

Pattern of Comorbid Substance Abuse in Patients of Depression

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ABSTRACT

This study explores the comorbidity of substance abuse among patients attending a Psychiatric Outpatient Department. The research focused on a sample of 100 individuals diagnosed with depression, drawn from four different clinics within the Muzaffarnagar District. The sample was evenly divided, with 50 respondents experiencing substance abuse and 50 without any history of substance abuse.

To assess the severity of depression, the Hamilton Depression Rating Scale (HDRS)—also known as the Hamilton Depression Scale (HDS) or simply the Hamilton Scale—was employed. This scale, developed by Dr. Max Hamilton in 1960, is a widely recognized instrument for evaluating the intensity of depressive symptoms and is extensively used in both clinical and research contexts.

For the screening of substance abuse, the World Health Organization's Alcohol, Smoking, and Substance Involvement Screening Test (WHO ASSIST) questionnaire was utilized. This tool, developed by WHO, is designed to detect substance use and associated problems.

The findings of the study are :

- There were three types of comorbid Substance Abuse in patients of Depression and those are Alcohol , Tobacco and Cannabis
- Respondents with Substance Abuse have more severe depression than respondents without Substance Abuse
- And these findings are presented with frequency and percentages, and they are supported by relevant research.

Keywords: Substance Abuse, Depression, Male, Female, Employment, Unemployment, Hindu, Muslim, Married, Unmarried.

INTRODUCTION



DEPRESSION

Depression is a common but serious mood disorder that affects how a person feels, thinks, and handles daily activities. It is more than just feeling sad or going through a rough patch. Depression can cause severe symptoms that interfere with the ability to function at work, at home, and in social situations.

The American Psychological Association (APA) defines **depression** as a common and serious medical illness that negatively affects how you feel, the way you think, and how you act. Depression causes feelings of sadness and/or a loss of interest in activities once enjoyed. It can lead to various emotional and physical problems and can decrease a person's ability to function at work and home

SYMPTOMS OF DEPRESSION

Depression can manifest in various ways, and symptoms can vary from person to person. However, some common symptoms include:

Emotional Symptoms:

1. Persistent sadness, anxiety, or "empty" feelings.
2. Feelings of hopelessness or pessimism.
3. Irritability.
4. Feelings of guilt, worthlessness, or helplessness.
5. Loss of interest or pleasure in hobbies and activities that were once enjoyed

Cognitive Symptoms:

1. Difficulty concentrating, remembering, or making decisions.
2. Thoughts of death or suicide, or suicide attempts.

Physical Symptoms:

1. Fatigue or decreased energy.
2. Insomnia, early-morning wakefulness, or oversleeping.
3. Changes in appetite or weight (unintentional weight loss or gain).
4. Aches or pains, headaches, cramps, or digestive problems without a clear physical cause that do not ease even with treatment.

Behavioral Symptoms:

1. Social withdrawal.
2. Neglecting responsibilities or self-care.
3. Increased substance use (alcohol, drugs).
4. Difficulty in managing tasks at work or home.

SUBSTANCE ABUSE

Substance use is not, by itself, a disorder. **According to DSM-5**, widely used as a road map to diagnosis, it becomes a disorder when use eludes control and interferes with functioning. Substance use disorder is marked by a pattern of pathological behaviors related to use of the substance.

World Health Organization (WHO): The WHO defines substance abuse as "the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs, characterized by a compulsive pattern of consumption." This use is typically associated with significant adverse consequences, such as health problems, social and legal issues, and impaired functioning.

American Psychological Association (APA): The APA refers to substance abuse as a condition in which an individual engages in the excessive or inappropriate use of substances that results in significant

negative effects on their health, well-being, and social functioning. In its Diagnostic and Statistical Manual of Mental Disorders (DSM-5), substance use disorders are characterized by a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems

THERE ARE SOME TYPES OF SUBSTANCE ABUSE WHICH ARE GIVEN BELOW :

ALCOHOL

Alcohol is a colorless, volatile liquid that is produced by the fermentation of sugars and is commonly used in beverages for its psychoactive effects. Chemically, alcohol refers to ethanol (ethyl alcohol), the type of alcohol found in alcoholic beverages. Ethanol is a central nervous system depressant that affects brain function and can alter mood, behavior, and cognitive functions

SYMPTOMS OF ALCOHOL ADDICTION

- Behavioral differences when the person is drunk versus when they are sober
- Blacking out frequently due to drinking too much on a regular basis
- Long-term health issues, including memory problems, stomach upset, heart and blood pressure problems, and damage to the liver and kidneys
- Mental health problems, including anxiety, depression, or insomnia, depending on how much alcohol the person has consumed
- Being drunk on a regular basis, evident by slurred speech, loss of coordination, impaired attention and memory, and poor decision-making

It's Impact on Depression: Alcohol is a central nervous system depressant. Its consumption can exacerbate or trigger depressive symptoms. Chronic alcohol use is associated with a higher risk of developing major depressive disorder (MDD). Individuals with depression may also use alcohol as a form of self-medication, creating a cycle that can worsen both conditions.

Mechanism: Alcohol affects neurotransmitters and brain function, which can disrupt mood regulation. Long-term use can lead to changes in brain chemistry that increase susceptibility to depression

TOBACCO

Tobacco refers to the leaves of the plant species *Nicotiana tabacum* and *Nicotiana rustica*, which are dried and processed for use in smoking, chewing, or snuffing. Tobacco contains nicotine, a highly addictive stimulant that affects the central nervous system

SYMPTOMS OF TOBACCO ADDICTION

- Boost mood, give people a sense of well-being, and possibly even relieve minor depression.
- Increase the heart rate by around 10 to 20 beats per minute.
- Increase blood pressure by 5 to 10 mm Hg.
- Possibly cause sweating, nausea, and diarrhea.
- Intense craving for nicotine
- Anxiety
- Depression
- Drowsiness or trouble sleeping

- Bad dreams and nightmares
- Feeling tense, restless, or frustrated
- Headaches
- Increased appetite and weight gain
- Problems concentrating

Impact on Depression: Tobacco smoking has been linked to higher rates of depression. Nicotine addiction can affect brain function and mood regulation. Smokers are more likely to experience depressive symptoms, and those with depression are more likely to smoke.

Mechanism: Nicotine alters neurotransmitter systems, including dopamine, which plays a role in mood regulation. The relationship is bidirectional; smoking can contribute to depression, and people with depression may use tobacco as a coping mechanism

CANNABIS

Cannabis, often called marijuana, is a plant known for its psychoactive effects, primarily due to the compound THC. It is used for both recreational and medicinal purposes.

SYMPTOMS OF CANNABIS ADDICTION

- Frequent intoxication on the drug, indicated by sleepiness, relaxation, mild euphoria, hunger (—the munchies!), pain relief, loss of coordination, depression
- In some cases, an anxiety disorder or psychosis triggered by use
- Side effects like decreased short-term memory, dry mouth, red eyes, impaired perception, and cravings for the drug
- Lung infections, if smoked; digestive issues, if eaten
- Constant need for more marijuana to feel normal or good
- Withdrawal symptoms, including nightmares, insomnia, nausea, disinterest in food, or depression

Impact on Depression:

Cannabis is sometimes used by individuals to alleviate symptoms of depression. However, its impact on depression is complex and can vary. While some studies suggest that cannabis, particularly CBD, may have antidepressant effects, heavy or long-term use, especially of THC-rich cannabis, can exacerbate symptoms of depression in some individuals

Mechanism:

- **CBD:** May interact with serotonin receptors, potentially providing mood-stabilizing effects.
- **THC:** Can influence the endocannabinoid system, which regulates mood, but may also impair cognitive function and exacerbate anxiety or depression in some users.

COMORBIDITY BETWEEN DEPRESSION AND SUBSTANCE ABUSE

The comorbidity between substance abuse and depression presents a profound challenge in mental health care, as these two conditions often intertwine, intensifying the impact of each. Individuals grappling with depression may resort to substance use as a means of self-medication, seeking solace from their emotional turmoil. However, this coping mechanism can spiral into a destructive cycle, where substance use further exacerbates depressive symptoms, complicating the treatment of both disorders. The interplay between these conditions demands a nuanced approach, as both must be addressed concur-

rently to achieve effective and lasting recovery.

This dual occurrence is influenced by a complex web of factors, including genetic predisposition, environmental pressures, and neurobiological alterations. Substance abuse can disrupt brain chemistry, potentially worsening or even triggering depressive episodes. On the other hand, depression can cloud judgment and heighten susceptibility to substance use as individuals attempt to navigate their distress. Successful treatment typically requires a holistic approach, integrating therapy, medication, and support systems to address both substance abuse and depression, thereby breaking the cycle and fostering sustained recovery.

NEED AND SIGNIFICANCE OF STUDY

In the present research we study the pattern of comorbid substance abuse in patients visiting psychiatric outpatient department

Studying dual diagnosis, which refers to the presence of both depression and substance abuse, is essential because these conditions often occur together and significantly impact individuals' lives. People with both depression and substance abuse face more severe health problems, including higher rates of hospitalizations, suicide attempts, and difficulties in maintaining relationships and jobs. By understanding how depression interacts with substance abuse, healthcare providers can develop more effective treatments that address both conditions simultaneously, leading to better overall outcomes for patients.

The significance of studying depression with and without substance abuse lies in improving the quality of care for affected individuals. Research can help identify the specific challenges and needs of those suffering from both conditions compared to those with only depression. This knowledge enables the development of tailored interventions and support systems, ensuring that patients receive comprehensive care. Furthermore, such studies can inform public health strategies, reduce the stigma associated with these conditions, and ultimately lead to better mental health and well-being for many people

OBJECTIVES OF STUDY:

- To prepare and compare Demographic details of the Respondent having depression
- To identify comorbid substance abuse in patients of depression visiting psychiatric outpatient department
- To find out and compare the severity of depression in patients with substance abuse and without substance abuse

RATIONALE

Understanding the relationship between depression and substance abuse is crucial because these issues often occur together, creating additional challenges for treatment and recovery. Patients with both conditions tend to have more severe symptoms, face greater difficulties in daily life, and often don't respond as well to standard treatments. By studying the differences and similarities between depressive patients with and without substance abuse, we can develop better treatment approaches, improve patient outcomes, and inform healthcare policies. This research aims to provide valuable insights that can lead to more effective, integrated care for individuals struggling with both depression and substance abuse

REVIEW OF LITERATURE

Swendsen et al. (1998) conducted a longitudinal study on Substance Abuse as a Risk Factor for Depression to examine substance abuse as a risk factor for depression. The study follows a cohort of young adults over a 10-year period, assessing the onset and recurrence of depression in relation to substance use. The findings highlight the bidirectional nature of the relationship between substance abuse and depression, underscoring the importance of early intervention and targeted prevention strategies.

Grant et al. (2004) conducted a longitudinal study on "Comorbidity of Depression and Substance Abuse: A Longitudinal Examination" aimed to explore the temporal relationship between depression and substance abuse over a five-year period. The researchers followed a large sample of individuals diagnosed with depression and assessed their substance use patterns at multiple time points. Results revealed bidirectional associations between depression and substance abuse, with individuals experiencing depression at baseline being at increased risk for developing substance use disorders (SUDs) over time, and vice versa. Additionally, the study highlighted the importance of early intervention and integrated treatment approaches for addressing both conditions concurrently.

Fergusson et al. (2005) gave a study on Longitudinal Associations between Depression and Substance Dependence from Adolescence through Early Adulthood that investigates the bidirectional relationship between depression and substance dependence from adolescence through early adulthood. Using data from a birth cohort study in New Zealand, the authors identify temporal patterns of co-occurring depression and substance abuse, emphasizing the need for early intervention and prevention efforts targeting both conditions.

Kessler, R. C., & Wang, P. S et al. (2008) conducted a study on "The Relationship Between Substance Use Disorders and Depression: A Meta-Analysis published in Archives of General Psychiatry.

This meta-analysis of 22 studies indicates a strong association between substance use disorders and an increased risk of depression. The odds ratio for depression among individuals with substance use disorders was found to be 2.5 times higher compared to those without substance use issues. This suggests a robust link between addiction and the onset of depressive symptoms

McHugh, R. K., & Weiss, R. D et al. (2013) gave a review on the study based on : "Co-occurring Depression and Substance Use Disorders: A Review of Epidemiological Studies" which was publishes on Journal of Clinical Psychiatry .

This comprehensive review examines the co-occurrence of depression and substance use disorders. It finds that approximately 40-60% of individuals with substance use disorders also meet the criteria for major depressive disorder (MDD). The study highlights that the prevalence of depression among those with addiction is significantly higher compared to the general population.

RESEARCH DESIGN

The primary objective of a cross-sectional study is to analyze the prevalence of a particular condition, characteristic, or outcome within the population at that specific moment, The research was conducted in Muzaffarnagar (Uttar Pradesh) The sample of the above study was Patients of depression with Substance Abuse and without Substance Abuse from four different clinics and de addiction center in the district Muzaffarnagar 50 depression patients with substance abuse and 50 Depression Patients without substance abuse were the target population of this study, In this study we use **Purposive sampling method**, ensuring representation across different psychiatric diagnoses and demographic factors.

TECHNIQUES AND TOOLS

TOOL -1 (FOR SCREENING SUBSTANCE ABUSE AND PATTERN OF SUBSTANCE ABUSE)

The WHO ASSIST (Alcohol, Smoking and Substance Involvement Screening Test) questionnaire was developed by the World Health Organization (WHO) to screen for substance use and related problems. It consists of a series of questions designed to assess the frequency and severity of substance use across various categories, including alcohol, tobacco, cannabis, cocaine, amphetamines, sedatives, hallucinogens, inhalants, opioids, and other drugs.

TOOL – 2(FOR SCORING DEPRESSION)

The Hamilton Depression Rating Scale (HDRS), also known as the Hamilton Depression Scale (HDS) or simply the Hamilton Scale, is a widely used tool for assessing the severity of depression in individuals. It was developed by Dr. Max Hamilton in 1960 and has since become one of the most commonly utilized instruments in clinical and research settings for evaluating depressive symptoms.

ADMINISTRATION OF TEST:

The questionnaires were printed and was distributed to the target population, the purpose and objectives of the study undertaken, instructions and consent form with socio- demographic details were provided. The participants were asked to fill the informed consent form before responding the questionnaires. The participants were advised not to think too much nor take much time in answering each question.

INSTRUCTIONS GIVEN WERE AS FOLLOWS:

“Please read each statement carefully There are no right or wrong answers. Do not spend too much time on any one statement. This assessment is not intended to be a diagnosis. If you are concern about your results in any way, please speak with a health professional.”

PROCEDURE OF COLLECTING DATA

The data has been collected from the patients of depression with substance abuse and without substance abuse from 4 different clinics from the district Muzaffarnagar in Uttar Pradesh

The data has been taken under the guidance of Psychiatrist

Firstly when the data has to be collected the patients were made to sit in a quiet and comfortable environment with proper lightings and were asked to be comfortable

The patients were asked for their consent about sharing their details if they gave positive consent then only their data has been taken for the study

They were made sure that everything will be confidential

When they are ready they were given few instructions about the test along with that they were told about the objective of the study and then the questionnaires with demographic detail form were given to the sample

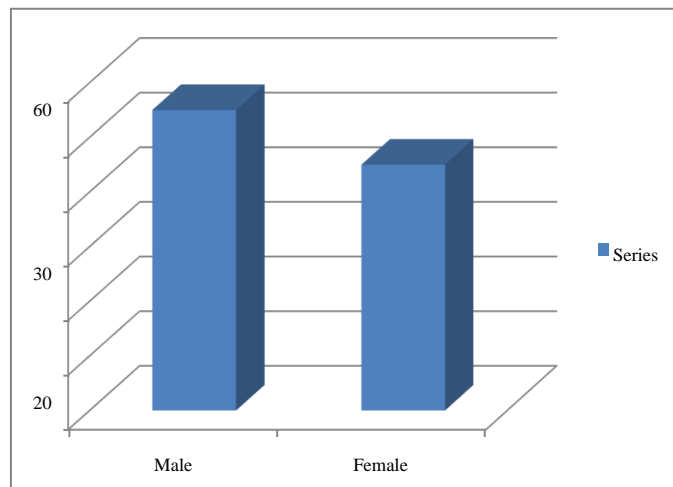
After the data collection has been done, the data has been analyzed for the study

RESULTS AND DISCUSSION

Table 1 Gender wise Distribution of Respondents (N=100)

Gender	Frequency	Percentage
Male	55	55%
Female	45	45%
Total	100	100%

FIGURE 1

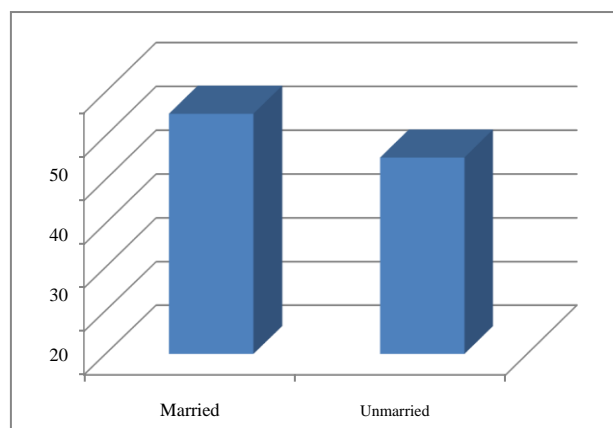


This is further explained by the figure (1) which shows the Gender Wise Distribution of respondents through Bar Graph representation. The total no. of the respondents were 100 out of which 55% were males and 45% were females.

Table 2 Distribution of the Respondents on the basis of Marital Status (N=100)

Marital Status	Frequency	Percentage
Married	55	55%
Unmarried	45	45%
Total	100	100%

FIGURE 2

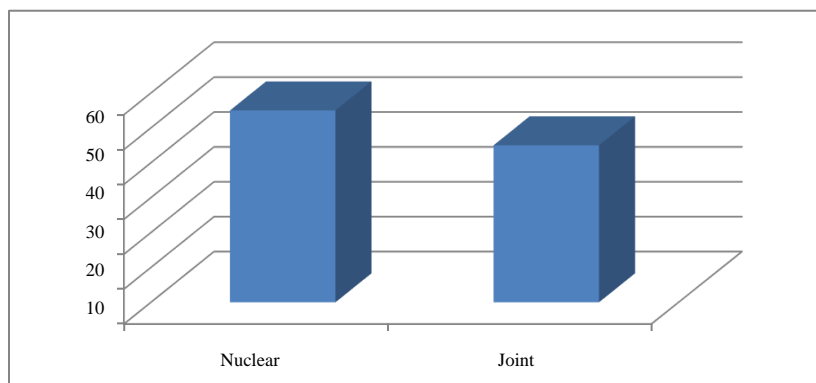


This is further explained by the figure 2 which shows Distribution of the respondents on the basis of marital status through Bar Graph representation. The total no. of respondents were 100 out of which 55% of the respondents were married and 45 % of the respondents were unmarried.

Table 3 Distribution of the Respondents on the basis of Family Type (N=100)

Type of family	Frequency	Percentage
Joint	45	45%
Nuclear	55	55%
Total	100	100%

FIGURE 3

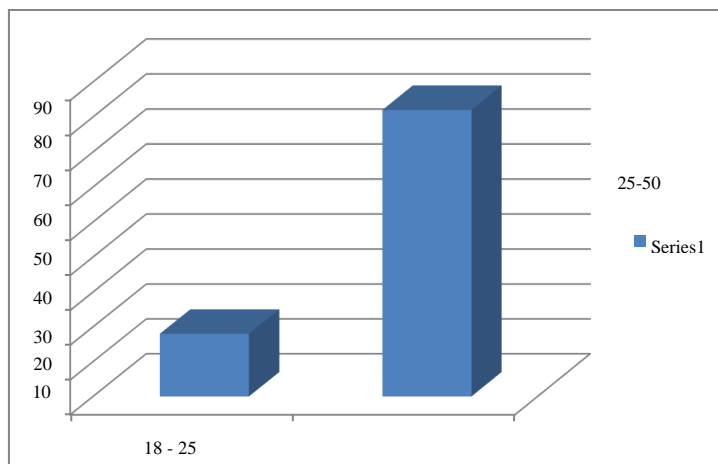


This is further explained by the figure 3 which shows the distribution of respondents on the basis of Family Type through Bar Graph Representation. The total numbers of the respondents were 100 out of which 55% belongs to nuclear family and 45% belongs to joint family.

Table .4 Age wise Distribution of the Respondents (N=100)

Age	Frequency	Percentage
18 - 25	18	18%
25 - 50	82	82%
Total	100	100%

FIGURE 4



This is further explained through the figure 4.4 which shows the age wise Distribution of the respondents through Bar Graph Representation. The total number of the respondents were 100 out of which 82 % of the respondents were above 25 years and 18 % of the respondents were below 25 years. The minimum age of the respondent is 18 and maximum age of the respondent is 50

Table 5 Mean of Age category of the respondents.(N=100)

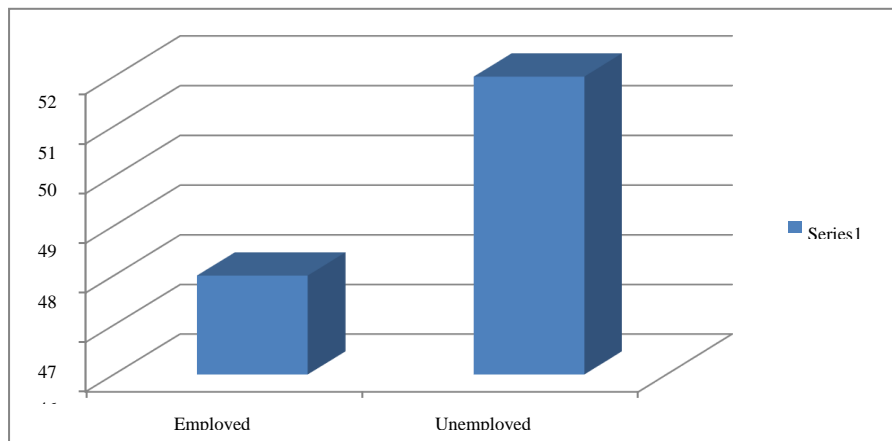
Step	Calculation	Result
Sum of all ages	3,723	3,723
Number of ages	100	100
Mean (Average)	Total sum of ages / number of ages	3,723/100
Mean (Average)		37.23

The mean of the given ages is 37.23.

Table 6 Distribution of Respondents on the basis of Occupation (N=100)

Occupation	Frequency	Percentage
Employed	48	48%
Unemployed	52	52%
Total	100	100%

FIGURE 5

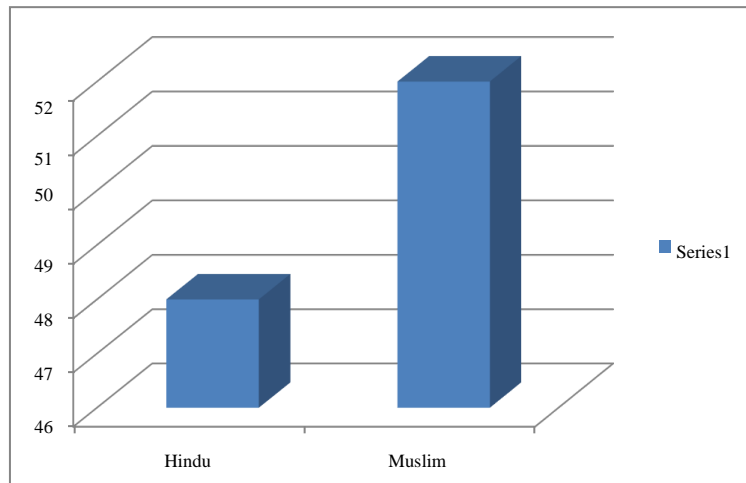


This is further explained through the figure 5 shows the Distribution of Respondents on the basis of Occupation through Bar Graph Representation. The total number of the respondents were 100 out of which 52% of the respondents were unemployed and 48% of the respondents were employed.

Table 7 Distribution of Respondents on the basis of religion (N=100)

Religion	Frequency	Percentage
Hindu	48	48%
Muslim	52	52%
Total	100	100%

FIGURE 6

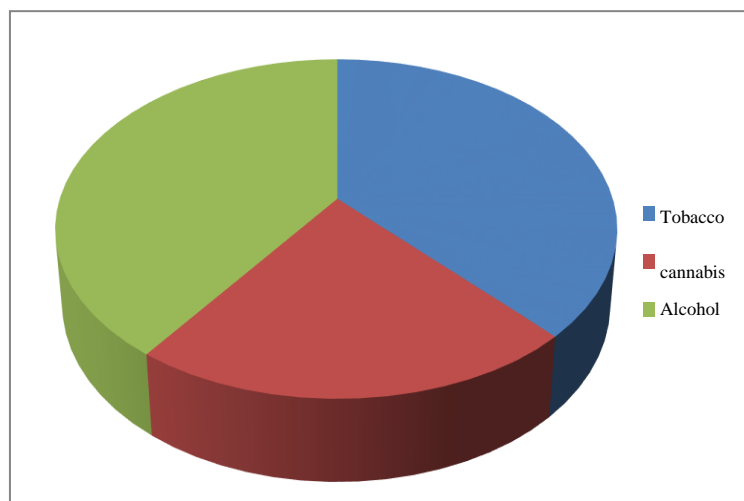


This is further explained by the figure 6 which shows distribution of respondents on the basis of religion through Bar Graph Representation. The total number of respondents were 100 out of which 52% of the respondents were Muslim and 48 % of the respondents were Hindu.

Table 8 Types of Substances consumed by Respondents (N=50)

Substance	Frequency	Percentage
Cannabis	11	22 %
Alcohol	20	40%
Tobacco	19	38 %
Total	50	100 %

FIGURE 7



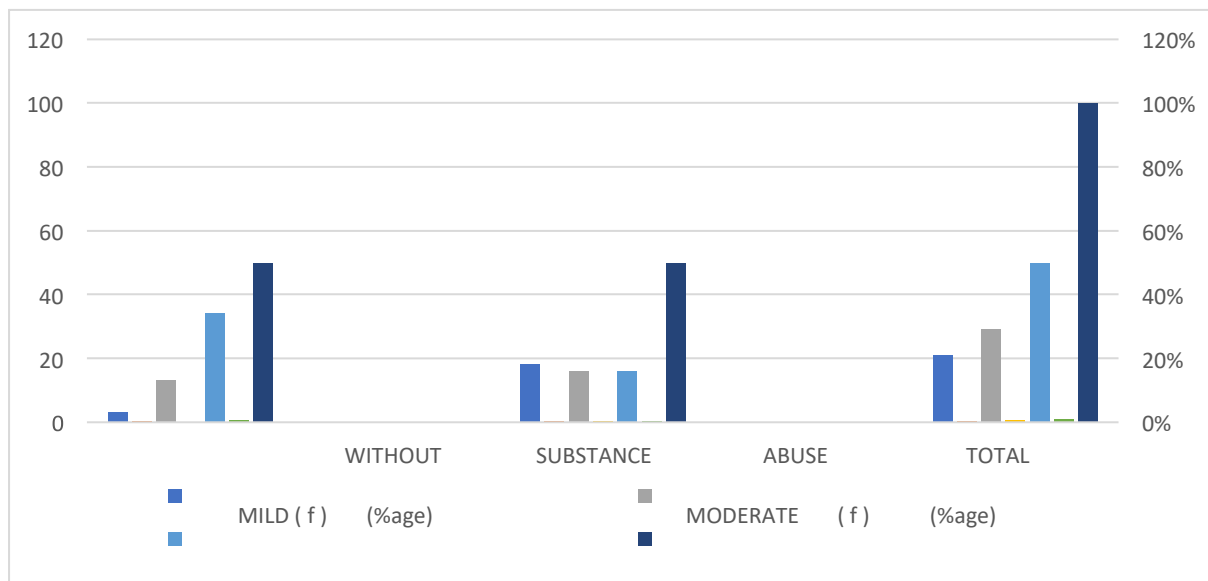
The above figure 4.7 shows different substance consume by respondents through the pie chart where 40 % Of the respondents consume Alcohol which is represented by green colour 38 % of the respondents consume Tobacco which is represented by Blue colour and 22% of the respondents consume Cannabis which is represented by Blue colour in the figure.

The objective 2 (To identify comorbid substance abuse in patients of Depression visiting Psychiatric Out Patient Department (OPD)) The findings of the above objective is shown by the table 8 and figure 7 which represent three types of comorbid substance abuse which are cannabis , alcohol and tobacco.

Table 9 Distribution of Depression Respondents With Substance Abuse and Depression Respondents Without Substance Abuse on the basis of Severity of Depression (N =100)

RESPONDENTS	MILD (f) (%age)		MODERATE (f) (%age)		SEVERE (f) (%age)		TOTAL (f) (%age)	
	<u>WITH</u> <u>SUBSTANCEABUSE</u>	3	6 %	13	26 %	34	68 %	50
<u>WITHOUT</u> <u>SUBSTANCEABUSE</u>	18	36%	16	32%	16	32%	50	50%
<u>TOTAL</u>	21	42%	29	58%	50	100%	100	100%

FIGURE 8



The above figure 8 shows the Distribution of Respondents with substance abuse and without substance abuse based on severity of Depression through Graphical Representation

The total number of respondents were 100 out of which 50 respondents consume substance abuse where 68% of the respondents were prone to Severe Depression, 26% of the respondents were prone to Moderate Depression and 6% of the respondents were prone to Mild Depression. And from the other 50 respondents who do not consume substance abuse where 36% of the respondents were prone to Mild Depression, 32% of the respondents were prone to Moderate Depression and 32% of the respondents were prone to Severe Depression.

In total there were 50 respondents who were prone to Severe Depression, 29 respondents were prone to Moderate Depression and 21 respondents were prone to Mild Depression.

Few supported research are given below:

- Kessler, R. C., & Wang, P. S et al (2008) "The Relationship Between Substance Use Disorders and Depression

- McHugh, R. K., & Weiss, R. D etal (2013) gave a review on the study based on : "Co- occurring Depression and Substance Use Disorders: A Review of Epidemiological Studies"

The purpose of this study is to know the pattern of comorbid substance abuse in patients of depression visiting psychiatric outpatient department

Major Findings of this study are :

- There were three types of comorbid substance abuse in patients of depression and those are Alcohol , Tobacco and Cannabis
- Respondents with Substance Abuse have more Severe Depression than respondents without Substance Abuse

CONCLUSION

The study explored patterns of comorbid substance abuse among 100 depressive patients, comparing those with and without substance abuse, across four clinics in Muzaffarnagar. The findings identified alcohol, tobacco, and cannabis as the predominant substances used. The research concluded that depressive patients who also engage in substance abuse experience significantly more severe depression. This increased severity is attributed to the combined effects of altered brain chemistry, additional stressors, and the negative impact of substance use on treatment adherence, creating a cycle of worsening depressive symptoms.

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