

# Unrecorded Alcohol in India



## Results of a Population Survey in Five States

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According to the World Health Organization (WHO), unrecorded alcohol makes up 51% of all alcohol consumed in India [1]. A recent systematic review of studies on unrecorded alcohol [2] noted wide variation in the levels of its consumption across diverse survey areas in India, ranging from large cities to rural communities, and estimated that unrecorded alcohol comprises between 40% and 77% of total consumption.

Although prohibition is written into the Constitution of India, in reality, beverage alcohol is regulated at the state level; legislation and regulations regarding production and sale differ among states. Data collection is not routine, even for commercially produced and branded alcohol beverages, and there is also variation in how some categories are defined. For example, country liquor, an important segment of the alcohol market, is recorded and taxed in some states; in contrast, other state governments consider it to be unrecorded alcohol and neither sanction

its sale nor apply taxation. Given the difficulty of collecting data on unrecorded alcohol, previous surveys of alcohol consumption in India have either ignored this segment [3-5] or have been limited to discrete populations or areas [6-12].

The International Alliance for Responsible Drinking (IARD)<sup>1</sup> supported a survey of alcohol consumption to help describe the unrecorded alcohol market in India, as well as drinking patterns and preferences among its consumers, in the states of Andhra Pradesh (AP), Kerala (KR), Maharashtra (MH), West Bengal (WB), and Madhya Pradesh (MP). The survey followed a multi-stage, stratified, semi-purposive sampling design and the work was undertaken in collaboration with Morsel Research and Development, a social science survey research firm based in Lucknow, India and Dr. Santosh Kumar, Assistant Professor of Health Economics at Sam Houston State University (SHSU), USA.<sup>2</sup>

## Methodology

Between June and December 2014, 6,088 in-person interviews were completed across the five states. In order to achieve representative samples of each state, two districts – one representative of high socioeconomic status (SES) districts, the other of low SES districts – were randomly selected within each state. Urban and rural areas were sampled proportionately within each district to represent the rural/urban population ratio in each

state, based on Census of India 2011 data. Additionally, 50 respondents were sampled from each of two randomly selected slums in each of the selected urban areas in order to oversample potential consumers of unrecorded alcohol. The survey relied on a questionnaire of items sourced by IARD from existing international and national surveys that were adapted to the local context and survey population.

<sup>1</sup>The International Alliance for Responsible Drinking (IARD) is a not-for-profit organization dedicated to addressing the global public health issue of harmful drinking. IARD is supported by the world's leading beer, wine, and spirits producers and works together with all relevant stakeholders to promote policy dialogue, assess the evidence, and seek local solutions to harmful drinking globally.

<sup>2</sup> Funding for the survey and data analysis was provided by IARD in accordance with the [Dublin Principles](#) and IARD's [General Principles for Research](#).

Respondents reported the usual frequency, quantity, and drink size for each type of recorded and unrecorded alcohol beverage that they consumed. The alcohol volume, in both liters and grams of alcohol, was calculated for each beverage type and summed across types to determine the total alcohol from all sources.

Recorded alcohol beverages included imported beer, wine, imported distilled spirits, and domestically produced Indian Made Foreign Liquor (IMFL); this is a designation given to western-style distilled spirits to differentiate them from traditional beverages, such as fenny or toddy. Unrecorded alcohol included traditional homemade beverages, counterfeit, contraband, and surrogate alcohol.

Country liquor, unique to India, is a locally produced distilled alcohol beverage prepared with cheap materials, such as molasses, meaning that it is inexpensive to produce and purchase. The strength of country liquor may vary widely by region and can range from 40% to 70% ABV [12]. Country liquor is defined as a recorded alcohol in MH, MP, and WB, but treated as unrecorded in AP and KR.

The other types of alcohol were classified as recorded and unrecorded in accordance with IARD's Alcohol Taxonomy and informed by IARD's [Toolkit for Assessing the Unrecorded Alcohol Market](#).

## Key Results

An overview of the key findings from the survey about drinking patterns, demographic characteristics of consumers, and outcomes associated with unrecorded alcohol consumption in five Indian states:

### Alcohol consumption

According to the results of the survey, 39% of the survey respondents were current drinkers.

- The majority of current drinkers (91%) were male, and only 9% of women respondents identified themselves as current drinkers.
- In general, current drinkers were more prevalent in urban (45%) than in rural areas (35%).
- Consumption varied across the five states studied, with the highest prevalence of current drinkers reported in AP (47%), followed closely by MP (45%), and the lowest prevalence was in MH (28%).

Current drinkers in the five states consumed alcohol at a per capita level of 11.9 liters of pure alcohol over the past 12 months.

- Men reported consuming significantly higher levels of alcohol than women at 8.2 liters of pure alcohol per capita per year; women reported consuming 1.3 liters of pure alcohol per capita per year.

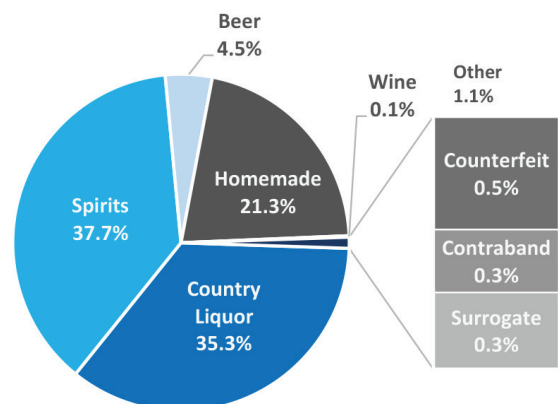
- Urban respondents drank significantly more alcohol in total than rural respondents, but less unrecorded alcohol.
- Among current drinkers, younger individuals (25 years old and younger) reported consuming the lowest levels of alcohol of all age groups, while those between the ages of 46 and 54 reported consuming the most alcohol.

### Unrecorded and recorded alcohol consumption

Unrecorded alcohol made up 29% of the total alcohol consumed in the past 12 months (Figure 1).

- Across the five states, 46% of respondents who identified themselves as current drinkers reported consuming spirits (premium imported spirits and IMFL) in the past 12 months, and alcohol from spirits accounted for an average of 4.5 liters, which was 38% of all alcohol consumed.
- The second-most preferred beverage type was country liquor, which was consumed by 31% of all current drinkers. Alcohol from country liquor accounted for an average of 4.2 liters, or 35%, of all alcohol consumed. It was followed closely by homemade alcohol which was consumed by 28% of all current drinkers and accounted for 2.5 liters, which was 21% of all alcohol consumed.
- Approximately 25% of current drinkers reported consuming beer, and 5% consumed wine; these two beverages combined accounted for an average of less than 6% of all alcohol consumed.
- A number of respondents reported consuming unrecorded alcohol; 2% of current drinkers reported consuming counterfeit alcohol, 1% reported drinking contraband alcohol, and 2% reported consuming surrogate alcohol. Together, these three unrecorded alcohol types contributed 1.1% of the average volume of alcohol consumed in the past 12 months from all sources.

**FIGURE 1.** Proportion of total alcohol consumption by beverage category; All current drinkers.



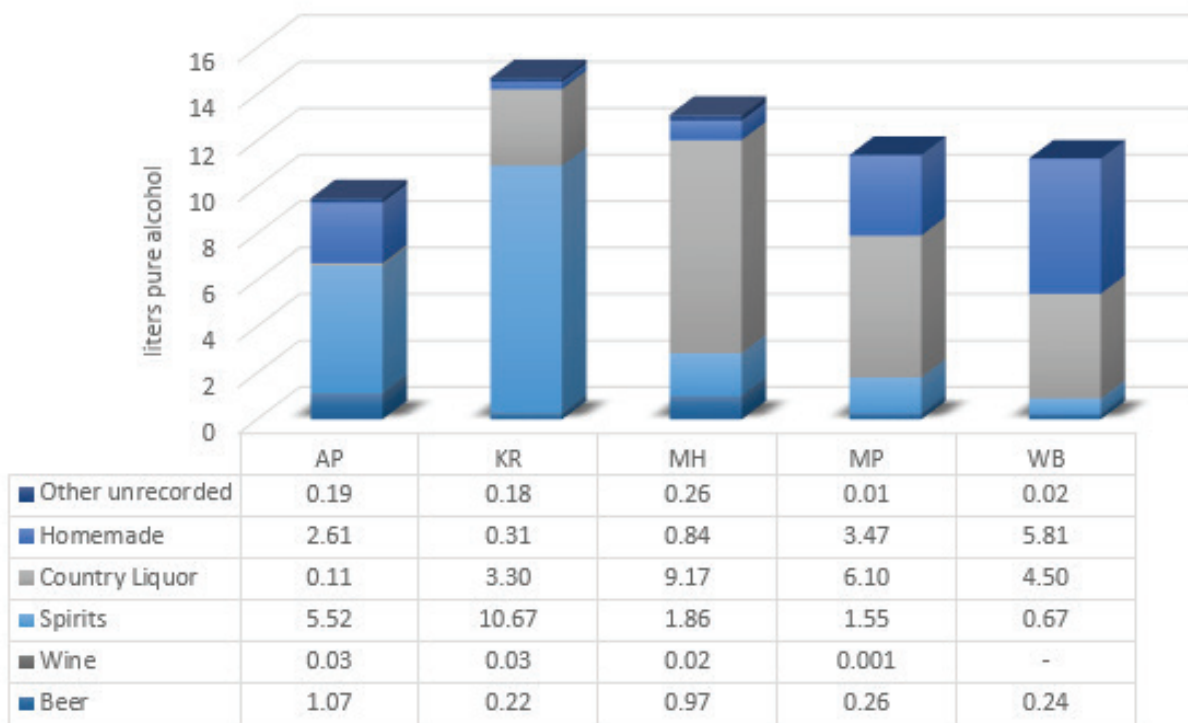
- Consumption of counterfeit beverages, in particular, may be underestimated in this survey as many people may be unaware that they are purchasing a counterfeit product. Reports of the illicit alcohol market in India indicate a sizable counterfeit alcohol market [13].

The survey found that consumption varied widely across states (Figure 2).

- At 52%, WB had the highest proportion of unrecorded alcohol consumption, with MH having the lowest proportion at 8%.

- Country liquor was the most consumed beverage type in MH and MP, accounting for 70% and 54% of total alcohol consumed respectively.
- In KR and AP, the most consumed beverage type was spirits; this accounted for 73% and 58% of all alcohol consumed respectively.
- Respondents in WB reported the highest consumption of homemade alcohol at 5.8 liters.
- In AP, respondents consumed the lowest amount of alcohol overall at 9.5 liters, and the smallest proportion of country liquor at 1% of the total consumption.

**FIGURE 2.** Contributions of all recorded and unrecorded alcohol beverage categories to total alcohol volume, by state.



**Demographic characteristics of respondents**

Respondents were classified according to the type of alcohol they were most likely to consume. Survey data showed that the characteristics of consumers of recorded and unrecorded alcohol beverages varied (Table 1).

- Those who reported consuming only recorded beer, wine, or spirits had higher incomes and literacy rates, and were more likely to be men, than consumers of other beverage types.
- By contrast, those who consumed only homemade or other unrecorded alcohol were older and were more likely to live in rural areas, be illiterate, and come from low-income households.

- Women were more prevalent among those consuming only homemade or other unrecorded alcohol than among consumers of other types of beverages.
- Those who reported only consuming country liquor were predominantly male and were more likely to be illiterate and from low-income households than consumers of only recorded alcohol.

**Drinking patterns**

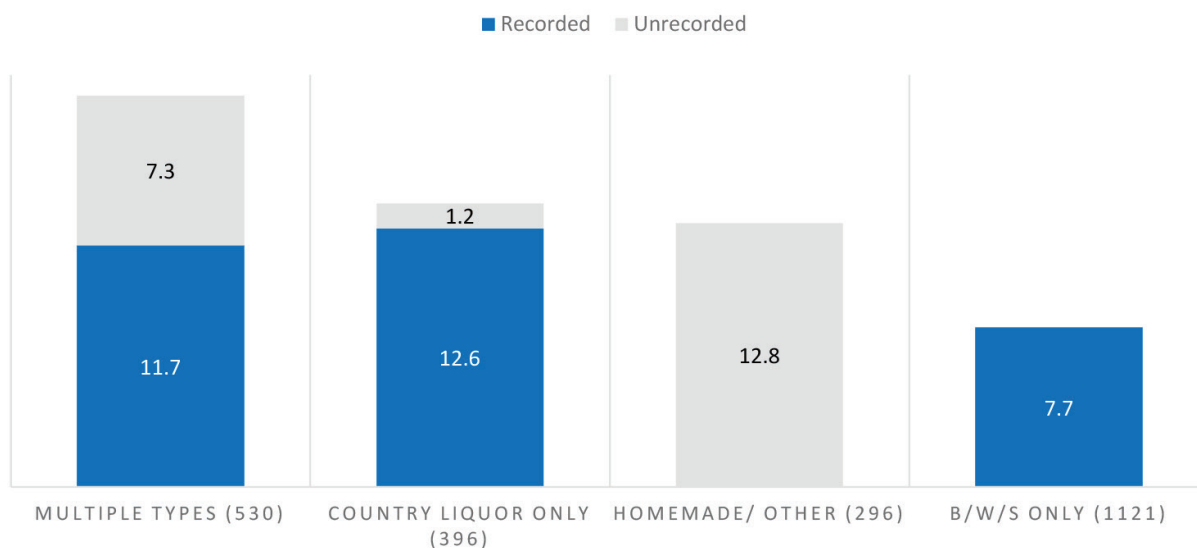
Average alcohol consumption in the past 12 months differed among select groups of drinkers (Figure 3).

**TABLE 1.** Demographic characteristics of participants.

	Full sample	All current drinkers	Recorded beer/wine/spirits only	Country liquor only	Homemade/other unrecorded only	Multiple types
<b>N</b>	<b>6084</b>	<b>2343</b>	<b>1121</b>	<b>396</b>	<b>296</b>	<b>530</b>
Male %	62	91	95	93	74	88
Urban %	34	40	42	43	32	37
Illiterate %	30	32	18	44	68	31
Laborers %	37	50	38	70	72	50
Married %	86	87.6	86	92	87	89
Monthly HHD income < 10000 RPS %	75	72	59	79	95	73
Average age in years	40.0	40.9	40.6	40.9	41.9	41.1

- The largest group of respondents – 48% of current drinkers – reported that they drank only recorded alcohol, including beer, wine, or spirits.
- On average, this group of respondents reported drinking 7.7 liters, which was the least amount of alcohol over the past 12 months, which was half of the 13.8 liters consumed by drinkers of only country liquor.
- The second-largest group of respondents, at about 23% of current drinkers, reported drinking a combination of alcohol types, with spirits and country liquor comprising the most common combination.
- Compared with respondents who only consumed recorded alcohol, those who drank multiple beverage types reported consuming 2.5 times more alcohol in the past 12 months, at 19.0 liters, than consumers drinking only recorded alcohol beverages.
- Consumers who drank only homemade alcohol or other unrecorded types (counterfeit, contraband, or surrogate) reported drinking similar amounts of alcohol in the past 12 months to country liquor drinkers; this was 12.8 liters and 13.8 liters respectively.

**FIGURE 3.** Average total alcohol consumption, among select groups of drinkers (drinkers of only recorded beer/wine/spirits, country liquor only, homemade and other unrecorded only, and multiple types), by recorded and unrecorded alcohol.



Unrecorded alcohol consumption differed significantly by consumer demographics.

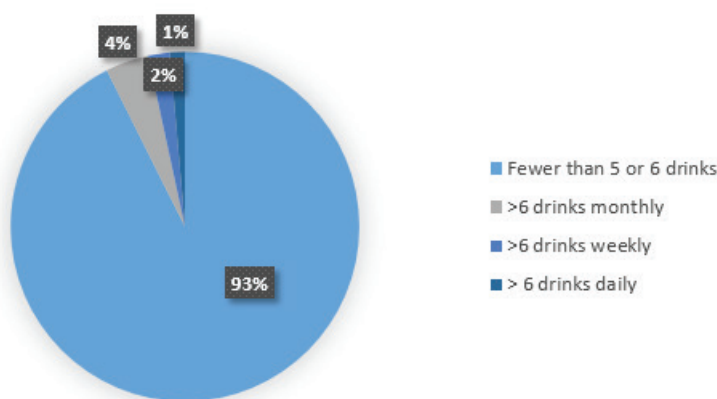
- Approximately 54% of all alcohol consumed among women was unrecorded, whereas it comprised 28% of all alcohol consumed by men.
- Researchers found that 34% of total alcohol consumption was unrecorded in rural areas, compared with 23% in urban areas.
- Unrecorded alcohol consumption increased with each age group. The youngest drinkers (under 26 years old) reported consuming on average 0.8 liters of unrecorded alcohol, which was 14% of all alcohol consumed. By contrast, the oldest age group of drinkers (56 years and older) consumed the most at 4.9 liters; this was 36% of all alcohol.

Respondents were also asked about the frequency with which they consumed alcohol.

- While 42% of respondents consumed alcohol on at least a weekly basis, 19% consumed alcohol on an occasional basis, and 24% reported drinking at least once a month but less than once a week.
- Women were more likely to be occasional drinkers than men, and less likely to be daily drinkers.
- The frequency of drinking was lowest among the youngest age groups and highest among those 56 years old or older.

Respondents were asked about the largest number of drinks they had consumed during a single 24-hour period in the past year and how often they had consumed this amount, providing an indication of chronic heavy drinking and occasional heavy drinking (Figure 4).

- Approximately 93% of respondents reported that they had not consumed more than five or six drinks in a single day.



**FIGURE 4.** Frequency of drinking more than six drinks in a 24-hour period during the past 12 months, among current drinkers (N= 2343).

- Chronic heavy drinkers (those who consumed more than six drinks a day on a daily basis) made up 1% of all current drinkers, and regular weekly heavy drinkers made up another 2% of all current drinkers.
- Occasional heavy drinkers (those who consume more than six drinks a day on a monthly basis) made up another 4% of all drinkers.
- The frequency of heavy drinking differed significantly by sex; 7.9% of men drank heavily on at least a monthly basis, compared with 2.8% of women.
- The youngest age group (under 26 years old) had the lowest prevalence of drinking heavily on at least a monthly basis, at 4.3%, and the 46 to 55 years-old group had the highest prevalence at 8.1%.

Patterns of drinking were examined to determine the prevalence of light, moderate, and heavy drinking.

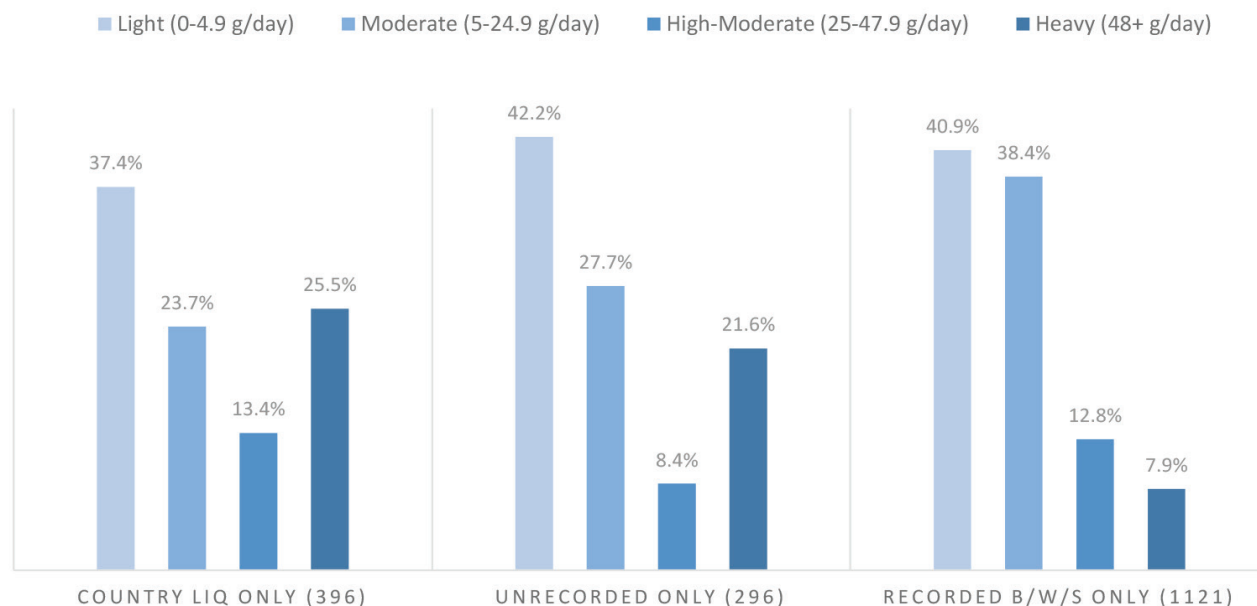
- While 73% of current drinkers were light or moderate drinkers, 14% reported drinking heavily (over 48g alcohol per day).
- Heavy drinking was more prevalent among respondents between 36 and 55 years old than among other age groups, at 19%.
- Heavy drinking was also more prevalent among men than women and more prevalent in rural compared with urban populations.
- Drinking levels differed significantly by state, with heavy drinking ranging from 9% in AP to 26% in MH, and light drinking ranging from 17% in AP to 61% in WB.

#### Alcohol-related harm

Respondents were asked about their perceived mental and physical health status as a potential indicator of alcohol-related harm.

<sup>3</sup> Drinking levels were defined according to the average number of grams of alcohol consumed per day during the past 12 months from all sources. While some researchers and the WHO use an average of 60 grams per day as the cutoff to indicate heavy drinking, there were few individuals in the current survey population with an average between 48g and 60g and so we chose to combine all drinkers with an average above 48g into the heavy drinking category.

**FIGURE 5.** Drinking levels by select groups of drinkers (average grams of alcohol consumed per day in the past 12 months).



- Consumers of homemade alcohol and country liquor were more likely to report being under stress and experiencing poor health than drinkers of recorded alcohol.
- Across all outcomes (home life, friendships, health, work/studies, and finances), the percentage of individuals who reported drinking-related harm at least once in the past year was higher among those who reported drinking country liquor than for other drinkers.

#### Drivers of unrecorded alcohol consumption

Consumers were asked about their reasons for drinking these types of beverages in order to assess the drivers of consumption among those who reported drinking country liquor or homemade alcohol.

- Almost 90% of drinkers reported that they drank country liquor or homemade alcohol because they were cheaper than branded commercial alcohol products.
- Consumers also reported that it was easier to obtain these types of alcohol due to fewer restrictions on where or when they could be purchased.
- Only 5% of respondents reported drinking homemade alcohol because it is considered a traditional beverage in their state of residence, while 20% of country liquor drinkers were more likely to report drinking country liquor for this reason.

#### Homemade alcohol production

All survey participants were asked about the production of homemade alcohol in their communities.

- Approximately 10% of respondents reported that they had a friend, neighbor, or relative who engaged in making homemade alcohol.
- Just over one-third of respondents reported that they had bought homemade alcohol from their friend, neighbor, or relative at least once in the past 12 months.
- Among all respondents, 2% reported that they had made their own homemade alcohol in the past 12 months, with 31% of this group reporting selling some of what they had produced.
- These results indicate that around 12% of the survey population either produced their own homemade alcohol or knew someone who did. This is nearly equivalent to the prevalence of homemade alcohol drinkers in the full sample population of drinkers and nondrinkers, at 10.8%.

## Final Remarks

The unrecorded alcohol market in India is complex and made even more so by the sheer size, widely diverse drinking patterns, varied regulatory structures, and regional idiosyncrasies that characterize that country. While this study cannot capture the entirety of the unrecorded alcohol market in India, it offers some useful insights and has implications for policy and prevention.

It is important to acknowledge that this study has a number of limitations. The findings are confined to five states in India, each with a different cultural and regulatory context. A second limitation of this study is its ability to adequately describe all of the relevant segments of the unrecorded alcohol market. According to other sources [13], counterfeit



products make up a significant proportion of the Indian alcohol market. However, given that consumers are often not aware that they are drinking counterfeit alcohol, such illegal products cannot be adequately captured in a population survey.

However, with these limitations in mind, the current study represents a valuable contribution to the evidence on unrecorded alcohol in India and globally; it also provides a solid basis for developing interventions and policy approaches that can address the unrecorded market in a sustainable and appropriate way, and can be used for initiatives aimed at addressing the burden to society from harmful drinking.

As in other countries where unrecorded alcohol is widely prevalent, its consumption in India is confined largely to populations at the lower end of the socioeconomic scale. Consumers of unrecorded alcohol are more likely to be poor, less educated, and with more limited access to resources; as the results of this study show, the consumption of unrecorded alcohol and country liquor is also associated with harmful drinking patterns.

The findings presented in this study show that the consumption of country liquor and unrecorded alcohol in India is primarily driven by price and availability; these beverages are both cheaper and more easily accessible than recorded and regulated alcohol. In light of this relationship, increased regulation of the recorded alcohol market may have the unintended consequence of driving consumption even further into the unrecorded sphere. At the same time, simply banning the production of unrecorded alcohol is also not an effective solution, since much of it is already illegal and part of the grey or black market.

Interventions are needed that can address the harmful drinking patterns associated with the consumption of country liquor and unrecorded alcohol, such as education and health campaigns, in order to mitigate its adverse health and social impact. Similar changes in attitudes and perceptions around country liquor and unrecorded alcohol are also needed, as well as efforts to ensure its safety and quality; such measures will help ensure that prevention efforts around harmful drinking are well integrated into larger social and health promotion initiatives.

## References

1. World Health Organization. (2014). Global status report on alcohol and health 2014. Geneva: World Health Organization.
2. Rehm, J., Dawson, D., Frick, U., Gmel, G., Roerecke, M., Shield, K. D., et al. (2014). Burden of disease associated with alcohol use disorders in the United States. *Alcohol Clin Exp Res*, 38(4), 1068-1077.
3. Ghosh, S., Samanta, A., & Mukherjee, S. (2012). Patterns of alcohol consumption among male adults at a slum in Kolkata, India. *Journal of Health, Population, and Nutrition*, 30(1), 73-81.
4. Rathod, S. D., Nadkarni, A., Bhana, A., & Shidhaye, R. (2015). Epidemiological features of alcohol use in rural India: A population-based cross-sectional study. *BMJ Open*, 5(12), e009802.
5. Pillai, A., Nayak, M. B., Greenfield, T. K., Bond, J. C., Nadkarni, A., & Patel, V. (2013). Patterns of alcohol use, their correlates, and impact in male drinkers: a population-based survey from Goa, India. *Soc Psychiatry Psychiatr Epidemiol*, 48(2), 275-282.
6. Gaunekar, G., Patel, V., Jacob, K. S., Vankar, G., Mohan, D., Rane, A., et al. (2004). Drinking patterns of hazardous drinkers: A multicenter study in India. In A. Haworth & R. Simpson (Eds.), *Moonshine markets: Issues in unrecorded alcohol beverage production and consumption* (pp. 125-144). New York: Brunner-Routledge.
7. Chakrabarti, A., Rai, T. K., Sharma, B., & Rai, B. B. (2015). Culturally prevalent unrecorded alcohol consumption in Sikkim, North East India: Cross-sectional situation assessment. *Journal of Substance Use*, 20(3), 162-167.
8. Benegal, V., Gururaj, G., & Murthy, P. (2003). Report on a WHO collaborative project on unrecorded consumption in Karnataka, Bangalore, India. Geneva: World Health Organization and National Institute of Mental Health and Neurosciences.
9. Chowdhury, A. N., Ramakrishna, J., Chakraborty, A. K., & Weiss, M. G. (2003). Cultural context and impact of alcohol use in the Sundarban Delta, West Bengal, India. *Social Sciences and Medicine*, 63, 722-731.
10. Gupta, P. C., Saxena, S., Pednekar, M. S., & Maulik, P. K. (2003). Alcohol consumption among middle-aged and elderly men: a community study from Western India. *Alcohol and Alcoholism*, 38, 327-331.
11. John, A., Barman, A., Bal, D., Chandy, G., Samuel, J., Thokchom, M., et al. (2009). Hazardous alcohol use in rural southern India: nature, prevalence and risk factors. *National Medical Journal of India*, 22, 123-125.
12. Nayak, M. B., Kerr, W., Greenfield, T. K., & Pillai, A. (2008). Not all drinks are created equal: Implications for alcohol assessment in India. *Alcohol and Alcoholism*, 43(6), 713-718.
13. Thought Arbitrage Research Institute (TARI). (2014). Illicit markets- a threat to our national interests, the alcoholic beverages industry. New Delhi: Federation of Indian Chambers of Commerce and Industry (FICCI). Retrieved from <http://tari.co.in/wp-content/uploads/2015/07/Alcoholic-Beverages.pdf>