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Research Paper

Understanding The Relationship Between Alcohol Consumption and Stress, Anxiety and Depression

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ABSTRACT

For decades, alcohol has become a significant part of our society and culture. Alcohol consumption is linked to an increased risk of both short and long-term harmful physical and mental health effects. The study is aimed at finding the relationship between alcohol consumption and stress, anxiety and depression. ***Materials and Methods:*** Descriptive-correlational design was adopted for conducting the research. The sample consisted of 160 participants aged 18-60 years out of which 81 were females and 79 were males. The Alcohol Use Disorders Identification Test (AUDIT) was used to assess alcohol consumption and The Depression, Anxiety, and Stress Scale – 21 (DASS-21) was used to evaluate the stress, anxiety and depression levels. ***Results:*** The findings of the study showed that there is a positive and significant correlation between alcohol consumption and stress in males and females (<0.01). It can also be seen that alcohol consumption and anxiety are also positively and significantly corelated in males and females (<0.01). It is also found out that alcohol is significantly and positively related with depression among males and females (<0.01). ***Conclusion:*** The findings of the study reveal that alcohol consumption and stress have a reciprocal relationship. People who are stressed are more likely to consume alcohol. Alcohol consumption, on the other hand, might also cause stress. Anxiety has a stronger relationship with alcohol consumption among males than in females. People who consume alcohol are more vulnerable to anxiety than those who do not and vice versa. It is also found that depression also has a stronger relationship with alcohol consumption among males than in females. People use alcohol to self-medicate their depressed symptoms because of its depressant properties, however long-term use of alcohol to self-medicate leads to depression.

Keywords: *Alcohol consumption, Anxiety, Depression, Stress*

According to a major new study published in The Lancet, global rates of individual alcohol consumption have risen dramatically. According to the same report, India's yearly alcohol consumption surged by 38% between 2010 and 2017. The overall amount of alcohol consumed globally each year has increased by 70% since 1990. Because alcohol is a proven risk factor for a variety of health issues, the global burden of disease will almost certainly rise as well. For the foreseeable future, alcohol use will remain one of the

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primary risk factors for disease burden, and its influence will likely rise in comparison to other risk factors.

Alcohol Consumption

Alcohol is a psychoactive drug that has effects on both cognitions and affects and is commonly used around the world (WHO, 2009). For decades, alcohol has become a significant part of our society and culture. Ethanol or alcohol is used widely from country to country. Alcoholic drinks are mostly consumed as intoxicants in some countries, although they are primarily consumed as beverages with meals in others. According to the World Health Organization (WHO), there are about 2 billion individuals who drink alcoholic drinks globally, with 76.3 million having diagnosable alcohol use disorders.

There are three categories of alcohol use: level of use, binge consumption, and alcohol use disorders (AUDs). The term "level of use" refers to the amount and frequency of alcohol use over a period of time (e.g., units per week). Binge drinking is described as excessive drinking on a single occasion that increases a person's risk of injury or harm on that particular occasion. AUD is a serious type of drinking problem that is chronic and medically diagnosed (NIH, 2019a). Compulsive alcohol intake, lack of control over drinking, and a depressive mental state when not drinking are all key medical factors for AUD (NIH, 2019a). In India, a “standard drink” contains 10 millilitres of alcoholic beverage which includes coolers; beer; wine; champagne; liquor such as whiskey, rum, gin, vodka, bourbon, tequila, scotch, brandy, cognac, cordials, or liqueurs; and also, any other type of alcohol.

Moderate drinking is described by the World Health Organization (WHO, 2009) as a pattern of alcohol use with little or no harmful effects. Social drinking can be mild, but since it is based on the traditions of the cultural context in which it exists, it can often have harmful effects. A practise of alcohol intake that raises the risk of negative effects is known as hazardous drinking (Saunders et al., 1993). The line between moderate and hazardous drinking can be described as drinking that exceeds weekly intake of 14 standard drinks for males and 9 standard drinks in females. Binge drinking, described as the intake of more than five standard drinks for males and more than four standard drinks for females on the same occasion (Andréasson and Allebeck, 2004), is also a major concern.

We use alcohol for a variety of reasons: to calm ourselves, feel courageous, seal business deals, enjoy life experiences, drown our sorrows, recall, forget, say goodbye to people, get to know people, exploit others and so on. Cooper (1994) suggested four drinking motives: social, conformity, enhancement, and coping. The social and enhancement motives are linked to the alcohol's positive reinforcing effects (to gain social rewards, and to enhance positive affect, respectively), whereas coping and conformity motives are linked to the alcohol`s negative reinforcing effects (to reduce anxiety and depression, and to avoid peer rejection and criticism, respectively). Also, social and conformity motives are influenced by factors outside of one's control (relate to other people), whereas enhancement and coping motives are guided from inside (relate to the self). Alcohol use may have both positive and negative consequences. Light drinking has been linked to increased social, behavioural, and physical wellbeing in several studies. However, an image of alcohol use as a means of masking issues and coping with feelings that would otherwise be too difficult to deal with is emerging. People drink for a variety of reasons and many of them are related to the idea of “self medication” – i.e., they think alcohol affects their mood and emotions and helps them deal with stressful circumstances or feelings. These reasons include: to relax; make friends

more easily; decrease anxiety; forget about issues or feel less depressed; rejoice or just feel good; feel more confident or less inhibited and blend in socially.

Harms of alcohol

Alcohol use and related diseases contribute significantly to burden of disease, and elevated levels of consumption are linked to poor mental wellbeing and psychosocial issues in adults. Increased alcohol intake is linked to an increased risk of both short and long-term harmful health effects. Long-term heavy drinking has been shown to be detrimental to one's physical and mental wellbeing (here, "heavy drinking" is used as an umbrella word for different types of excessive and problematic alcohol consumption.).

In our culture, alcoholism is a major issue. Alcohol consumption has been linked to over sixty medical disorders, either directly or indirectly. Alcohol is responsible for 1.8 million deaths (3.2 percent of all deaths) and 58.3 million Disability-Adjusted-Life-Years losses (4 percent of all DALY losses) (WHO, 2002). Because of the widespread use of alcohol, over a third of India's population lives in poverty. Around 1980 and 2007, the average age of first drink dropped from 28 to 17 years, indicating troubling increases in alcohol intake. Alcohol abuse and harmful use of alcohol are all conditions identified by the International Classification of Diseases (ICD10) and the Diagnostic and Statistical Manual Disorders (DSMIV) as disorders.

The immediate harmful effects of alcohol involve road accidents, falls, fires, sports and recreation deaths, rapes, suicides, homicides, abusive treatment of children, domestic violence and other illnesses. Alcohol intoxication, hangovers, and withdrawal from alcohol will also have anxiolytic effects in the short term. Alcohol is also linked to a variety of long-term effects, including several forms of cancer, epileptic seizures, cirrhosis of the liver, pancreatitis and high blood pressure (Room et al., 2005). Mostly, the young adults are concerned with immediate consequences, whereas older people are concerned with long-term consequences. Alcohol includes the depressant ethanol, which can induce depression, anxiety, and stress. In certain situations, depression, anxiety, or stress may already be present, and drinking alcohol may exacerbate these symptoms over time.

Male v/s female

Since women have fewer defensive enzymes in their stomachs that are used to break down alcohol than men, their bodies respond differently to alcohol. Women consume 30% more alcohol into their bodies than males, causing them to become inebriated faster.

There is a historical stigma associated with alcohol that men are the ones who drink the most and have the most issues as a result of their consumption. This was true for a long time when men were the only users of alcohol, but that has changed now. Various findings revealed that women consumed almost as much as their male counterparts.

Women are twice as likely as men to experience depression, anxiety, and stress disorders. Various findings suggest that women had greater levels of depression, anxiety and stress than men.

Stress

Stress is a natural aspect of life and a normal reaction. It may operate as a positive force that enhances health and performance, as well as a negative force that decreases health and

performance. Stress is described by Hans Selye, the founder of the stress concept, as the body's nonspecific response (stress response) to a demand (stressor) imposed on it (Everly and Lating, 2006). Stress is a common condition that causes a variety of physical, emotional, and/or relationship symptoms, such as tiredness, nervousness, "butterflies," irritability, disturbed sleep patterns, difficulty thinking clearly, over-reactions, increased conflicts, and social isolation.

People suffer from a wide range of mental health problems that might be linked to stress. Their overall quality of life is also affected by stress. They also have lower levels of life satisfaction.

Physical, psychological, and social pressures are the three types of stressors. Physical stressors are external or environmental forces that can be harmful but can be usually avoided. Unplanned life events that result from interaction with the environment are frequently referred to as social stressors. Psychological stressors are intense emotions that are frequently self-induced or triggered by physical or social stressors. The cognitive interpretation of an event makes social and psychological stressors become stressors while physiological stresses, do not need a cognitive evaluation to elicit the stress response.

Stress, a psychosocial element, is thought to have two general effects on health. First, it can stimulate autonomic, neuroendocrine, and immunological responses, among other psychophysiological reactions. These reactions leave the person vulnerable to viruses and can even trigger disease mechanisms, making them linked to psychopathologies. Second, stress may have an influence on health-related behaviours including substance use (including alcohol and cigarettes), physical activity, and diet, all of which can affect people's health and well-being.

Anxiety

One of the most prevalent psychiatric disorders in the general population is anxiety disorder. Anxiety is a broad term that encompasses a variety of psychological and physiological symptoms. Anxiety manifests itself in a variety of ways, including cognitive, physical, and behavioural. Anxiety disorders, state anxiety and trait anxiety are the three types of anxiety.
State anxiety refers to fear that is triggered by an external stressor that lasts for a short period of time. The state anxiety should dissipate after the stressor (situation or condition) has passed. Trait anxiety is a more stable personality trait that leads to variations in feelings of anxiety based on one's temperament. When compared to others, certain people can experience anxiety more often or intensely. Excessive fear, maladaptive anxiety signs, and associated behavioural abnormalities are all symptoms of anxiety disorders.

According to DSM-V, there are 5 types of anxiety disorders. 1) Panic disorder- Having panic attacks at inconvenient times on a regular basis. An individual suffering from panic disorder can live in constant fear of having another panic attack. 2) Specific phobia- excessive aversion to a particular item, situation, or event/activity. 3) Social anxiety disorder- extreme apprehension of being judged in social settings by people. 4) Agoraphobia- fear of being trapped in conditions where getting out is impossible or where assistance is unavailable if things go wrong. 5)Generalized anxiety disorder- excessive, irrational worry and stress for no apparent cause.

Depression

Low mood, low energy, elevated fatigability, low activity, and lack of motivation are signs of depression, which are graded as mild, moderate, or extreme. Some other signs and symptoms include: guilt and worthlessness, self-harm or suicidal thoughts, sleep problems, and a pessimistic outlook on the future. Decline in self-esteem, motivation, attention and concentration, and a loss of appetite are all symptoms of depression. This should last at least two weeks, obstructing the individual's daily functioning. Depression may occur alone or in conjunction with other illnesses. There are 4 major types of depression. 1) Major depression (clinical depression)- defined by a depressive mood during the day, and a lack of interest in daily activities and relationships — symptoms that last at least two weeks. 2)Persistent depressive disorder(dysthymia)- is a form of depression that lasts for a long time (chronic). Dysthymia causes depressive symptoms to last for a long time, sometimes two years or more. 3) Bipolar disorder- also known as bipolar depression, is a mental condition characterised by extreme mood swings, as well as changes in sleep, energy, thought, and behaviour. 4)Seasonal affective disorder- is a form of depression that is a form of depression linked to seasonal changes and occurs at roughly the same time each year.

Alcohol and Stress

The tension reduction hypothesis, which assumes that people consume alcohol for its stress-relieving effects and that alcohol intake decreases stress, is most likely the most influential theory on the relationship between stress and alcohol. Both social and problem drinkers report that alcohol is commonly expected to relieve stress or help people cope with negative emotions. It was also discovered that while stress did not lead to increased drinking frequency, it did lead to increased alcohol consumption. This relationship isn't necessarily causative. Under any condition, stress does not always lead to the alcohol consumption. This impact is determined by a range of characteristics such as a family history of alcoholism, gender, low self-control, high self-consciousness, and other cognitive deficiencies such as minimal brain dysfunction. Different studies show different results when it comes to the association between alcohol and stress. Some studies claim that there is no link between alcohol use and stress, while others claim that there is a linear relationship between them. Increased drinking levels, negative outcomes, and long-term and severe negative repercussions have all been linked to stress-related drinking. Alcohol reduces negative emotional states caused by stress, which reinforces consumption and makes it more likely to be consumed again when stress occurs. Drinking, at least in the short term, can result in pleasurable feelings and relaxation. However, problems develop when stress persists and people continue to use alcohol to cope with its consequences. Long-term, excessive drinking, rather than “calming your nerves,” can actually work against you, causing a slew of physical and psychological issues as well as raising the likelihood of alcoholism.

Alcohol and Anxiety

There are some conflicting reasons about the association between anxiety and alcohol consumption. First, whether anxiety occurs before or after alcohol consumption is a point of contention. Second, it's unclear if anxiety is a risk or a safety factor for drinking. Third, it's likely that common risk factors contribute to both anxiety and alcohol use and as a result, there may not be a clear causal link between the two.

There is a disparity in the percentage of individuals who seek professional treatment and the number of people who are alcohol dependents. Therefore, the connection between anxiety disorders and alcoholism is not well understood, especially in developing countries.

Individuals with elevated levels of stress and anxiety could be more prone to problematic alcohol consumption, according to some theories. More generally, an estimated 20% of people with anxiety disorders also have an alcohol use disorder. One possible cause for irrational drinking is that people may consume it for its tension reducing properties.

According to tension reduction theory, anxiety sufferers could be more likely than non-anxiety sufferers to consume larger levels of alcohol. People suffering from anxiety drink to relieve their anxiety when intoxicated; however, this is just a temporary cure, because after the intoxication wears off, the individuals return to their anxious condition and in certain cases, at higher levels of anxiety.

Alcohol depletes neurotransmitters, which are essential for the brain to overcome anxiety on its own, as a result, the more a person drinks, the more nervous they get. In the long run, this will lead to a person being accepting of alcohol, meaning that they need progressively large doses of alcohol to achieve the same level of anxiety reduction. It should be noted that excessive alcohol is not necessarily caused by elevated levels of anxiety.

Alcohol and Depression

According to a 2005 WHO survey, neuropsychiatric diseases account for 31.7 percent of all years lived-with- disability; the leading disorder contributing to this figure was Unipolar major depression (11.8%), led by alcohol-use disorders (3.3%). According to various studies, depressive signs are reported by about approximately 80% of problematic alcohol users, with 30% having major depressive disorder. This also impedes the treatment process. Due to depression, the user may avoid treatment. The vicious cycle of a large number of seamlessly integrated activities in life is exacerbated by depression and alcohol abuse; depression can be caused by a variety of incidents and this adds alcohol intake, which exacerbates the problem by increasing the consumer's depressive symptoms.

At least two-thirds of alcoholics exhibit signs of anxiety, sadness, depression, and/or manic-like symptoms. Alcoholism and major depression are more common than expected in the general population. Similarly, higher levels of alcohol intake are linked to more depressive effects in the general population. The rate of major depression is greater in people in treatment for alcohol abuse and dependency than in the general population. Patients of depression have been seen to have a higher incidence of alcohol use disorders. Conjointly, it is suggested that depression and alcoholism are related and that alcohol disorders and depressive symptoms co-occur to a greater extent than can be anticipated by chance. Abstinence from alcohol dramatically decreases depressive symptoms of people who are dependent on it in a brief period of time, demonstrating the effect of alcohol on depression once again.

Depression may develop as a result of excessive drinking but it may also be the other way around, with the person drinking excessively because they are depressed. Generally, depression often comes first and consuming alcohol can exacerbate the symptoms but people are more likely to drink when they are sad. Alcohol decreases the levels of serotonin in the brain which stabilises our mood, happiness and feelings of well-being, as a result, the more a person drinks, the more depressed they get. In the long run, this will lead to a person being tolerant of alcohol, meaning that they need progressively large doses of alcohol to achieve the same level of reduction of sad feelings.

REVIEW OF LITERATURE

Previous research has looked at the effects and relationships of alcohol consumption on anxiety disorders and depression in people of all ages. In order to examine alcohol use, anxiety disorders, and depression, many evaluation techniques are used.

A study was conducted by Tanya.Y.Shortt in 2008 to investigate alcohol use and how it impacts men and women aged 18 and up who are university students, as well as their levels of depression, anxiety, and stress by using a quantitative cross-sectional survey design. A total of 90 people took part in the study, 38 of whom were men and 52 of whom were women belonging to Dublin Business School. According to the findings, male participants consume more alcohol units than female participants, and both groups experienced equal levels of depression, anxiety, and stress. Younger people had higher levels of depression than older people. Binge drinkers had higher levels of anxiety, depression, and stress.

In 2005, Sami P. Pirkola, Erkki Isometsä, Jaana Suvisaari, Hillevi Aro, Matti Joukamaa, Kari Poikolainen, Seppo Koskinen, Arpo Aromaa, Jouko K. Lönnqvist published results from the health 2000 study. Depressive-, alcohol-, and anxiety disorders were found to be present in 6.5 percent, 4.5 percent, and 4.1 percent in a study of 6005 adults over the age of 30. This study found that men had more comorbid disorders than women (7.3 percent vs. 1.4 percent), whereas women had more anxiety disorders (8.3 percent vs. 4.6 percent).

In the years 1980-1999, Galaif et al. (2007) found a 100 percent rise in suicide among 10–14-year-olds and a 14 percent increase among 15–19-year-olds. They claimed that severe depression was the most prevalent co-morbidity of suicide, that alcohol consumption raised the risk of depression by a factor of 6, and that depression and alcohol abuse had a mutual "synergistic" relationship.

Marie D. S. König used correlation and regression analysis to perform a study on mental health, stress, and alcohol consumption among students in June 2019. There were 1474 students in the sample. Students had moderate levels of stress, according to the findings. 36.7 percent of the people in the study had no symptoms of depression, 21.5 percent had a minor or mild major depression, and 17.0 percent had a moderately severe or severe major depression. 31.0 percent of the participants had no anxiety, 33.3 percent had mild anxiety, 21.7 percent had moderate anxiety, and 13.8 percent had severe anxiety. For diagnosing hazardous drinking or active alcohol use disorder, 72.4 percent of females and 73.2 percent of men were classed as optimal. There were moderately high levels of well-being. Stress predicted poor mental health but not well-being. There was no link between alcohol use and stress or mental health.

Espen Lund Johannessen, Helle Wessel Andersson, Johan Håkon Bjørngaard, and Kristine Pape in the year 2017 conducted a cross sectional study of Norwegian secondary school students. They examined the links between anxiety and depression symptoms and alcohol use among teenagers, focusing on the role of symptom load as well as gender disparities. A total of 6238 teenagers between the ages of 16 and 18 were included in the study. Boys and girls with depression symptoms, as well as girls with anxiety symptoms, are more likely to engage in harmful drinking habits. A popular approach to mental health and alcohol use could benefit preventive interventions at all stages, particularly for girls in their mid-adolescence.

Understanding The Relationship Between Alcohol Consumption and Stress, Anxiety and Depression

A study was published by Constantin Vintilescu on 11th February 2020. The aim of this paper was to look at the association between alcohol intake and the seriousness of depression as described by the Alameda County Health and Ways of Living Study (ACHWLS) dataset. Although the correlations are poor, alcohol intake has a favourable overall effect on depression. The actual nature of the connection is complicated, with both heavy drinkers and abstainers reporting higher levels of depressive symptoms.

Matt G Kushner and Kenneth B Abrams investigated the relationship between anxiety orders and alcohol use disorders in the year 2000. They reviewed laboratory, clinical, family, and prospective studies. Both of the results point to the same conclusion: anxiety disorders and alcohol disorders can also cause the onset of the other, particularly in cases of alcohol dependence rather than alcohol abuse alone. Anxiety disorder can also lead to the maintenance and relapse of pathological alcohol use, according to data from clinical research. They hypothesise that short-term anxiety relief from alcohol use, in combination with longer-term anxiety induction from binge drinking and abstinence, may trigger a vicious feed-forward loop of increasing anxiety symptoms and alcohol consumption, resulting in comorbidity, based on pharmacological and behavioural laboratory findings.

A descriptive study to assess the level of anxiety and depression among Alcohol Abuse Disorder patients in a tertiary care hospital of Western Maharashtra was conducted on 30 AUD patients by Seema Madhavan Nair**,** Punita A Sharma**,** Radhika Das in 2019. In the anxiety element of the HADS, 60 percent of the patients had mild anxiety and 40 percent had severe anxiety, and in the depression component of the HADS, 70 percent of the patients had mild depression and 30 percent of the patients had serious depression, according to the review of the score. Patients with mild anxiety also have mild to severe depression as well.

A study was conducted in 2013 to evaluate if anxiety symptoms are associated with problematic alcohol use in young subjects. Marianna de Abreu Costa; Giovanni Abrahão Salum Junior, Luciano Rassier Isolan; Jandira Rahmeier Acosta; Rafaela Behs Jarros; Carolina Blaya; Lísia Von Diemen; Gisele Gus Manfro conducted the study on a total of 239 individuals aged 10-17 years who were randomly selected from schools located in the catchment area of Hospital de Clínicas de Porto Alegre. One hundred and twenty-seven people (53.1%) said they had consumed alcohol previously. A total of 14 people were found to have a problem with drinking (5.8 percent). There was no connection between lifetime alcohol use and anxiety symptoms, but mean SCARED scores in people with problematic alcohol use were higher than those without problematic use, even after age and gender were taken into account.

A cross-sectional survey was conducted by Dr. Sudan Pasad Neupane during the months of July to December among 188 consecutively admitted alcohol-use disorder (AUD) patients at several residential alcohol treatment institutions in Kathmandu. According to the results, depressed AUD patients exhibited much more severe alcohol issues and were less likely to be cohabiting with a spouse than non-depressed AUD patients. The prevalence of major depressive episodes among alcohol abuser/dependent patients was found to be 45 percent and 36 percent, respectively, during a 12-month period.

In 2013, Journal of Alcoholism and Drug Dependence published a systemic review by Larissa Horta Esper and Erikson Felipe Furtado on "Gender Differences and Association

between Psychological Stress and Alcohol Consumption". The results of this study revealed positive and negative associations between alcohol consumption and stress when they are evaluated according to exposure to stressful events, but this association is different for men and women. The association between substance use, coping strategies and symptoms of stress seems to be more important for men than for women. Regarding the possibility of reducing tension, stress seems to be a predictor of increased consumption only for men with positive expectations.

AIMS, OBJECTIVES AND HYPOTHESES

The present study examines individuals, aged 18 to 60, in relation to their alcohol consumption, stress, depression and anxiety. Very few studies have been conducted to examine this relationship. The current study will look at the link between alcohol intake, stress, depression, and anxiety in the men and women who participated. It would be interesting to look at the relationships between alcohol consumption, stress, anxiety, and depression to see how these factors are linked. The present study hopes to further educate the people about the negative effects of alcohol not only on people's physical but also on their mental health. It's worth mentioning that this research didn't look at causative linkages; instead, it looked at correlations between variables.

The general aim is to evaluate the relationship between stress, anxiety, depression and alcohol consumption among people aged 18 to 60.

Objectives

1. To assess alcohol consumption among people aged 18-60.
2. To estimate the prevalence of stress, anxiety and depression among individuals who consume alcohol.
3. To compare the prevalence of stress, anxiety and depression between males and females who consume alcohol.
4. To assess the correlation between stress, anxiety and depression between males and females who consume alcohol.

Hypotheses

H_1- There is no significant difference relationship between alcohol consumption and stress in males.

H_2- There is no significant difference relationship between alcohol consumption and stress in females.

H_3- There is no significant difference correlation between alcohol consumption and depression in males.

H_4- There is no significant difference correlation between alcohol consumption and depression in females.

H_5- There is no significant difference correlation between alcohol consumption and anxiety in males.

H_6- There is no significant difference correlation between alcohol consumption and anxiety in females.

MATERIALS AND METHODS

This chapter's goal is to give an overview of the methodologies employed in this study. It contains information about the research design, participants, instruments, procedures, data

analysis, and ethics and considerations. The study's detailed data serves as a useful guide for explaining the design's goals and how they can be met. This study's main objective was to evaluate the relationship between stress, anxiety, depression and alcohol consumption among people aged 18 to 60. The paucity of previous studies in this field provided the basis for using this methodological technique. The purpose of this methodological approach was to create the groundwork for future research and study in this field.

Research Design

The approach that the study employed was quantitative and comparative. The method used in the study was correlation. The goal of the research was to collect quantitative data in order to further investigate and study the research topic and find common themes, concepts and ideas of the research topic. The independent variables used in the study were alcohol consumption and gender whereas the dependent variables used in the study were stress, depression and anxiety.

Participants and Sampling Technique

The sample consisted of 160 participants out of which, 81 were females and 79 were males. The ages of the participants varied from 18 to 60. Apart from helping with the research, there was no additional incentive for participants to participate in the study. The convenience sampling method was used in this study. In convenience sampling, sample is taken from a group of people easy to contact or reach. People had to meet the following criteria in order to be included in the study: (i) to be between the ages of 18 and 60 (ii) to accept the participation in the study. The exclusion criteria of the study was: (i) those who did not give their consent

Measures

The data collection in the research study was quantitative. The instruments were chosen after considering their previous usage, validation in the target population, and the context of their application in research. Data was collected in the form of questionnaires, an online survey using google forms. The questionnaire used was reviewed and approved by the supervisor of this research study. The present research is descriptive. Participants were initially given a consent form that explained what was being asked in the questionnaire, the risks and benefits they could encounter, and where they may turn for help if they had any unfavourable consequences as a result of their participation. Participants were given the questionnaire after giving their agreement to participate.

- **Demographic information:** A few demographic questions were asked at first. Participants were asked to state their age, sex, educational qualifications, occupation, income, current relationship status, domicile and socio-economic status. The demographic questions were compiled by carefully merging demographic tools from a variety of similar research articles. The study's demographic questions were carefully developed by referring to previous demographic questionnaires. In addition to demographic details, participants were asked about their existing medical conditions, concomitant substance dependence and gross motor impairment.
- ***The Alcohol Use Disorders Identification Test (AUDIT):*** The Alcohol Use Disorders Identification Test (AUDIT) was used to determine the quantity of alcohol consumed by individuals. The self- report version of AUDIT was used in the present study. The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening tool developed by the World Health Organization (WHO) to assess alcohol consumption, drinking behaviours, and alcohol-related problems. The AUDIT test is designed to

detect the early signs of hazardous drinking and moderate dependency. It's used to find out about drinking problems in the recent year. AUDIT is one of the most reliable alcohol tests available. It contains three questions about hazardous alcohol use, three about dependence symptoms and four about harmful alcohol use. AUDIT is scored on a point system: 0-4 with 5 answers on first 8 questions with higher values representing higher frequency. The last two questions, alcohol related injuries and others concerned about drinking, are responded as 0(no), 2(yes, but not in the last year), and 4 (yes, in the last year). According to World Health Organization (WHO) recommendations, a score of 1 to 7 indicates low-risk intake. A score of 8 to 14 suggests risky or dangerous alcohol consumption, whereas a score of 15 or higher suggests the possibility of alcohol dependency (moderate-severe alcohol use disorder). AUDIT has a high degree of internal consistency, reliability, and validity in connection to clinical diagnosis, according to several studies, implying that it is assessing a single construct in a reliable manner.

- ***Depression Anxiety Stress Scales (DASS-21):*** DASS-21 was used in the second portion of the questionnaire for assessing stress, anxiety and depression among participants. The Depression, Anxiety, and Stress Scale - 21 Items (DASS-21) is a combination of three self-report scales that assess depression, anxiety, and stress. Each of the three DASS-21 scales has seven items that are grouped into subscales that have similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. Autonomic arousal, skeletal muscle effects, situational anxiety, and subjective sensation of anxious affect are all measured on the anxiety scale. Chronic nonspecific arousal levels are responsive to the stress scale. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. The items are scored on a scale from zero to three which ask how much each statement applied to the participant in the last week (0 = Did not apply to me at all, 1 = Applied to me to some degree, or some of the time, 2 = Applied to me to a considerable degree, or a good part of the time, 3 = Applied to me very much, or most of the time). The possible scoring range for depression ranges from 0-28+, (0-9 = Normal level, 10-13 = Mild level, 14-20 = Moderate level, 21-27 = Severe level, 28+ = Extreme level), anxiety ranges from 0-20+, (0-7 = Normal level, 8-9 = Mild level, 10-14 = Moderate level, 15-19 = Severe level, 20+ = Extreme level) and stress ranges from 0-34+, (0-14 = Normal level, 15-18 = Mild level, 19-25 = Moderate level, 26-33 = Severe level, 34+ = Extreme level). The depressed, anxiety, and stress subscales of the DASS-21 all have high Cronbach's alpha values of 0.81, 0.89, and 0.78, respectively. It was found to have excellent internal consistency, discriminative, concurrent and convergent validities.

Procedure

Because this study was conducted during the COVID-19 pandemic and the lockdown, it was physically impossible to administer questionnaires and collect data from the subjects. The only remaining alternative was to send the self-report questionnaires via email, text messages and other social media messaging applications. Because of the COVID-19 constraints, only those participants who could be reached via social media were chosen for the study. The sample was drawn from the people who were easy to contact.

The research was finalized in the mid of April 2021 and the data collection process began on 29th April 2021. The data was gathered till the 20th of May 2021 whereas. Finally, the data

gathering process and the report writing process were completed by 25th May 2021 and 5th June 2021 respectively.

A piece of text detailing the study's objective and aims, as well as a hyperlink to the survey, was developed. The piece was sent to the participants via email, text messages and other social media messaging applications. The survey was entirely made up of self-report questionnaires. The survey used in this study was evaluated by the thesis supervisor before it was administered to the participants.

Participants in this study were given an informed consent and a confidentiality agreement to safeguard themselves which described the study, including confidentiality, the research's aim, and voluntary participation. The participant had the authority to terminate the survey at any moment if they did not feel comfortable answering any of the questions. Participants had to give informed consent before they could continue with the study to protect themselves from personal information disclosure.

In the following fragments of the survey, participants were given questionnaires on their probable alcohol consumption, alcohol consequences, and stress, anxiety and depression measurements after giving their agreement to participate. The first section of the questionnaire included the Alcohol Use Disorders Identification test to identify the amount of alcohol consumed by the participants, while the second section included the Depression Anxiety Stress Scales-21 (DASS-21) to measure the participants' stress, anxiety, and depression. They were thanked for their participation once the survey was completed.

Data Analysis

For each of the relevant variables, demographic frequencies, means, standard deviations, minimum and maximum scores were determined using statistical techniques. Checking for errors revealed invalid responses. Statistical analysis of the information obtained from the participants was done using computerized software SPSS 20 (Statistical Package for the Social Sciences). Descriptive statistics like means and standard deviations was computed for each of the variables: alcohol consumption, stress, anxiety and depression. Tables were used to display the findings of descriptive statistics. To analyse how the different research variables are associated to each other, the bivariate correlations of the various test scores were obtained using the Pearson Correlation Coefficient in SPSS. The association between alcohol consumption and stress, anxiety as well as depression was investigated in males and females separately using Pearson correlation coefficients (r). The variables were verified for data distribution and reorganised and coded as needed. The types of data (numerical, date, and string) were handled with separately, as were the measurements (scale, ordinal and nominal). The information gathered fell into one of two categories: nominal or scale. The variable Gender was coded under nominal descriptive whereas the variables alcohol consumption, anxiety, stress and depression were coded under scale descriptive. Calculations and categorization based on diagnostic criteria were done with care, and the procedure was double-checked for accuracy.

Ethics and Considerations

Throughout the research, ethical considerations were kept in mind. Beneficence, nonmaleficence, fairness, and respect for autonomy were among the particular ethical concepts that were addressed in research. During the study procedure, all personal experiences, prejudices, and views were avoided to preserve fairness. The responses used in

the study were recent and came from legitimate sources. Participants were given the option of not giving their name or email address in order to keep their identities anonymous.

Limitations

The type of test used in the study (Correlation) does not indicate causality and cannot be construed as such. We cannot infer that one variable causes the other even if there is a substantial correlation between them. Due to pandemic restraints, other techniques of data collecting could not be used for greater generalisation of the results.

RESULTS

In the current study, the aim was to identify the relationship between alcohol consumption and stress, anxiety & depression. The sample consisted of 160 participants, out of which 79 were males and 81 were females. The variables used in the study were alcohol consumption, stress, anxiety and depression.

Descriptive statistics for variables (N=160)

This section explains the descriptive statistics of the variables used in the present study. Alcohol consumption was measured through AUDIT (The Alcohol Use Disorders Identification Test) whereas DASS-21 (Depression Anxiety Stress Scales-21) was used to assess stress, anxiety and depression.

Table 1 The means and standard deviations of variables utilized in the analysis (males)

	Mean	Std. Deviation	N
Depression Score	4.20	5.403	79
Stress Score	4.03	4.613	79
Anxiety Score	3.77	4.356	79
Consumption Total Score	4.06	5.239	79

The above table shows the mean and standard deviation of variables among males. For males, the obtained mean of alcohol consumption, stress, anxiety and depression are 4.06, 4.03, 3.77 and 4.20 respectively with standard deviations of 5.239, 4.613, 4.356 and 5.403 respectively.

Table 2 The means and standard deviations of variables utilized in the analysis (females)

	Mean	Std. Deviation	N
Depression Score	8.20	8.623	81
Stress Score	8.15	8.560	81
Anxiety Score	7.78	8.295	81
Consumption Total Score	3.15	4.489	81

The above table shows the mean and standard deviation of variables among females. For females, the obtained mean of alcohol consumption, stress, anxiety and depression are 3.15, 8.15, 7.78 and 8.20 respectively with standard deviations of 4.489,8.560,8.295 and 8.623 respectively.

Table 3 Frequency distribution of gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	79	49.4	49.4	49.4
Female	81	50.6	50.6	100.0
Total	160	100.0	100.0	

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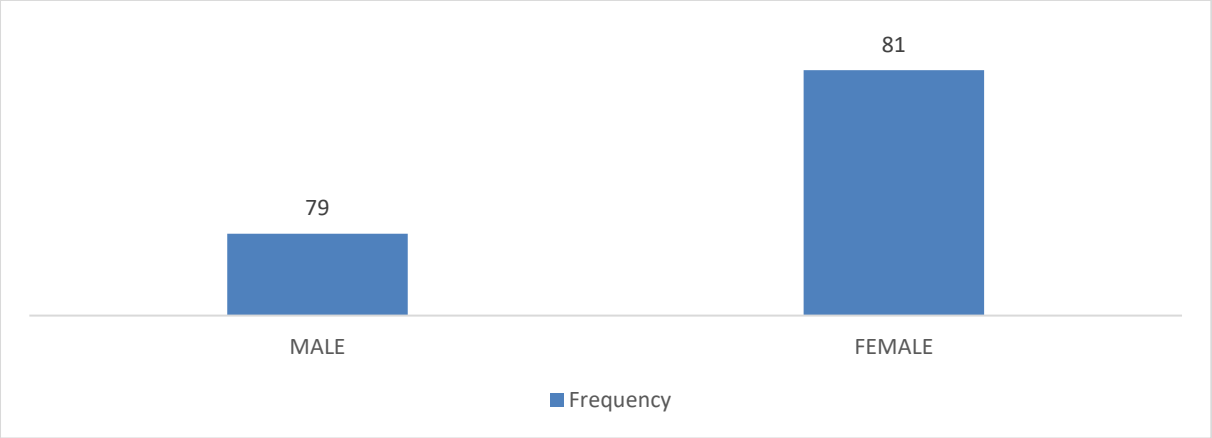
Figure 1 Bar graph of frequency distribution of gender



In the present study, there were total 160 participants out of which 49.4 percent were males and 50.6 percent were females

Table 4 Frequency distribution of alcohol consumption scores of males

	Frequency	Percent	Valid Percent	Cumulative Percent
Low risk consumption	63	79.7	79.7	79.7
Harmful alcohol consumption	12	15.2	15.2	94.9
Likelihood of alcohol dependence	4	5.1	5.1	100.0
Total	79	100.0	100.0	

Figure 2 Bar graph of frequency distribution of alcohol consumption scores of males

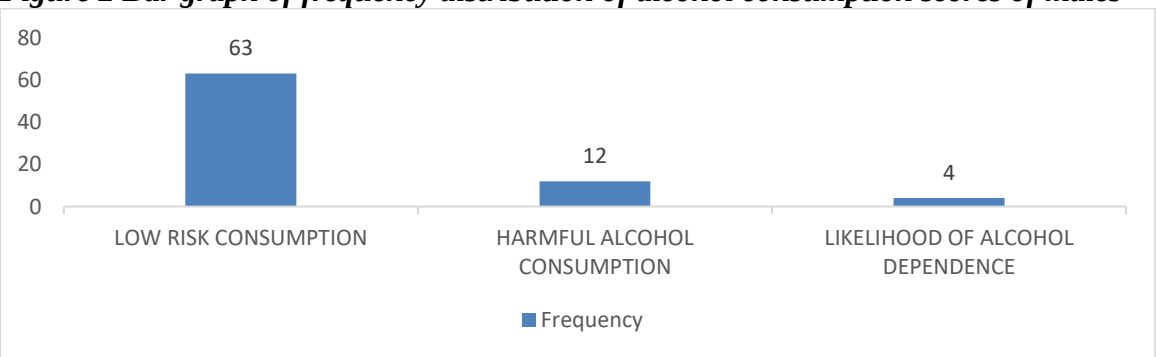


Table-4 and Figure-2 show alcohol consumption levels in males. 79.7 percent males fall in the category of low-risk consumption whereas 15.2 percent of males fall in the category of harmful alcohol consumption. The remaining 5.1 percent of males were found to be prone to alcohol dependency.

Table 5 Frequency distribution of alcohol consumption scores of females

	Frequency	Percent	Valid Percent	Cumulative Percent
Low risk consumption	72	88.9	88.9	88.9
Harmful alcohol consumption	6	7.4	7.4	96.3
Likelihood of alcohol dependence	3	3.7	3.7	100.0
Total	81	100.0	100.0	

Figure 3 Bar graph of frequency distribution of alcohol consumption scores of females

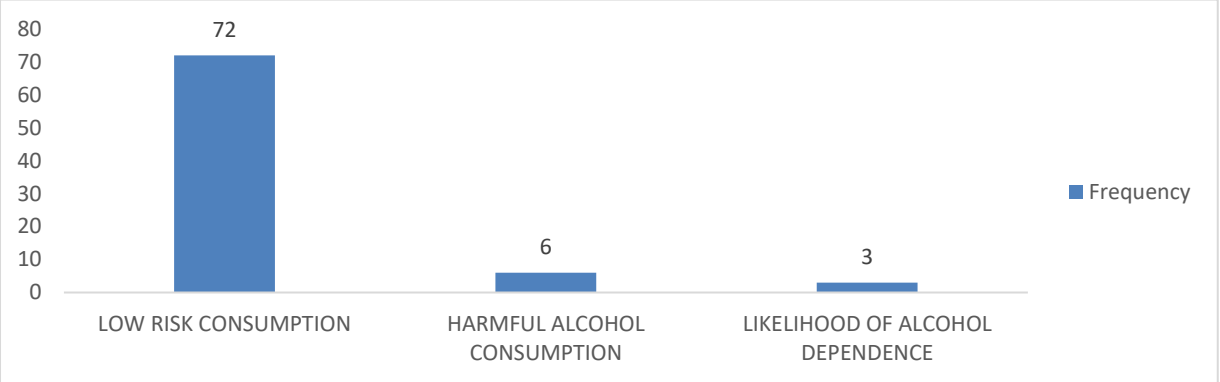


Table-5 and Figure-3 show alcohol consumption levels in females. 88.9 percent of females fall in the category of low-risk consumption whereas 7.4 percent of females fall in the category of harmful alcohol consumption. The remaining 3.7 percent of females were found to be prone to alcohol dependency.

Table 6 Frequency distribution of stress scores of males

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	70	88.6	88.6	88.6
Mild	9	11.4	11.4	100.0
Moderate	0	0	0	
Severe	0	0	0	
Extremely Severe	0	0	0	
Total	79	100.0	100.0	

Figure 4 Bar graph of frequency distribution of stress scores of males

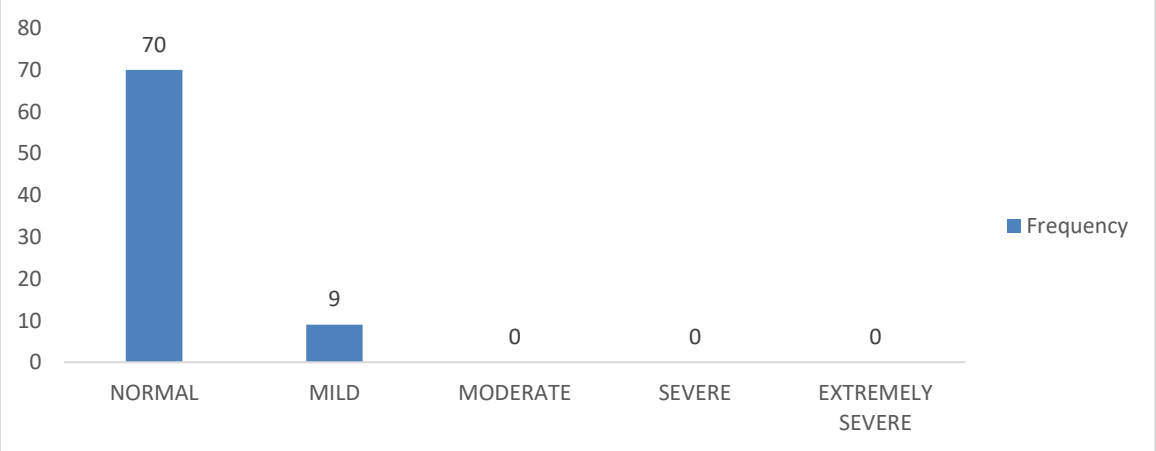


Table-6 and Figure-4 depict the stress levels of males. It can be seen that 88.6 percent males experience normal levels of stress whereas 11.4 percent of males experience mild level of stress. None of the males in the sample fall in the moderate, severe and extremely severe categories of stress levels.

Table 7 Frequency distribution of stress scores of females

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	56	69.1	69.1	69.1
Mild	15	18.5	18.5	87.7
Moderate	6	7.4	7.4	95.1
Severe	4	4.9	4.9	100.0
Extremely severe	0	0	0	
Total	81	100.0	100.0	

Figure 5 Bar graph of frequency distribution of stress scores of females

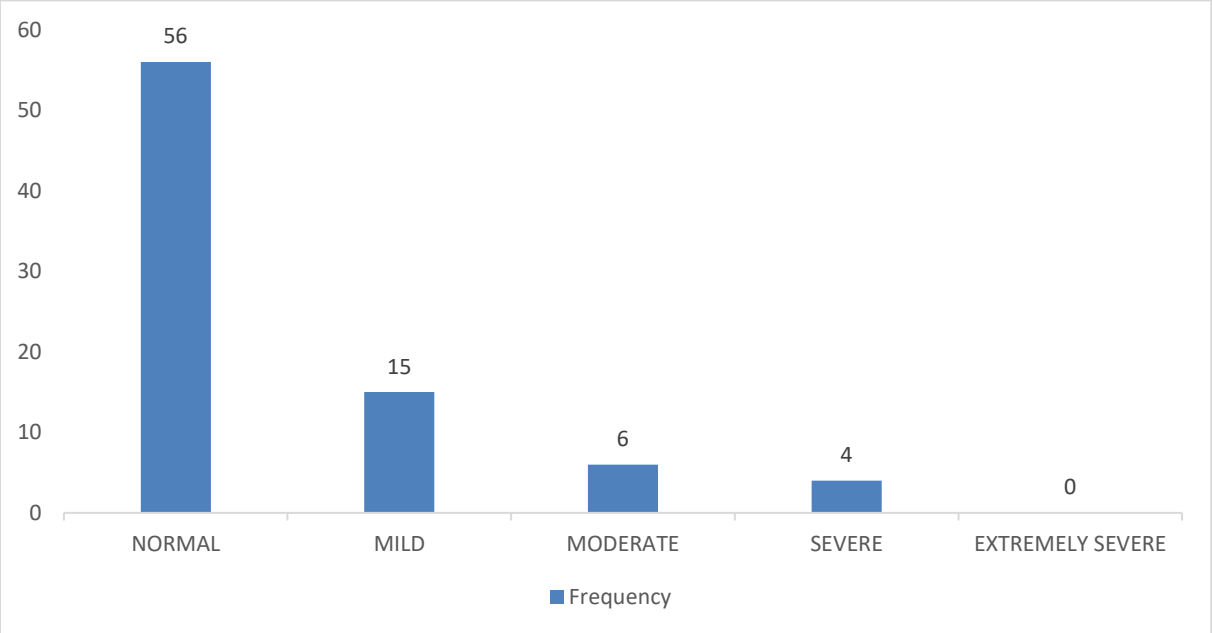
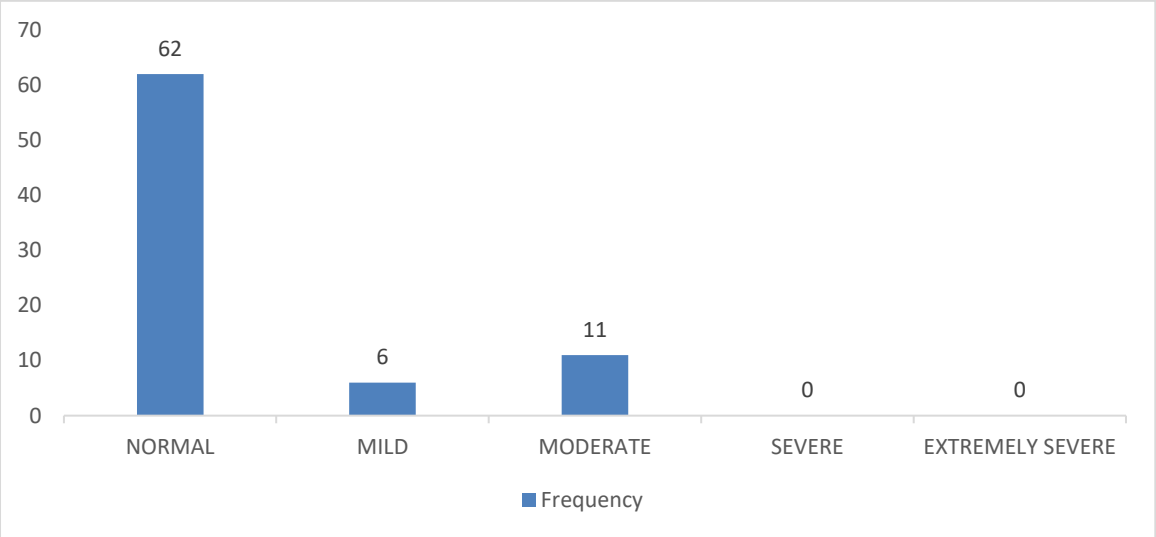


Table-7 and Figure-5 show the stress levels of females. It can be seen that 69.1 percent females in the sample experience normal levels of stress. 18.5 percent and 7.4 percent of females experience mild and moderate levels of stress, respectively. The remaining 4 percent of females experience severe levels of stress. None of the females in the sample fall in the category of "extremely severe" stress levels.

Table 8 ***Frequency distribution of anxiety scores of males***

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	62	78.5	78.5	78.5
Mild	6	7.6	7.6	86.1
Moderate	11	13.9	13.9	100.0
Severe	0	0	0	
Extremely Severe	0	0	0	
Total	79	100.0	100.0	

Figure 6 Bar graph of frequency distribution of anxiety scores of males



In Table-8 and Figure-6, we can see the anxiety levels of males. It can be seen that 78.5 percent males have normal stress levels whereas 7.6 percent of males have mild anxiety levels. The remaining 13.9 percent of males have moderate levels of anxiety. None of the males in the sample fall in the "severe" and "extremely severe" categories of anxiety levels.

Table 9 Frequency distribution of anxiety scores in females

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	46	56.8	56.8	56.8
Mild	4	4.9	4.9	61.7
Moderate	17	21.0	21.0	82.7
Severe	6	7.4	7.4	90.1
Extremely Severe	8	9.9	9.9	100.0
Total	81	100.0	100.0	

Figure 7 ***Bar graph of frequency distribution of anxiety scores of females***

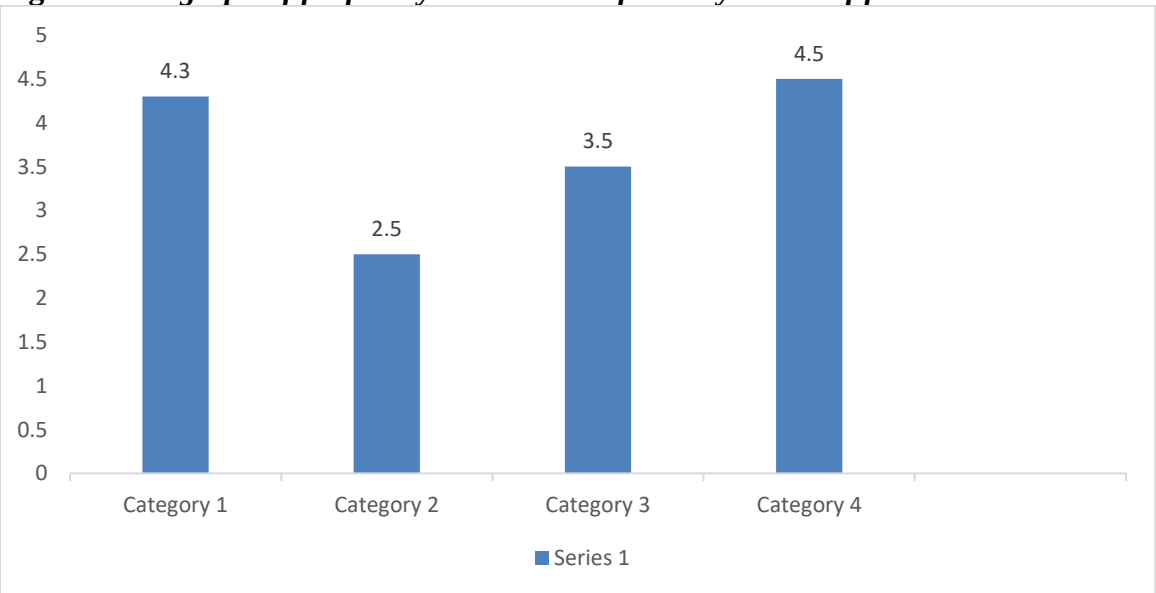
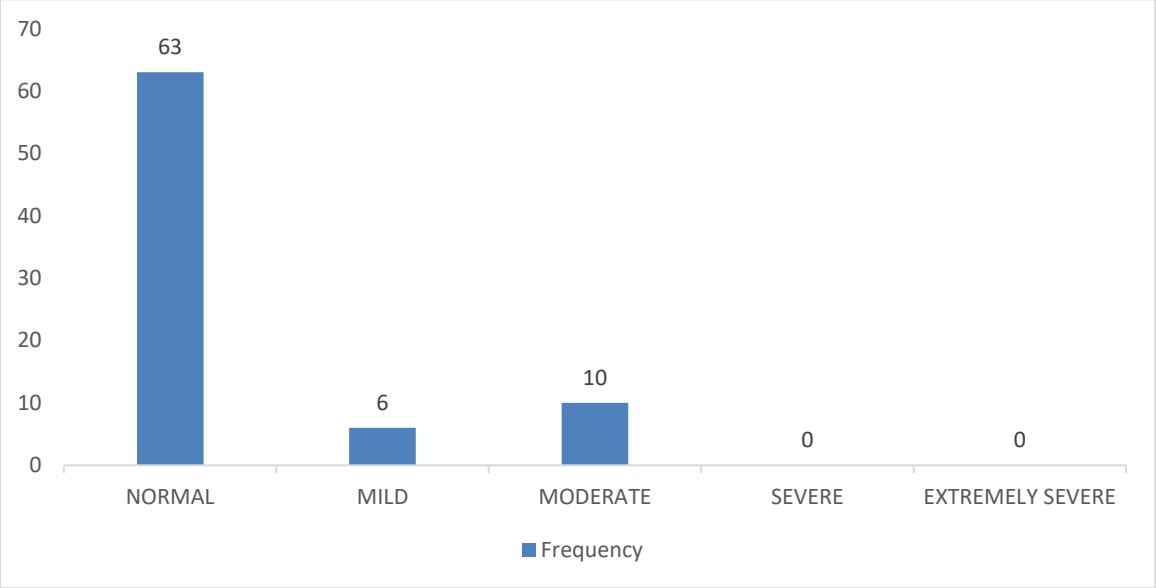


Table-9 and Figure-7 show the anxiety levels of females. It can be seen that 56.8 percent females in the sample experience normal levels of stress. 4.9 percent, 21 percent and 7.4 percent of females experience mild, moderate and severe levels of stress, respectively. The remaining 9.9 percent of females experience extremely severe levels of stress.

Table 10 ***Frequency distribution of depression scores of males***

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	63	79.7	79.7	79.7
Mild	6	7.6	7.6	87.3
Moderate	10	12.7	12.7	100.0
Severe	0	0	0	
Extremely Severe	0	0	0	
Total	79	100.0	100.0	

Figure 8 Bar graph of frequency distribution of depression scores of males



In Table-10 and Figure-8, we can see the depression levels of males. It can be seen that 79.7 percent males have normal depression levels whereas 7.6 percent of males experience mild levels of depression. The remaining 12.7 percent of males were found to have moderate levels of depression. None of the males in the sample fall in the "severe" and "extremely severe" categories of depression levels.

Table 11 Frequency distribution of depression scores of females

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	49	60.5	60.5	60.5
Mild	8	9.9	9.9	70.4
Moderate	17	21.0	21.0	91.4
Severe	5	6.2	6.2	97.5
Extremely Severe	2	2.5	2.5	100.0
Total	81	100.0	100.0	

Figure 9 Bar graph of frequency distribution of depression scores of females

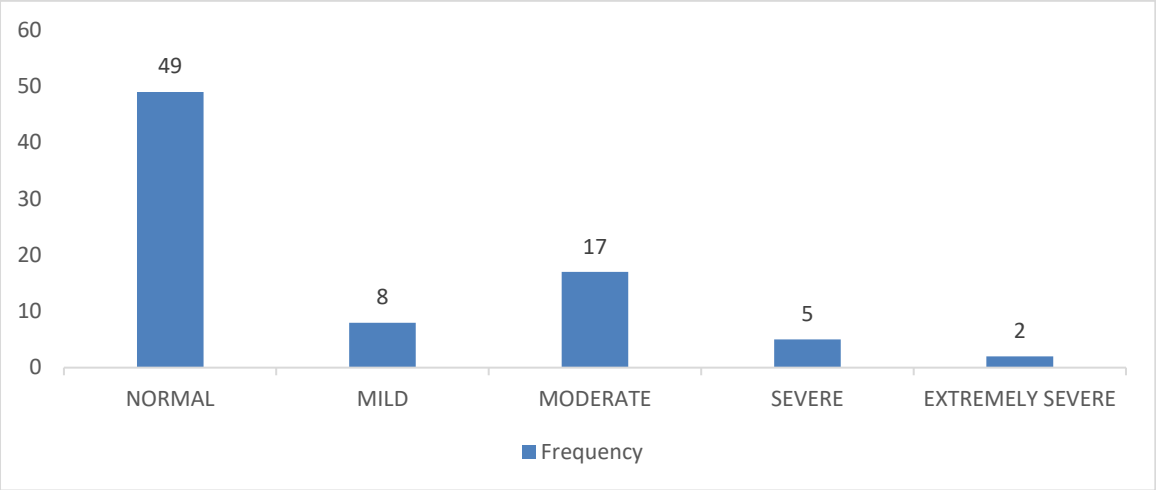


Table-11 and Figure-9 show the depression levels of females. It can be seen that 60.5 percent females in the sample experience normal levels of depression. 9.9 percent, 21 percent and 6.2 percent of females experience mild, moderate and severe levels of depression, respectively. The remaining 2.5 percent of females experience extremely severe levels of stress.

Correlation Analysis

This section explains the correlation analysis of different variables of the present study. It also depicts the strength and direction of the relationship between the variables using Pearson Correlation non-parametric test.

Table 12 Correlation between alcohol consumption, stress, anxiety and depression among males

		Depression Score	**Stress Score**	**Anxiety Score**	**Alcohol Consumption Score**
Depression Score	Pearson Correlation	1	.722**	.786**	.523**
	Sig. (2-tailed)		.000	.000	.000
	N	79	79	79	79
Stress Score	Pearson Correlation	.722**	1	.763**	.472**
	Sig. (2-tailed)	.000		.000	.000
	N	79	79	79	79
Anxiety Score	Pearson Correlation	.786**	.763**	1	.555**
	Sig. (2-tailed)	.000	.000		.000
	N	79	79	79	79
Alcohol Consumption Score	Pearson Correlation	.523**	.472**	.555**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	79	79	79	79

⋆ *Correlation is significant at the 0.01 level (2-tailed).*

Table 12 depicts that there is a positive and significant correlation (r=.472) between alcohol consumption and stress in males at 0.01 level of significance. It can be seen that alcohol consumption and anxiety are also positively and significantly corelated (r=.555) in males at 0.01 level. It can also be found that alcohol is significantly and positively related with depression (r=.523) at 0.01 level of significance.

Table 13 Correlation between alcohol consumption, stress, anxiety and depression among females

		Depression Score	**Stress Score**	**Anxiety Score**	**Alcohol Consumption Score**
Depression Score	Pearson Correlation	1	.802**	.829**	.369**
	Sig. (2-tailed)		.000	.000	.001
	N	81	81	81	81
Stress Score	Pearson Correlation	.802**	1	.803**	.412**
	Sig. (2-tailed)	.000		.000	.000
	N	81	81	81	81
Anxiety Score	Pearson Correlation	.829**	.803**	1	.402**
	Sig. (2-tailed)	.000	.000		.000
	N	81	81	81	81
Alcohol Consumption Score	Pearson Correlation	.369**	.412**	.402**	1
	Sig. (2-tailed)	.001	.000	.000	
	N	81	81	81	81

⋆ *Correlation is significant at the 0.01 level (2-tailed).*

Table-13 depicts that there is a positive and significant correlation (r=.412) between alcohol consumption and stress in females at 0.01 level of significance. It can be seen that alcohol consumption and anxiety are also positively and significantly corelated (r=.402) in females at 0.01 level. It can also be found that alcohol is significantly and positively related with depression (r=.369) at 0.01 level of significance.

DISCUSSION

The aim of the present study was to examine the relationship between alcohol consumption and stress, anxiety, and depression in both men and women. The participants ranged in age from 18 to 60. The findings of the Pearson Correlation do not support the study's hypotheses. The findings revealed that alcohol consumption has a positive correlation with stress, anxiety, and depression among men and women.

There is a significant relationship between alcohol consumption and stress among males and females.

The current study's hypotheses 1 and 2 were that there is no significant relationship between alcohol consumption and stress in males and females, however the results from Pearson Correlation show otherwise. It was found that there is a moderate degree of relationship between alcohol consumption and stress among males and females. Hence, Hypotheses 1 and 2 were rejected.

A possible explanation for this relationship may be that people drink alcohol because they have had a stressful day or are going through a particularly stressful period in their lives. This can lead to regular excessive drinking, which interferes with the brain's neurotransmitters, making it even more difficult to cope with stress in a healthy and efficient manner. Because of the sedative and depressant impact of alcohol on the neurological system, drinking is used to alleviate stress. As a result, the effects of stress reduction gained would increase consumption. The tension reduction hypothesis, which assumes that people consume alcohol for its stress-relieving effects and that alcohol consumption decreases stress, is perhaps the most influential theory on the link between stress and alcohol. Most people drink alcohol in response to stress under specific circumstances, however this depends on a number of factors, including probable genetic determinants, usual drinking habits, the type of experienced stressor, gender and individual characteristics. Alcohol is often expected to relieve stress by both social and problem drinkers. Individuals differ in their susceptibility to the impacts of stress and their readiness to use alcohol to cope. Consumers of alcohol also claim that they consume alcohol to cope with negative emotions. A major epidemiological research that included over 30,000 past-year drinkers found a constant positive connection between the number of past-year stresses and excessive drinking. It was also discovered that stress did not lead to increased frequency of drinking, but rather increased the amount of alcohol consumed. It's less clear if alcohol has a calming impact on the body's stress reaction. Furthermore, this impact is determined by a number of individual and environmental variables in addition to the pharmacological effects of alcohol. Family history of alcoholism, gender, low self-control, high self-consciousness, and other cognitive impairments such as minor brain damage were shown to be plausible modifiers. In various previous studies, it was also discovered that alcohol has stress-relieving benefits only when consumed in the context of something that distracts the drinker from their distress, a concept known as the attention allocation model.

The relationship between alcohol consumption and stress is two-way. The difficulty with drinking alcohol to reduce stress is that it might disrupt the body's physiological equilibrium. Alcohol has been proven to have a psychological and physiological impact on the body, and may even exacerbate the consequences of stress, according to many researchers. The HPA systems in the body work hard to maintain a delicate physiological balance, but adding alcohol to the mix increases the body's risk of damage. Alcohol stimulates the production of more cortisol, which changes the chemistry of the brain and resets what the body deems "normal." Alcohol alters the hormonal balance, altering how the body perceives stress and responds to it. Cortisol interacts with the brain's reward or pleasure systems, according to research, which may add to alcohol's reinforcing effects, encouraging users to consume more and more alcohol to obtain the same effect. Cortisol can also enhance habit-based learning, which raises the chance of becoming a regular drinker and of relapsing. Despite the fact that low doses of alcohol have been found to decrease stress, studies have revealed that alcohol has some of the same physiologic effects as other stressors. Drinking to cope with

stress may cause problems at work, in relationships, and in finances, as well as lead to more serious issues such as alcoholism and health problems, exacerbating the stressors that led to the individual drinking in the first place. Stress is linked to insomnia and disrupted sleep patterns, both of which are linked to increased alcohol use. Alcoholics frequently claim that they use alcohol to treat insomnia.

When it comes to gender differences, stress appears to impact risk behaviour differently for men and women. Women, on the other hand, tend to internalise the effects of stress more frequently than men, suggesting that men have a stronger relationship with alcohol. According to several research, women are more vulnerable to stress than males and have different coping methods. Therefore, they are less likely to consume alcohol to reduce stress and abuse alcohol. Women's traits that are linked to lower risk of alcohol consumption to reduce stress include how they react to stress and how they utilise emotion-focused coping techniques including seeking social support and talking to their companion. On the other hand, men are less likely to seek social support during stressful circumstances.

There is a significant relationship between alcohol consumption and anxiety among males and females.

Hypotheses 3 and 4 of the current study were that there is no significant relationship between alcohol consumption and anxiety in males and females, however Pearson Correlation findings suggest otherwise. It is found that there is high degree of relationship between alcohol consumption and anxiety among males whereas there is a moderate degree of relationship among females. Hence, hypotheses 3 and 4 were rejected.

There is a bi-directional relationship between alcohol consumption and anxiety. According to the tension reduction theory, those who suffer from anxiety are more prone to consume larger amounts of alcohol than people who do not. There are two possible drawbacks to using this coping strategy. To begin with, self-medicating with alcohol has the potential to become self-perpetuating. Underlying anxiety leads to greater alcohol use, which alters the biochemistry of the brain and depletes the neurotransmitters (the brain's "messengers") required to naturally reduce anxiety. As a result, the person becomes more anxious and requires more alcohol to ‘numb' their anxiety. In the long run, this can lead to an individual becoming tolerant of alcohol, meaning that they require increasingly greater doses of alcohol to get the same level of anxiety reduction. The second issue with self-medicating with alcohol is that it is difficult to maintain the exact quantity of alcohol required to reduce negative feelings. Because the action of alcohol on the brain is such that after the initial ‘euphoria' or excitement from the first drink, alcohol works as a depressant, and anxious sensations may quickly return, maintaining the optimal balance of alcohol to lower anxiety is nearly difficult. Increased drinking to cope with those feelings results in a quick rise in blood alcohol levels, which can be counterproductive.

Individuals with anxiety drink to alleviate their anxiety when inebriated; however, this is just a temporary fix, and after the alcohol wears off, the individuals return to their anxious condition. After a night of drinking to try to relieve anxiety, the effects of the alcohol will wear off, and the individual's anxious feelings will return, generally at higher levels. In a cross-sectional study, Zimmermann et al. (2003) discovered that people who suffered from anxiety episodes and problems connected with anxiety were more likely to become dependent drinkers or misuse alcohol. According to Villarosa et al. (2014), individuals who reported higher anxiety symptoms consumed more alcohol than those who had fewer or no

symptoms. According to various cognitive theories, anxiety may indirectly lead to increased alcohol use since alcohol inhibits cognitive processes and therefore decreases anxiety's cognitive symptoms. Increasing distractibility (lowering attention to the stressor) or decreasing the perceived degree of threat are two of these cognitive processes. Although alcohol may alleviate anxiety in some situations, it can also exacerbate anxiety in the short and long term through biological, psychological, or social factors. Alcohol depletes neurotransmitters, which are essential for the brain to overcome anxiety on its own, as a result, the more a person drinks, the more nervous they get. Intoxication, hangovers, and withdrawal from alcohol can all have anxiolytic effects in the short term. People might suffer from a hangover just a few hours after stopping heavy drinking. Hangover symptoms include unpleasant physical and mental symptoms similar to anxiety, such as sympathetic hyperactivity (e.g., tremor, sweating, and an increase in heart rate and blood pressure), as well as cognitive and mood problems (e.g., worrying about what one did or said while intoxicated). Chronic alcohol use, or AUDs, is a risk factor for anxiety disorders in the long run, according to experimental data. Alcohol-induced anxiety disorders are marked by the emergence of anxiety shortly after and as a result of alcohol use, as well as the decrease of anxiety symptoms after abstinence from alcohol. It is found that anxiety symptoms can improve after reducing alcohol use and receiving treatment for alcoholism, confirming the idea that alcohol causes anxiety. Anxiety and alcohol consumption aggravate each other over time, creating a vicious cycle.

The gender difference in the strength of relationship among males and females may be due to the difference in ways of dealing with anxiety. Men may be more likely than women to use alcohol as a coping mechanism for their anxiety. There is a stronger relationship between alcohol intake and anxiety among males as compared to females.

There is a significant relationship between alcohol consumption and depression among males and females.

Hypotheses 5 and 6 of the current study were that there is no significant relationship between alcohol consumption and depression in males and females, however Pearson Correlation findings suggest otherwise. It is found there is high degree of relationship between alcohol consumption and depression among males whereas there is a moderate degree of relationship among females. Hence, hypotheses 5 and 6 were rejected.

One possible explanation of this relationship is that people may be lured to alcohol's depressant effects as a form of medicine to help them cope with chronic feelings of sorrow. Desperate to feel better or numb the suffering, even if only for a short time, depression patients frequently turn to the pleasant effects of alcohol. While alcohol may temporarily alleviate some of the symptoms of sadness, it has the long-term effect of worsening depression. Alcohol addiction has a slew of negative consequences that affect almost every part of life. Depressed people may acquire depression as a result of the financial and career consequences of alcohol drinking, as well as the stress on their relationships. This frequently results in a destructive cycle of consuming alcohol to self-medicate depressive symptoms, with the depression increasing as a result of the ongoing alcohol misuse. When a person abuses alcohol on a regular basis, physical dependency and addiction can develop quickly. Some people have overlapping genetic predispositions that make them more susceptible to both alcohol addiction, and the beginning of one can precipitate the onset of the other. Hangovers are frequently accompanied by symptoms of despair, and long-term alcohol consumption can lead to depression. Alcohol consumption can have additional negative

consequences for those who have been diagnosed with depression and are taking antidepressants to treat it. Antidepressants are less effective when used with alcohol, and the depressive effects of the alcohol will exacerbate the depression that is already mismanaged or poorly controlled.

Depression and alcohol use exacerbate the vicious cycle of life's many intertwined events. Depression can result from frustration, conflict, or pressure as a result of failure to meet our needs, failure to achieve goals, inability to meet expectations, loss of loved ones, guilt due to mistakes, or personal limitations, among other things, and this may lead to alcohol consumption, which worsens the situation by increasing depressive symptoms in the consumers. Depression can arise as a consequence of excessive drinking, but it can also occur as a result of excessive drinking because the person is depressed. Mood problems can be caused or exacerbated by alcohol consumption. People who are depressed are more likely to start drinking heavily. It's unclear if depression or alcohol abuse occurs first. Although each person's experience is unique, having one of the circumstances raises the likelihood of developing the other. People who suffer from severe depression, for example, may self-medicate by drinking on a regular basis. This can exacerbate the problem of alcohol abuse. People who drink regularly are more prone to have depressive episodes, and they may drink more to feel better.

Regular drinking alters brain chemistry, depleting levels of the neurotransmitter serotonin, which is particularly relevant in this case. This is a substance in the brain that has been linked to depression. This results in a cyclical pattern of drinking to relieve depression, then becoming more depressed as serotonin levels decline, necessitating the use of more alcohol to treat the depression. Furthermore, there is some evidence that refraining from alcohol for a brief period of time improves depressive symptoms in those who are dependent on alcohol, underlining the influence of alcohol on depression once again.

There is a gender difference in the strength of this relationship among males and females. There is a stronger relationship between alcohol intake and depression among males as compared to females. According to various studies, women are less prone to consume alcohol to reduce stress and depressive symptoms. Women also differ from men in how they react to stress and how they utilise emotion-focused coping techniques including seeking social support. On the other hand, men are less likely to seek social support during stressful circumstances.

CONCLUSION

The study broadens the perspective on the association between alcohol consumption and stress, anxiety and depression. According to the findings of this study, there is a positive relationship between alcohol consumption and stress. Males and females had the same level of relationship strength. Alcohol consumption and stress have a reciprocal relationship. People who are stressed are more likely to consume alcohol. Alcohol consumption, on the other hand, might also cause stress.

The results of the study revealed that there is a positive relationship between alcohol consumption and anxiety. The strength of this relationship is stronger in males than in females. In males, there is a high degree of correlation between alcohol consumption and anxiety whereas in females, the degree of correlation is moderate. It has been found out that

people who consume alcohol are more vulnerable to anxiety than those who do not. In the same way, anxious people are more likely to consume alcohol than non-anxious ones.

The findings of the study also revealed that there is a positive relationship between alcohol consumption and depression among males and females. Similar to anxiety, depression also has a stronger relationship with alcohol consumption among males than in females. In females, the degree of correlation is moderate whereas in males, there is a high degree of correlation. The relationship between alcohol consumption and depression is two-way. People use alcohol to self-medicate their depressed symptoms because of its depressant properties, however long-term use of alcohol to self-medicate leads to depression.

The findings of this research revealed information that can be utilized and adopted by health care professionals in healthcare practice, psychologists and psychiatrists. The present study hopes to further educate the people about the negative effects of alcohol not only on people's physical health but also on their mental health. This will ensure early management and increased quality of life among the people who consume alcohol.

Limitations

- This study only included a small number of samples (160 individuals).
- The research was conducted at a single point of time, avoiding the episodic nature of depression and anxiety symptom assessment.
- Because of the constraints on techniques of data collection, it has limitations in generalising the results.
- The study's focus on the urban population restricts our knowledge of the relationship between alcohol consumption and stress, anxiety, and depression among the rural population.
- The type of method used for analysis in the study (Correlation) does not indicate causality and cannot be construed as such
- Participants were given a self-report questionnaire, which may have resulted in data collecting inaccuracies owing to misinterpretation of questions or misreading of statements and responses. Also, there was a possibility that Participants might also score themselves too low or too high on the alcohol consumption and depression, anxiety, and stress scales.

Strengths

The amount of information presented, as well as the vast variety of variables assessed in the present study, are both strengths of the current study. For future research in this field, the current work can easily be replicated.

Future recommendations

This research raised new questions about the relationship between alcohol and stress, anxiety and depression. It's unclear why males have a stronger association between drinking and anxiety and depression than women. As a result, more research is needed to determine the differences in the strength of this association.

It is suggested that people who consume alcohol regularly should be screened for elevated levels of stress, anxiety, and depression. It is also recommended that people with alcohol

dependency and people who are undergoing treatment for alcohol use disorders should also be screened for excessive levels of stress, depression, and anxiety.

Future research should investigate the direct impacts of alcohol on stress, anxiety, and depression, and vice versa. Future study should emphasize on how alcohol intake directly promotes stress, anxiety, and depression, as well as the opposite. It's difficult to predict if anxiety or depression symptoms led to alcohol consumption or vice versa, or whether the associations are due to other factors that are linked to both psychological health and alcohol consumption.

With a larger sample size, future research in this area might build on the current work.

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Conflict of Interest

The author(s) declared no conflict of interest.

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LIST OF ABBREVIATIONS

- **AUD** – Alcohol Use Disorders
- **AUDIT**- The Alcohol Disorders Identification Test
- **COVID 19**- Coronavirus Disease 2019
- **DASS 21**- Depression Anxiety Stress Scales- 21
- **DSM**- Diagnostic and Statistical Manual Disorders
- **HADS**- The Hospital Anxiety and Depression Scale
- **HPA-** Hypothalamic–pituitary–adrenal axis
- **ICD**- International Classification of Diseases
- **SCARED**- Screen for Child Anxiety Related Disorders
- **SPSS-** Statistical Package for the Social Sciences
- **WHO** – World Health Organisation