gotoh, 1994; Roizen et al., 1980), but maybe the difference in less developed societies are the norms, and that consequences are aggravated by less social tolerance, their traditional roles, and poverty, which represent an important additional burden.
There is no doubt that gender roles are in transition; nowadays females have a higher school status and are more frequently incorporated to the productive sector, including married women and child bearing

[^0]mothers. Nonetheless they are still receiving lower salaries and have less access to higher positions than males. Furthermore, male roles have not changed in parallel. As a consequence, females are now more stressed and work double turns, as in addition to their new roles they are still responsible for the care of the family. This burden is specially heavy for poor females, specially in times of economical crisis, when they can not pay for extra help and the numbers of paid activities increase.
This unequal position of females in traditional societies is well described by Benson Ilukesan (1994) in a paper on drinking problems and the position of women in the traditional Nigerian society, "... generally, women were to be better seen than beard, and social controls comparatively applied more readily than to men. They were expected to keep a bumble and modest social outlook, and to be more dedicated to making the home than anything else. It was considered an absurdity for a woman to drink, and female alcoholic intoxication was unbeard of. Only in very special circumstances, such as traditional religious festivals, ...could women be administered a measured quantity" "... alcoholic intoxication is pardoned only as a masculine feature".
In some traditional Latin American societies, male dominant roles have been described as "machismo", a cult to virility, where the main attributions are an exaggerated aggressiveness and intransigence among males and an arrogant and sexual aggressive attitude towards women. The complementary role of females is of "submissiveness" or the "syndrom of the suffering women", a cult to a superior feminine spirituality over males and submission and shyness, whose value is the measure of how much they suffer. In the Mexican culture, there is a strong ambivalence toward female figures: at the same time they are adored and worshipped as saints and devaluated and given a secondary role. This role is still more visible among low income groups (Lara, 1992).
Alcohol intake is greatly influenced by these roles: while heavy alcohol intake, including intoxication, is considered as part of the "macho" role, abstention is expected from females, but in the light of the many changes that have occurred in gender roles, drinking habits are expected to change. More liberal attitudes are expected to occur in those societies where the women's liberation movement has had a great impact, specially among the more educated women and the younger sectors of the population.
This is the case of many Latin American cultures, as Araya (1994) has stated "Machismo seems to be losing its appeal, but overt and covered discrimination against women continues to be a part of our reality".
In spite of these important differences, social and health research has traditionally focused on male
drinking habits and problems, and current measures used to study the problem and the prevention and treatment alternatives, have been developed disregarding the special conditions of females.
The varying female hormone levels due to menstrual cycles, pregnancy and menopause; the lower proportion of water related to higher levels of intoxication at lower doses of alcohol intake, and the higher rates of psychiatric comorbidity, including depression, anxiety, and other affective disorders are among the physiological factors contributing to the different drug responses between men and women (UN, 1994; Dawson and Archer, 1992 ; Alcohol and Health, 1997).
Gender differences also play an important role in the consequences of alcohol misuse. From a biological perspective, it has been documented that females are at special risk for developing problems at lower doses and less time of exposure. Women seem to be more susceptible to serious alcoholic liver injury and they develop cirrhosis at a lower cumulative dose of alcohol that men do. In addition, as compared to men, women who have alcoholic liver injury remain at substantially higher risk of disease progression even when abstinent. This differences in vulnerability might be related to differences in the metabolism of fatty acids, as recent evidence suggests that fatty acid toxicity is causing liver injury in alcoholic women (Alcohol and Health, 1997).
When problems develop as a consequence of the hidden nature of a socially rejected behavior, opportunities for early detection are more limited, dependent females suffer more social consequences and start treatment after having sustained more losses than males, marriage being in many cultures the first thing that they seem to lose (Ikuesan, 1994; Mphi, 1994). In a study that included a sample of AA members in Mexico, Rosovsky (1992) found that $33 \%$ of the females were separated or divorced as compared to only $8.1 \%$ of males.
The social and biological conditions of females impose specific requirements not included in treatment programs designed considering only male needs, such as reproductive health; care of small children, including the possibility of treating addicted babies or those with deficits related to in utero exposure in addition to attending to different psychological problems, usually expressed as guilt and shame that result from popular beliefs adopted by both males and females, that dictate that "decent women should not drink" and from their role as responsible for the well being of children and husbands.
It has been documented that an important barrier for treating women is their fear of loosing their children (UN, 1994; Vega and Gutierrez, 1998) which enhances
the need to closely consider gender differences when designing interventions.
The burden of alcohol misuse in women is not limited to those that actually misuse it, because females that do not drink alcohol are also affected due to their social role as mothers or wives of persons with dependence to alcohol, and the risks for them include violence, HIV infection and an increased burden in their role as family providers.
Silberschmidt (1990) found that more than half of the women interviewed in rural Kenya as part of a health and family planning services utilization study, had problems with husbands who were more or less severely addicted to alcohol. A major complaint from the respondents was that most husbands hardly gave any financial support to the household. Men interviewed by using quantitative and qualitative approaches, admitted that they spent a large part of the money they earned and of that given to them by their spouses, in drinking.
Studies undertaken in Sri Lanka have documented that alcohol is an important factor in the maintenance of poverty: "many families are unable to escape from poverty because of the alcobol and tobacco use of one or more members. Once influenced by alcohol use, poverty itself may be exacerbated by absenteeism, lack of motivation, ill-health and lack of family unit" (WHO, 1993).

The risk of HIV infection has been documented by Salgado (1996) in her studies conducted among rural Mexican female partners of seasonal migrant workers to the United States. She found that $64 \%$ of the women interviewed did nothing to prevent their self perceived risk of infection, and although they identified condoms as the more efficient preventive tool, only $20 \% \mathrm{had}$ actually bought them, and none had used condoms in the last two intercourses. Males often refused to use them, and women felt that they owned it to their husbands because they went to the "other side" (the United States) to work and send money.
It has also been observed that in some developing societies, maybe as a result of the strong normative structure, females married to alcoholics do not always copy their drinking habits. For instance, Natera (1988) found in Mexico that despite the fact that an important proportion of the females married to alcoholics had a family history of alcoholism ( $68 \%$ ), only $1 \%$ were heavy drinkers themselves, a similar proportion to the one found in population surveys (Medina-Mora et al., 1991).

Violence is an important additional consequence of alcoholism. In Mexico, a household survey undertaken among females from medium low and low socioeconomical status in the capital city, showed that $14 \%$ of them had been physically abused by their male partners, and the risk of violence was 3.3 times higher
when the male partner was drunk every day as compared to those with no alcohol problems (Natera et al, in press). The risk of being depressed was also higher. The proportion of the sample that met the criteria for depression was of $8 \%$, but it increased four times ( $25 \%$ ) when they were victims of domestic violence, and it was almost 8 times higher when women were physically abused during pregnancy (Medina-Mora et al., 1997).
In Brazil, Oliveira and Vianna (1993) studied women's explanations for the increase of domestic violence during pregnancy: "women reported that their partner's behavior changed after they became pregnant because of "aversion" to the "pregnant body", jealousy of the future baby or suspicion about paternity".

When focusing on the relation between alcohol and violence, the importance of alcohol intake or intoxication must be considered on behalf of the victim. Studies conducted by Natera et al. (1996) have documented that intoxicated women, but also intoxicated males are more easily victimized.
In spite of the extension of the problem, there are few services for women in this situation mainly due to the fact that violence and other abuses are matters of public health; in addition, even fewer services provide assistance to violent men or to couples.

A final consideration deals with the role of females in agriculture. For instance, women produce $80 \%$ of the agricultural products and most of the home brews in rural Africa (United Nations, 1994; Mphi, 1994). It has been estimated that on average, in African countries, the informal sector employs over $60 \%$ of the urban labor force (Maula, 1997). This activity is an alternative source of income for women that suffer from intense job discrimination that cuts them off from waged employment but at the same time women that have been excluded from job opportunities due to an alcohol problem, turn to self employment, brewing being an available alternative. This situation must be considered when developing policies, as this is the cost that derives from the restriction of availability.

This evidence strongly suggests the need to tailor interventions for women according to their unique needs.

## Gender differences in drinking practices in Developing societies

The strongest predictors of alcohol use derived from epidemiological surveys are age and gender. Epidemiological studies consistently report that females drink less than males; meta-analyses of data from 39 longitudinal general population surveys in 15 developed countries show that in every country and age group repre-
sented, adult women were less likely than their male counterparts to drink, to drink frequently or heavily or to report drinking related problems (Fillmore et al., 1991) and the situation in developing countries is not very different.
In some developing societies, abstention from alcohol seems quite common, specially among women; Partanen (1990) reports rates from studies conducted in the last decade in several African countries, that vary from $45 \%$ in a rural community in Nigeria to $77 \%$ in Zambia. The rates for males were $26 \%$ and $41 \%$, respectively. Partanen finds abstention rates among women higher than the ones reported in Finland, the former Soviet Union, the United States and the wine countries of southern Europe.
In a cross-national analysis of drug prevalence in Latin America and the Caribbean, Jutkowitz and Hongsook (1994) obtained from samples of populations ${ }^{1}$ lower rates of abstention ${ }^{2}$ among females ranging from around one fifth of this group in Peru, to slightly more than half in Guatemala and Colombia. The rates of abstention in the Caribbean countries, Dominican Republic and Haiti were slightly higher than $50 \%$. Rates for males ranged between $10 \%$ and $22 \%$ except in Haiti where abstention among males approached $40 \%$ as the one observed for females.
Few studies have documented rates of dependence. Using the CAGE, Rodriguez et al. (1992) found in Colombia that males ( $20 \%$ ) outnumbered females ( $4 \%$ ) by five times in measures of point prevalence. Using the same instrument, the proportion in Mexico ${ }^{3}$ was similar: $22 \%$ of the male drinkers and $5 \%$ of the female drinkers had a positive score (Medina-Mora et al., 1997). The ratio for a sample of the same age group that entered all emergency rooms in the same site and period was of 4.5 (Borges et al., 1997).

Rates of mortality due to hepatic cirrhosis, adjusted to the European age distribution, vary considerably, and Latin American countries show higher rates for both males and females than the USA and Canada, while the ones observed in the Caribbean countries are much lower. In all countries reported, with the exception of Cuba, the rates male/female were higher than those observed in the developed countries of the region (USA and Canada) varying from 4.0 to 2.6 (Edwards et al., 1994).

[^1]Due to the disproportion between drinking rates and mortality rates, these figures might well reflect the coexistence of additional risk factors for the development of the disease, including a higher susceptibility among females.
Although it has been documented that females get intoxicated with lower doses of alcohol as compared to men, measures do not take in to account this fact. When reanalyzing survey data, Dawson and Archer (1992) demonstrated that when differences in body weight and composition were considered the ratio of male to female consumption is reduced, though it is still higher among males. The same would be expected in developing societies, though due to the bigger differences in rates of consumption, women would still outnumber males.

This data clearly show that in developing countries females drink in considerably lower proportions than males, nevertheless, important variations are expected within each culture, as well as different manifestations of social consequences. Not many studies have shared definitions and methodologies that would enable a direct comparison between the patterns of drinking and the problems produced within cultures and genders. The WHO study on community responses to alcobol related problems provides an excellent example. This study compared the patterns and problems related to alcohol intake, as well as the social norms and responses in two developing societies: Mexico and Zambia, and two developed countries: the United States and Scotland (Rottman and Moser, 1984; Roizen et al., 1980).
Rates of abstention in Zambia and Mexico were high when compared to those reported in the more developed countries. In Zambia it might be due to the fact that drinking beverages containing little alcohol is not regarded as alcohol consumption, while in Mexico it might be explained by the difference in the drinking rates of males and females, the former drinking whith a similar frequency as the one observed in developed countries such as the United States or Scotland (Roizen, 1980). In Mexico and Zambia the frequency of male drinking almost doubled that of females; the drinking rates of males of all age categories were above the drinking rates of females of all ages, whereas in Mexico age had little effect in drinking practices; independently of their age, women very seldom drink, while in Zambia women become drinkers with age. In fact, middle and old aged females drink more frequently than young males.
The relation between drinking and intoxication was quite high in the two countries, which also shared high rates of abstention. Drunkenness was frequent among Mexican males, and among males and females in Zambia. Around one third of the Mexican male respon-
dents, and approximately the same proportion of men and women in Zambia reported the same frequency for drinking and getting drunk.
The proportion of women who drink moderately or excessively has increased significantly in many societies. The incorporation of females to the drinking culture is more widespread in the urban sites, probably due to the changing roles and to the affluence of people to them (WHO, 1992, 1993). This rate increase has not been equal in all females; they vary according to socioeconomic and cultural factors. In a report on the situation of Nigeria, Mphi (1994) states: "increase in female drinking is a preserve of some educated westernized female city dwellers and also some female socialites like mistress of bighly placed men and business women".
Adolescents in general, including females, are now drinking more. In some sites the differences observed between adult drinkers and non drinkers seem to be narrower among the underage youth, pointing to a possible trend towards an increase in their consumption and more adverse consequences for women (WHO, 1992).

## DRINKING NORMS

The differences observed in women's drinking are partly derived from cultural expectations reflected in social norms or rules concerning a given practice in a given cultural setting that are usually specific for subgroups of the population defined by gender, age occupation or socio-economical status, and for the particular situation in which the individual finds himself. The strongest differentiation in many developing cultures pertains to gender.
These expectation systems refer either to characteristics which account for the performance of the role, or to tasks which the incumbent is compelled, permitted or forbidden to perform. Both characteristics and tasks may be considered to be appropriate for only one group and proscribed for all others. And even when different characteristics and tasks are assigned to individuals of various social positions, their performance may differ in frequency, intensity, reasons for performing, setting in which it takes place and consequences of behavior.
In many countries, traditional rules state that women should abstain or drink less than males, while in many circumstances, the occasional inebriation of this last group is tolerated, and in some cases even expected.
Responses given by Mexicans in the above mentioned WHO study, indicated that both genders believe that males may drink more than females. In general, males were more willing to permit any type of drinking in
comparison with females. Restriction in relation to females, and liberalism toward male behavior was supported by young and old persons of both sexes. Young people (between 18 and 29 years of age) also tended to be more liberal with persons of their same age or younger, in comparison with older respondents. But even young males were very restrictive with young females, while older people seemed to be a little more liberal. In general, young males were less willing to accept drinking by their partners or possible wives. The same trend was observed when only heavy drinking was considered.
Answers given by male and female Zambians were similar: males within each age group may drink more than their female counterparts but the differences were not very marked with the exception of the 21 years old group, where both males and females agreed that the former may drink more than females. Also, unimportant differences were observed in the opinions of the different age groups.
Young people agreed with older respondents, that minors around 16 years of age should not drink, and both young males and females were more permissive towards persons of their same age and sex than the older respondents. When only heavy drinking was considered, males and females were more permissive towards males.
Answers were then summarized in two groups: any drinking (that excludes only the option of "no drinking permitted") and heavy drinking (that includes the options "feeling the effects" and "getting drunk"). The data were further analyzed through a scale of "gender differences in norms", which is an indicator of the existence of double standards. This scale summarizes the degrees in which respondents favored one sex over the other, in relation to permissiveness to drink, to get high or to get drunk. It combines the responses given by all four age levels (16, 21, 40 and 60 years of age). In each level, the responses given for the male example weres compared to the response given for the female example. Responses for all age groups were summarized in a total score.
Through the scale of double standards it was observed that only $22 \%$ of the people in the Mexican sample thought males and females had the same rights to drink, feel the effects or get drunk, and through a multiple regression analysis it was found that gender was the more important variable to explain variations in responses to the scale. Double standards were significantly more supported by males from rural settings, with less security in their jobs, less income, not married, young and with low school status. In Zambia data were very similar to the ones observed in Mexico, gender was also the most important variable, but age was more
important that the urban/rural status (Medina-Mora, 1986).

## Alcohol related problems

Problems that result of inappropriate behavior while drinking, depend on the reaction of others, on the social tolerance to drunkenness, on social rewards to repeat intoxication and on the personality of the individual. Once males and females present alcohol dependence, their symptoms will be very similar, nevertheless, the effect of frequent intoxication on their everyday lives will vary a great deal due to differences in their social functions and cultural expectations. According to Knupfer (1982), the existence of different norms for males and females regarding drunkenness, does not depend on whether or not intoxicated women might be more irresponsible, dishonest or selfish as compared to males in the same circumstances, but from the belief that women should not drink, thus these norms do not depend on rational arguments, but are an expression of cultural values.

Mphi (1994) describes the cultural role in the manifestation of problems, "a woman who is known of being abusing alcohol is seen as degraded and is regarded as an irresponsible woman,... they are never given roles bighly valued in Lesotho society, ranging from disciplinary committees to the administration of villages... their children will at times carry the shame into adulthood... of being children born of an irresponsible women, ...if such a woman eventually develops dependence, ...chances are high that she ... will be returned to her family of origin as a woman who is not suitable to be a wife".
In addition, alcohol also plays an important risk factor for the development of other diseases among women, including breast cancer. Some studies have documented that moderate alcohol intake results in an increased oestrogen level and a higher bone mineral density among postmenopausal women which may be protective from osteoporosis, however the opposite effect was observed among premenopausal women, who may also suffer from menstrual dysfunction derived from the abuse of alcohol (UN, 1994).
The reviewed data suggest that though females drink less than men, they are at risk of presenting more problems as an effect of cultural values and norms and physiological and psychological increased vulnerability.

## Treatment alternatives

As mentioned above, in spite of the important evidence of gender variations regarding alcohol consump-
tion and treatment needs, few programs have been developed to include the specific needs of females. Also few studies have been developed addressing service utilization and barriers to treatment among females.

In Mexico, Rosovsky (1992) found that AA was a good resource for females, who are over represented in relation to males, as could be expected due to the dependence rate among males and females in the general population. In Mexico City, females represent $10 \%$ of the membership of AA. While according to the NSA (SS, 1989), there is one female for each 16.7 males, in AA there is one female for each ten males.
In Mexico, opposite of what has been observed in other countries, there are not many exclusive AA or any other type of groups for females, neither special programs for them. Rosovsky (1992) found only one group for females among 175 randomly selected from the registered groups, but concludes that the characteristics of AA may be specially attractive for females due to its anonymity, it variety of schedules and meeting places, and specially the fact that AA enables the adoption of female traditional practices such as self introspection and analysis of her relations with others, love, expression and sharing of emotions, among others.

It was also observed that $22 \%$ of the females became members of AA at the same age, when they felt that alcohol was being a problem for them, compared to only $11 \%$ of males. Both genders reported having started drinking before they were 20 years of age, though among females the proportions were smaller ( $74 \%$ and $93 \%$ respectively). More females started drinking at a later age ( $26 \% \mathrm{vs} .7 .3 \%$ ), there were no differences in the number of years between the age when they started to drink and when alcohol problems were perceived; $58 \%$ of males and $65 \%$ of females reported a lapse of 10 years or more (Rosovsky, 1992).
A United Nations position paper developed after reviewing the situation of women around the world and based in 26 country reports ("Women and substance abuse", WHO, 1993), concluded that:

- "Most treatment/rehabilitation programmes do not consider the special needs of women, e.g. child care, how to deal with feelings or guilt and shame, gender related interpersonal relationship difficulties and empowerment training".
- "Most treatment programmes are based on the needs of men, who often, as opposed to women, can count on somebody else to care for their children/family and who do not have the same feelings of gender based shame or guilt".
- "Even if women's refugee or counseling centres are available, these usually focus on protecting and assisting
the women. Few also offer assistance to violent men, or couples. Few have sufficient resources to carry out preventive programmes, such as training in schools, and of social workers".


## TOWARDS A MORE COMPREHENSIVE POLICY

The data presented in this section calls our attention to the need of stronger actions directed to the prevention, treatment and rehabilitation of females that are directly or indirectly affected by alcohol misuse.
More information is required on the extension and trends of alcohol use and misuse among this group of the population, as well as social, clinical and basic research that would help understand the burden derived from alcohol use in developing countries, including variations within them. Techniques and criteria should take into account gender differences related to levels of intoxication and harm. Violence, often not considered as a public health problem, deserves special consideration.
Prevention programs should start by reinforcing the concept of equality between genders. Education should promote respect for both sexes. Those programs should start early in the school years and among different organizations in the community. Special attention should be placed in etiological factors that increase the risk for females, such as affective problems, societal rejection, lack of opportunities and excess of responsibilities, which should be included in the ongoing prevention programs.
Treatment and intervention programs specially designed for females should also be developed based on their special needs, such as:

1) their increased risk (psychiatric comorbidity, physiological vulnerability, etc.),
2) their condition (reproductive health, care of children, etc.) or
3) a higher level of societal rejection (isolation, guilt, etc.).
Outreach services should be developed based in the specific barriers to treatment observed for this group. These programs should also provide services for non drinking females, that are affected by the drinking habits and problems of others.
The inclusion of women in intervention programs (prevention, treatment and rehabilitation) should be encouraged. Some examples of successful programs of social mobilization that have been encouraged by women, are available in Honduras, where women's organizations, such as the Federation of Honduran Women, the Center for Studies on Women and the "Visitación Padilla" group, have developed educational
activities on the problem of alcohol and drugs within the context of the problems that women face(WHO, 1993).

In Mexico, after a meeting conducted in their community where the results of the WHO Community Responses project were discussed, a group of women closed the local shops where they sold "pulque", a traditional fermented beverage produced from a Mexican agave. More recently the group of women, "Mujeres y Punto", engaged in community interests became aware and started social mobilization oriented to prevent drinking and driving, specially among adolescents and young adults.
Health policies in particular, and programs for social development should target the psychological and social development of females based on human rights principles.

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[^0]:    *National Institute of Psychiatry Ramón de la Fuente. Paper prepared for the Alcohol Policy in Developing Societies Project, to be presented at the Alcohol Policy Conference XI, Chicago, Ill., May 10-13, 1998.
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[^1]:    ${ }^{1}$ In general the samples compared were drawn from urban populations; the age group considered ranged from 12 to 45 years of age in all sites except in Bolivia and Peru where the upper range was of 50 years of age and in Colombia that included population from 12 to 64 years of age. The studies were conducted between 1986 and 1993.
    ${ }^{2}$ Defined as never used, the complement of life time prevalence.
    ${ }^{3}$ Household survey of population 18 to 65 years of age, from a city located in Central Mexico.

