



MENACE OF ALCOHOL: A PUBLIC HEALTH CONCERN IN INDIA

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ABSTRACT

Alcoholic beverages are known to be consumed in human civilization since ages. Around 3.3 million deaths every year result from harmful use of alcohol globally which represents 5.9 % of all deaths. India too is not unaffected by public health consequences of alcohol intake where per capita alcohol consumption has been reported to be 4.3 liters. Main causes of mortality are cirrhosis of liver and road traffic

accidents. Prevalence of alcohol use disorders and alcohol dependence was 2.6% and 2.1% respectively. The social costs of alcoholism far outweigh the benefits accrued from the sale and taxation of alcohol. The harmful use of alcohol is a causal factor in more than 200 diseases and injuries. There is a causal relationship between harmful use of alcohol and mental and behavioral disorders. To combat the problem of alcohol in India, political will is of utmost importance. All stakeholders should be involved while framing the public policies and frameworks for alcohol issue. The market forces which are promoting alcohol should be brought under legislative control. Legislations should be strictly enforced. Taxation policies can have huge impact on alcohol demand and supply system. Raising public awareness about the harmful effects of alcohol is essential.

KEYWORDS: Alcohol, health, India.

INTRODUCTION

Alcohol is a psychoactive substance which produce dependence. Alcoholic beverages are known to be consumed in human civilization since ages. It has been an integral part of many cultures for thousands of years. Fermented drinks were prepared and consumed in most parts

of the world before the European colonial expansion, which changed the cultural position of alcohol nearly everywhere.^[1] Gradually the consumption of alcohol beverages promoted all over the world and took a commercial look. Alcohol has a number of effects on almost all the walks of life of an individual ranging from health, society, family, nation, crime and violence. Scientific attention to alcohol as a public health issue has come into attention in last few decades when scientific evidence was collected to demonstrate the ill effects of alcohol on health. A number of definitions have been used for alcohol to measure its public health aspects. One such definition was given by World Health Organization (WHO) which defines “harmful use” of alcohol as drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.^[2]

Current scenario

According to Limm SS^[3], the harmful use of alcohol ranks among the top five risk factors for disease, disability and death throughout the world. As per the Global Status Report on alcohol and health for the year 2014 by WHO, around 3.3 million deaths every year result from harmful use of alcohol globally which represents 5.9 % of all deaths. 5.1 % of the global burden of disease and injury is attributable to alcohol, as measured in disability- adjusted life years (DALYs). Alcohol consumption causes death and disability mainly in the relatively younger age group of 20 – 39 years where approximately 25% of the total deaths are attributable to alcohol intake.

India too is not unaffected by public health consequences of alcohol intake. Per capita alcohol consumption has been reported to be 4.3 liters. Main causes of mortality are cirrhosis of liver and road traffic accidents. Prevalence of alcohol use disorders and alcohol dependence was 2.6% and 2.1% respectively.^[4] Figures are higher for adult males where nation-wide prevalence of drug use, recorded alcohol use in the past year was 21% as per a National level Household Survey of Drug Use in India.^[5]

A number of variations are also present in India with rates of alcohol consumption. There is also an extreme gender difference. Prevalence among women has consistently been estimated at less than 5% but is much higher in the North-eastern states in India. The percentage of men who had consumed an alcoholic beverage in the previous year varied widely among different regions, ranging from 16.7 percent in Madras City in southern India to 49.6 percent in a Punjab village in northwest India.^[6]

Figures show that alcohol-related problems account for over a fifth of hospital admissions. Of the patients with harmful use of alcohol, 4.7% were categorized as having "definitely alcohol related diseases" and equal number "possibly alcohol related diagnoses".^[7] Alcohol is a major cause of injuries as well. Studies have shown that around sixteen per cent of the injured patients are intoxicated with alcohol at the time of hospital registration.^[8] Severity of brain injuries, duration of hospital stay, death and post-traumatic disabilities among alcohol users were significantly higher compared with non-users. Alcohol abuse bears a high social cost. A study from Karnataka state in Southern India^[9] estimated that direct and indirect costs attributable to people with alcohol dependence alone was more than three times the profits from alcohol taxation and many times more than the annual health budget of that state. The social costs of alcoholism far outweigh the benefits accrued from the sale and taxation of alcohol.

Mechanism of alcohol related injury

There are three main mechanisms by which alcohol can harm an individual^[4]

1. Toxic effects which causes severe damage to almost all the organs and organ systems.
2. Acute and chronic intoxication, leading to impairment of physical coordination, consciousness, cognition, perception or behavior.
3. Dependence in which the individual control over the amount and volume of alcohol to be taken and behavior is impaired.

A number of factors affect the consumption of alcohol. They ranges from individual factors like age, gender, occupation, education, family, peer influences, demographic factors, socio economic status, economy, cultural factors, easy availability of alcohol, advertising, alcohol related legislations and policies etc.^[10]

HEALTH EFFECTS OF ALCOHOL

- Neuropsychiatric disorders:*** Alcohol abuse and alcohol dependence are important psychiatric consequences of alcohol consumption. Alcohol dependence is defined as a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated alcohol use and that typically include a strong desire to consume alcohol, difficulties in controlling its use, persisting its use despite harmful consequences, a higher priority given to alcohol use than to other activities and obligations, increased tolerance, and sometimes a physiological withdrawal state.^[11] Alcohol is also related to epilepsy and

unprovoked seizures.^[12] Other conditions like depression, anxiety, personality disorders are also associated with alcohol intake.^[13]

- ii. *Liver and pancreatic diseases:*** Fatty liver, alcohol induced hepatitis and liver cirrhosis are alcohol induced toxic effects. For men drinking 30 g of absolute alcohol per day is associated with a relative risk (RR) of 2.8 of dying from liver cirrhosis (7.7 for females). Regarding morbidity, the RRs for males and females for drinking the same amount of alcohol per day were 0.7 and 2.4. For men drinking, 54 g of alcohol per day was associated with a relative risk of 2.3 for acquiring liver cirrhosis.^[14] Acute and chronic pancreatitis are causally associated with alcohol consumption. For pancreatitis, a threshold of about 48 g/day has been found, again with increased volume of alcohol consumed per day being associated with increased risk.^[15]
- iii. *Cancers:*** Alcohol is directly associated with cancer of the mouth, nasopharynx and oropharynx, laryngeal cancer, oesophageal cancer, colon and rectum cancer, liver cancer.^[16] Recently breast cancer relationship with alcohol consumption has been demonstrated. Warner SA et al^[17] revealed a significant dose-response effect. Consumption of 10 gram per day of pure alcohol increases the risk of breast cancer by 9%, and consumption of 30–60 g per day increasing the risk by 41%.
- iv. *Injuries:*** Alcohol consumption is directly associated with injuries, falls, accidents, drowning, suicides, crime and violence.^[18] Mechanism include that alcohol reduces self awareness, intellectual functioning and accurate assessment of risks.^[19]
- v. *Cardiovascular diseases:*** Excessive alcohol consumption is associated with hypertension, stroke and coronary heart diseases. Cardiovascular diseases have dual relationship with alcohol intake. Alcohol drinking reduced the risk of coronary heart disease (CHD) mortality for both sexes and in each category of intake (up to 40 g/d) but is harmful beyond that. The mechanism include an increase in HDL cholesterol, a decrease in platelet aggregation/function, reduced myocardial ischemia-reperfusion injury, activation of endothelial cell antiapoptotic and proapoptotic pathways, lower plasma levels of coagulation factor VII and fibrinogen, increased fibrinolysis, and higher levels of atrial natriuretic peptide.^[20]
- vi. *Infectious diseases:*** Harmful use of alcohol weakens the immune system which in turn makes the individual prone to a number of infectious diseases like pneumonia and tuberculosis.^[21] In addition to this, alcohol is found to be strongly associated with HIV infection and sexually transmitted diseases. The reasons behind them were found to be high risk behaviors indulgence.^[22]

- vii. *Socio economic consequences*: Alcohol consumption has severe negative effects in the society including drop out from school, death of family members, perform poorly in academics, work performance and even suicide. Alcoholism led to break-up of families and suffering of children due to lack of basic commodities of life. It leads to social disrepute and disrupt family life.^[23]

Public policy in India

Increases in the average volume of drinking have been predicted for the most populous regions of the world including India. Current trends in India suggest a steady increase in the production and use of alcohol. The Indian beer industry currently produces 4.32 million hectolitres of beer per year, and is growing at an annual rate of 17%. Country liquor is the most frequently consumed alcoholic beverage, due to the extensive network of outlets serving country liquor and its low price.^[24] India has drinking patterns due to social caste, cultures and religious groups. For example, among the Hindus, alcoholic beverages are forbidden for Brahmins and other upper caste groups who are strict vegetarians. Drinking is acceptable for members of all other caste groups who are meat-eaters. Muslims are also not supposed to drink, although some Muslim men consume alcohol. Religions like Buddhists and Jains, who are strict vegetarians, are forbidden to drink alcohol.^[25] Since as mentioned in the Constitution of India, 'The State shall endeavor to bring about prohibition of the consumption of intoxicating drinks', the states can have their own policies regarding alcohol. Growing awareness of the problem of alcohol consumption in India has been reflected in several policy initiatives.^[26] There are two main policy directives which regulate alcohol availability and consumption in India. First is complete or partial ban on production, sale and consumption of alcohol which has been implemented in certain states in India. This can be implemented at state level only not uniformly for entire nation due to constitutional directives. The second perspective is to regulate alcohol use by imposing taxes on alcohol production and consumption. There are legal restrictions on age limit also purchase of alcohol.^[27] The policies related to licensing and restrictions on availability of alcohol, restricted locations and timings of sales outlets, also have an impact on consumption. Studies have shown that easy availability of alcohol is associated with increased alcohol consumption and related harms, including medical harms, injury, crime, and violence. The regulation of alcohol availability may be a useful public health tool for the reduction of excessive alcohol consumption and related harms.^[28] The strict enforcement of laws related to drink driving in the West has led to responsible drinking and driving, which argues for the need for similar implementation in

India. There is need that laws should be strictly enforced in India. India should review policies and support legislation that promote health, prevent harm and address health and social problems associated with the use of alcohol. These policies should range from those related to licensing, taxation, restrictions on availability and purchasing, education and media information campaigns, advertising and sponsorship, laws on drink driving and alcohol-related offenses to those related to treatment and rehabilitation. Inter sectoral coordination which calls for different ministries, sectors, non-governmental organizations, medical associations and community members should be involved in framing and implementing the policies.^[29] Specific care should be taken to prevent initiation of alcohol intake in early age groups like youth. Raising public awareness using mass media technology about the harmful effects of alcohol is essential. Those who recover should be integrated with the society without stigma and discrimination. Steps have been taken by Indian government like drunk driving is a punishable offence. Legal limits are set for alcohol concentration for breath analyzer test. There are national prohibited days which are specific days when the sale of alcohol is not permitted. The government of India has established detoxification centers and counseling centers for people who need special care and rehabilitation. Although steps have been taken but they are not sufficient enough.

CONCLUSION

Looking at the serious public health implications of alcohol use in India, it is necessary to take urgent steps for dealing with its medical and social implications. Political will is of utmost importance. Different innovative approaches which including legislative, economic policies, rehabilitation, behavior change communication (BCC) strategies should be devised. Laws should be enforced strictly.

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