# Alcohol Drinking Patterns in Latin America

# Comparative Analysis of Nine Countries

FLACSO Costa Rica

Dr. Carlos Sojo

**Introduction**

This article summarizes the results of the research project on Alcohol Consumption Patterns (EPCA, Spanish acronym) in Latin America that FLACSO Costa Rica has conducted in different countries in Latin America.[1]The research is based on nationwide surveys (or a survey of the country's largest cities in the cases of Mexico and Brazil)–see appendix—and its goal is to provide more information on alcohol consumption patterns in the region, from a sociological perspective. The study of drinking patterns has been recommended by a range of institutions such as the World Health Organization (WHO) and the Pan American Health Organization (PAHO). Both of these organizations have noted the importance of researching the way the population consumes alcoholic beverages as opposed to merely the number of drinks consumed.

In this regard, the report published by the WHO that aims to standardize the measurements and methodologies for monitoring alcohol consumption and its consequences states:

[1]The research project began with a cooperation agreement signed in 2007 by FLACSO Costa Rica and *Cerveceros Latinoamericanos*. The research was funded by subsidies from the brewer industry in each country and supported by renowned local experts and qualified research institutes in each location. All applicable scientific and technical standards were applied in the study results and analyses.

> *Per capita consumption estimates can measure only limited variation within the population. Patterns of drinking within nations or cultures are extremely important. The more knowledge that can be gleaned regarding drinking patterns, as well as per capita consumption, the more accurately policies may be designed to reduce alcohol-related harm.(WHO,2000a:31)*

More recently, the report *Alcohol and Public Health in the Americas: A Case for Action* (Monteiro,2007) pointed out the importance of assessing the characteristics of consumption patterns in a region where consumption practices are so diverse and where there is a real lack of the primary information needed to evaluate the current scope and future trends of consumption practices.

The PAHO report states (Monteiro,2007: 3,5):

> *The Region is diverse in terms of the consumption of alcohol. The alcohol related burden is linked to at least two different dimensions of alcohol consumption: average volume and patterns of drinking. Thus, in order to understand and reduce the burden both dimensions should be taken into consideration(…)Although many countries have not undertaken appropriate general population surveys on alcohol consumption and patterns of drinking, key informants have provided information to WHO which has been used to estimate the typical pattern of drinking in a country*.

Nationwide (or equivalent) statistical information is essential not only to increasing scientific knowledge of the issues at hand, but also to aiding in decision-making and generating evidence-based public policies. The other challenge is to obtain comparative information that facilitates an assessmentof the situation in each country while allowing for comparative analyses between countries.

In this regard, the EPCA project uses a single questionnaire for all countries, with linguistic and cultural adaptations that do not affect the general structure. The study was done with a sample of at least 1,800 respondents (men and women between the ages of 18 and 65), both drinkers and abstainers. A random multietapic procedure was used to select the households for the door-to-door survey, and the last birthday method was used to identify the final respondents. During the fieldwork, the team worked seven days a week, also in the evenings, to ensure that the respondents would be at home. If the person was not available, the visit was rescheduled for later that day; if it was impossible to locate the potential respondent at home, a substitution was made, though substitutions did not exceed 20% of the population contacted. The results of the surveys have been weightedin order to represent the trends in the general population of each of the countries.

To estimate the volume of alcohol consumed, the Graduated Quantity Frequency (GQF) method recommended by the WHO (2000) was used. In a region with significant seasonal variations in alcohol consumption, obtaining information on consumption over the past year allowed for a more robust analysis of the actual consumption than would have been obtained using methods that

determine levels of consumption over the past week or month. In addition, the study defined a standard drink as one containing 12grams of pure ethanol. This parameter was used to create a table of equivalents in each country on the basis of the most common drinks and the way they are served. With this information, the consumption per capital in liters of pure ethanol was calculated (applying the conversion factor for grams to liters of 790gm.=1000ml.). With this methodology, the study was able to calculate: the prevalence of consumption (at least one drink in the past 12 months); the rate of former drinkers and lifetime abstainers, and the levels of long-term and occasional risk based on WHO guidelines for men and women in relation to ethanol consumption patterns, as outlined on the following chart.

Measurement of Risk Levels in Alcohol Consumption

| | **Long-Term Risk**<br><br>Average daily consumption per person | | **Occasional Risk**<br><br>Average consumption per person on a drinking day | |
|---|---|---|---|---|
| | Women | Men | Women | Men |
| Low | 0-20 | 0-40 | 1-20 | 1-40 |
| Medium | 21-40 | 41-60 | 21-40 | 41-60 |
| High | 41and over | 61and over | 41and over | 61and over |

Source:WHO,2000:52-54.

The EPCA thus seeks to increase knowledge about a little studied area, especially from the social sciences. Some countries in the region conduct regular surveys on drinking that reveal important aspects of consumption patterns. In these cases, the EPCA data can supplement or update the knowledge already available; in other cases, there have been few nationwide studies and, for methodological reasons, they have failed to yield estimates on the volume of alcohol consumed or on the risk patterns associated with drinking. In these cases, the information provided by the EPCA researchcan be used to create a baseline.

One important precedent in Latin America is the *Multicentric Study on Gender, Alcohol, Culture and Harmin the Americas*, which applies a common survey (GENASIS) to gather information in ten countries in North and South America, seven of which are Latin American (Argentina, Brazil, Costa Rica, Mexico, Nicaragua, Peru and Uruguay). The surveys in the Multicentric Study were administered from 1998 to 2006, and the sampling frameworks for each country were different from those applied in the EPCA, even though both studies use a compatible methodology (GQF) for defining consumption volumes.

Another important example of comparative analysis is the European study presented in the report *Alcoholin Postwar Europe. Consumption, drinking patterns, consequences and policy responses in 15 European countries* (Norström;2002).In the context of the *European Comparative Alcohol Study*(ECAS), a single questionnaire was administered in six countries representative of the different alcohol consumption cultures in the region: wine drinking countries (France and Italy);beer drinking countries (Germany and England), and the countries where people used to drink distilled alcohol and now consume more beer (Finland and Sweden). Like the EPCAin Latin America, the ECAS uses a single questionnaire, and uniform procedures for sampling and respondent selection. Similarly, both the EPCAand the ECAS analyze the population between the ages of 18 and 64 (in the case of the SAPC, 18-65) (see the chart below). However, the ECAS made use of a phone survey, which could lead to more refusals and make it more difficult to use the study for a comparative analysis of different countries.

| Comparative regional investigation on alcohol consumption patterns. | | | | |
|---|---|---|---|---|
| | **Multicentric Study on Gender, Alcohol, Culture and Damage (PAHO)** | ***Monograph on Alcohol Epidemiology in Developing Countries (WHO)*** | ***European Comparative Alcohol Study (ECAS) survey*** | **EPCA (Study on Alcohol Consumption Patterns) FLACSO Costa Rica)** |
| **Methodology** | Surveys at homes and by phone (USA and Canada) | Different surveys with at least N=1000, after 1988 | Phone survey | Surveys at homes,probabilistic two-stage sampling with selection method based on last birthday |
| **Coverage** | 7 LATAM countries (10 in total) | 7 developing countries (two in Latin America: Mexico and Costa Rica) | 6 countries | 9 countries by 2011; 14 by 2012. |
| **Scope** | Variable (nationwide and largest cities) | Variable | Variable | Nationwide/Urban, Rural and regions.<br>Metropolitan(three largest cities) en Brazil and Mexico |
| **Measurement of consumption volume** | GENACIS (GQF) | Variable | QF Scale | GQF method, standard 12 gm. drink |
| **Size of survey** | Variable from N. 1000 to N.14000 | Variable | N:1000 | 1800 contacts, consumers and non- consumers |
| **Period of Application** | 1998-2006 | Variable since 1988 | Spring 2000 | 2009-2011 |

Sources of primary information on alcohol drinking patterns are relatively scarce in Latin America[2], and the goal of the EPCAwas to ensure the uniformity of the studies performed in all of the different countries by using the same scientific standards. As a result, EPCA provides a single baseline for comparative analysis and thus helps identify challenges related to harmful drinking, useful in the developmentof public policies and corporate social responsibility strategies. Between 2009 and 2012, nine studies were conducted in El Salvador, the Dominican Republic, Costa Rica, Peru, Nicaragua, Venezuela, Mexico, Colombia and Brazil.

This paperpresents the results from these nine countries. Unless otherwise noted, all results correspond to a population between the ages of 18 and 65. Given that a survey-based study is prone to cultural differences in data collection in each country and the limited prior research available on the topic, it is important to be cautious in the comparative analysis of countries (Hemström,LeifmanandRamstedt,2002). In the case of Latin America, the high level of historical and linguistic homogeneity (as opposed to Europe) favors the use of common tools, but the results of a single survey should still be compared with other types of information, just as Anderson and Baumberg recommend for the case of Europe. (2006:80)

**Alcohol Consumption Patterns in Latin America**

**Prevalence of Consumption**

The prevalence of consumption varies greatly in the countries studied and this is fundamental to our analysis. The data show that prevalence of consumption, which is measured as having had at least one drink in the past 12 months, ranges from 31% in El Salvador to 83% in Venezuela. The average for the region (9 countries) is 59.8%.[2] These differences are due to the fact that in certain countries few people drink, while in others drinking is common among the adult population. The level of prevalence in Mexico, Nicaragua, Costa Rica and El Salvador was lower than the regional average, which indicates a pattern for Mesoamerica that differs from the one for the south of the continent and the island region of the Caribbean, represented in this survey by the Dominican Republic.

The male/female ratio ranges from 2.4 in Mexico and 2.8 in El Salvador, on one extreme,to 1.1 in Venezuela and 1.3 in Brazil, on the other. This shows that the overall pattern of lower prevalence in Mesoamerica coincides with lower consumption among women.

---

[2] A report from the Organization of American States (OAS-CICAD, 2011) publishes comparable data (gathered between 2002 and 2009) regarding prevalence of consumptionand problematic consumption of alcohol for a group of countries, including 13 of the 18 countries in Latin America.

[3]As a contextual reference, Anderson and Baumberg (2006:81) estimate, based on various sources, the annual prevalence of consumption among European adults is 85%. In the case of Canada and the United States, the percentages are 77.6% and 65.4%, respectively (WHO,2011).

Lifetime abstainers is very high among women in El Salvador and Mexico (55.8% and 40.5%, respectively). In other countries like Peru and Colombia, the proportion of abstainers drops drastically, to 3.5% and 6.5%, respectively.

These data show that despite the largely patriarchal nature of all Latin American societies, there seem to be factors specific to Mesoamerica that keep women from drinking alcohol, a question that should be explored in future studies. Taking into account these differences, the regional average of approximately 16% of lifetime abstainers is higher than the rate reported for Canada (8.3%) and very similar to that of the United States (17.7%). If we break this down between men and women in Latin America (9 countries), the rates are 9% and 22% respectively. These figures are quite different from those reported for Canada (5.7% of men and 10.8% of women) and for the United States (12% and 23% respectively) (WHO, 2011).

**Volume of Consumption**

The data on pure alcohol consumption as calculated by liters of pure ethanol per person also reveal significant variations between countries and by gender. The average is 5.5 liters (8.9 for men and 2.3 for women) in the entire region. However, reports range from 5.3 liters among men in El Salvador to 12.9 liters in the Dominican Republic, with a ratio of 2.4 between the highest and lowest levels of consumption per capita. The range for women goes from 0.3 liters in El Salvador to 5.2 liters in Venezuela, yielding a ratio of 17.

Based on the sales method the WHO reports an average consumption per capita of 6.7 liters of pure alcohol for the same group of 9 countries (WHO, 2011). Anderson and Baumberg (2006:78) estimate the consumption of the adult population in Europe at 13 liters of pure alcohol, while the WHO data for Canada and the United States report levels of 9.8 and 9.4 liters, respectively.

A relevant issue in the analysis of drinking patterns is the relation between alcohol consumption estimates in surveys and the calculations of per capita consumption based on sales method. On average, the EPCA data on consumption per capita in Latin America (9 country average) correspond to WHO data for the population ages 15 and over (WHO, 2011) at a rate of 80% (see chart 3). Taking into account the difference between the populations included in the study and the quality of the original data for the estimate of consumption based on sales method, the EPCA data show a lower rate of underestimation than that reported for the ECAS in Europe.[4] It is important to note that where the difference between the two methodsis greater, specifically Mexico and Peru, the levels of unrecorded consumption that are added to the consumption per capita in the WHO calculation are also greater (3.4 and 4liters, respectively). As a result, we can conclude that in countries with less

[4]According to Anderson and Baumberg (2006:79)regarding Europe,"…all surveys of drinking find that the reported total alcohol consumed is less than sales records show (typically in the range 40%-60%; Bloomfieldetal.2003). A necessary assumption for making international comparisons is that the level of under reporting is constant, but this is unlikely to be strictly true (see also for ECAS)".

and/or poorer administrative information and a higher level of unrecorded consumption (legal or illegal), the estimates of consumption volumes provided by surveys may yield a lower level of underestimation than would be the case in other social contexts.

**Harmful Consumption**

The WHO defines "harmful consumption" as:

*…a broad concept that involves alcohol consumption which has detrimental health and social effects for the drinker and for those around the drinker and society in general, as well as levels of alcohol consumption associated with a* ***higher risk*** *of detrimental health effects. Harmful alcohol use affects both individual and social development and can ruin an individual's life, devastate families and tear apart the fabric of a community.*

(WHO,2010)

In order to quantify harmful alcohol consumption in Latin America, EPCA has made use of three basic indicators: 1) **long-term risk** according to average daily ethanol consumption; 2) Heavy episodic drinkers (**binge drinking)** defined as consuming over five drinks on a single occasion at least once a week 3) **Level IV on the AUDIT scale**. Whereas the first two indicators yield a measurement on the basis of declared practice construed on the basis of the GQF method, the AUDIT scale provides a qualitative measure on the basis of the respondent's recognition of the severity of problems s/he experiences due to alcohol consumption.

Data show an average of 5.3%

[5]of the adult population in the nine countries surveyed experiences highlong-term risk associated with alcohol consumption with a gender ratio of 2.5. The Dominican Republic is the country with the highest rate of men at long-term high risk (14.4%) and El Salvador the country with the lowest (3.8%), due to the low rate of annual consumption there. Among women, the countries with the highest rate ofpopulation at high risk in the long term are the Dominican Republic and Venezuela, with rates of 5.4%and 7.7% respectively, whereas the levels in the other countries range from 0.4% in ElSalvador to 2.5%in Colombiaand Mexico,and 4.7%in Brazil. Interestingly, the country with the smallest difference in the rate of long-term high risk between men and women is Venezuela(1.3 percentage points)(see Table 1).

[5] Anderson and Baumberg (2006:82) consider 6.6% of the adult population (16 years and older) of Europe to be at long-term high risk (Level III).

One indicator widely used as a parameter for harmful alcohol consumption is binge drinking or heavyepisodic drinking,[6] defined as five or more drinks on a single occasion at least once a week. Inthe countries studied, the average rate of binge drinking is 15.4% of drinkers between the ages of 18 and 65,[7]21.7% of men and 6.5% of women.[8]The country with the highest levels for both sexes in this indicator is Venezuela, and the one with the lowestPeru (see Table 2). Although binge drinking is usually measured in relation to drinkers, it is important to bear in mind the rate in relation to the general adult population. When this adjustment is made (see Table 1), the regional average is 9.5% of the population, 15.9% among men and 3.5% among women. The gender ratio is 4.5, which suggests that binge drinking is a highly masculine phenomenon.

There is no direct relation between the prevalence of annual alcohol consumption and rates of harmful consumption, especially binge drinking. In other words, a greater or lesser proportion of the population that consumes at least one alcoholic beverage per year does not indicate higher or lower rates of binge drinking. The incongruity between the prevalence of alcohol consumption or abstinence and the volume of alcoholconsumed has also been observed in studies in Great Brittan,Italy and the United States (Anderson and Baumberg, 2006:85).

The study made use of the AUDIT scale, a widely recognized tool developed for clinical monitoringpurposes by the WHO in order to identify persons with dangerous and harmful patterns of alcohol consumption(WHO:2001). The AUDIT scale is easy to use and assess, and it is widely used in studies of the general population.[9]

Projected data based on the rate of alcohol consumers with Level IV consumption (16 points or more on a maximum scale of 32),which, according to the WHO, "requires treatment for dependencies" ranges from 2.0% in Brazil to 8.9% in Nicaragua. The highest and lowest rates among female drinkers are in El Salvador(0) and Mexico 5.5% respectively. Among men, rates vary from 1.8% in Brazil to 12.7% in Nicaragua.

---

[6]For a brief discussion of these concepts, see Andersonand Baumberg (2006:93).

[7]On the basis of this definition, Anderson and Baumberg (2006:93) indicate that, despite the inadequacy of the information available, the rate for the ten European countries studied ranges from 20% to 30% among male drinkers, and from 3% to 6% among female drinkers. The rate in the nine countries in the ECAS ranges from 14% to 37% among men, and 2% to 12% among women.

[8]By way of reference, this average by sex is greater than the figures obtained by the WHO (2011) for the population age fifteen and older in Canada and the United States. The rate in percentage of consumers ranges from 15.5% to 13% among men, and 3.5% to 3.4% among women.

[9]Such as the Multicentric Study of the Pan American Health Organization (PAHO,2007).

**Commentary**

Patterns of alcohol consumption in Latin America have not been sufficiently analyzed, nor is there adequate survey-based information for estimating volume of consumption and harmful use of alcohol in the region. It is important to make available standard tools and common methodologies that allow for comparable indicators within countries over time, as well as comparative analysis between countries.

The EPCA research performed by FLACSO Costa Rica provides baseline information for identifying alcohol drinking patterns in a region that, despite evident commonalities, encompasses substantial differences in consumption patterns and associated problems. This study addresses issues related to consumption volume and patterns, as well as harmful consumption in nine countries in the region.

The main findings relevant to the comparative analysis of the countries are the following:

There are at least two sub-regions in terms of alcohol consumption in Latin America,which supports the findings of other studies that have noted major differences between countries in terms of prevalence of consumption and consumption per person.

Specifically, there are two marked tendencies in clearly distinguished geographical regions: the first entails a consumption rate of approximately 50% of the population or less, and the second a consumption rate of greater than 64%, and as high as 83%of the adult population. The countries with the lowest rate are located in the Mesoamerican cultural and historical region. The other major difference is the rate of alcohol consumption among women. While throughout the entire region women consume less alcohol and do so less frequently than men, in Mesoamerica the rate is once again lower than in both the south of the continent and the Caribbean.

In terms of volume consumed, the data indicate a range of up to 7.6 liters in consumption among men (with El Salvador and the Dominican Republic at either extreme), and a marked difference between the volume consumed by men and women in each country. Strikingly, alcohol consumption per capita among women in Venezuela is the same as consumption among men in ElSalvador.

There is an important difference between data on per capita consumption based on sales method which the WHO reports on a regular basis, on the one hand, and data yielded by the EPCA survey. In other contexts, where there is better and more extensive recorded information and less so-called “unrecorded” consumption, the difference between sales dataand the findings of surveys is probably due to underestimation in the surveys. The average per capita consumption as reported by the EPCA findings is 80% of the average amount reported by the WHO in the same group of countries in 2011. This could indicate a lower rate of underestimation in the region and, hence, a greater relative usefulness of survey-based data.

The EPCA attempts to contribute to the definition of parameters that help identify the magnitude of harmful use and consumption of alcohol, as well as the causes thereof. On a more descriptive level,

it has been shown that the long-term risk affecting an average of 5% of the population studied is three times less than the risk of binge drinking.This fact must be addressed by public policies and the private sectorin order to deal with the social effects of harmful alcohol consumption.

The data also indicate that countries where alcohol consumption is less prevalent may have higher rates of the population prone to long-term and occasional risk.

Measured levels of heavy episodic drinkersor binge drinking and level IV AUDITamong drinkers provide guidelines for public policy geared towards the most severe cases of excessive use. In the countries studied, an average of 9.5% of the population, and 15% of consumers (that is, 22 of every 100 men and six of every 100 women who consume alcohol), bingeat least once a week. The geographical division in terms of prevalence of consumption is not operative in terms of binge drinking among consumers, though the magnitude of the problem does vary significantly from country to country. In terms of AUDIT Level IV, the data on negative effects related to alcohol consumption reported by the respondents to the survey seem to coincide with the percentage of the population at long-term risk. Nonetheless, since these rates are based on the population of drinkers, they indicate that a fraction of those whose alcohol consumption places them at long-term high risk (an average of 60grams daily for men and 40 grams daily for women) do not report problems of this magnitude.

The important differences between countries and gender in rates of the population who consume alcohol in excess or moderation, as well as the prevalence of or abstinence from consumption, reveal the importance of developing evidence-based prevention and control policies adapted to the specific social and cultural conditions of each country. These differences also indicate the need to develop programs geared towards specific populations according to their consumption pattern. In Latin America, public policies with a selective focus have made significant progress in recent years in social programs working towards combating poverty, for instance. These programs have proven much more effective at benefiting a broader population than programs developed according to policies that do not adequately differentiate between populations. An approach of this sort could yield more beneficial results in policies aimed at reducing harmful alcohol consumption.

**Table 1**

| | Prevalence of consumption –at least one drink in the past 12 months(% of population between the ages of 18and 65) | | | Lifetime abstainers (% of the population between the ages of 18and 65) | | | Per capita Consumption<br><br>Liters of pure ethanol (population between the ages of 18and 65) | | | Long-term high risk (% of population between the ages of 18and 65) | | | Heavy episodic drinkers (Binge drinking) -Had at least 60 grams or more of pure alcohol on at least one occasion weekly(% of population between the ages of 18and 65) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | M | W | Total | M | W | Total | M | W | Total | M (≥61gm. | W(≥41gm. | Total | M | W |
| Brazil(2011- | 68 | 76 | 60 | 10.9 | 7.5 | 14.1 | 6.9 | 10.3 | 3.9 | 6.4 | 8.4 | 4.7 | 13.2 | 23.2 | 4.2 |
| Colombia | 69 | 81 | 59 | 4.2 | 1.6 | 6.5 | 6.3 | 10.7 | 2.3 | 6 | 9.9 | 2.5 | 8.1 | 13.6 | 3.3 |
| CostaRica | 57 | 68 | 46 | 17.2 | 9.7 | 24.7 | 3.9 | 6.1 | 1.7 | 3.3 | 5.3 | 1.2 | 6.7 | 10.8 | 2.7 |
| ElSalvador | 31 | 48 | 17 | 38.9 | 18.2 | 55.8 | 2.6 | 5.3 | 0.3 | 1.9 | 3.8 | 0.4 | 3.8 | 7.8 | 0.5 |
| Mexico | 46 | 65 | 27 | 29.1 | 16.9 | 40.5 | 4.8 | 8.4 | 1.4 | 5.7 | 9.1 | 2.5 | 6.6 | 12.2 | 1.4 |
| Nicaragua | 50 | 61 | 40 | 23.1 | 13.2 | 32.0 | 4.2 | 7.3 | 1.4 | 4 | 5.8 | 2.3 | 7.8 | 13.2 | 2.8 |
| Peru (2010) | 70 | 83 | 59 | 6.1 | 9 | 3.5 | 3.7 | 6.4 | 1.2 | 2.8 | 4.5 | 1.1 | 6.3 | 11.6 | 1.4 |
| Dominican Republic | 64 | 75 | 53 | 5.6 | 2.1 | 9.1 | 8 | 12.9 | 3.1 | 9.9 | 14.4 | 5.4 | 12.2 | 18.8 | 5.7 |
| Venezuela | 83 | 88 | 78 | 6.7 | 3.3 | 9.9 | 8.9 | 12.8 | 5.2 | 8.1 | 8.7 | 7.4 | 20.6 | 32.3 | 9.5 |
| LAC(simple average) | 59.8 | 71.7 | 48.8 | 15.8 | 9.1 | 21.8 | 5.5 | 8.9 | 2.3 | 5.3 | 7.8 | 3.1 | 9.5 | 15.9 | 3.5 |
| Source:FLACSOCostaRica,EPCAProject | | | | | | | | | | | | | | | |

**Table 2**

| | Among Consumers (percentages) | | | | | |
|---|---|---|---|---|---|---|
| | Binge Drinking | | | AUDITIV/b | | |
| | Total | M | W | Total | M | W |
| Brazil | 19.5 | 30.4 | 7 | 2 | 1.8 | 2.2 |
| Colombia | 11.7 | 16.7 | 5.5 | 3.5 | 5.2 | 1.3 |
| CostaRica | 11.8 | 16 | 5.7 | 4.2 | 5.2 | 2.6 |
| ElSalvador | 12.4 | 16.4 | 3 | 5.5 | 7.9 | 0 |
| Mexico | 14.5 | 18.6 | 5.2 | 4.1 | 3.5 | 5.5 |
| Nicaragua | 15.8 | 21.8 | 7.3 | 8.9 | 12.7 | 3.4 |
| Peru | 9.0 | 14.0 | 2.3 | 2.2 | 2.7 | 1.5 |
| Dominican Republic | | | | | | |
| Venezuela | 24.9 | 36.6 | 12.2 | 5.5 | 6.5 | 4.5 |
| LAC(simple average) | 15.4 | 21.7 | 6.5 | 4.3 | 5.6 | 2.4 |
| a/ Consumes five drinks or more at least once a week | | | | | | |
| b/ Eight phraseswith a maximum scale of 32 were used in this study. Level IV corresponds to a score equal or higher than 16. | | | | | | |
| Source: FLACSO CostaRica, EPCA Project | | | | | | |

**Table 3**

| | Percapita Consumption (EPCA) | WHO2011 (LEPSales) | EPCA/WHO Ratio |
|---|---|---|---|
| Brazil | 6.9 | 9.2 | 0.8 |
| Colombia | 6.3 | 6.2 | 1.0 |
| CostaRica | 3.9 | 5.6 | 0.7 |
| ElSalvador | 2.6 | 3.6 | 0.7 |
| Mexico | 4.8 | 8.4 | 0.6 |
| Nicaragua | 4.2 | 5.4 | 0.8 |
| Peru | 3.7 | 6.9 | 0.5 |
| Dominican Republic | 8 | 6.4 | 1.2 |
| Venezuela | 8.9 | 8.2 | 1.1 |

| | | | |
|---|---|---|---|
| LAC(simple average) | 5.5 | 6.7 | 0.8 |

**References**


Anderson, P.&Baumberg, B.(2006) ***Alcohol inEurope*.**London.InstituteofAlcohol Studies.

Babor,ThomasF.;JohnC.Higgins-Biddle;JohnB.SaundersandMaristelaG.Monteiro.2001. ***AUDIT. The Alcohol Use Disorders Identification Test***. Guidelines for Use in Primary Care.Geneva,WHO.

Hemström,Örjan;Leifman,Håkan&Ramstedt,Mats.(2002)TheECASsurveyondrinkingpatterns and alcohol-related problems.InNorström,Thor,Editor (2002) ***AlcoholinPostwarEurope. Consumption, drinkingpatterns,consequencesandpolicyresponsesin15Europeancountries*.**Sweden. NationalInstituteofPublicHealth.

Monteiro,Maristela G. (2007).***Alcohol and Public Health in the Americas: A Case for Action.***Washington, D.C:OPS.

Norström, Thor,Editor (2002) ***AlcoholinPostwarEurope. Consumption,drinkingpatterns, consequencesandpolicyresponsesin15Europeancountries*.**Sweden. NationalInstituteof PublicHealth.

OEA-CICAD (2011).***Report on Drug Use in the Americas,2011.***OAS Official Records Series; OEA Ser.L. Washington, D.C.

Pan American Health Organization(2007).***Alcohol, Gender, Culture and Harms in the Americas: PAHO Multicentric Study Final Report***.Washington, D.C.OPS.

World Health Organization (2010) ***Global Strategy to Reduce the Harmful Use of Alcohol.*** Geneva. World Health Organization.

Rehm,J.and Gmel,G.(1999) Patterns ofalcohol consumption andsocial consequences.Results from an 8-year follow-up studyin Switzerland.***Addiction***94(6),899–912

Rehm,J.et.al.(2003)Therelationshipof averagevolumeof alcohol consumption andpatterns of drinking to burdenofdisease: anoverview. ***Addiction***98(9),1209–1228

WorldHealthOrganization.(2000).***InternationalGuideforMonitoringAlcoholConsumptionand Related Harm.***Department of Mental Health and Substance Dependence No communicable Diseases andMentalHealthCluster.Geneva.World HealthOrganization

WorldHealthOrganization.(2011).***GlobalStatusReportonAlcoholandHealth2011.Country profilesbyWHORegion:TheAmericas.***
http://www.who.int/substance_abuse/publications/global_alcohol_report/msbgsramro.pdf

**Appendix**

| Country | Breadth and Date of the Study | Participating local academic partners (study of secondary sources) |
|---|---|---|
| Brazil | RiodeJaneiro,SanPabloandSalvador, December2011/January 2012 | FLACSOBrazil |
| Colombia | Nationwide,November-December2011 | UniversidadNacional |
| CostaRica | Nationwide,November 2009 | UniversidaddeCostaRica,EscueladeEstadística |
| ElSalvador | Nationwide,November2008 | FLACSO ElSalvador |
| Mexico | Mexico City,Guadalajaraand Monterrey,November 2011 | UniversidadAutónomaMetropolitana,UAM-Xochimilco |
| Nicaragua | Nationwide,November-December2010 | Instituto NicaragüensedeInvestigacionesEconómicasySociales, INIES |
| Peru | Nationwide, September 2010 | UniversidadCayetanoHeredia |
| Dominican Republic | Nationwide,July 2009 | FLACSODominican Republic |
| Venezuela | Nationwide,April-May2011 | Dr. Mireya Vargas |