



A REVIEW OF ALCOHOL CONSUMPTION: IMPLICATION FOR HEALTH EDUCATION

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Abstract

Heavy uptake of alcoholic drinks contributes to social, health and psychological problem among individuals especially adolescents in the society. This paper focuses on alcohol consumption: implication for health education. Alcohol consumption is broadly, any drinking of [alcohol](#) that results in [mental](#) or physical [health](#) problems. In a medical context, alcoholism is said to exist when two or more of the following conditions are present: a person drinks large amounts of alcohol over a long time period, has difficulty cutting down, acquiring and drinking alcohol. Alcoholic drinks come in multiple forms and contain differing amounts of pure alcohol (also called ethanol). The health risks associated with alcohol consumption can be short or long term. Some of the health problems it causes include cardiovascular disease, high blood pressure, heart attack, atrial fibrillation, cancer, alcohol liver disease and cirrhosis, gallstones etc. Therefore, the implication for health education is that the following group of persons should totally avoid the consumption of alcohol including persons younger than age 21, pregnant or may be pregnant, driving, planning to drive, or participating in other activities requiring skill, coordination, and alertness, taking certain prescription or over-the-counter medications that can interact with alcohol, suffering from certain medical conditions, recovering from alcoholism or are unable to control the amount they drink etc. Therefore, this paper recommended amongst other that the ministries of health and non-governmental organizations at all level should mount intensive enlightenment campaigns through public talk to create more awareness on the need to bridge knowledge gap of alcohol consumption.

Original Research Article

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Introduction

Heavy uptake of alcoholic drinks has contributed to social, health and psychological problem among individuals especially adolescents in the society. The increase use of alcohol is higher among adolescents and young adults because it is typically initiated right from the stage of transition and young adulthood which may have long term consequences (Miech et al, 2016). Early initiation to alcohol use and gambling in the lifestyle of an individual determines poor health status and other psychological disorders in the nearest future as both are always linked together.

The problem of consumption of alcohol and gambling is on the increase in Nigeria especially among adolescents. Nigeria has now assumed the position and destination for hard and illicit use of substance including alcohol

beverages. This is because majority of Nigerians depend on one form of substance use or the other in their daily activities such as the use of alcoholic drinks which includes dry gins, beers, wines, and alcohol-related beverages (Balogun et al., 2014).

Harmful use of alcohol is responsible for approximately 3 million deaths each year globally, which is roughly 5.3% of all global deaths (World Health Organization, 2018). In addition, alcohol misuse is recognized as a risk factor for more than 200 disease and injury conditions, emphasizing its wide-ranging influence on global population health. Alcohol use contributes to about 5.1% of the Disability-Adjusted Life Years (DALYs) worldwide, which is a measure of overall disease burden that considers both premature death and years lived with disability. Alcohol is

defined broadly in problematic terms, as patterns of drinking which have negative consequences for physical or psychological health (American Psychiatric Association; 2013), and therefore it falls within clinical and public health classifications.

Alcohol-related harm is especially magnified in younger populations, with evidence suggesting that up to 13.5% of deaths in people aged 20–39 years are attributable to alcohol use. In addition to mortality, there is clear causal evidence for a wide range of mental and behavioral disorders, as well as non-communicable diseases and treatment-related outcomes linked to harmful alcohol consumption. Beyond its health effects, alcohol misuse (often co-occurring with behaviours such as gambling) is a major social and economic burden on individuals, families and societies. The drinking patterns are affected by various contextual factors like the peer dynamics, home environment, and residential environments which lead to different behavioral outcomes. Considering these various consequences, the current study addresses alcohol consumption with a specific focus on its significance in health education.

Concept of alcohol consumption

What is Alcohol Consumption: As defined in the Diagnostic and Statistical Manual of Mental Disorders (2013), alcohol use disorders are patterns of alcohol consumption that cause detrimental health consequences, either physically or psychologically. In earlier literature, alcohol-related disorders were classified into alcohol abuse and alcohol dependence; modern clinical paradigms now accept a more continuous construct of the diagnosis of Alcohol Use Disorder (AUD). Seen in medical terms, alcoholism is generally diagnosed when a person meets three or more diagnostic criteria of prolonged and excessive alcohol use, unsuccessful attempts to decrease intake, large amounts of time focused on obtaining and using alcohol, cravings that are hard to ignore (importantly, defining themselves with their affliction) and the continuation of drinking even after experiencing negative consequences. Such consequences may include impairment in social or occupational functioning, medical complications (Table 29), high-risk behaviors, and the development of physiological dependence as indicated by tolerance and withdrawal symptoms (Alcoholism MeSH Descriptor Data, 2018).

Alcohol has systemic effects on the human body, which can have serious consequences for vital organs including the brain, liver, heart, pancreas and immune system (American Psychiatric Association 2013). Excessive consumption of alcohol has also been linked to many (such as mental disorders, delirium tremens, Wernicke–Korsakoff syndrome, cardiac arrhythmias, immune

dysfunction, liver cirrhosis and an increased risk for a number of cancers). Furthermore, maternal alcohol consumption during pregnancy increases the risk for Fetal Alcohol Spectrum Disorders—permanent developmental deficits in affected individuals later in life. However, there are also gender-based differences in alcohol metabolism that contribute to making women more vulnerable to the effects of AOD because of their lower body mass and metabolic capacity are smaller, and higher fat composition (Global Status Report on Alcohol and Health, 2014).

Borges et al. According to (2017), approximately 50% of the overall risk of developing alcoholism can be attributed to genetic factors, while the other 50% comes from life experience in conjunction with social and environmental influences. People with a family history are three to four times more likely to engage in similar behavior. Environmental factors, such as social norms, cultural expectations and the context in which behaviour occurs also influence patterns of alcohol consumption. Many other risk factors also increase a person's vulnerability, including chronic stress and anxiety and affordability and access to alcohol. Persistent alcohol use is frequently supported by wanting to relieve withdrawal signs and symptoms, which can remain after quitting. As a result, alcoholism in medical parlance is commonly understood as a multifaceted disease characterized by somatic addiction and psychological factors that require comprehensive prevention and treatment interventions.

Definitions of amounts of alcohol consumption

There are many different types of alcoholic drinks, and they all have different percentages of pure alcohol (also called ethanol). Balogun et al. (2014) and WHO (2018) defined alcohol intake as one serving of alcohol, which is about 10 to 15 grams of ethanol. This can be found in:

- a. One 12 ounce bottle or can of beer (roughly equivalent to the 330 mL cans of beers sold in some countries)
- b. One 5 ounce serving of wine (about 150 mL)
- c. One shot (1.5 ounces) of 80-proof distilled spirits (about 50 mL)

Standard unit definitions are not universally consistent, and address a variety of standards that differ from country to country and from regulator to regulator. Such differences are compounded by demographic and biological factors, such as age, sex and the physiological variability in how alcohol is metabolised. Under the United States Department of Agriculture Dietary Guidelines, 2020–2025, adults who drink alcohol are encouraged to do so in moderation (up to one standard drink a day for women — absolute avoidance is recommended when pregnant — and up to two for men).

These differing recommendations illustrate fundamental biological differences, as females metabolize alcohol more slowly than males and are thus more vulnerable to its effects (American Psychiatric Association, 2013).

Other general definitions include:

- a. "Heavy" drinking: For women, more than three drinks in a day or more than seven drinks in a week. For men, more than four drinks in a day or more than 14 drinks in a week.
- b. "Binge" drinking is having four or more drinks for women or five or more drinks for men in around two hours.

The National Institute on Alcohol Abuse and Alcoholism has its own definition of what amount of alcohol constitutes "low risk for developing alcohol-use disorder":

- a. For persons who aren't pregnant and are older than 65, they shouldn't have more than three drinks in a single day or seven drinks in a week.
- b. Men up to 65 years old should not drink more than four drinks in one day or 14 drinks in one week.

Health risk associated with alcohol consumption

There are various health associated with alcohol consumption. The World Health Organization (2018) and the Department of Health and Human Services (2018) outlined the following as two major health risk associated with alcohol consumption. They are;

Short term health risks

Excessive alcohol use has immediate consequences that elevate the danger of numerous detrimental health issues. These are usually caused by drinking too much and include the following:

- Injuries such as [motor vehicle crashes](#) falls, drowning, and burns.
- Violence, including homicide, suicide, sexual assault, and intimate partner violence.
- Alcohol poisoning, a medical emergency that results from high blood alcohol levels.
- Risky sexual behaviors, including unprotected sex or sex with multiple partners. These behaviors can result in unintended pregnancy or sexually transmitted diseases, including HIV.

- Miscarriage and stillbirth or [fetal alcohol spectrum disorders \(FASDs\)](#) among pregnant women.

Long term health risks

Over time, excessive alcohol use can lead to the development of chronic diseases and other serious problems including:

- High blood pressure, heart disease, stroke, liver disease, and digestive problems.
- [Cancer](#) of the breast, mouth, throat, esophagus, voice box, liver, colon, and rectum.
- Weakening of the immune system, increasing the chances of getting sick
- Learning and memory problems, including dementia and poor school performance.
- Mental health problems, including depression and anxiety.
- Social problems, including family problems, job-related problems, and unemployment.
- Alcohol use disorders, or alcohol dependence.

Long-term misuse

In other words, people with alcohol use disorder develop tolerance, meaning that they need larger and larger quantities of alcohol to obtain similar effects, while suffering physical dependence that irreparably damages their capacity of control over consumption. This dependence is frequently coupled with powerful urges, which serve to perpetuate the cycle of usage despite negative outcomes. All these physical and mental traits lessen a person's ability to stop drinking alcohol. over and above its somatic effects, alcoholism is associated with poor mental health outcomes such as development or exacerbation of psychiatric disorders in the individual and increased risk for suicidal behaviour. Thus, for people with high levels of alcohol consumption, persistent depressive symptoms also play a relevant role (O'Keefe et al., 2014).

Classification of alcohol problems

The [Diagnostic and Statistical Manual of Mental Disorders](#) (DSM) and the International Classification of Diseases (ICD) for diagnostic (and other) purposes classified the following as alcohol problems. They are;

Manual	Nomenclature	Definition
DSM-IV	Alcohol abuse, or Alcohol dependence	<ul style="list-style-type: none"> • Alcohol abuse - repeated use despite recurrent adverse consequences • Alcohol dependence - <i>alcohol abuse</i> combined with tolerance, withdrawal, and an uncontrollable drive to drink. The term "alcoholism" was split into "alcohol abuse" and "alcohol dependence" in 1980's DSM-III, and in 1987's

		DSM-III-R behavioral symptoms were moved from "abuse" to "dependence". Some scholars suggested that DSM-5 merge alcohol abuse and alcohol dependence into a single new entry, named "alcohol-use disorder".
DSM-5	Alcohol use disorder	"A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by [two or more symptoms out of a total of 12], occurring within a 12-month period
ICD-10	Alcohol harmful use, or Alcohol dependence syndrome	Definitions are similar to that of the DSM-IV. The World Health Organization uses the term "alcohol dependence syndrome" rather than alcoholism. The concept of "harmful use" (as opposed to "abuse") was introduced in 1992's ICD-10 to minimize underreporting of damage in the absence of dependence. The term "alcoholism" was removed from ICD between ICD-8/ICDA-8 and ICD-9.
ICD-11	Episode of harmful use of alcohol, Harmful pattern of use of alcohol, or Alcohol dependence	<ul style="list-style-type: none"> • <i>Episode of harmful use of alcohol</i> - "A single episode of use of alcohol that has caused damage to a person's physical or mental health or has resulted in behaviour leading to harm to the health of others" • <i>Harmful pattern of use of alcohol</i> - "A pattern of alcohol use that has caused damage to a person's physical or mental health or has resulted in behaviour leading to harm to the health of others" • <i>Alcohol dependence</i> - "Alcohol dependence is a disorder of regulation of alcohol use arising from repeated or continuous use of alcohol. The characteristic feature is a strong internal drive to use alcohol ... The features of dependence are usually evident over a period of at least 12 months but the diagnosis may be made if alcohol use is continuous (daily or almost daily) for at least 1 month."

Health conditions and alcohol consumption

Multiple studies suggest that drinking alcohol can affect your risk of developing certain health conditions (Association, American Psychiatric, 2013; WHO, 2018);

Cardiovascular disease: Cardiovascular disease, including disorders of the heart, blood vessels, and blood circulation, is the leading cause of death in the United States. Several studies suggest that moderate alcohol use, as compared with heavy drinking or abstaining (avoiding alcohol completely), decreases the risk of coronary heart disease (CHD). However, this has not been definitively proven, and any possible benefit can be eliminated with even occasional episodes of binge drinking. As a result, the American Heart Association advises that adults should not consume alcohol specifically to improve their cardiovascular health.

High blood pressure: People who consume more than two drinks per day have up to a twofold increase in the incidence of high blood pressure compared with nondrinkers. However, the effect of drinking less than two drinks per day on high blood pressure remains less clear.

Heart attack: Drinking a moderate amount of alcohol has been associated with lower risk of having a heart attack.

Atrial fibrillation: Having several drinks at a single occasion, even for people who usually only drink in

moderation, can cause abnormal heart rhythms, including atrial fibrillation (the most common chronic heart rhythm disturbance). Cutting back on drinking has been proven to reduce episodes of atrial fibrillation among moderate to heavy drinkers. There may be a slightly increased risk of atrial fibrillation among moderate drinkers, although it is still uncertain if this may result from occasional binges in otherwise moderate drinkers or occurs even within recommended limits of alcohol use.

Stroke: Alcohol has been shown to affect the risk of stroke in contradictory ways, depending upon the amount of alcohol consumed and the type of stroke. A stroke occurs when brain tissue dies as a result of a sudden, severe disruption of blood flow and insufficient oxygen. Strokes may be due to a blockage (ischemic stroke) or rupture and leakage (hemorrhagic stroke) of one of the blood vessels supplying the brain.

Heavy alcohol use is associated with increased risks of both ischemic and hemorrhagic stroke. Light alcohol use is associated with fewer ischemic strokes; the risk appears to be lowest in people who consume less than one drink per day. By contrast, the risk of hemorrhagic stroke appears to rise even with minimal alcohol use.

Breast cancer: There is consistent evidence that breast cancer risk is higher in females who drink alcohol, and that

the risk increases steadily with greater alcohol consumption.

Taking folic acid (folate) may reduce the effect of alcohol consumption on breast cancer, suggesting that females who drink alcohol may benefit from a daily multivitamin fortified with folic acid.

Cancers of the head and neck and digestive tract:

Alcohol use has been linked to several types of cancer of the head and neck and digestive (gastrointestinal) tract, even at low levels of consumption. People who drink and smoke have a greater risk than would be expected from either factor alone.

Cancer arising within liver cells (hepatocellular carcinoma) has been linked to alcohol use. This may be related to liver scarring (ie, cirrhosis) that occurs in people who consume excessive amounts of alcohol since cirrhosis is associated with an increased risk for hepatocellular carcinoma. However, even at low levels, drinking may increase the risk of hepatocellular cancer in people with inflammation of the liver (hepatitis) due to infection with certain viruses (eg, hepatitis C virus). People with chronic hepatitis should avoid alcohol.

Alcoholic liver disease and cirrhosis: Excessive alcohol consumption is associated with a range of liver diseases, including alcoholic fatty liver disease (with or without steatohepatitis), alcoholic hepatitis, and cirrhosis. People who drink heavily are at increased risk of cirrhosis. Low levels of alcohol are not clearly associated with cirrhosis in the absence of other factors.

Gallstones: Moderate alcohol use has been associated with a lower risk of gallstones. However, heavy drinking may eliminate this benefit.

Pancreatitis: Heavy drinking is associated with increased risks of both sudden (acute) and long-term (chronic) inflammation of the pancreas, also called pancreatitis.

Osteoporosis: Heavy drinking is associated with an increased risk of hip fractures because it increases the risk of both osteoporosis (in which the bones become weak and brittle) and falls.

Pregnancy: Experts advise completely avoiding alcohol during pregnancy. There is a significant risk of birth defects related to use of alcohol during pregnancy. Heavy drinking can cause fetal alcohol syndrome, which prevents normal growth and may cause intellectual disability, malformations of the skull and face, and other problems. Even light alcohol consumption may also be harmful, although this is a matter of some controversy. There is **no** known benefit of alcohol use during pregnancy.

Perception of health and quality of life: Excessive and frequent alcohol use reduces quality of life for individuals,

their families, and others around them, potentially leading to problems at work or school, relationship issues, and physically dangerous situations. On the other hand, some people may feel that limited or moderate alcohol consumption, particularly in social settings, improves their quality of life.

Accidents and trauma: Alcohol use increases the risks and severity of injury from motor vehicle accidents.

Exposure to alcohol is generally measured in blood alcohol concentration (BAC) rather than drinks per day or week. In most of the United States, the legal BAC limit for driving is 0.08 percent, which corresponds to about four drinks for a 200 pound male and 2.5 drinks for a 150 pound female. However, the risk of having an accident while driving doubles at a BAC of only 0.05 percent, and driving ability is impaired with a BAC as low as 0.02 percent.

Alcohol also increases the risk of other types of injury. It has been shown to impair a pilot's ability to fly and an operator's ability to control a boat, bicycle, or snowmobile. In addition, occupational injuries, falls, drownings, burns, and hypothermia are more common in those who use alcohol, particularly in heavy drinkers.

Violence: Alcohol is involved in at least half of all sexual assaults, at least one-half of serious assaults, and one-half to two-thirds of all homicides.

Suicide: Alcohol abuse is associated with an increased risk of suicide. Although moderate drinking does not appear to raise suicide risk, episodes of heavy drinking cause disinhibition that can increase suicide risk.

Implication for health education

Knowing the dangers associated with alcohol consumption, the Association, American Psychiatric (2013) outlined that the following group of persons should totally avoid the consumption of alcohol. These include;

- Persons younger than age 21.
- Pregnant or may be pregnant.
- Driving, planning to drive, or participating in other activities requiring skill, coordination, and alertness.
- Taking certain prescription or over-the-counter medications that can interact with alcohol.
- Suffering from certain medical conditions.
- Recovering from alcoholism or are unable to control the amount they drink.

Conclusion

Heavy uptake of alcoholic drinks contributes to social, health and psychological problem among individuals

especially adolescents in the society. Alcohol consumption is broadly, any drinking of [alcohol](#) that results in [mental](#) or physical [health](#) problems. Alcoholic drinks come in multiple forms and contain differing amounts of pure alcohol (also called ethanol). The health risks associated with alcohol consumption can be short or long term. Some of the health problems it causes include cardiovascular disease, high blood pressure, heart attack, atrial fibrillation, cancer, alcohol liver disease and cirrhosis, gallstones etc. Therefore, the implication for health education is that the following group of persons should totally avoid the consumption of alcohol including persons younger than age 21, pregnant or may be pregnant, driving, planning to drive, or participating in other activities requiring skill, coordination, and alertness, taking certain prescription or over-the-counter medications that can interact with alcohol, suffering from certain medical conditions, recovering from alcoholism or are unable to control the amount they drink etc. Therefore, there is need to continue with enlightenment campaigns to discourage members of the society from high alcohol consumption.

Recommendations

Based on the review, the following recommendation were made

- Government, ministries of health and non-governmental organizations at all level should mount more enlightenment campaigns through public talk to create more awareness on the need to bridge knowledge gap of alcohol consumption in the society especially among adolescents
- The family, school and society should support to curtail early alcohol consumption among the populace.
- Prevention strategies by institutions and families should focus on beliefs and expectations about alcohol consumption/gambling and on delaying the age of one set.
- Parents should not take alcoholic drinks and play gambles in the presence of their children.
- Government should enforce the law prohibiting sales of alcoholic drinks and establishment of gamble shops to people under the age of 18 years.
- Religious bodies, NGOs, should carryout programmes from time to time discouraging the use of alcohol and gambling in their gatherings.

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