

Review Article

Alcohol's Effects on Health

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Abstract: Across the globe, 30 lakhs die in a year from ill effects of alcohol, which contributes 5.3% of all deaths. The ill effects of alcohol are a phenomenal factor in more than 200 conditions. Overall 5.1% of the global burden of disease and injury is attributable to alcohol, as measured in disability-adjusted life years (DALYs). In 2020, during the 146th session of the WHO Executive Board called for accelerated action to reduce the harmful use of alcohol and requested the WHO Director-General to develop a strategy for the year 2022 to 2030 to initiate the Universal plan to reduce the ill effects of alcohol as a public health priority. The effects of alcohol leads to Cirrhosis of the liver, traffic injuries, cancers, interpersonal violence, suicide, TB, Epilepsy, Withdrawal symptoms, Hypertension, mood disorders, devastating problems at home, office and economically. So every nation shall emphasize the development, implementation and evaluation of cost-effective interventions for harmful use of alcohol as well as creating, compiling and disseminating scientific information on alcohol use and dependence, and related health and social consequences.

Keywords: Alcohol, health, consequences.

Introduction

In 2020, during the 146th session of the WHO Executive Board called for accelerated action to reduce the harmful use of alcohol and requested the WHO Director-General to develop a strategy for the year 2022 to 2030 to initiate the Universal plan to reduce the ill effects of alcohol as a public health priority.

The idea behind the universal plan is to improve health and social outcomes among individuals, families and communities, with focus shifting towards reduced disease and death rate due to ill effects of alcohol and its consequences. It ensures that the universal plan will promote and facilitate local, regional and universal actions to prevent and manage the ill effects of alcohol.¹

Magnitude of alcohol problem in India

Across the globe, 30 lakhs die in a year from ill effects of alcohol, which contributes 5.3% of all deaths. The ill effects of alcohol are a phenomenal factor in more than 200 conditions. Over all 5.1 % of the global burden of disease and injury is attributable to alcohol, as measured in disability-adjusted life years (DALYs).

Alcohol intake leads to death and disability in early years. In the middle-aged adults nearly 13.5% of the total mortality are alcohol-related. There is a linkage between ill effects of alcohol with mental and behavioral disorders, including other disease conditions and injuries.²

Most of the Indian population lives free from alcohol. But alcohol acts as a constraint in the progress of our country. Alcohol use is widely prevalent in Indian society and consequently results in the form of injurious physical health outcomes like alcohol use disorders, liver cirrhosis, traffic injuries, pancreatitis, various cancers, interpersonal violence, suicides, tuberculosis, epilepsy, hypertension, pancreatitis and mood disorder.

Alcoholism is one of the leading causes of death and disability both globally and nationally. Alcohol is the most common psychoactive substance consumed by our citizens. Consumption of alcohol among men (27.3%) is higher compared to women (1.6%). For every single woman there are 17 men who consumes alcohol.¹⁰



Factors affecting alcohol consumption

Various factors were responsible at various levels, which demolishes the patterns of alcohol intake and the magnitude of alcohol-associated problems at the community level.

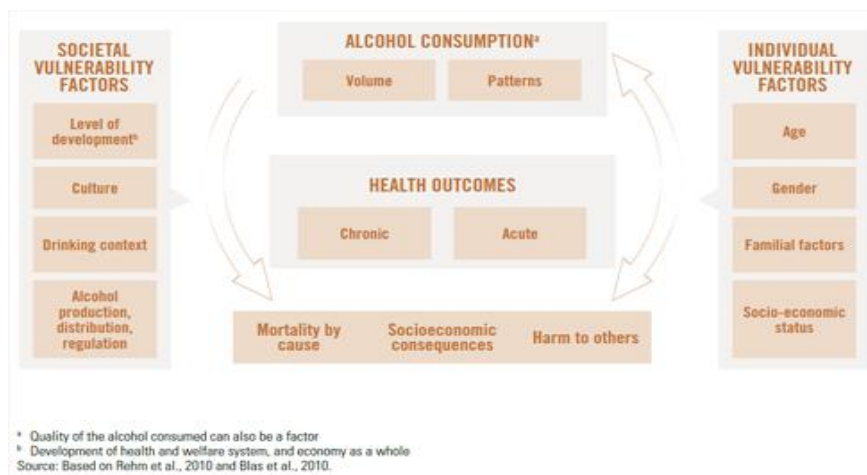
Nature related factors comprising of economic advancement, cultural development, and the holistic implementation and convergence of alcohol related policy formulation. For a given level or pattern of drinking, vulnerabilities within a society are likely to have similar differential effects as those between societies. There is no predominant risk factor associated with alcohol-associated complaints as a result of alcohol intake.³

Causation model of alcohol intake and health outcomes

The effect of alcohol intake on long term and short-term health impact among people is identified by two different but common dimensions of drinking:

- ✓ the total volume of alcohol consumed, and
- ✓ the pattern of drinking.

Drinking plays a vital role in health outcomes, mainly related with ill effects of alcohol intoxication and the quality of alcohol intake. Alcohol intake will have an effect not only on the occurrence of the diseases, injuries and other health problems, but also on the course of their health outcomes among individuals.



There are vast differences in the death and disease rate among those individuals who consume alcohol. The quantum of alcohol related mortality rate among men was 7.7% compared to 2.6% among women. Total per capita intake of alcohol among men and women drinkers globally was 19.4 litres for men and 7.0 litres for women respectively.⁵

Alcohol's Effects on the Body

This is how alcohol can affect the body:

Alcohol use disorders: It is a condition in which a person has a desire or physical need to consume alcohol, even though it has a negative impact on their life. An individual with alcohol dependent is clueless how to stop and when to stop drinking. They spend a majority of time thinking about alcohol, and the quantity of alcohol consumption does not rest in their hand, even though it leads to devastating problems at home, office and economically.

Liver cirrhosis: Too much consumption of alcohol can damage the liver, causing problems as follows:

Cirrhosis–Scarred and permanently damaged liver

Fibrosis–Abnormal formation of scar tissue in the liver

Alcoholic hepatitis–Inflamed liver caused by drinking alcohol

Steatosis–Fatty liver

Traffic injuries: It is a leading cause of death and disability among young people. Globally, the number of people died in road traffic accidents every year is considered nearly 12 lakhs, while the injured could be more and nearly 5 crores. Alcohol leads to impairment which raises the chance of accident as it featured poor judgment, excess reaction time, lower vigilance and decreased visual acuity. In addition to judgment and reaction time vision also impaired. Alcohol also has an impact over driver safety aspects such as seat-belt wearing, helmet use and speed choice. Alcohol impairs driving and decision taking ability leading to fatal and non-fatal road traffic injuries. Most of the road users in India risked their life with accidents due to consumption of alcohol.

Cancers: Alcohol consumption leads to different types of cancers as follows: mouth cancer, upper throat and voice box cancer, oesophageal cancer, breast cancer, colorectal cancer, stomach cancer and liver cancer. The more the alcohol quantity, the greater is the susceptibility to cancer. The acetaldehyde, a chemical released when the body breaks down alcohol is dangerous and destroys the DNA in our body cells, which leads to cancer.

Interpersonal violence: It refers to any behavior with close relationship that leads to biological, psychological and sexual harm. It comprises of physical aggression like slapping, hitting, kicking, beating, etc. Also comprises of psychological abuses like intimidation, humiliation, etc.

Suicide: In today's world, suicide rates have regularly climbed over time. Nearly one-third of the suicides result because on alcohol consumption. This is universally accepted without any second thought.

Tuberculosis: Tuberculosis in people struggling with alcohol use disorder is not just exacerbated by damage to the immune system. People tend to neglect their health when consuming alcohol heavily when compared to those who tend to stay away from it. Heavy drinking may contribute to various lethal problems among those who consume it. They can't keep themselves from the intake of alcohol and subsequently ignore their clinical symptoms rather than seeking medical treatment. WHO reports that alcohol abuse increases the risk of contracting tuberculosis threefold, and the condition becomes worse because people who struggle with alcohol abuse are less likely to stick on to a treatment strategy to get rid of the health issue. They will fail to eat properly, balanced diet; malnutrition leads to increased risk to those individuals who contracted TB.

Epilepsy: Alcohol can make seizures more likely to occur and too much alcohol is known to trigger seizures. It binds to the GABA receptors in the brain and alters the release and absorption of neurotransmitters. When there is excess GABA, it results in slurred speech, tiredness, stumbles and trips. They also will be anxious, trouble sleeping with increasing the chance of seizures.

Hypertension: Chronic drinking or too much consumption on a single instance will damage the heart, causing problems as follows:

Cardiomyopathy–Stretching of heart muscle

Arrhythmias–Irregular heart beat

Hypertension–Increased blood pressure

Stroke–Interrupted or reduced blood supply to a part of the brain⁹

Pancreatitis: It results in production of toxic substances that will result in pancreatitis, inflamed and swollen pancreas that leads to digestion problems.

Mood disorder: It blocks the brain's communication pathways and can alter the way the brain functions. These disruptions will change mood and behavior, and make it difficult to think clearly and move with coordination.⁴

Ways to reduce the burden from harmful use of alcohol

The health, safety and socioeconomic issues related to alcohol consumption requires modifications at different levels with various health determinants.⁷

Every nation has the responsibility for framing, supervising and assessing policies on prevention of ill effects of alcohol.⁸ Policy making considers the effectiveness and reduced cost by following these strategies:

- ✓ Regulating the marketing of alcoholic beverages (in particular to younger people);
- ✓ Regulating and restricting the availability of alcohol;
- ✓ Enacting appropriate drink-driving policies;
- ✓ Reducing demand through taxation and pricing mechanisms;
- ✓ Raising awareness of public health problems caused by harmful use of alcohol and ensuring support for effective alcohol policies;
- ✓ Providing accessible and affordable treatment for people with alcohol-use disorders; and
- ✓ Implementing screening and brief interventions programmes for hazardous and harmful drinking in health services.⁶

Conclusion

The harmful use of alcohol is one of the leading risk factors for population health worldwide and has a direct impact on many health-related targets. Every country aims to reduce the health burden

caused by the harmful use of alcohol and, thereby, to save lives, prevent injuries and diseases and improve the well-being of individuals, communities and society at large. Also emphasizes the development, implementation and evaluation of cost-effective interventions for harmful use of alcohol as well as creating, compiling and disseminating scientific information on alcohol use and dependence, and related health and social consequences.

Conflicts of interest: The author declares no conflicts of interest.

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