

Opinions about Alcohol Control Policies among Brazilians: The first National Alcohol Survey

I. Pinsky,¹ M. Sanches,² M. Zaleski,^{3,4} R. Laranjeira¹ and R. Caetano⁵

1. Psychiatry Department, Federal University of São Paulo, UNIAD

2. University of São Paulo

3. Santa Catarina State Institute of Psychiatry

4. Federal University of Santa Catarina

5. University of Texas School of Public Health

Abstract

Several general-population alcohol surveys have been conducted in Brazil in the past 25 years, none using probability sampling methodology. This paper focuses on the results of the first alcohol national survey in Brazil, particularly as it concerns support for six alcohol policies. A total of 2,346 interviews were conducted with adults aged 18 and older. The interviews, averaging 53 minutes in length, were conducted face to face in the respondent's home by trained interviewers using a standardized questionnaire, with an overall response rate of 66.4%. Overall at least half of the respondents supported the six alcohol policies analyzed. Gender, intensity of alcohol consumption and age were the main variables associated with approval of the alcohol policies. The relatively high level of support for the alcohol policies suggests that there is room for developing new measures in the area in Brazil.

KEYWORDS: age, alcohol, gender, policies, population

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Introduction

Public opinion regarding alcohol-related issues is a driving force in policy planning and implementation. Public sentiments are a useful tool to assess the level of public understanding of health issues, thus indicating areas in need of potential education efforts (Room 1990). In addition there is much to be learned from public opinion on alcohol policy – from reflecting back the processes and interactions that helped create certain policies to the framework within which new policy and change will be made (Giesbrecht and Greenfield 1999).

Efforts to understand public sentiment about alcohol policies have relied partly on surveys of public opinions about policies. A part of this process is the identification of individuals' socio-demographic characteristics that may influence their opinion about policies. For instance, women, those who are married, older individuals and those with lower alcohol consumption seem significantly more supportive of conservative policies than men (Schmid et al. 1990).

The level of alcohol consumption also influences individuals' support for alcohol control policies. In a national probability sample, Giesbrecht and Greenfield (1999) found that lighter drinkers were more likely to support restrictive policies than frequent or heavier drinkers. Latimer et al. (2003) reported that women, infrequent drinkers and adults with greater knowledge or concern about youths exhibit the greatest support for more restrictive alcohol policy, rated across five alcohol policy scales. Also older adults and those who were married, widowed or divorced tended to support policies that restricted alcohol use in public places, while younger adults and those who were single tended to support alcohol tax increases in order to address problems surrounding underage drinking.

While much progress has been made in research attempting to identify predictors of public opinion related to alcohol policy, there remain many gaps in the literature. In addition, most of

the work done in this field refers to data from developed countries, especially the U.S., Canada and European nations.

Recently in a journal editorial, Caetano and Laranjeira (2006) reported that developing countries such as Brazil are being targeted by international beverage companies because of its current economic and population growth. Multiple factors such as advertising, low price due to low production costs and availability are associated with increasing alcohol sales. The authors also observed that weakness in enforcement of already existing alcohol control policies on hours of sale, advertising, legal age limits and legal blood content to drive a car also contribute to this rise in alcohol consumption.

Brazil, the largest country in South America, with a population of more than 180 million people and the 11th-largest world economy, has not had until now a comprehensive national alcohol survey. Previous surveys included elementary and high school students only, “street children,” inpatient hospital populations and two household surveys (Galduróz and Caetano 2004). However, none of these surveys covered alcohol use patterns in depth or used probabilistic methodology. This paper presents data from the first Brazilian national alcohol consumption survey, representing the entire population. It attempts to fill some existing gaps by analyzing a national general population survey covering public opinion on a variety of policies related to access to alcohol, alcohol promotion and prevention and treatment policies.

Methods

Sample

Subjects 14 years of age and older were selected through a multistage area probability procedure from among individuals living in households in all Brazilian states. Individuals were interviewed

between November 2005 and April 2006, with 485 of them representing an over-sample of teenagers. The sample analyzed here comprises 2,346 adults 18 years of age and older, and is representative of the Brazilian adult population. All respondents granted their informed consent.

Data Collection

Data collection was done during face-to-face interviews averaging 53 minutes in length, conducted in respondents' homes with standardized questionnaires by trained interviewers. The response rate was 66.4%. Higher non-response rates were observed in large metropolitan areas of the country's most developed southeast and south regions, and also in the national capital, Brasilia; the lowest were registered in rural and small urban areas of the less developed northeast region.

Statistical Analysis

Data were weighted to adjust for the probability of selection into the sample and non-response rates. Post-stratification weights were calculated to adjust the sample to known population distributions on certain demographic variables (sex, age and region of the country). To correct for clustering effects resulting from the multicluster sample design, all analyses were performed with "complex samples" from SPSS V13.

As a first step we examined principal socio-demographic characteristics as well as the subjects' drinking status. Next we examined the proportion of respondents supporting each one of the alcohol policies under analysis. Finally we conducted a series of multivariate logistic regressions to examine the association of support for the alcohol control policies with the level of alcohol consumption after adjusting for socio-demographic factors.

Measures

Alcohol control policies

A total of six policy questions, covering the areas of access, taxes and promotion, were selected from the questionnaire and answered by the respondents.

1. *Access.* Respondents were asked three questions: “Do you think alcoholic beverages should be forbidden in corner stores such as bakeries?” (yes or no); “Do you think there should be time limits for selling alcoholic beverages?” (yes or no); “Do you think the legal drinking age of 18-year-olds should be raised, be reduced or continue the same?”
2. *Taxes.* Respondents were asked one question: “Do you think the alcohol beverage tax should be raised, be reduced or continue the same?”
3. *Promotion.* Respondents were asked two questions: “Should the government prohibit or stop wine, liquor and beer advertising on TV?” (yes or no); “Should the government prohibit or stop wine, liquor and beer companies from paying for sporting or cultural events?” (yes or no).

Of the six questions there were two with three possible answers in each case. The answers in favour of raising alcohol taxes or raising the legal drinking age were considered as supporting alcohol policy, whereas responses supporting reduced or unchanged taxes or legal age were considered as not supporting alcohol policy.

Alcohol consumption

A modified version of the Cahalan and Cisin (1968) Volume-Variability (V-V) Index was used to classify respondents’ patterns of alcohol consumption. Respondents were asked about their consumption of wine, beer, liquor and “alcopops” in the 12 months prior to the survey interview. Respondents’ frequency of drinking was coded into 11 categories ranging from “never” to “three

or more times a day.” Quantity of consumption was assessed by asking for the frequency with which respondents drank 1 to 12 drinks of wine, beer or liquor. These quantities were asked in terms of ranges -- 1, 2, 3, 4, 5 to 7, 8 to 11, 12 or more. The frequency was also asked in ranges, varying from every day to never. By combining information on quantity and frequency of drinking wine, beer, liquor and alcopops, respondents were classified into the following categories:

- frequent heavy drinker – drinks once a week or more and has five or more drinks at a sitting, at least once a week or more (a drink is 1 ounce of spirits, a 3-ounce glass of wine or a 12-ounce can of beer)
- frequent drinker – drinks once a week or more, but drinks 5 or more drinks at a sitting less than once a week or not at all
- less frequent drinker – drinks one to three times a month, whether or not drinking five or more drinks at a sitting
- infrequent drinker – drinks less than once a month but at least once a year, whether or not drinking five or more drinks at a sitting
- abstainer – drinks less than once a year or has never drunk alcohol

Sociodemographic characteristics

Seven socio-demographic variables were included in the analyses: gender (male, female), age (18–24, 25–34, 35–44, 45–59, 60+), religious affiliation (Catholic, Evangelical, other, none), monthly household income (up to US\$200, US\$201–\$340, US\$341–\$545, US\$546–\$1,136, US\$1,136+), educational level (up to fifth grade, sixth to ninth grade, high school graduate, at least some college), marital status (married/cohabiting, separated/divorced, widowed,

single/never married) and employment status (homemaker, retired, unemployed, employed, student).

Results

Sample Characteristics

Results from our first Brazilian National Survey, released this year in a National Anti-Drug Secretariat (SENAD) publication, showed that 48% of the Brazilian population above 18 years of age abstained from alcohol consumption in the past 12 months: 35% of males and 59% of females. Other differences in abstention rates were observed among age groups, with 79% higher rates in the 60-years-and-older population when compared to the 18-to-24-year-old group. More differences in abstention rates were found among the five different geographic regions of Brazil, especially in the south, where the overall population abstention rate is only 35%. In the drinking population, a little over a tenth are infrequent, less frequent or frequent drinkers. Brazil has a high proportion of Catholics, which was confirmed in the sample, but about a fifth of respondents declared themselves Evangelical. Most of the sample comprised employed people, which included formal and informal jobs. About two-fifths of the sample were 18 to 34 years of age. The educational level was low (compared to developed countries), with about two-fifths of the sample having up to five years of education. A little more than a quarter of the respondents were single (Laranjeira et al. 2007).

[INSERT TABLE 1]

Support for Alcohol Policies

Two of the access questions were the most approved measures. Limiting hours of sale and forbidding alcohol sales in corner stores were supported by, respectively, 76% and 74% of the sample. Of the sample, 68% approved of forbidding alcohol ads on TV and a little over half of the respondents favoured increasing the alcohol beverage tax (56%), raising the legal age for drinking (55%) and prohibiting the alcohol industry from sponsoring events (55%).

[INSERT TABLE 2]

Multivariate Results

Overall, the most important variables associated with support for alcohol policies were drinking, age and gender. Young males and heavy drinkers were less supportive of alcohol policies. In addition, married or cohabitating respondents were more supportive of the policies than those who were single. Respondents who were Catholic or Evangelical were stronger supporters of two of the access policies than those with no religion.

Education made an interesting contribution to the models. In relation to three of the policies analyzed (alcohol available in corner stores, limiting hours of sale and prohibiting alcohol ads), those with less education were more supportive of the policies than were college-educated people. However, the situation is reversed when it concerns raising alcohol taxes; in this case people with a fifth-grade education or less were more opposed.

Another interesting finding was weaker support (in two instances, significant) of the policies by homemakers, who are generally regarded as a more conservative group. This was the

only difference found in the analysis for employment status. Finally, those with higher incomes were more likely to support efforts to curb alcohol promotion.

Discussion

This study presents, for the first time, the level of support for alcohol policies and variables affecting this support in a national representative sample of Brazilians. The six policies examined here are among those least supported in other countries, as they are directed at controlling physical or economic access to alcohol and alcohol promotion (Giesbrecht and Greenfield 1999). The results suggest that Brazilians present a relatively high level of support for these alcohol policies – which is somewhat surprising, since discussion of alcohol policy by the general public is not common in our country – and it could be seen as a consequence of higher public concern about the effects of alcohol consumption and abuse.

When looking at public opinion based on drinking patterns, heavier drinkers tend to be less conservative. Abstainers were more supportive of all alcohol policies examined in this paper. However, infrequent, less frequent and frequent drinkers also support shorter hours of sale and higher alcohol taxes. The general support – including among frequent drinkers – for alcohol policies could be related (from a cynical point of view) to the widespread feeling in Brazil that stricter policies are seldom enforced. Thus it would be acceptable to support a policy if it were not really going to be enforced. The rate of support found in this study also suggests that the population is somewhat sensitive to the country's alcohol problems and that the forces opposing policy implementation are probably more economic and political rather than coming from Brazil's population.

Among the variables affecting levels of support for the alcohol policies and alcohol consumption, gender and age were the more consistent ones, specially among “nurturing” women with a conservative orientation and considering the “practical perspective” of women concerning taxes and access to corner stores, as well as “risk-taking” youth, especially males, and the “vested interests” of younger respondents who support sponsorship.

Being a woman is one of the characteristics consistently associated with support for more restrictive policies. This is not surprising, as women tend to be more conservative than men and more nurturing and concerned about community and individual problems associated with drinking. Women tend to take fewer risks than men, and thus should be more inclined to adopt a more supportive position regarding alcohol control policies. However, one exception to this finding is the somewhat lesser approval rate among homemakers for two of the alcohol policies. Homemakers (in Brazil they are almost all women) showed less support for prohibiting alcohol sales in corner stores and for raising taxes. One possible interpretation for this finding is of a practical nature: housewives, who are responsible for the family food supply and budget, may be automatically less interested in any tax increase, which would make things more expensive. In addition, corner stores are an easy place at which to buy supplies, and prohibiting sales of alcohol there could make the homemaker’s life more complicated.

Younger individuals tend to be less supportive of the alcohol policies. This is expected because they tend to be less conservative than older people and are at a life-stage in which individuals tend to take more risks, to be more adventurous and impulsive. Taking this into consideration, two findings seem interesting. First, younger respondents were not substantially less supportive of not selling alcohol in corner stores or limiting hours of sale, and raising the legal age for drinking was not more approved of by the younger age range (18–24) – those with a

possible direct interest in the policy – than the older age-group. The second finding is that younger individuals were especially opposed to restrictions on alcohol industry sponsorship of sports events. In Brazil the alcohol industry, especially the beer industry, has been increasingly responsible for sponsorship of events such as Carnival, virtually every soccer championship, university festivals and some large music festivals (especially those appealing to younger folks).

Contrary to Europe's most developed countries, where in the past decade alcoholic beverages have increasingly been a public health and social policy issue (Alavaikko and Österberg 2000; Österberg 2006), Brazil has not yet been influenced by public and community opinion, being ruled by government institutions and the alcohol industry. For these reasons we hope this paper may be a scientific reference for future changes in Brazil's alcohol control policy.

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Table 1. Socio-demographic distribution in the survey.

Variables	Categories	<i>n</i> = 2,346 (%)
Pattern of alcohol consumption	frequent heavy drinker	8.5
	frequent drinker	14.8
	less frequent drinker	14.6
	infrequent drinker	14.2
	abstainer	47.9
Religion	none	5.0
	Catholic	67.9
	Evangelical	20.9
	other	6.3
Employment status	employed	65.0
	unemployed	4.0
	homemaker	14.1
	retired	13.8
	student	3.1
Age	18–24	19.7
	25–34	23.5
	35–44	20.8
	45–59	21.5
	60+	14.5
Educational level	up to fifth grade	36.8
	sixth–ninth grade	24.5
	high school graduate	28.2
	at least some college	10.5
Marital status	single	26.4
	married/cohabiting	61.2
	widowed	6.1
	separated/divorced	6.4
Monthly household income	up to US\$200	54.7
	US\$200–\$340	20.1
	US\$341–\$545	14.7
	US\$546–\$1,136	7.8
	US\$1,136+	2.7
Gender	male	47.6
	female	52.4

Table 2. Odds ratios and 95% confidence intervals for 2006 Brazilian National Alcohol Survey alcohol policy questions.

	Alcohol Available in Corner Stores	Limiting Hours of Sale	Raising Legal Drinking Age	Raising Taxes	Prohibiting TV Alcohol Ads	Prohibiting Alcohol Sponsorship
	OR; 95% CI	OR; 95% CI	OR; 95% CI	OR; 95% CI	OR; 95% CI	OR; 95% CI
Gender (ref: Female)						
Male	0.5; 0.4, 0.7	0.6; 0.5, 0.9	0.6; 0.5, 0.8	0.9; 0.7, 1.1	0.8; 0.6, 1.1	0.6; 0.5, 0.7
Age (ref: 60+)						
18–24	0.7; 0.4, 1.4	0.8; 0.4, 1.6	0.8; 0.5, 1.4	0.5; 0.3, 0.9	0.6; 0.3, 1.1	0.4; 0.3, 0.7
25–34	0.8; 0.4, 1.4	1.0; 0.5, 1.9	0.9; 0.6, 1.3	0.5; 0.3, 0.8	0.6; 0.3, 1.0	0.5; 0.3, 0.8
35–44	0.9; 0.5, 1.7	1.2; 0.6, 2.4	1.2; 0.7, 1.8	0.6; 0.4, 1.0	0.8; 0.5, 1.4	0.6; 0.4, 1.0
45–59	0.9; 0.6, 1.5	1.2; 0.6, 2.1	1.6; 1.0, 2.3	1.0; 0.6, 1.5	1.2; 0.7, 1.9	1.1; 0.8, 1.5
Income (ref: US\$1,136+)						
< US\$200	0.9; 0.5, 1.7	1.3; 0.7, 2.4	1.2; 0.7, 2.1	1.4; 0.8, 2.4	0.4; 0.2, 0.8	0.7; 0.4, 1.1
US\$201–\$340	1.0; 0.5, 1.8	1.4; 0.8, 2.6	1.2; 0.7, 2.2	1.7; 0.9, 3.0	0.6; 0.3, 1.1	0.7; 0.4, 1.2
US\$341–\$545	0.6; 0.3, 1.1	0.9; 0.5, 1.7	1.2; 0.7, 2.0	1.6; 0.9, 2.7	0.6; 0.3, 1.1	0.8; 0.5, 1.4
US\$546–\$1,136	0.8; 0.4, 1.4	1.1; 0.6, 1.9	0.9; 0.6, 1.6	1.5; 0.8, 2.6	0.5; 0.3, 1.0	0.9; 0.6, 1.5
Education (ref: College)						
< Fifth grade	1.9; 1.1, 3.4	2.3; 1.3, 4.1	1.2; 0.7, 2.1	0.6; 0.4, 1.0	1.7; 1.0, 3.0	1.5; 0.9, 2.6
Fifth–ninth grade	1.8; 1.0, 3.2	2.6; 1.5, 4.5	1.3; 0.8, 2.2	0.7; 0.4, 1.2	1.2; 0.7, 2.0	1.2; 0.7, 2.0
High school	1.6; 0.9, 2.8	1.4; 0.8, 2.3	1.1; 0.6, 1.8	0.8; 0.5, 1.2	1.2; 0.7, 1.8	1.1; 0.7, 1.7
Marital Status (ref: Single)						
Married/cohabiting	1.6; 1.1, 2.3	1.1; 0.8, 1.5	1.4; 1.0, 1.9	1.4; 1.1, 1.9	1.2; 0.9, 1.6	1.2; 0.9, 2.6
Separated/divorced	1.7; 0.9, 3.2	1.4; 0.7, 3.0	1.4; 0.8, 2.4	1.6; 0.9, 2.9	1.0; 0.6, 1.7	0.9; 0.5, 1.4
Widowed	1.6; 1.0, 2.7	1.1; 0.6, 2.0	1.3; 0.8, 2.1	1.4; 0.8, 2.4	1.1; 0.7, 1.8	1.0; 0.6, 1.6
Employment (ref: Employed)						
Unemployed	0.7; 0.3, 1.6	1.1; 0.5, 2.4	1.1; 0.6, 2.1	1.1; 0.6, 2.3	0.7; 0.4, 1.4	1.6; 0.9, 2.7
Homemaker	0.7; 0.4, 1.0	1.1; 0.7, 1.8	0.9; 0.7, 1.3	0.7; 0.5, 1.0	1.0; 0.7, 1.6	0.8; 0.6, 1.1
Retired	0.8; 0.5, 1.3	1.0; 0.6, 1.8	1.1; 0.7, 1.7	0.9; 0.6, 1.4	1.1; 0.7, 1.7	0.9; 0.6, 1.3
Student	1.0; 0.4, 2.2	0.9; 0.4, 1.9	0.9; 0.4, 2.0	1.1; 0.5, 1.2	0.9; 0.4, 2.0	0.8; 0.4, 1.9
QF (ref: Frequent heavy drinker)						
Frequent	1.2; 0.8, 1.9	1.8; 1.2, 2.9	1.4; 0.9, 2.2	1.4; 0.9, 2.1	1.1; 0.7, 1.6	0.8; 0.5, 1.3
Less frequent	1.0; 0.7, 1.6	2.5; 1.6, 4.0	1.1; 0.7, 1.7	1.5; 1.0, 2.3	1.2; 0.7, 2.0	1.0; 0.6, 1.5
Infrequent	1.7; 1.0, 2.7	3.7; 2.2, 6.1	1.4; 0.9, 2.1	2.3; 1.5, 3.6	1.4; 0.8, 2.2	1.2; 0.8, 2.0
Abstainer	2.9; 1.9, 4.4	5.4; 3.3, 8.7	2.3; 1.5, 3.6	4.1; 2.7, 6.1	2.0; 1.2, 3.2	1.7; 1.1, 2.6
Religion (ref: None)						
Catholic	1.3; 0.8, 2.1	1.8; 1.1, 2.9	1.0; 0.6, 1.7	1.4; 0.7, 2.1	1.0; 0.6, 1.6	0.9; 0.5, 1.5
Evangelical	1.9; 1.1, 3.4	1.7; 0.9, 3.0	1.0; 0.6, 1.6	1.6; 1.0, 3.1	1.5; 0.8, 2.7	1.2; 0.7, 2.2
Other	1.4; 0.7, 2.8	1.4; 0.7, 2.8	1.2; 0.6, 2.5	1.8; 0.9, 3.6	0.9; 0.4, 1.8	1.3; 0.7, 2.6