Trends Changes in Alcoholic Consumption and It's Impacts on Indian Society

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Abstract: This is one of the interesting papers which deals with the changes in consumption patterns of alcohol and its effects on human health. This paper elucidates that use of alcohol plays very important role on human health, society and its environment. It has been observed during this study that in ancient times people were used to drinking mainly for pleasure, while in 21st century consumption of alcohol, is primarily for stress control, fashion, macho masculine display, treatment for insomniac, sexual satisfaction, or as a medicine.
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Introduction

According to religion in Hindu rituals few god and goddess like SHIVA and KALI are also pacified by offering alcoholic beverage. Even the god and goddess in heaven were drinking grape wine called SOMRAS. The English word *alcohol,* derived through Medieval Latin from Arabic, is first recorded in 1543 in this sense. Arabic chemists also used *al-kuḥl* to refer to other substances such as essences that were obtained by distillation, a sense first found for English *alcohol* in 1672. One of these distilled essences, known as "alcohol of wine," is the constituent of fermented liquors that causes intoxication. Alcohol is a volatile, colorless fluid with an ethereal odor, obtained by fermenting a liquid containing sugar, the strength of which can be further increased by distillation.

When a person drinks an alcoholic beverage, it is very unlikely that he or she is actually drinking pure alcohol; pure alcohol is extremely potent and takes only a few ounces to raise a person's blood alcohol level into the danger zone. The ethanol concentration for common types of alcoholic drinks is as follows (How Stuff Works, 2006).

- Beer: 4-6%
- Malt liquor: 5-8%
- Wine: 7-15%
- Wine coolers: 5-10%
- Champagne: 8-14%
- Hard liquor (Distilled spirits - vodka, rum, whiskey, etc.): 40-95%
- Grain Alcohol: 95-97.5%

A standard drink contains 12 grams of pure ethanol – approximately the amount found in one 12 oz. beer, one 5 oz. glass of wine, or one 1.5 oz. 'shot' of hard liquor.

- Beer 12 Oz. (1 Can or Bottle)
- Wine 5 Oz. (1 Glass)
- Hard Liquor 1.5 Oz. (1 Shot)

In general, it takes the average drinker's body one hour to metabolize one drink. As the amount of alcohol consumed exceeds the body's ability to metabolize it, the user's blood alcohol concentration (BAC) increases, and he or she begins to feel the effects of alcohol intoxication. As one's BAC continues to increase, the user will experience different levels of intoxication.

According to Indian Alcohol Policy Alliance, Chennai (India)

- In India, rapid motorisation rates and ambivalent attitude towards alcohol consumption has led to 'fashionable' alcohol use, binge drinking and led to increase in drink driving as a major cause for road traffic injuries, especially in urban India.
- In a report for WHO, a multi-centre collaborative study – 'Injury and Alcohol' at NIMHANS Bangalore it was found that the proportion of injuries 'linked' to alcohol use was 58.9% of all injuries with 24% due to own drinking and 35% due to others drinking. It was found that on the types of injuries amongst alcohol users, 46% was due to road accidents, 24% due to violence, 24% falls and 6% others.
- A report titled "High spirits take toll on Bangalore roads" reveals that driving under the influence of alcohol is alarmingly high among the citizens in the pub capital of India. The highest number of road fatalities occurs on weekends between 6.00 - 10.00 p.m. and

there is little reason to believe that this could be for any reason other than drink driving.

- In a survey done at Delhi by the Directorate of Prohibition, it was found that 45% of vehicles are driven by drivers who had consumed alcoholic drinks. One third of the injured were two wheeler drivers under the influence of alcohol and 30% of the government hospital beds were occupied by road accident victims alone.
- In Delhi prosecution against drunk driving has increased from 1260 in 1995 to 1635 till 15th April 2006. In 2006 alone, 960 two wheelers were involved in drunk driving as compared to only 245 trucks. The effective campaigns in Delhi were enforcement campaigns and random checks with alcometers from time to time.
- Studies conducted in Kerala showed that Kerala is the second most accident prone state in the country after Maharashtra and also has one of the highest per capita consumption of alcohol with 40% road accidents in the national highway related to drinking driving.
- Death per day due to drink driving is 270 per day and serious injuries are approximately 5000 per day which is equivalent one air bus crash! Yet it is not sufficiently highlighted by the media and roads accidents go unnoticed. In a comparative study, the burden of road traffic injuries had been shown to amount to 3.2% of India's GDP.
- Mr. Derek Rutherford, Chairman, GAPA (Global Alcohol Policy Alliance) said that drink driving is being viewed around the world as a public health issue, and tackling it becomes even more important because it is preventable. People who die tend to be innocent victims, pedestrians and co-passengers. Also 43.5% of the deaths on the roads, in the UK, are of young people under the age of 24 years! He said that legislation is good, but it is strict enforcement that is key to effective prevention of drinking and driving. UK for instance has one of the highest permissible levels (0.08% BAC level) yet one of the lowest rates of drink driving incidents.

History:

The chemical name for the alcohol in a alcoholic drink is ethanol. It is a compound of carbon, hydrogen and oxygen; its chemical formula is C_6H_5OH. In the end, it becomes ethanoic acid, the same acid that is found in vinegar. To make the oxidation happen an enzyme called LAD (low-alcohol-drinking) has to be present. LAD is liver alcohol dehydrogenize, and it is found in the liver. People who drink too much may damage their liver, then they don't have enough LAD to burn up the alcohol quickly, so it stays around in their blood stream for much longer.

In the Far East, people tend to avoid alcohol. If they do drink some, their faces go bright red and they feel very ill. This is because they do not have the LAD in their liver which is needed to burn up the alcohol. The alcohol is simply turned into ethanol, which is a poisonous substance that makes you feel ill. Some people become addicted to alcoholism. Some alcoholics are helped by taking drug called antabuse. Originally, antabuse was designed as a drug to kill parasitic worms which sometimes get into people gut. Then it was noticed that if the patient had been drinking alcohol the antabuse made them feel very sick. Antabuse stops LAD doing its works so the patient's body fills up with ethanol. This makes them feel so ill that they soon learn to avoid drinking alcohol.

Production of alcohol from ancient to advance period

India is one of the largest producers of alcohol in the world and there has been a steady increase in its production over the last 15 years, according to fresh statistics. More than two-thirds of the total beverage alcohol consumption within the region is in India, according to figures in the newly compiled *Alcohol Atlas of India*. There has been a steady increase in the production of alcohol in the country, with the production doubling from 887.2 million liters in 1992-93 to 1,654 million liters in 1999-2000 and was expected to treble to 2300 million litres by 2007-08. The prevalence of alcohol use is still low in India as per some studies done across the country. The consumption is two liters per person per year. A substantial portion of family income is spent on alcohol, more so in rural households, which also tend to be poor and marginalized (32 per cent urban and 24 per cent rural). The statistics also show that alcoholism increases suicidal tendencies, incidents of domestic violence and affects the ability of a person to concentrate at work.

Addressing illegal and informal production of alcohol

The illegal and informal production of alcoholic beverages is seen as a major impediment to the adoption of effective policies. Nevertheless, this situation impacts on health and on tax revenues and reduces the ability to control production. This needs to be addressed and included in the national policy response. Some measure of quality control is needed including licensing and training of producers and introduction of appropriate enforcement measures. In

addition, it is important to raise awareness among the general population and consumers about the dangers inherent in the consumption of certain forms of alcoholic beverages and to find funding to assist local informal producers to establish alternative income-generating business.

Women often experience drug abuse and addiction quite differently than men

The female plays important role to understand of certain social psychological aspects not only at a personal evolutional level but also regarding the social implications, and changing rapidly and consequent repercussions in new trends in the consumption of drugs. Social influence refers to the way people affect the thoughts, feelings, and behaviors of others. Like the study of attitudes, it is a traditional, core topic in social psychology. In fact, research on social influence overlaps considerably with research on attitudes and persuasion. Social influence is also closely related to the study of group dynamics, as most of the principles of influence are strongest when they take place in social groups.

Effects of Alcohol:

The effects of drinking depend on a variety of factors, including, but not limited to the:

- Amount of alcohol consumed
- Time taken to consume it
- Individual's gender, weight, body size, and percentage of body fat
- Amount of food in the stomach
- Use of medications, including non-prescription drugs
- Mindset of the individual at the time of consumption
- Setting in which the drinking takes place

Also, mixing alcohol with other drugs can drastically increase the damaging effects of drinking. For example, combining alcohol with narcotics (i.e., heroin, Oxycontin®, methadone) can cause slowed breathing, heart attack, and death. For some, even the combination of alcohol and aspirin can be extremely dangerous.

Short-Term Effects

The short-term effects of drinking alcohol can cause numerous adverse effects on the user, including:

- Slowed reaction times and reflexes
- Poor motor coordination
- Blurred vision
- Slurred speech
- Lowered inhibitions and increase in risk behavior
- Lowered reasoning ability, impaired judgment
- Memory loss
- Confusion, anxiety, restlessness
- Slowed heart rate, reduced blood pressure
- Slowed breathing rate
- Heavy sweating
- Nausea and vomiting
- Dehydration – a leading cause of condom breakage
- Coma
- Death from respiratory arrest

A person who consistently uses alcohol over a period of time will develop a tolerance to the effects of drinking; that is, it takes progressively more alcohol to achieve the same effects. Over time, that person may grow dependent on alcohol, and in some cases this can lead to a vicious cycle of addiction.

Long-Term Effects

Over time, heavy drinking can cause permanent damage to the user's body and brain. Several factors affect the severity and extent of this damage, including the drinker's age and gender as well as the duration and extent of abuse.

The physical damage caused by sustained alcohol abuse includes:

Liver damage

- Accumulation of fat in the liver
- Cirrhosis – heavy scarring of the liver prevents blood flow; usually fatal
- Alcoholic hepatitis – swelling of liver cells, causing blockage; sometimes fatal
- Liver cancer

Heart damage

- High blood pressure
- Coronary disease – narrowing of the arteries, leading to heart attack or death
- Enlarged heart
- Irregular heartbeat, which can lead to heart attack or death
- Decreased blood flow to the arms and legs
- Stroke – blocked blood flow to the brain

Brain damage

- Lowered cognitive abilities
- Destruction of brain cells, producing brain deterioration and atrophy
- Mental disorders – increased aggression, antisocial behavior, depression, anxiety
- Damage to sense of balance, causing more accidental injuries

Bone damage

- Bone growth that normally takes place in teenage years is stunted

- Osteoporosis – severe back pain, spine deformity, increased risk of fractures

Pancreas damage

- Pancreatitis – inflammation of the pancreas, causing abdominal pain, weight loss, and sometimes death

Cancer

- Alcoholism increases a person's chances of developing a variety of cancers of the pancreas, liver, breasts, colon, rectum, mouth, pharynx, and esophagus.

Sexual problems

- Reduced sperm count and mobility, as well as sperm abnormality
- Menstrual difficulties, irregular/absent cycles, and decreased fertility
- Early menopause

Birth defects

- Drinking any alcohol during pregnancy can cause permanent, severe damage, by putting the child at risk for Fetal Alcohol Syndrome

Alcohol-Related Problems

- Premature aging
- Heartburn, nausea, gastritis, and ulcers
- Poor digestion and inflammation of the intestines
- Malnutrition
- Water retention
- Weakened vision
- Skin disorders
- Korsakoff's Syndrome – amnesia and delirium after long-term alcohol abuse

Social Impact:

Generally after drinking people tend to remove a loaf away from social gathering of known friends circle. Moreover it has many impacts on human environment such as:

Crime

Alcohol use is related to at least one-half of all types crime, violence, rapes, sexual activity exhibitionist, poor performance in curricular and extracurricular activities and assaults, accidents and other problems among minors in America.

Rape

- 90% of reported campus rapes involve alcohol use by the assailant, the victim, or both.
- Colleges and universities with higher numbers of binge drinking also higher number of incident of rapes. In addition, nearly 3/4th of rape victims being reported are intoxicated at the time of the attack. Almost one in 20 (4.7%) of women reported being raped, and 72 % of the victims reported being intoxicated while being raped.

Chile Abuse

- According to research estimates, each year more than 1 million children in the United States experience some form of abuse or neglect (Widom 1993). Child abuse is one of the many types of violence associated with alcohol use and abuse, either as a consequence or as a causative factor. For example, parental alcohol abuse may contribute to the abusive treatment of children. Furthermore, people who have been abused as children may be at increased risk for developing alcohol abuse as adults.

Spousal Abuse

- Heavy drinkers (15 to 20 drinks per week) and moderate drinkers (eight to 14 drinks per week) were also three times as likely to report beating their partner while intoxicated, compared to men consuming less than one drink per week. **Even light drinking — one to seven drinks per week — doubled the rate of abuse while intoxicated.**
- Domestic violence is a significant and preventable cause of injury to women. The majority of cases involve violence perpetrated by a male partner, and heavy drinking has also been implicated as a risk factor. Findings indicate that soldiers who drink heavily are more likely to abuse their spouses both when they are and when they are not drinking alcohol; heavy drinking is also associated with subsequent episodes of spouse abuse even when drinking habits are measured years prior to the event.

Youth Crime

- Criminal and/or disorderly behavior during or after drinking was again more prevalent among young adult binge drinkers (with the exception of theft) - 63% of all young adult binge drinkers admitted to such behavior during or after drinking, compared with 34% of other young regular drinkers. Young male binge drinkers were much more likely to get into a fight then young females (25% vs. 12%). Young male binge drinkers were much more likely to get into a fight (25% vs. 12%) and damage something (14% vs. 4%) during

or after drinking than young female binge drinkers.

Cost of Crime

The annual costs of crimes that can be attributed to the use of alcohol are $83 billion (interestingly *illegal* drugs cause only $37 billion).

Symptoms of Alcohol Poisoning

- Person is passed out and extremely difficult to wake
- Cold, clammy, pale or bluish skin
- Slow or irregular breathing
- Vomiting; person vomits while passed out

Alcohol and Gender

Women are more vulnerable than men to the negative effects of drinking. Women have less total body water and less alcohol dehydrogenase – the stomach enzyme involved in metabolizing alcohol. As a result, the female body takes longer to break down alcohol. Also, the fluctuations in hormone levels that women experience during the menstrual cycle can make a woman more susceptible to the effects of drinking. And because alcohol increases estrogen levels, birth control pills or other medications containing estrogen can increase intoxication.

- Two-thirds of alcoholics are men; however, the negative effects of heavy drinking are more severe for women. Female alcoholics are more likely to suffer alcohol-related damages and diseases than alcoholic men.

Alcoholism Warning Signs

There are several indicators that can signify a budding alcohol problem. The Mayo Clinic lists twelve warning signs of problematic drinking:

- Drinking alone or in secret
- Inability to limit amount of alcohol consumed
- Experiencing blackouts
- Making a ritual of having drinks before, with or after dinner and becoming annoyed when this ritual is disturbed or questioned
- Losing interest in hobbies or activities that used to bring pleasure
- Feeling a need or compulsion to drink
- Irritability when normal drinking time approaches, especially if alcohol is not available
- Keeping alcohol in unlikely places at home, at work or in the car
- Gulping drinks, ordering doubles, becoming intoxicated intentionally to feel good or drinking to feel "normal"
- Having legal problems or problems with relationships, employment or finances
- Building a tolerance to alcohol so that an increased number of drinks is necessary to feel alcohol's effects
- Experiencing physical withdrawal symptoms, such as nausea, sweating and shaking, when not drinking

Standard drinks Proportion:

A standard drink is a notional drink that contains a specified amount of pure alcohol. The standard drink is used in many countries to quantify alcohol intake. It is usually expressed as a measure of beer, wine, or spirits. One standard drink always contains the same amount of alcohol regardless of serving size or the type of alcoholic beverage. The standard drink varies significantly from country to country. For example, it is 7.62 ml (6 grams) of alcohol in Austria, but in Japan it is 25 ml (19.75 grams).

In the United Kingdom, there is a system of units of alcohol which serves as a guideline for alcohol consumption. A single unit of alcohol is defined as 10 ml. The number of units present in a typical drink is printed on bottles. The system is intended as an aid to people who are regulating the amount of alcohol they drink; it is not used to determine serving sizes. In the United States, the standard drink contains 0.6 US fluid ounces (18 ml) of alcohol. This is approximately the amount of alcohol in a 12-US-fluid-ounce (350 ml) glass of beer, a 5-US-fluid-ounce (150 ml) glass of wine, or a 1.5-US-fluid-ounce (44 ml) glass of a 40% ABV (80 proof) spirit.

Conclusion:

It is well known fact that about 2 billion people across the world consume alcoholic drinks. Consumption of alcohol is not a problem itself if it is use in optimum quantity, considered as medicine. Alcohol is not an ordinary commodity. While it carries connotations of pleasure and sociability in the minds of many peoples. Alcohol-attributable injuries are of a growing concern to the public health community, with alcohol-related injuries such as road traffic accidents, burns, poisonings, falls and drownings making up more than a third of the disease burden attributable to alcohol consumption. Alcohol can damage your stomach, liver, kidneys, and many other organs. If consumed under the age of approximately 25 years old the brain can sustain permanent damage as well because it has not fully developed.

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