A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION

Dissertation submitted for partial fulfillment

of the rules and regulations

DOCTOR OF MEDICINE

BRANCH - XVIII (PSYCHIATRY)

THE TAMILNADU DR.MGR MEDICAL UNIVERSITY,

CHENNAI, TAMIL NADU

MAY 2019

CERTIFICATE

This is to certify that the dissertation titled **A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION is** the bonafide work of **Dr. Kanmani. V.K** in part fulfillment of the requirements for the M.D. Branch – XVIII (Psychiatry) examination of The Tamilnadu **Dr. M. G. R. Medical University,** to be held in May 2019. The period of study was from April 2017 to September 2017.

The Director,
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CERTIFICATE OF GUIDE

This is to certify that the dissertation titled, **A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION is** the original work of **Dr. Kanmani. V.K** , done under my guidance submitted in partial fulfillment of the requirements for M.D. Branch – XVIII [Psychiatry] examination of The Tamilnadu Dr. M. G. R. Medical University, to be held in May 2019.

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DECLARATION

I, **Dr. KANMANI. V. K**, solemnly declare that the dissertation titled, **A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION** is a bonafide work done by myself at the Madras Medical College, Chennai, during the period from March – September under the guidance and supervision of **Prof. Dr. POORNACHANDRIKA MD, DCH**, Professor of Psychiatry, Madras Medical College. The dissertation is submitted to The Tamilnadu Dr. M.G.R. Medical University towards part fulfillment for M.D. Branch XVIII (Psychiatry) examination.

Place: **Dr. KANMANI.V. K**

Date :

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I also thank all my family members for blessings and cooperation.

Above all, I thank all the participants of the study – the patients of Institute of Mental Health and their family members for their consent and cooperation.

INSTITUTIONAL ETHICS COMMITTEE
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CERTIFICATE OF APPROVAL

To

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Dear Dr.Kanmani.V.K,

The Institutional Ethics Committee has considered your request and approved your study titled **"A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION" - NO.09042017**

The following members of Ethics Committee were present in the meeting hold on **04.04.2017** conducted at Madras Medical College, Chennai 3

1.Prof.Dr.C.Rajendran, MD.,	:Chairperson
2.Prof.K.Narayanasamy, MD.,DM.,Dean(FAC), MMC,Ch-3	:Deputy Chairperson
3.Prof.Sudha Seshayyan,MD., Vice Principal,MMC,Ch-3	:Member Secretary
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7.Tmt.J.Rajalakshmi, JAO,MMC, Ch-3	: Lay Person
8.Thiru S.Govindasamy, BA.,BL,High Court,Chennai	: Lawyer
9.Tmt.Arnold Saulina, MA.,MSW.,	:Social Scientist

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

Member Secretary – Ethics Committee

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Sources included in the report:

A RETROSPECTIVE STUDY ON PREVALENCE OF PRIOR DEPRESSIVE EPISODES IN NEWLY DIAGNOSED BIPOLAR DISORDER.doc (D30985500)
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ABBREVIATIONS

AUDIT	-	Alcohol Use Disorders Identification Test
BPD	-	Bipolar depression
BPRS	-	Brief psychiatric rating scale
HAMD	-	Hamilton Depression Rating Scale
ECT	-	Electroconvulsive therapy
MDD	-	Major depressive disorder
WHO	-	World Health Organization
DSM	-	Diagnostic and statistical manual
NIMH	-	National institute of mental health
UPD	-	Unipolar depression
ICD	-	International Statistical Classification of Diseases and Related Health Problems
NESARC	-	National epidemiologic survey on alcohol and related conditions

TABLE OF CONTENTS

INTRODUCTION

Depression is common illness worldwide. According to WHO, 300 million people affected globally. It became serious health condition when it is long lasting and with moderate to severe intensity. It causes significant impairment in social and occupational areas. It is also a leading cause for suicide. It can be misdiagnosed often due to inaccurate assessment and various clinical presentations.

Depending upon severity, it can be classified into 3 types –

- Mild,
- Moderate,
- Severe.

When there is presence of manic episode, diagnosis would be made as bipolar affective disorder. Treatment will be different if its case of bipolar disorder. Clinically it will be difficult as both are having overlapping symptoms.

Depressive episodes are characteristic of both major depressive disorder and bipolar disorder. Distinguishing between both disorders is essentially important because there are differences in the optimal management of these conditions. Anti- depressant treatment of bipolar depression can adversely affect long term prognosis by causing destabilization of mood and more frequent depressive episode and can lead to treatment resistance.[1]

Despite decades of effort, we still lack a reliable biological marker to distinguish between bipolar depression and major depressive disorder. Misconceptions about diagnosis of these conditions are

- Both are clear cut and separable condition
- Easy to diagnose with careful assessment
- No true differences found between clinical features of both.

Most people with bipolar disorder experience depression rather than mania in their first episode of illness.

The SANE report in Australia found that over two-thirds of people with bipolar disorder were misdiagnosed, most common alternative diagnosis were major depression (60%). It is clinically desirable to recognize, or at least suspect, bipolar depression at an early stage of a bipolar illness.

Number of studies has attempted to distinguish the phenomenology of depression in MDD and bipolar disorder. In bipolar depression, a greater prevalence of atypical features or reverse neuro-vegetative symptoms was reported by most studies but not all [2]. Like-wise a greater prevalence of melancholic symptoms among bipolar depressed patient was identified in several reports.

Finally, family history of bipolar disorder, early age of onset, shorter duration of individual episode, frequent episodes, irritability, anger, sub

threshold mixed symptoms such as over activity and psychosis have also been associated with bipolar depression.

For planning a holistic treatment, it is important to know how these two conditions differ from each other.

In Indian setting, there are very few studies comparing Bipolar and Unipolar depression for phenomenology and substance use. In our study, we were assessed illness parameters and clinical variables and use of substance among two groups.

Review of literature:

Depression is a heterogenous disorder. The term depression was derived from Latin word - 'Deprimere' which means to press down.

Ancient Greek physician Hippocrates recognized a syndrome of melancholia with mental and physical symptoms It is known as black bile. It comprises symptom of aversion to food, sleeplessness, irritability and despondency and restlessness.[3]

Later Emil Kraeplin uses the term depression an encompassing concept.

Globally it accounts for one-third DALY. Proportion of people with depression to be 4.4%. it is more common in females, with peak of around 55-75yrs of both sexes.

Epidemiology in India (WHO)[4]

- It accounts DALY for 37%, by 2025 it is expected to rise by 2.6 million. As per NMHS (2015-2016) in India, 1 in 20 people over 18 yrs of age have suffered from depression.
- Depression is most common psychiatric disorder present in primary care – 63.6%

Unipolar depression:

Major depressive disorder is most common mood disorder. It can be single episode or recurrent episodes.

According to ICD – 10, Depression predominantly has low mood, loss of interest, and enjoyment and reduced energy associated with increased fatigability and reduced activity, 2 of above symptoms present for 2 weeks. [5]

Other features include

- Reduced attention and concentration
- Low self esteem and self-confidence
- Ideas of guilt
- Pessimistic views of future
- Disturbed sleep and appetite
- Ideas or acts of self-harm or suicide

They can present as mild moderate and severe. With or without somatic syndrome.

Somatic symptoms include loss of pleasure in normal activities, early morning awakening, psychomotor agitation or retardation, loss of appetite and loss of weight of around 5% or more in past month, decreased sexual function.

According to DSM-5, [6]

In addition to symptoms and they also mention about specifiers

Anxious,

Mixed,

Melancholic,

Atypical,

Mood congruent psychosis,

Mood incongruent psychosis,

Catatonia

Peripartum onset and

Seasonal pattern.

Bipolar depression

Bipolar depression is common like unipolar depression but often misdiagnosed as they are having overlapping symptomatology. It has mixed depressive episode and manic or hypomanic episodes.

Certain symptoms are common in Bipolar depression rather than unipolar depression, includes increased appetite, presence of psychosis, and excessive sleep.[7]

These symptoms are not consistently present in all individuals. And also, there is significant difference in duration of symptoms[8]. The most complicated part is treatment of bipolar depression which should plan according to prior episodes and should decide upon starting of mood stabilizers rather than anti-depressants alone. Antipsychotics also useful in the treatment. Combination therapy is more helpful than monotherapy.[9,10]

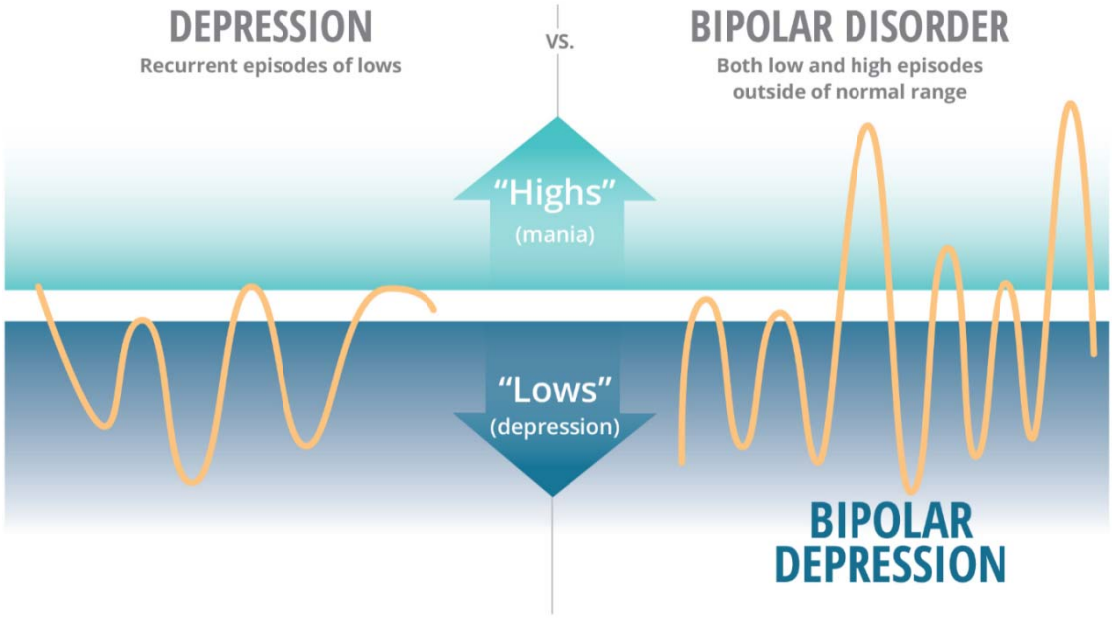


Figure 1. Mood Chart

Prevalence of depression in bipolar disorder:

NIMH Collaborative Depression Study [11] have found that depression is more frequent symptoms than mania or hypomania in bipolar depression individuals. Initial presentation would be depressive episode in nearly 50% of patients.

Depressive symptoms can be present as subsyndromal type or minor depression or major depression. Some people present with mixed cycles favor for chronicity.[12]

Bipolar spectrum:

In DSM 5, only 2 types of bipolar disorder mentioned.

Bipolar disorder 1 which is characterized by full blown manic episode throughout course of illness followed by mixed episodes or depression.

Bipolar 2 characerized by depressive episode with atleast one episode of hypomania, not necessary for full blown manic episode.[13]

The diagnosis of bipolar in clinical practice not only limited with above two types,because of complexity of presentation.

HAGOP AKISKAL[14] described bipolar spectrum which includes various presentations:

Bipolar 0.25	Unstable form of unipolar depression,respond to antidepressants rapidly
Bipolar 0.5	schizoaffective disorder/schizobipolar disorder
Bipolar 1.5	Protracted hypomania without depression
Bipolar 2.5	Cyclothymic patients develop major depressive disorder.
Bipolar 3	Antidepressant induced manic or hypomanic episodes
Bipolar 3.5	Bipolar disorder associated with Substance use
Bipolar 4	Depressive episodes with pre existing hyperthymic temperament
Bipolar 5	Depression with mixed hypomania
Bipolar 6	Bipolar with dementia.

Why it is important to know??

20% of Bipolar depression patients presents with depressive episode diagnose correctly in first year of treatment,[15] it takes few years to give appropriate treatment from the time of onset to diagnosis[16]. And it is very to differentiate depression in bipolar depression and unipolar depression, even though some symptoms become more evident in one condition.[17]

More than 60% of Bipolar depression are diagnosed as Unipolar depression[18,19]. Misdiagnosis depression leads to serious consequences, that involve inappropriate treatment in turn lead to poor prognosis[20], increase rates of switching to mania, increase rates of suicides and more health care costs.[21,22,] It is essential to diagnose bipolar depression in early stages to prevent complications.[23,24]

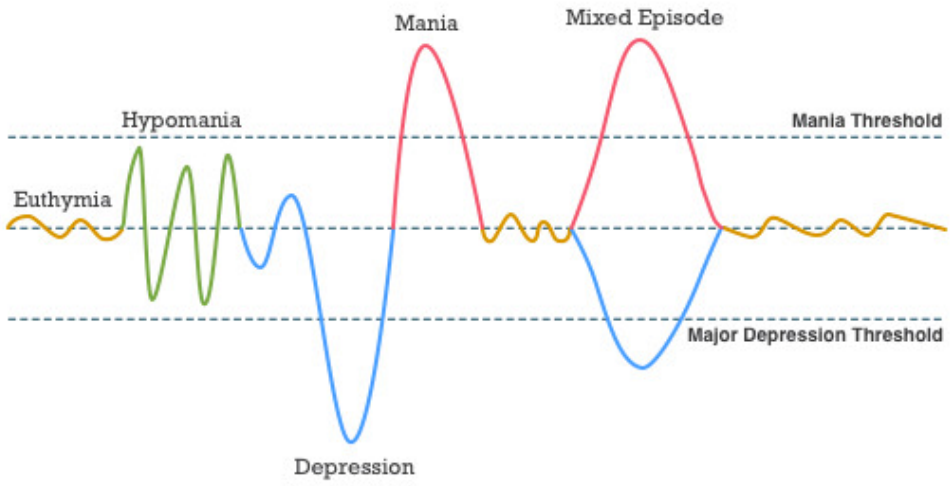


Figure 2: Life chart of mood disorder

Why it is difficult to distinguish?

It is very crucial to differentiate unipolar depression from bipolar depression in early stages. Many studies have concluded that the presentation of depressive symptoms more marked than hypomania/ manic symptoms during the course or initial presentation of bipolar depression. Another reason would be presence of sub threshold symptoms of depression[25]

NIMH Collaborative Depression Study conclude that 9% people of bipolar disorder-I and 1% people of bipolar disorder- II, only presents with classical symptom of mania and hypomania[26,27], but around 30-50% showed sub threshold symptoms.

The distinction between unipolar and bipolar disorder mainly in the field of psychopharmacology. Various clinical studies shown the misdiagnosis and mistreatment.[28] It covers a wide range of spectrum ranging from bipolar to cyclothymia, hypomania, unspecified bipolar. They are also mentioned about limitation in categorical diagnosis.[29]

People of unipolar depression shows more of bipolar affinity. So that, they have proposed bipolar spectrum mentioned earlier which covers discrete range of syndromes.[30]

In bipolar disorder, duration was 3-6 months average, in bipolar Recovery period will be 2 to 3 years from index diagnosis. People with bipolar depression have more episodes in lifetime but no difference in severity.[31]

Misdiagnosis of unipolar in bipolar disorder around 40% of patients, and the time period for diagnosis from onset to reach mental services would be 7.5 years. Consequence of misdiagnosis is long duration of untreated illness due to inadequate treatment. Presence of residual symptoms due to inadequate treatment.[32]

Antidepressant-Associated Mania

Anti depressant usage leads to increased number of episodes and increase frequency of episodes, so overall increase in manic episodes common. Bipolar depression has more cases of antidepressant induced manic episodes[33]. Prevalence of antidepressant induced mania in bipolar depression about 20%-50%.

Along with that, increase number of mixed episodes commonly noticed in this group. Associated mixed symptoms leads to suicide, incidence of suicidality is high in this group.[34]

Studies found that increased rates of switching to manic episode occurs with following drugs such as tricyclic antidepressants showing higher rates and drugs like paroxetine, bupropion, moclobemide may have low rates.[35]

Antidepressant prophylaxis leads to rapid cycling course in bipolar individuals and rapid cyclers presented with depression in their first episode.[36]

Rapid cycling more common among young age, women, bipolar II.[37]

Risk factors for antidepressant-induced mania:[38,39,40,41]

1. Young age
2. Rapid cycling
3. Substance abuse
4. Bipolar depression I > Bipolar depression II
5. Mixed episodes
6. More with tricyclic antidepressants.
7. Action of nor-epinephrine

Neurobiology:

Neurobiological abnormalities in depression involves several prefrontal structures and limbic structures and interconnected circuits.[42]

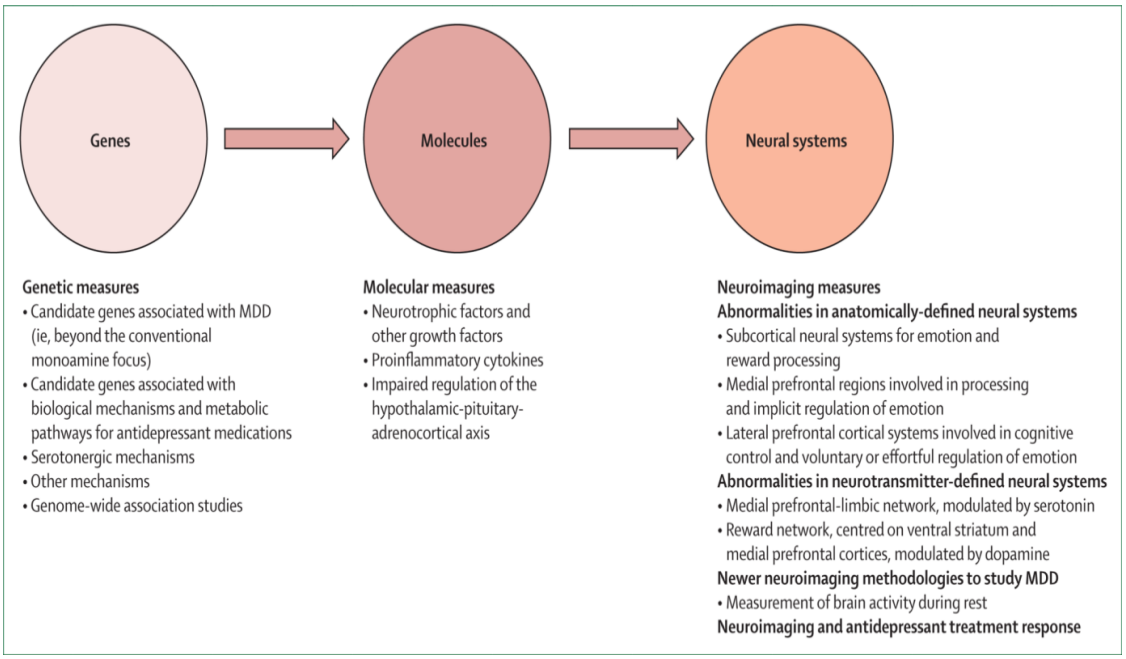


Figure 3, neurobiology of depression,

Functional and structural changes :

Neuroanatomical areas which involved

1) Ventromedial prefrontal cortex (VMPFC),
2) Lateral orbital prefrontal cortex (LOPFC),
3) Dorsolateral prefrontal cortex (DLPFC),
4) Anterior cingulated cortex (ACC),
5) Ventral striatum (including nucleus accumbens), amygdala and the hippocampus.

The areas which mentioned above involved in each symptoms, but vary in individuals.[43]

Prefrontal cortex along with hippocampus, cingulate, amygdala regulates mood regulation, learning and memory process.[44]

Executive function is maintained by Lateral orbito frontal cortex and venteromedial prefrontal cortex have a reciprocal action with dorso-lateral prefrontal cortex.[45]

On regional blood flow studies, people with MDD shows hypoactivity in dorsolateral prefrontal cortex and hyperactivity in other 2 areas.[46]

Reduced hippocampal volume noted in depression. It is directly proportional to duration and number of episodes.(32,33)

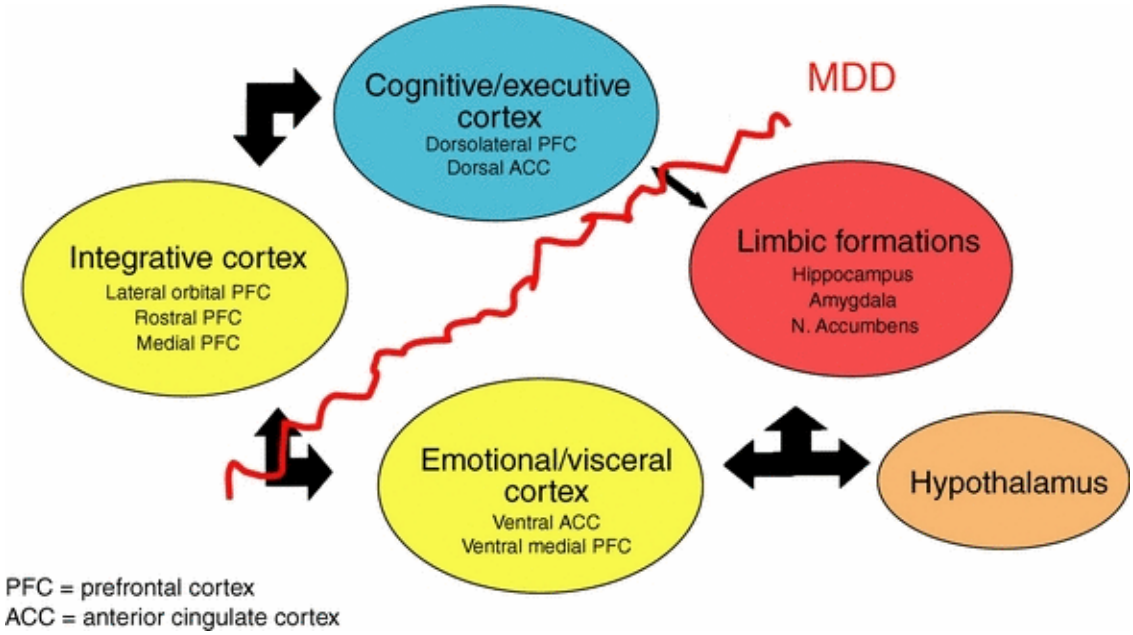


Figure 4, neuroanatomical correlates of depression

Molecular processes mediating neurobiological changes

Neuroendocrine dysregulation involves increase cortisol levels during stress which alter neuroplasticity, in major depressive disorder.[47] This also cause impact over hippoacampus and amygdala. Stress also cause increase pro inflammatory cytokines causes disruption in neurotrophic factors and monoamines regulation.[48]

Role of neurotransmitters:

Serotonin and norepinephrine are two important mono amines implicated in pathology of depression. Chronic treatment leads to activation protein kinase A, targets increased production of Brain Derived Neurotrophic Factor(BDNF) via genes. The role of neurotrasmitters implicated in the treatment.[49]

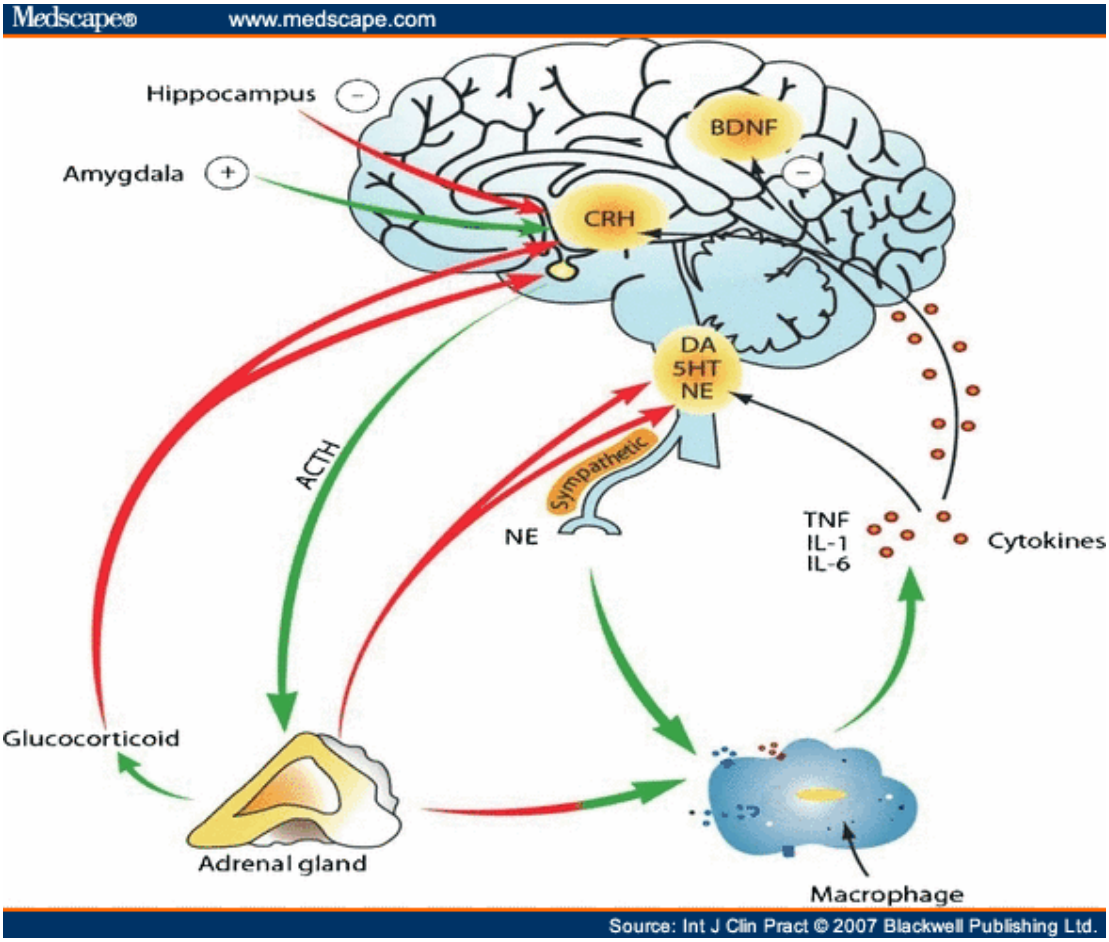


Figure 5, neurotransmitters

Genetics:

Various genes involved in the pathogenesis of depression mainly polymorphisms in the glucocorticoid receptor gene NR3C1, group-2 metabotropic glutamate receptor gene (GRM3), insertion-deletion promoter variant (serotonin transporter-linked polymorphic region [5HTTLPR]) in the serotonin transporter gene (SLC6A4) genetic variants in TREK1 catechol-O-methyltransferase (COMT) gene, corticotrophin-releasing hormone (CRH) receptor-1 (CRHR1) and CRH binding protein (CRHBP).[50,51,52,53,54]

Neuroimaging :

Structural neuroimaging:

A study [55] used diffusion tensor imaging (DTI) show decreased FA left superior longitudinal fasciculus in both unipolar and bipolar depression and in right uncinate fasciculus decreased activity in bipolar depression and in left inferior longitudinal fasciculus in unipolar depression.[56,57,58]

Other findings include white matter hyperintensities occur in both when they are having comorbid medical condition. Decreased volume in left habenula seein in bipolar depressed individual.[59,60,61]

Functional neuroimaging:

FMRI – when showing happy and sad and neutral faces, in unipolar depression for sad faces thers is increased amygdala activation wherin bipolar depression for happy faces there is activation of amygdala noted.[62,63,64]

Phenomenology:

Sociodemographic profile:

- **Age**: Mean age among various study samples around 40yrs. Age of people of Unipolar depression will be more than bipolar depression[65]
- **Age of onset:** Bipolar depression group has early age of onset as compared to unipolar depression.
- **Sex:** Women are most commonly affected in unipolar depression. For bipolar depression, male to female ratio is 1:1. Certain studies[66] found no difference between males and females in case of bipolar

depression.Unipolar depression more prevalent in females. And also, there are evidence that bipolarity more common among males.[67]

- **Marital status**: most of the studies, married group are common among unipolar depression and among bipolar depression, people are mostly single.[68]

A study[69] showed that no significant difference observed between Marital status, Family type, Socio-economic status. It is found that higher socio economic status seen among unipolar depression thaan bipolar depression.

Illness variables:

Age of onset:

As above mentioned, bipolar depression has 6 years younger onset than unipolar depression. According to Perlis.et.al[2], bipolar has 8 years earlier onset than unipolar depression. Age of onset in Bipolar depression is 20 -25 years,but in unipolar depression around 30-35 years. Risk of depression increases as age increases with peak seen in middle age and late onset of 40 years mostly in unipolar depression.[70]

Patel et al[71] found that Early onset depression occurs prior to any life even like, death of family, relationship issues, failure of exams.

Sharma dk.et.al[72] showed that Late onset depression occurs after 40 yrs of age. More common in people belong to low socio-economic status, divorced or widower, unemployed, low education status.

Duration of illness and hospitalisation:

Increased duration of illness seen mostly among bipolar group. Length and duration of episode in unipolar depression more lengthy as compared to bipolar depression.

Perlis et al[2], showed that greater number of episodes seen in bipolar group.

Among bipolar depression, the episodes has rapid onset and short duration than unipolar depression.[73]

It is found that bipolar depression episodes will be shorter than unipolar depression.

Certain studies not showing consistent evidence about average duration and number of episodes.[74]

Chronic course of illness found among unipolar depression but multiple episodes are common in Bipolar depression.[67]

At the same time, Benazzi et al[75] documented that since bipolar depression has early age of onset, it has more number of episodes.

And also, during the course of illness, full blown severe depressive episodes more commonly found in Bipolar depression[76]

Mitchell et al[11], concluded that bipolar depression has more life time depressive episodes than unipolar depression.No considerable difference found between age differences or duration.

Mitchell et al[12]., showed that rate of hospital admission during severe depression higher in bipolar than unipolar depression

Family history

Considerably, from Family pedigree, psychiatric illness in first generation and overall family history of psychosis mostly favours bipolarity.[75,77,78] (manning et al, akiskal et al, benazzi et al)

Co morbities

Medical and psychiatric comorbities are very common with depressive disorders. Medical comorbities like Diabetes, Hypertension and Coronary artery disease often coexist with depression.

Diabetes mellitus and Depression

45% of diabetes patients have depression. diabetes and depression has bi-directional relationship. Depression associated with 60% increase in people with diabetes. Diabetes associated with 15% increased risk of depression.[79,80] Comorbid depression in physical disease leads to poor outcome and vice versa.[81]

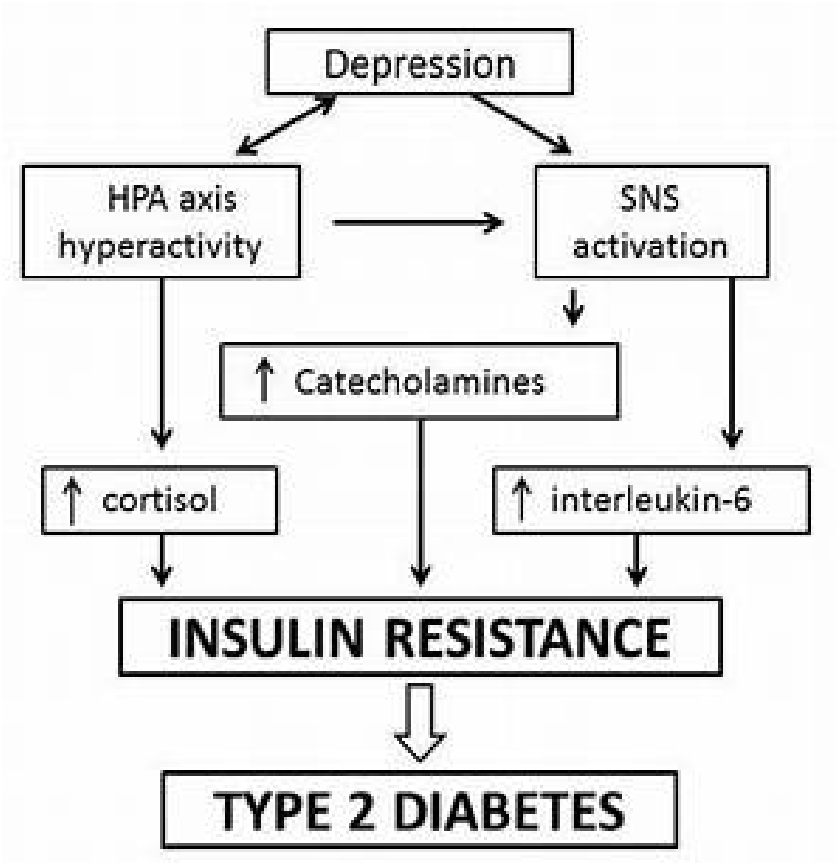


Figure 6, diabetes and depression

Stroke,Coronary heart disease, Diabetes, Hypertension all are increasingly associated with depression. so, in order to get good outcome, we need to identify both and treat accordingly.

Thyroid dysfunction and Depression:

The thyroid gland is endocrine organ which is commonly involved with psychiatric conditions. It has two different hormones, [82]

1. Prohormone thyroxine (T4) and

2. Triiodothyronine (T3).

Hypo thalamo-pituitary adrenal axis plays a major role. The HPT axis was regulated by feedback mechanisms at various levels. In hypothalamus, and anterior pituitary inhibits TSH release and also by TRH levels. [83]

Neuropsychiatric manifestations are very common in thyroid disorders, mostly mood symptoms and cognitive disturbances. Anxiety, depression and mood lability are common. Rarely, overt psychiatric disorder occurs. Manic episodes frequent in hyperthyroidism. Hypothyroidism is associated with depression and cognitive dysfunction.[84]

Substance abuse:

Bipolar disorders are seven times more likely to be associated with substance use disorders. Prevalence of substance use among bipolar more likely to be 56%.[85,86]

Individuals with depression are twice likely to have associated substance use problem. Overall prevalence of substance use disorders in mood disorders to be around 32%. Under that, 6.5% for alcohol use and 18% for any other drug use disorders. [87,88]

Also people who are seeking treatment, increase number of co-morbidity of mood disorder and substance use. Almost 20-67% experience depression and 6-7 % had bipolar disorder [89]

Why substance use so common?

Mood disorders and substance use both are so synergistic. Mostly, because of negative affective states in depression, people tend to take substance of various forms, in order to get relief from the symptoms . psychoactive substances improve affective symptoms because of dopaminergic action. [90]

But at the same time, chronic use of substance leads to withdrawal symptoms and most of the time, it aggravates further mood symptoms, leads to chronic duration of illness and increased number of episodes.[91]

Self medication is another reason for using substance during mood symptom. And another reason for substance use prevalent in mood disorders as such changes in neurotransmitter system, abnormal signaling, and genetic vulnerability.[92]

But the problem which noticed in people who are taking substances for a long time,it unmask the mood symptoms and trigger and increase the severity. It is difficult to get clear picture so leads to misdiagnosis and mal treatment, because substance induced withdrawal symptoms mostly depressive or manic or hypomanic symptoms.[93]

Prevalence of substance use in mood disorders

Bipolar depression often associated with substance use. NESARC study showed that life time prevalence of occuring substance use in bipolar disorder I around 58% alcohol, 38% other drug use.[85]

While comparing between Bipolar disorder Iand Bipolar disorder II, various studies supported that substance use more common in bipolar disorder I than bipolar disorder II.

McElroy et al[94]., in Bipolar disorder I,

36%- alcohol

40%-cannabis

10%-cocaine

8%-opioid

Bipolar disorder II,

22%- alcohol

10%- cannabis

4%-cocaine

8%-opioid

Chengappa et al[95].,also showed that Bipolar disorder I > Bipolar disorder II

Substance	**BP I**	**BP II**
Alcohol	57.8%	38.9%
Cannabis	19.7%	5.6%
Cocaine	11.3%	5.6%
Opioid	5.6%	0%

The Mclean Harvard first episode Mania study showed that 33% for Substance use disorders during index affective episode.[85]

It has found that current alcohol use disorder more prevalent in bipolar depressive patients. Alcoholism more frequently found in the bipolar group however this difference was not significant. It found degree of substance abuse equal in both bipolar and unipolar groups.[96]

Electroconvulsive therapy in depression:

One of the indication for ECT is Major Depression with Suicidal ideation. Sometimes, ECT mostly considered in early phase of treatment in melancholic depression and psychotic depression. Especially, psychotic features in depression respond very well to ECT.[97,98,99]

Studies showed that there is no difference in remission between unipolar and bipolar depression.[101]

It has found that overall improvement is quick with patients of bipolar depression.

Compared to unipolar depression, bipolar depression needs less ECT treatment during the course of illness. [102]

PHENOMENOLOGY

Bipolar and Unipolar depression can be differentiated in clinical settings by

1. Past history of hypomania or mania.
2. Family history of bipolarity
3. First episode of depression.[11]

"Leonhard" says about Bipolar disorder, because it is polymorphic, it has two poles, labile from one pole to another pole. Even though, there are overlapping symptoms, there has been differences,but inconsistent findings in previous studies.

Mitchell et al[11]., found that unipolar depression has increased severity,more suicidal intent, difficulty in initiating sleep- early insomnia, loss of weight, and somatic compliants.

In Bipolar Depression, presented with mood lability, diurnal variation, derealization and in both unipolar and bipolar depression, psychomotor agitation and retardation commonly seen.[103]

Some studies showed that increased psychomotor activity in both cases.[104] Some studies has found that psychomotor retardation most common in Bipolar depression.

Psychomotor retardation was found to be more common and more severe in bipolar depression than unipolar depression. Using CORE scale, patient showed features like non reactive mood, masked facies, poor verbal response, bradykinesia, and delay in initiating action.[19]

Mood, somatic anxiety, impact on work and activities, psychic anxiety, gastro intestinal and somatic symptoms was associated with unipolar depression than with bipolar depression[105]. Like wise Bipolar depression patients presents with atypical features like hypersomnia, excessive eating and hypersexuality.[106]

Features which called as bipolar signature are persistent and unvarying mood, subjective restlessness, leaden paralysis, hypersomnia, anticipatory anhedonia, worthlesness and also there is history of psychotic depression.[12] These are not pathognomic, but clinician should consider possibility of bipolar disorder when presented with mere symptoms.

Benazzi et al[75]., found no difference in psychomotor retardation, but increased atypicality in bipolar II.

Irritability found more in Bipolar depression than unipolar depression. Loss of appetite and loss of weight more common in unipolar depression. Difficulty in concentration also more common in unipolar than bipolar depression.[75,106]

Somatic complaints like something wrong with my body found more common in unipolar depression.

Brockington et al., showed that early depression more common in bipolar depression than unipolar depression. Increased activity, excessive talk, lability of mood also more common among bipolar depression.[107]

Overall, Psychotic features like delusions and hallucinations comparatively more common in bipolar depression.[108]

Olfson et al[109] found that those with bipolar depression were significantly more likely than those with unipolar depression to report hallucinations, current suicidal ideation, and low esteem, but were less likely to acknowledge disturbed appetite.

Some of the studies stated that no differences in atypical depression found between the unipolar and bipolar depressed groups and that there are no differences in the intensity of depression between both types.[110]

Studies have found that female bipolar patients compared unipolar depressed patients had significantly more frequently an early age of onset of depression and post partum depression[111]. On the other end, the percentage of agitation, irritability, distractibility, thought racing and panic attacks during depression was not different in patients with bipolar and unipolar depression.[112]

But, Brockington et al[107]., showed that auditory hallucination and referential ideation more prevalent among unipolar depression than bipolar depression.

Few studies showed that psychotic features commonly found among Unipolar depression who convert into bipolar depression.[113, 114,115]Venkoba Rao et al., stated that considering the occurrence of affective disorder in the other first degree relation, the study failed to reveal any differences between unipolar and bipolar disorder.[116]

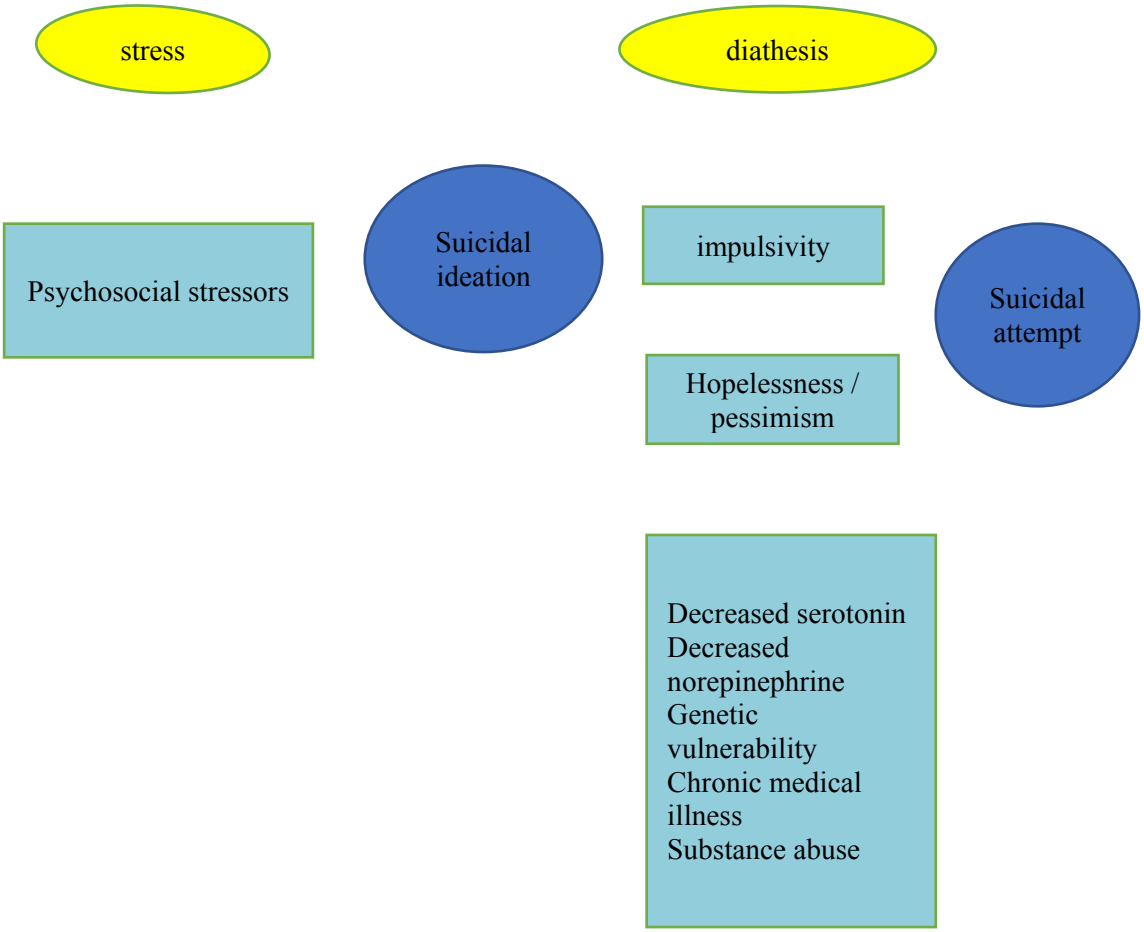
Suicidal ideation:

Suicide is major concern for people with psychiatric disorders. 90% suicide more common in psychiatric disorders. Most common being major depression and bipolar disorders which accounts for around 60%. Among bipolar disorders, risk of suicide is 20-30 times greater than normal population. In that also, bipolar disorder II has increased risk than bipolar disorder I.[117]

Studies showed that serious suicide attempt and family history of suicide are closely associated with diagnosis of bipolar depression. Number of suicidal attempts more common among bipolar disorder than in unipolar disorder [118]

Suicide attempters showed significantly higher rates of atypical depression. Bipolar suicide attempters had more life time episodes of major depression compare to bipolar non-attempters.

Brockington et al[107], (1982) found that suicidal ideation score more in unipolar depressed patients compared to bipolar patients.



Some studies also found that maximum length of suicidal acts tended to be higher among bipolar depressed attempters compared to those with unipolar depressed attempters. It also showed that suicidal ideation and psychomotor disturbance more likely to be found across in all levels of severity of depression in bipolar versus unipolar depression.[119]

Predictors of bipolarity:

Angst and preisig et al[120]., showed that almost 1% patients diagnosed as unipolar depression , after hospitalisation and treatment, switched to Bipolar disorder-I every year.

Studies have mentioned that certain variables as predictors of bipolarity, which includes early age of onset, family history of mood disorder, switching to manic episodes by antidepressant use, onset following postpartum, mixed episodes, suicidal attempts, atypical symptoms. [121]

AIM AND OBJECTIVES

1. To assess Psycho-socio-demographic profile and Clinical profile of patients with bipolar depression and unipolar depression.
2. To assess Substance use among patients with bipolar depression and unipolar depression.
3. To assess predictors of bipolarity.

METHODOLOGY

STUDY POPULATION AND STUDY PLACE:

The study population consists of patients attending out-patient clinic and in-patient wards of Department of Psychiatry, Institute of Mental Health, Kilpauk.

STUDY DESIGN:

Comparative Cross- sectional study

SAMPLE SIZE: 100

50 patients in unipolar depression group

50 patients in bipolar depression group

DURATION OF STUDY:

6 months from the date of approval of ethical committee.

INCLUSION CRITERIA:

1) 20-50 years of age
2) Both gender
3) Patient diagnosed with bipolar affective disorder or recurrent depressive disorder, currently with moderate/ severe depression, with/without somatic syndrome, and wit/without psychotic symptoms.

EXCLUSION CRITERIA:

1) People with Mental retardation, Seizure disorder, Dementia, and other psychiatric conditions like schizophrenia, anxiety disorders.

2) Patients who have not given consent

3) Patients who cannot provide adequate information.

Methodology:

Patients whoever attending out-patient and in-patient clinic of Institute of Mental Health, Kilpauk, who were diagnosed with Bipolar Affective Disorder or Recurrent depressive disorder, currently presents with depressive episode with/ without somatic syndrome, and with/without psychotic symptom, using ICD-10 criteria, and those who met inclusion criteria were included in the study. Informed consent obtained from the patients who were included.

Detailed history was taken from each patient regarding episodes and course of illness.

Semi-Structured Proforma was applied for assessing socio-demographic parameters and illness parameters and scales given for quantifying depression and psychotic features.

Socio-demographic profile includes biographical data and socio-economic status was assessed using MODIFIED KUPPUSWAMI SOCIO-ECONOMIC STATUS scale and illness parameters include

1. Age of onset,
2. Total duration of illness,
3. Number of hospitalisations,
4. Family history of illness,
5. Medical co-morbities,
6. Postpartum onset,
7. History of ECT all were assessed.

Along with that, to compare substance use like alcohol, cannabis, nicotine between unipolar and bipolar depression.

Regarding phenomenology,

1. Sleep pattern,
2. Appetite changes,
3. Guilt feelings,
4. Irritability,
5. Ideas of helplessness,
6. Hopelessness,
7. Worthlessness,
8. Decreased concentration, decreased attention, forgetfulness,
9. Psychomotor activity,
10. Low self esteem
11. Catatonic features,

12. Anhedonia,
13. Deliberate self -harm, suicidal ideas, suicidal attempts,
14. Dissociative features, anxiety features,
15. Psychotic features like delusions, hallucinations between unipolar depression and bipolar depression were assessed.

SCALES USED:

1. HAMILTON RATING SCALE FOR DEPRESSION(HAM-D)
2. BRIEF PSYCHIATRIC RATING SCALE (BPRS)
3. ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)
4. FAGERSTROM TEST FOR NICOTINE DEPENDANCE
5. MODIFIED KUPPUSAMY SCALE

The above, mentioned scales were applied to each patient to quantify the severity of depression and elicit the substance use pattern.

HAMILTON RATING SCALE FOR DEPRESSION:

It is mostly widely used and developed by Max Hamilton in 1960. It is multidimensional scale. It contains 17 items to assess symptoms of depression over past week, especially designed for hospital inpatients. Later, 21- item version added. For scoring, score of 0–7 – normal range (or in clinical remission), 8-13-mild depression; 14-18- moderate depression; 19-22- severe depression, >23- very severe depression. It has internal consistency varies from 0.48-0.92. It has high inter-rater reliability of 0.80-0.98. [122,123]

BRIEF PSYCHIATRIC RATING SCALE:

It was designed by Overall and Gorham to assess overall psychopathology in major psychiatric disorders, particularly psychosis. It remains one of most widely used clinician administered tool for evaluating baseline psychopathology. [124,125]

ALCOHOL USE DISORDERS IDENTIFICATION TEST:

It is gold standard rating scale developed by WHO. It is reliable and valid measure in identifying alcohol use behavior. It measures different domains of alcohol consumption. [126]

1-3 questions for assessing frequency in alcohol consumption

4-6 questions to measure alcohol dependence

7-10 questions to measure alcohol related problems

For interpretation of scoring, score of 8 in men suggest harmful drinking and score of more than 20 likely to be dependence. It has been found to be both sensitive and specific in detection of alcohol use related disorders.[127]

FAGERSTROM TEST FOR NICOTINE DEPENDANCE:

It is brief 6-item scale that gives quantitative measure of nicotine dependence. It has internal consistency of 0.68.[128,129.]

Interpretation: score of 0-2 very low; 3-4- low; 5- moderate 6-7- high; 8-10- very high. Score of 6 or high indicates of high nicotine dependence.

STATISTICAL ANALYSIS

The Normality tests Kolmogorov-Smirnov and Shapiro-Wilks tests results reveal that some variables follow Normal distribution and few variables (Duration, no of episodes and no of hospitalizations) do not follow normal distribution. Therefore, to analyse the data both parametric and non-parametric methods are applied. For variables which follow Normal distribution, to compare mean values between BPD and UPD independent samples t-test is applied. To compare values of Duration, no of episodes and no of hospitalizations (Non-Normal variates) between BPD and UPD Mann Whitney test is applied. To compare proportions between BPD and UPD groups Chi-Square test is applied, if any expected cell frequency is less than five then Fisher's exact test is used. To analyse the data SPSS (IBM SPSS Statistics for Windows, Version 23.0, Armonk, NY: IBM Corp. Released 2015) is used. Significance level is fixed as 5% ($\alpha = 0.05$). Logistic regression analysis has done to identify predictors for bipolarity using odds ratio.

RESULTS

Table 1: COMPARISON OF AGE BETWEEN TWO GROUPS:

	Group	N	Mean	Std. Dev	t-value	p-value
Age (Years)	BPD	50	33.90	7.346	2.696	**0.008*** **
	UPD	50	38.14	8.350		

P<0.05 – statistically significant.

The Mean age of presentation in Bipolar depression was 33.90 years as compared to unipolar depression was 38.14 years, which was found statistically significant.

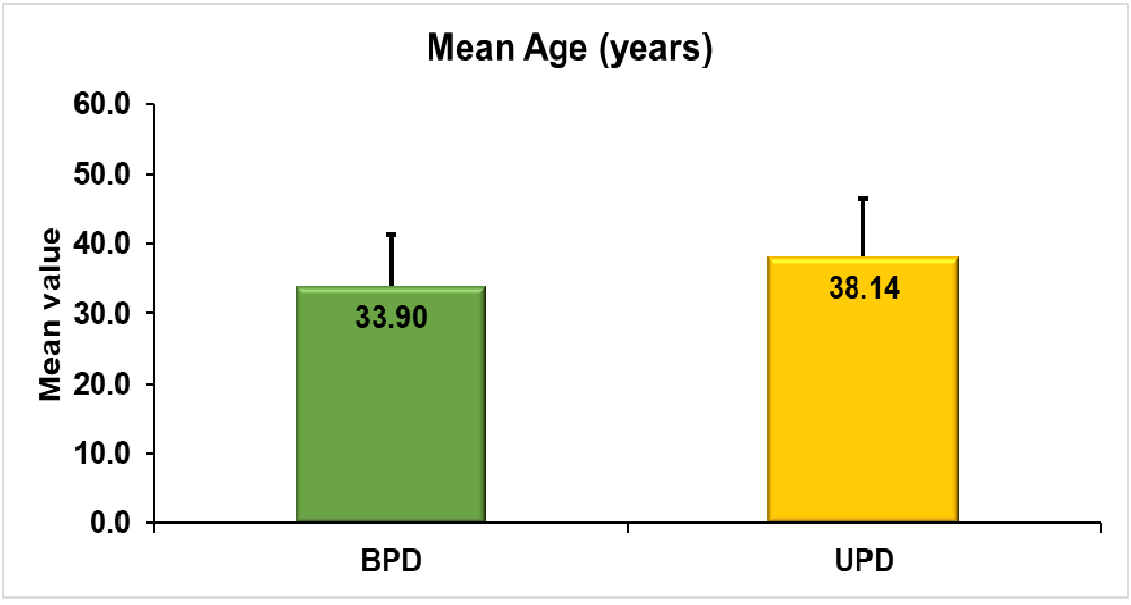


Table – 2

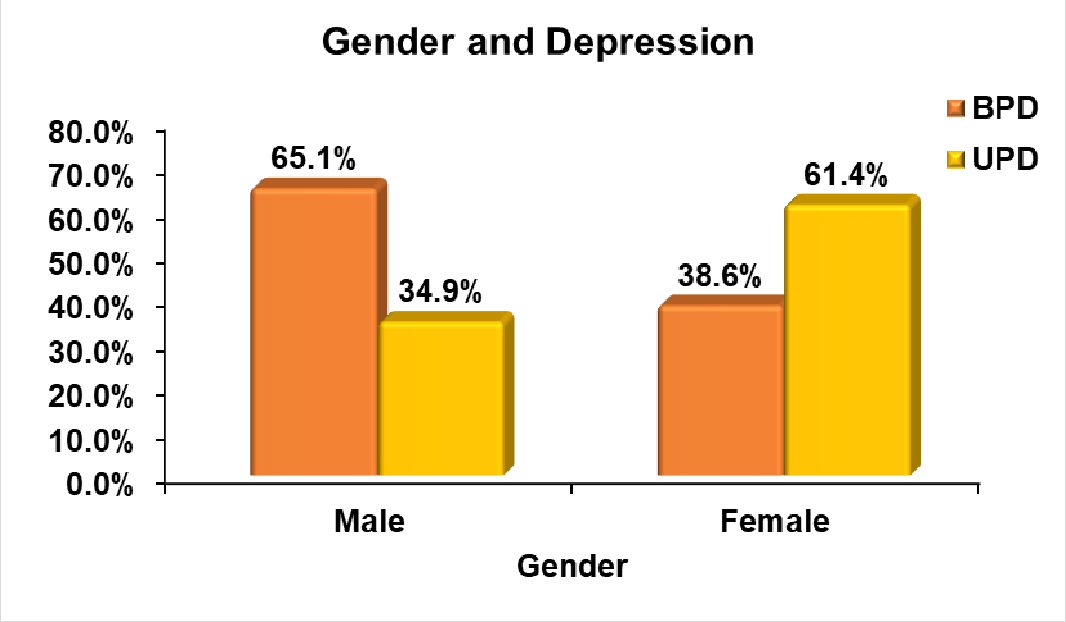
Comparison of Socio demographic variables between two groups:

Variables		Group			
	BPD		UPD		P value
	N	%	N	%	
Gender					
Male	28	65.1%	15	34.9%	
Female	22	38.6%	35	61.4%	
Total	50	50.0%	50	50.0%	**0.09*** **
Marital status					
Married	32	45.1%	39	54.9%	
Unmarried	17	63.0%	10	37.0%	
Others	1	50.0%	1	50.0%	
Total	50	50.0%	50	50.0%	0.217
Family type					
Nuclear	30	44.1%	38	55.9%	
Joint	15	71.4%	6	28.6%	
Extended	5	45.5%	6	54.5%	
Total	50	50.0%	50	50.0%	0.087
Religion					
Hindu	37	46.3%	43	53.8%	
Islam	5	55.6%	4	44.4%	
Christianism	8	72.7%	3	27.3%	
Total	50	50.0%	50	50.0%	0.286
SES					
Lower	5	41.7%	7	58.3%	
Upper lower	29	54.7%	24	45.3%	
Lower middle	13	52.0%	12	48.0%	
Upper middle	3	30.0%	7	70.0%	
Total	50	50.0%	50	50.0%	0.485

****** - p value - < 0.05 is significant.**

In above Table-2, socio-demographic variables were compared between Unipolar and bipolar depression. On comparing Marital status, Family type,

Religion and Socio-economic status, there were no difference found between two groups.



In our study, above chart showed that bipolar depression is more common among males and Unipolar depression is more common among females , which was found to be statistically significant.

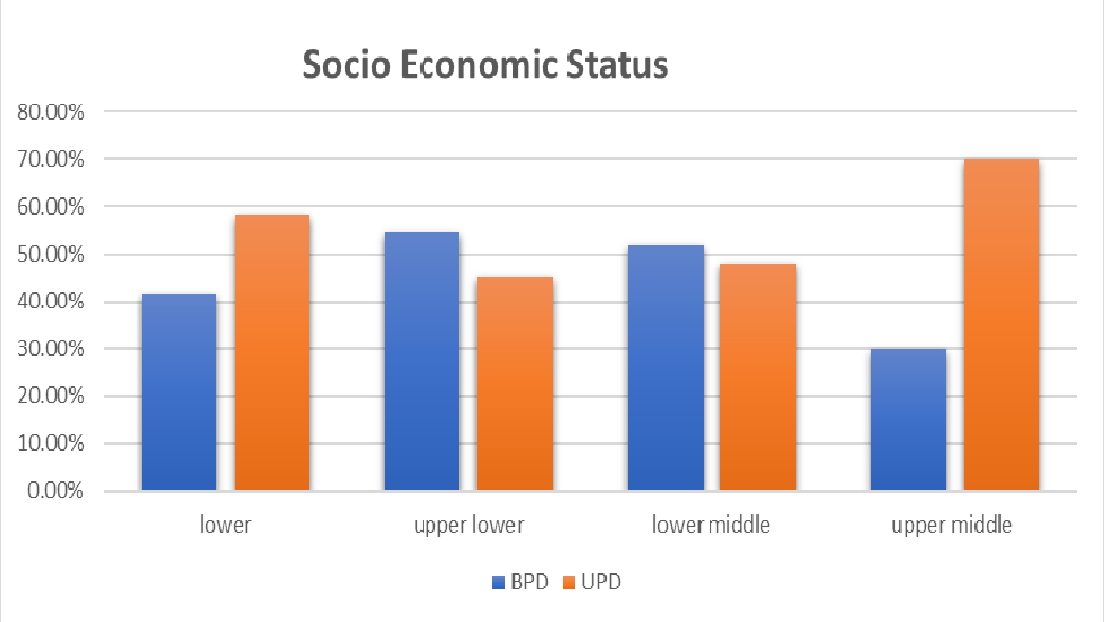


Table 3: MEAN AGE OF ONSET COMPARISON

BETWEEN TWO GROUPS:

	Group	N	Mean	Std. dev	t-value	p-value
Age of onset (years)	BPD	50	24.82	4.885	5.444	<0.001***
	UPD	50	31.94	7.885		

*****-P<0.05- Significant**

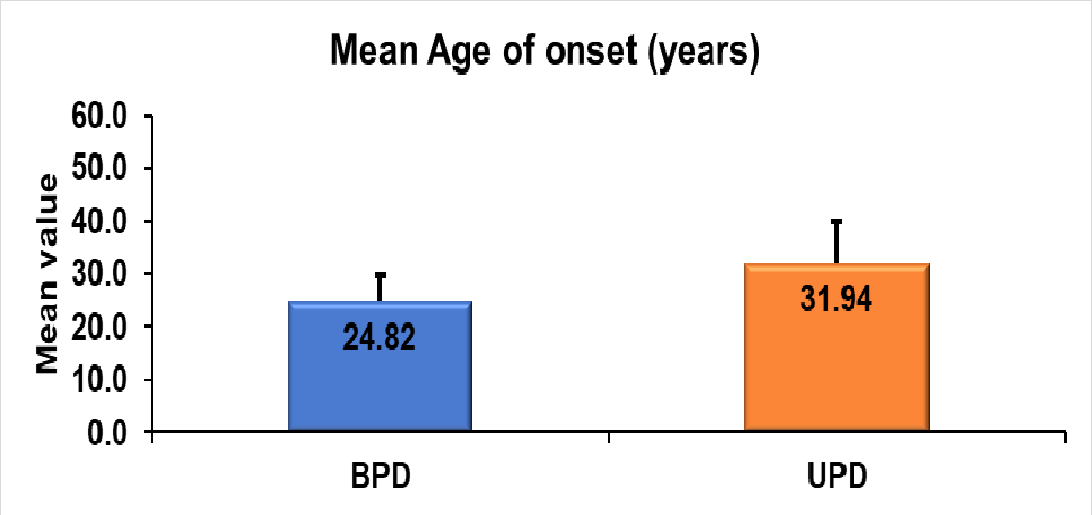


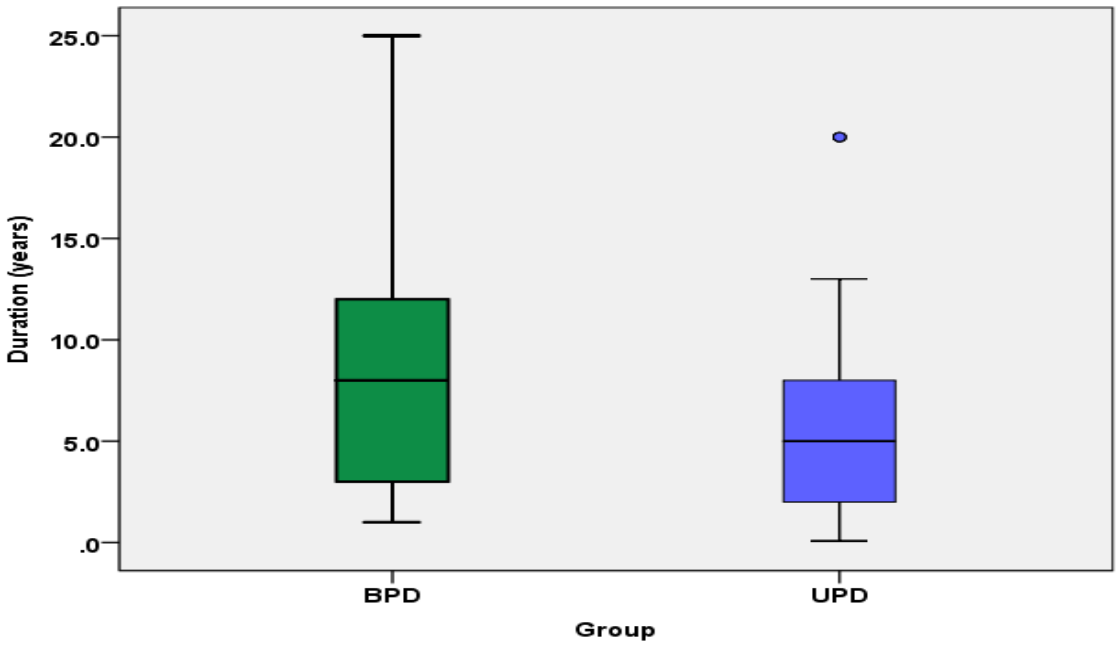
Table – 3 showed that bipolar depression group has mean age of onset of around 24.82 years and unipolar depression group has mean age of onset around 31.94 years which showed that bipolar depression has earlier age of onset than unipolar depression group, which was found to be statistically significant.

TABLE 4: COMPARISON OF ILLNESS PARAMETERS BETWEEN UNIPOLAR AND BIPOLAR DEPRESSION:

		Group		Z-value	p-value
		BPD	UPD		
Duration (years)	N	50	50	2.345	**0.019*** **
	Mean	8.9	6.2		
	Std. Dev	6.30	5.31		
	Median	8.0	5.0		
	1st Quartile	3.0	2.0		
	3rd Quartile	12.0	8.0		
No. of episodes	N	50	50	2.540	**0.011*** **
	Mean	3.3	2.9		
	Std. Dev	1.59	2.24		
	Median	3.0	2.0		
	1st Quartile	2.0	2.0		
	3rd Quartile	4.0	3.0		
No. of hospitalisations	N	50	50	2.307	**0.021*** **
	Mean	1.0	.6		
	Std. Dev	1.12	1.24		
	Median	1.0	.0		
	1st Quartile	.0	.0		
	3rd Quartile	2.0	1.0		

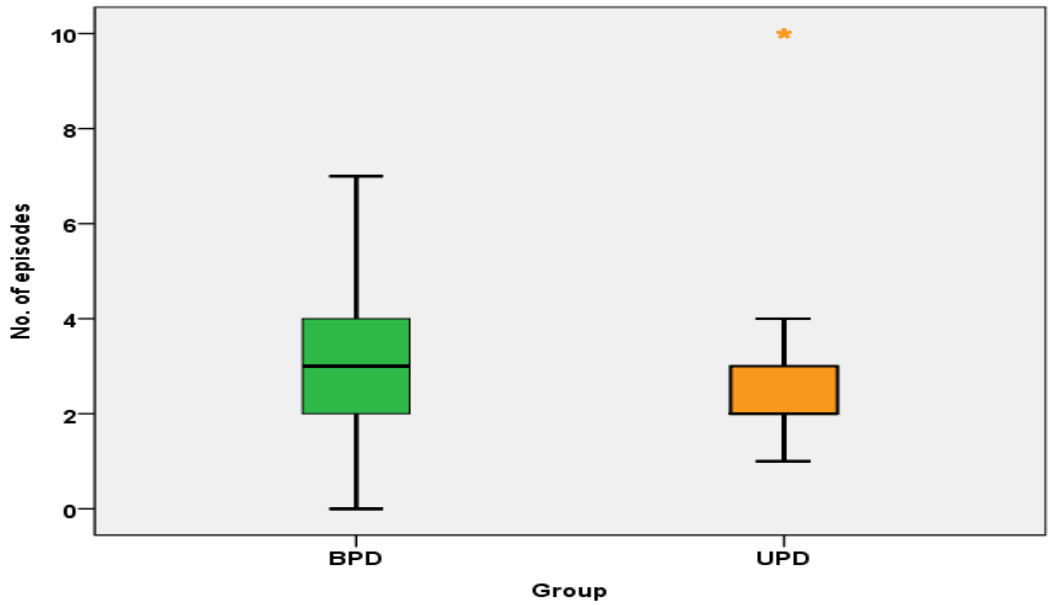
*****-p<0.05 – significant**

BOX AND WHISKER PLOT FOR COMPARISON OF DURATION OF ILLNESS BETWEEN TWO GROUPS:



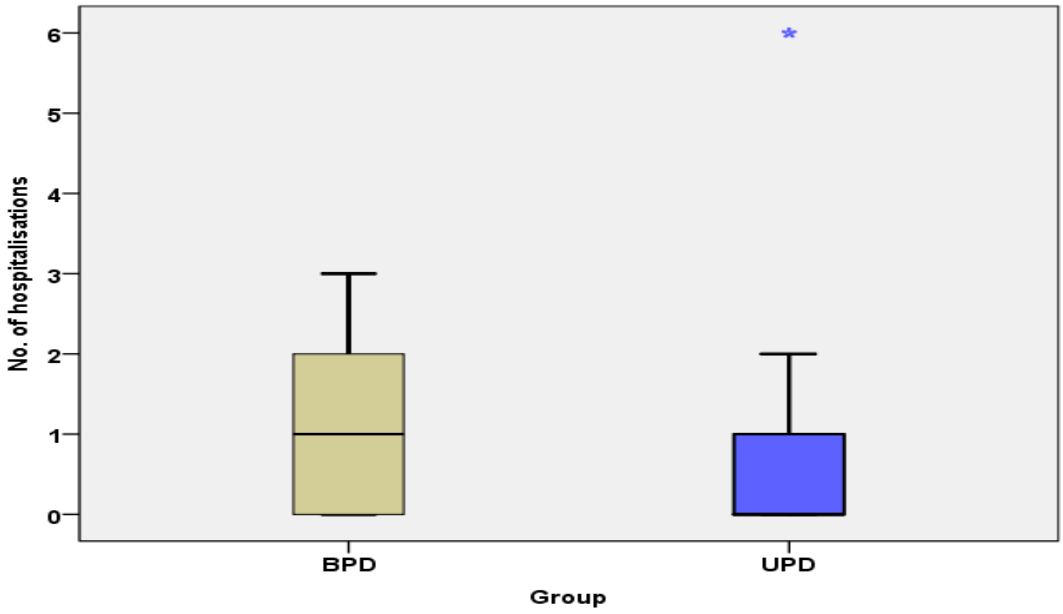
Duration of illness was compared between bipolar depression and unipolar depression which showed that bipolar depression has long years of duration of illness (8.9years) than unipolar depression (6.2 years). It was found to be statistically significant (P=0.019)

BOX AND WHISKER PLOT FOR COMPARISON BETWEEN NUMBER OF EPISODES BETWEEN TWO GROUPS:



In Above diagram, Number of episodes were compared between unipolar depression and bipolar depression, found that number of episodes were seen higher among bipolar depression (3.3) than unipolar depression (2.9), which was statistically significant.

BOX AND WHISKER PLOT FOR COMPARISON BETWEEN NUMBER OF HOSPITALISATIONS BETWEEN TWO GROUPS:



Number of hospitalisations in bipolar depression were compared with unipolar depression in the above diagram, showed that number of hospitalisation were higher in bipolar depression (1.0), than unipolar depression (.6) which was found to be statistically significant (P=0.021)

Table 5: FAMILY HISTORY OF ILLNESS

Mood	Group				
	BPD		UPD		P value
	N	%	N	%	
No	33	48.5%	35	51.5%	
Yes	17	53.1%	15	46.9%	
Psychosis					
No	47	50.5%	46	49.5%	
Yes	3	42.9%	4	57.1%	0.999
Total	50	50.0%	50	50.0%	
Suicide					
No	33	45.2%	40	54.8%	
Yes	17	63.0%	10	37.0%	0.115
Total	50	50.0%	50	50.0%	
Substance use					
No	19	39.6%	29	60.4%	
Yes	31	59.6%	21	40.4%	
Total	50	50.0%	50	50.0%	**0.045*** **

******- p value<0.05**

Above Table- 5, family history of psychosis, mood disorder, suicide and substance use were compared between bipolar and unipolar depression. There were no significant difference found between two groups, except family history of substance use. Family history of substance use more commonly found among Bipolar depression than unipolar depression which was found to be statistically significant. (P=0.045)

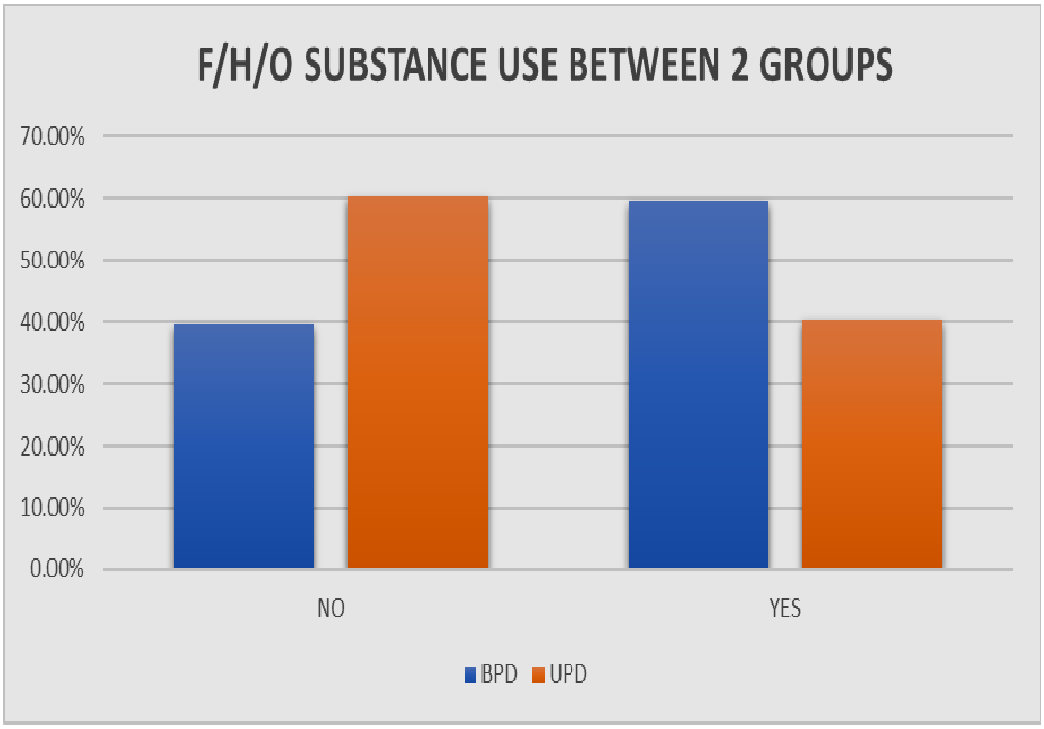


Table 6: COMPARISON OF CO-MORBID MEDICAL ILLNESS AMONG 2 GROUPS:

Diabetes	Group				
	BPD		UPD		P value
	N	%	N	%	
No	42	56.8%	32	43.2%	
Yes	8	30.8%	18	69.2%	
Total	50	50.0%	50	50.0%	**0.023*** **
Hypothyroid					
No	36	58.1%	26	41.9%	
Yes	14	36.8%	24	63.2%	
Total	50	50.0%	50	50.0%	**0.039*** **
Hypertension					
No	46	52.3%	42	47.7%	
Yes	4	33.3%	8	66.7%	
Total	50	50.0%	50	50.0%	0.218

****P<0.05 significant**

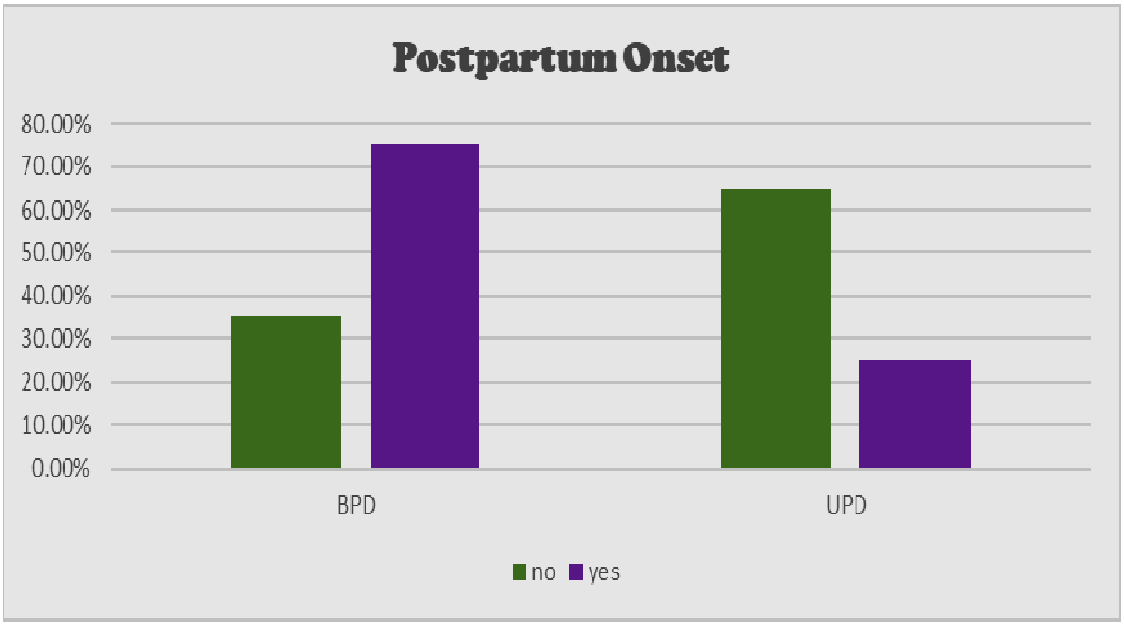
People with unipolar depression (69.2%) has more association with diabetes than bipolar depression (30.8%) which was found to be statistically significant. (p-0.03).

Unipolar depression (63.2%) group has higher association with co morbid hypothroidism as compared to Bipolar depression group (36.8%), which was also found to be statistically significant (p-0.039). There were no significant differences found for hypertension between two groups.

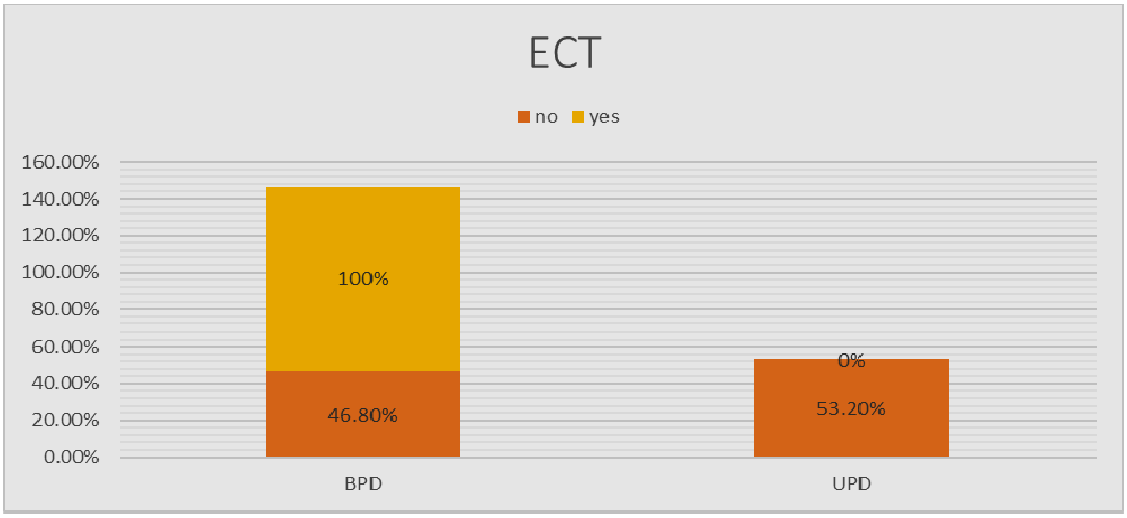
TABLE 7: COMPARISON OF ILLNESS PARAMETERS BETWEEN TWO GROUPS:

Postpartum	Group				
	BPD		UPD		P value
	N	%	N	%	
No	18	35.3%	33	64.7%	
Yes	3	75.0%	1	25.0%	
NA	29	64.4%	16	35.6%	
Total	50	50.0%	50	50.0%	**0.007*** **
ECT					
No	44	46.8%	50	53.2%	
Yes	6	100.0%	0	0.0%	
Total	50	50.0%	50	50.0%	**0.027*** **

*****- p<0.05 is significant**



In above table, postpartum onset of illness was found higher in bipolar depression (n=3) than unipolar depression (n=1), which was found to be statistically significant. P= 0.007



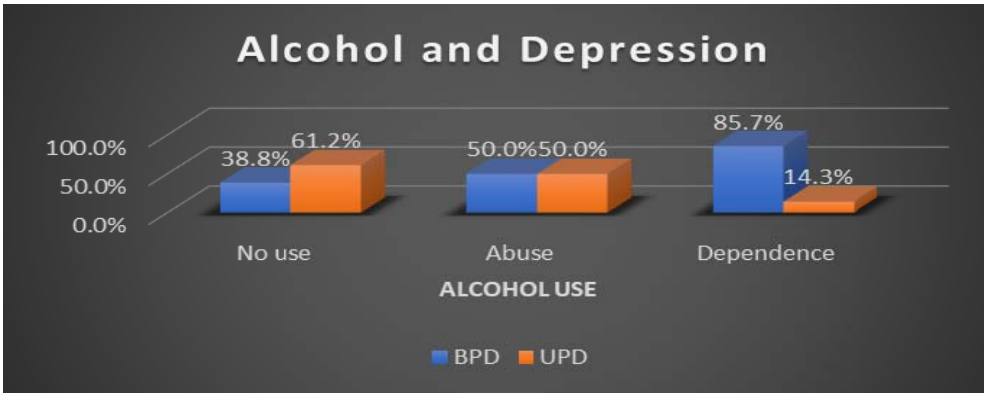
Above chart showed that Treatment with electroconvulsive therapy compared between bipolar depression and unipolar depression, only 6 people of bipolar depression had ECT treatment during the course of illness, which was found to be statistically significant.

Table 8: COMPARISON OF SUBSTANCE USE AMONG 2 GROUPS:

Alcohol	Group				
	BPD		UPD		P value
	N	%	N	%	
No use	26	38.8%	41	61.2%	
Abuse	6	50.0%	6	50.0%	
Dependence	18	85.7%	3	14.3%	
Total	50	50.0%	50	50.0%	**0.001*** **
Nicotine					
No use	27	40.3%	40	59.7%	
Abuse	0	0.0%	2	100.0%	
Dependence	23	74.2%	8	25.8%	
Total	50	50.0%	50	50.0%	**0.001*** **
Cannabis					
No use	42	45.7%	50	54.3%	
Dependence	8	100.0%	0	0.0%	
Total	50	50.0%	50	50.0%	**0.006*** **

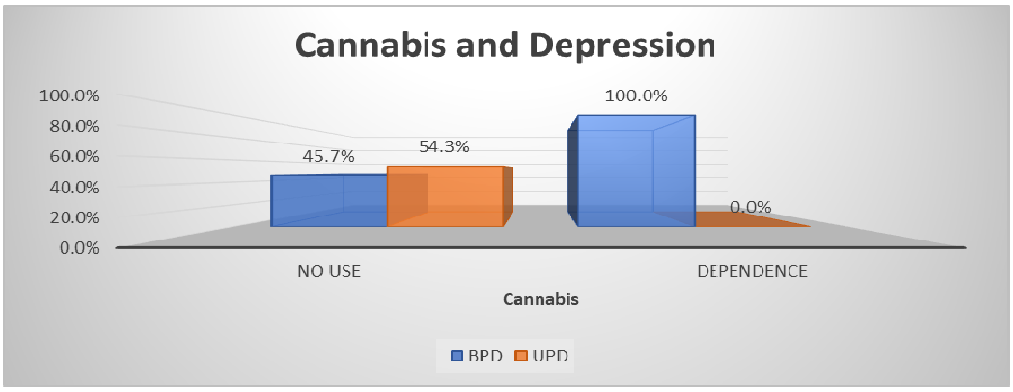
*****- p<0.05 – significant**

COMPARING ALCOHOL USE PATTERN BETWEEN UPD AND BPD



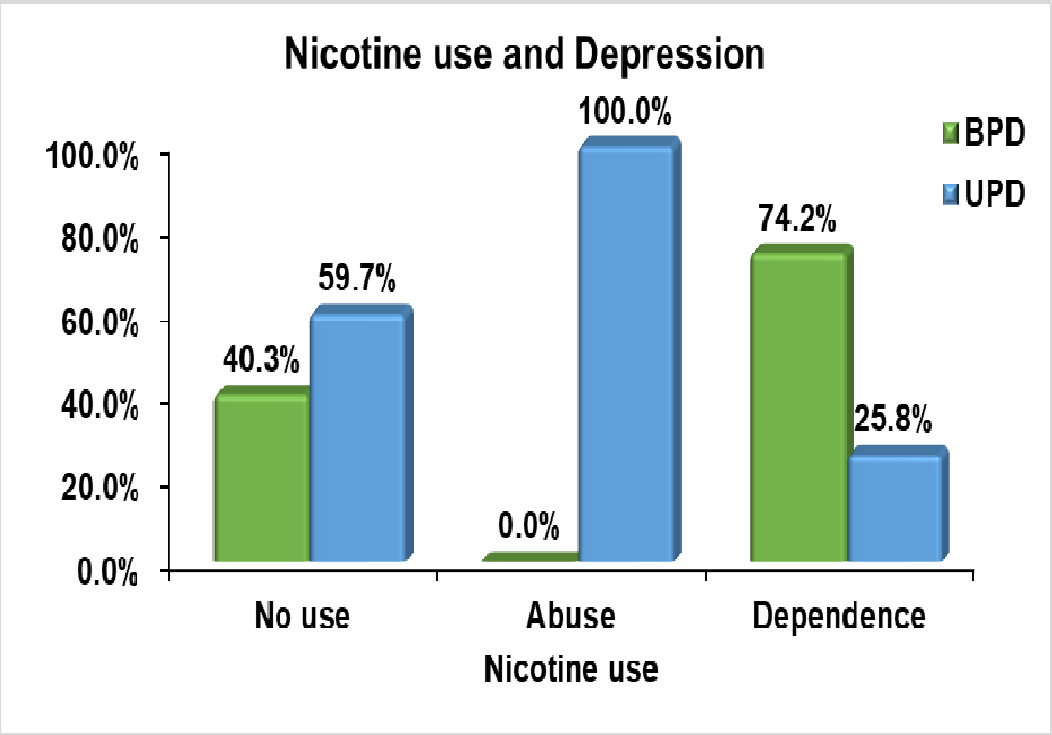
Comparing alcohol use among two groups, found that bipolar depression has higher association with alcohol dependence than unipolar depression, which was found to be statistically significant.

COMPARING USE OF CANNABIS AMONG 2 GROUPS:



Above picture depicted that, bipolar depression group (n=8) has higher association with cannabis dependence than unipolar depression, which was found to be statistically significant. P=0.006

COMPARING NICOTINE USE AMONG TWO GROUPS:

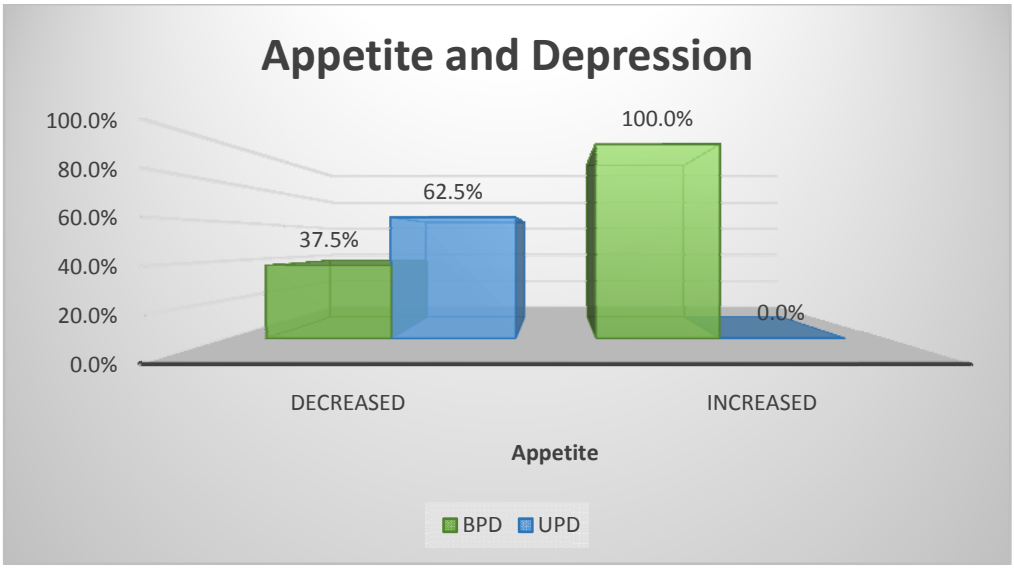


Above picture depicted that nicotine dependence pattern found higher among bipolar depression group than unipolar depression, which was found to be statistically significant. (P=0.001).

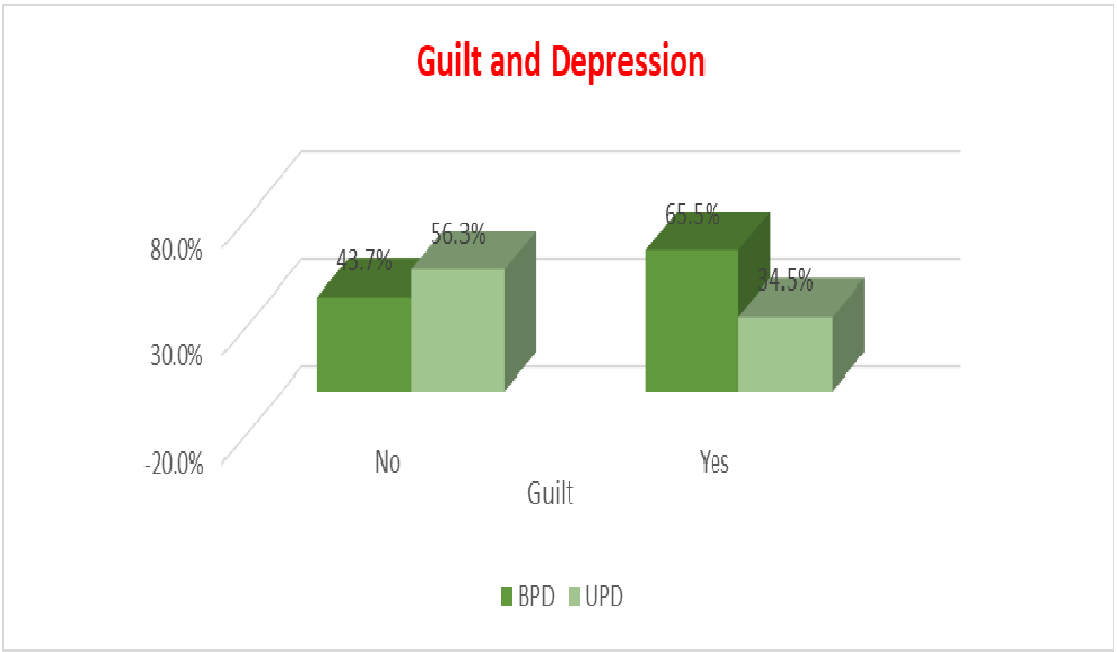
TABLE 9: COMPARISON OF DEPRESSIVE SYMPTOMS BETWEEN TWO GROUPS:

Sleep	Group				
	BPD		UPD		P value
	N	%	N	%	
Insomnia	46	47.9%	50	52.1%	
Hypersomnia	4	100.0%	0	0.0%	
Total	50	50.0%	50	50.0%	0.117
Appetite					
Decreased	30	37.5%	50	62.5%	
Increased	20	100.0%	0	0.0%	
Total	50	50.0%	50	50.0%	**<0.001*** **
Guilt					
No	31	43.7%	40	56.3%	
Yes	19	65.5%	10	34.5%	
Total	50	50.0%	50	50.0%	**0.047*** **
Irritability					
No	0	0.0%	41	100.0%	
Yes	50	84.7%	9	15.3%	
Total	50	50.0%	50	50.0%	**<0.001*** **

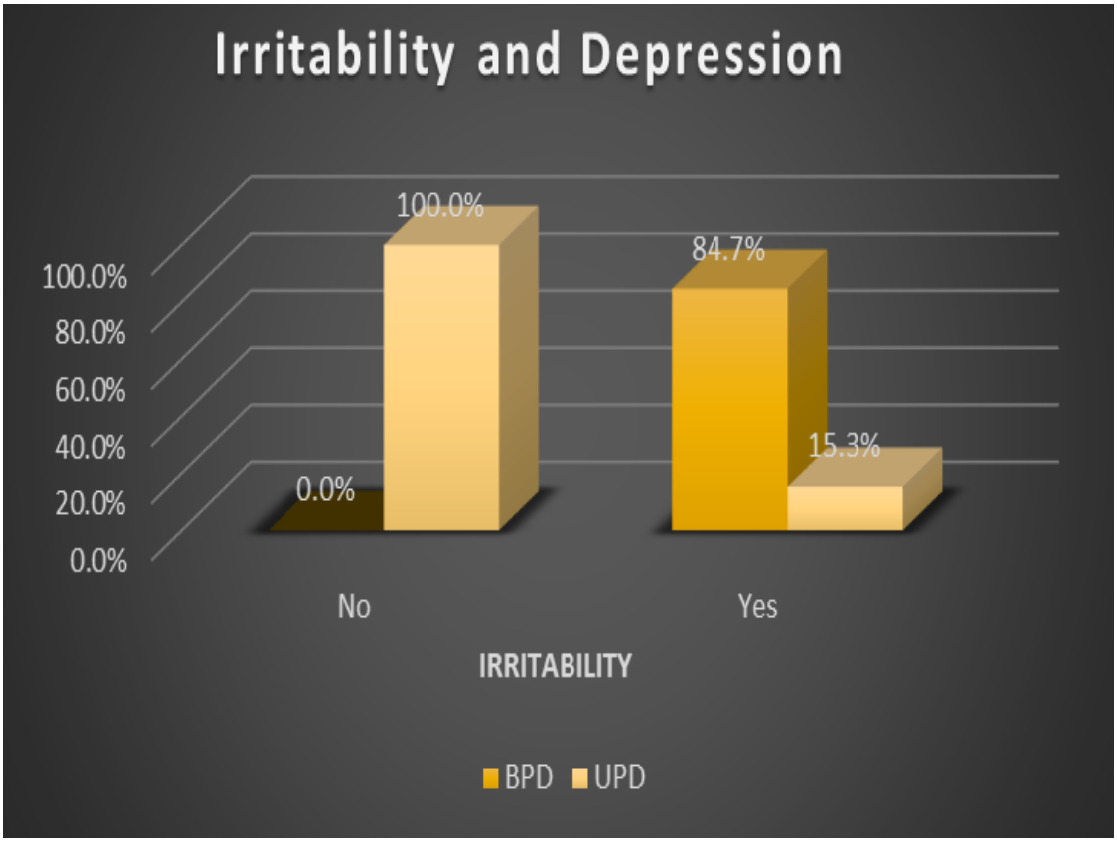
**** p<0.05- significant**



Comparing vegetative symptoms between 2 groups, there were no significant difference in sleep pattern but hyperphagia found more common among bipolar depression than unipolar depression, which was found to be statistically significant. $p < 0.001$.



Guilt feelings found higher among bipolar depression than unipolar depression, which was found to be statistically significant.



Irritability was found more in Bipolar depression group (84.7%) than unipolar depression (15.3%), which was found to be statistically significant. P<0.001

TABLE 10: COMPARISON OF DEPRESSION SYMPTOMS BETWEEN 2 GROUPS:

Memory disturbances	Group				
	BPD		UPD		P value
	N	%	N	%	
No	13	36.1%	23	63.9%	
Yes	37	57.8%	27	42.2%	
Total	50	50.0%	50	50.0%	**0.037*** **
Reduced attention					
No	5	45.5%	6	54.5%	
Yes	45	50.6%	44	49.4%	
Total	50	50.0%	50	50.0%	0.749
Reduced Concentration					
No	4	66.7%	2	33.3%	
Yes	46	48.9%	48	51.1%	
Total	50	50.0%	50	50.0%	0.678

***** p value<0.05 – significant.**

Above table, comparing depressive symptoms between two groups showed that memory disturbances found significantly higher among bipolar depression than unipolar depression, which was found to be statistically significant.

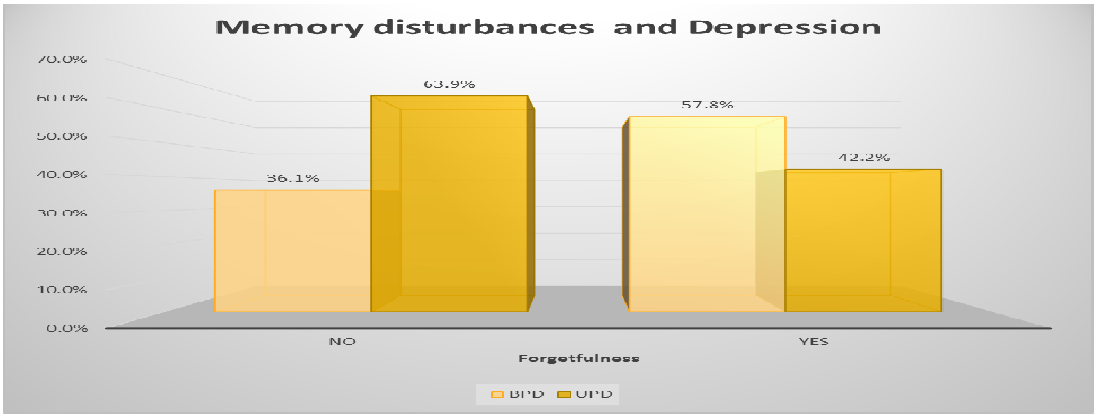
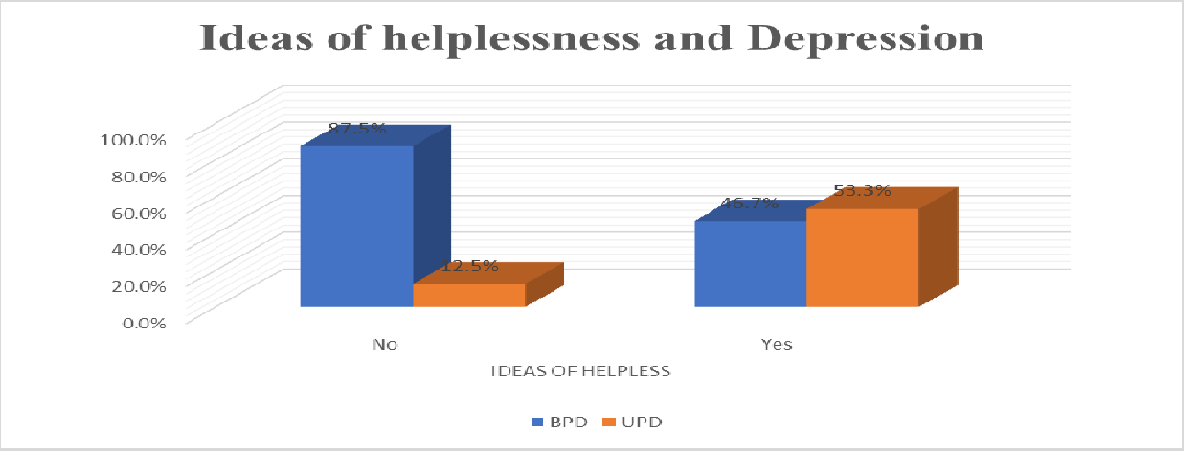


TABLE 11: COMPARISON OF DEPRESSIVE SYMPTOMS BETWEEN TWO GROUPS

Ideas of helplessness	Group				
	BPD		UPD		P value
	N	%	N	%	
No	7	87.5%	1	12.5%	
Yes	43	46.7%	49	53.3%	
Total	50	50.0%	50	50.0%	**0.059*** **
Hopelessness					
No	14	48.3%	15	51.7%	
Yes	36	50.7%	35	49.3%	
Total	50	50.0%	50	50.0%	0.826
Worthlessness					
No	28	45.9%	33	54.1%	
Yes	22	56.4%	17	43.6%	
Total	50	50.0%	50	50.0%	0.305

*****- p<0.05- significant.**



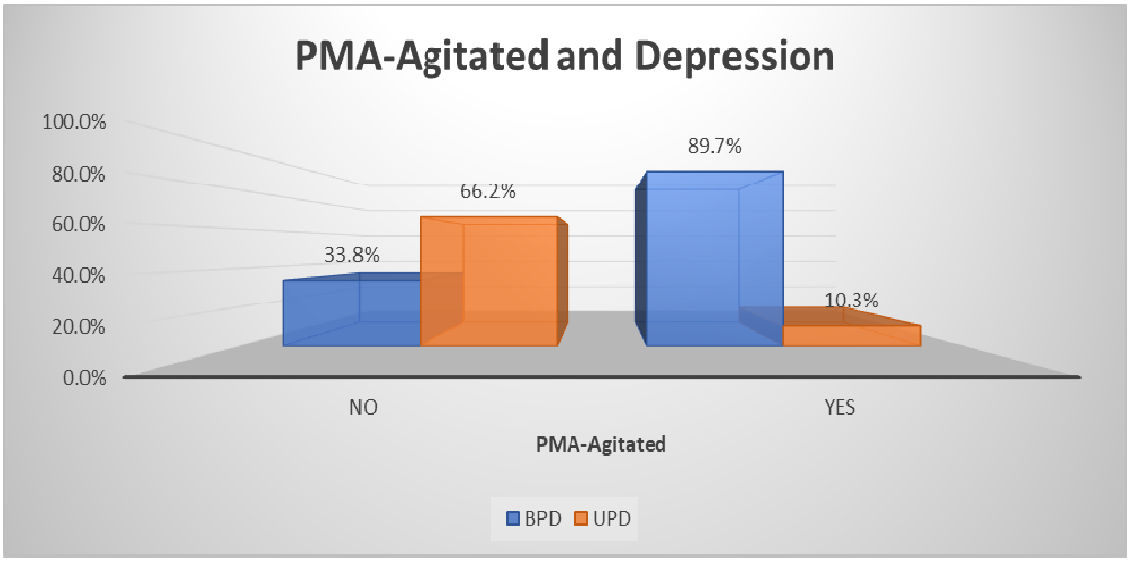
On comparing depressive symptoms like ideas of helplessness, hopelessness and worthlessness between two groups, above picture showed that ideas of

helplessness found higher among unipolar depression than bipolar depression, which was found to be statistically significant. p=0.059

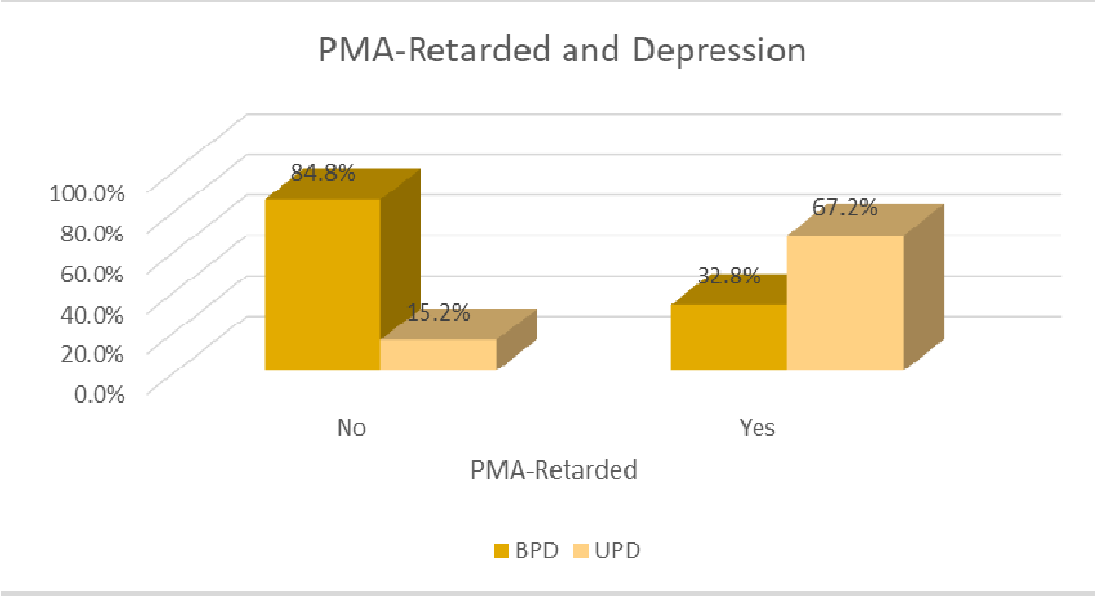
TABLE 12: COMPARISON OF PSYCHOMOTOR ACTIVITY BETWEEN TWO GROUPS:

PMA-Agitated	Group				
	BPD		UPD		P value
	N	%	N	%	
No	24	33.8%	47	66.2%	
Yes	26	89.7%	3	10.3%	
Total	50	50.0%	50	50.0%	**<0.001*** **
PMA-Retarded	**Group**				
	BPD		**UPD**		**P value**
	N	**%**	**N**	**%**	
No	28	84.8%	5	15.2%	
Yes	22	32.8%	45	67.2%	
Total	50	50.0%	50	50.0%	**<0.001*** **

*****- p<0.05- significant.**



Psychomotor Agitation was found higher in bipolar depression group (89.7%) as compared to unipolar depression (10.3%), found to be statistically significant (p=<0.001).



Psychomotor Retardation is found significantly higher in unipolar depression (67.2%) as compared to bipolar depression (32.8%), which was found to be statistically significant p=<0.001

TABLE 13: COMPARISON OF SUICIDAL IDEAS AND ATTEMPTS BETWEEN 2 GROUPS

Suicidal ideas	Group				
	BPD		UPD		P value
	N	%	N	%	
No	15	50.0%	15	50.0%	
Yes	35	50.0%	35	50.0%	
Total	50	50.0%	50	50.0%	1.000
Suicidal attempt	**Group**				
	BPD		**UPD**		**P value**
	N	**%**	**N**	**%**	
No	31	47.0%	35	53.0%	
Yes	19	55.9%	15	44.1%	
Total	50	50.0%	50	50.0%	0.398
DSH	**Group**				
	BPD		**UPD**		**P value**
	N	**%**	**N**	**%**	
No	18	31.0%	40	69.0%	
Yes	32	76.2%	10	23.8%	
Total	50	50.0%	50	50.0%	**<0.001*** **

***- p value<0.05- significant**

On Comparing suicidal ideas, suicidal attempts and deliberate self-harm between two groups showed that Deliberate self-harm was found higher in bipolar depression of around 76% as compared to unipolar depression of around 23.8%, which was found to be statistically significant (p=<0.001)

TABLE 14: COMPARISON OF SYMPTOMS BETWEEN 2 GROUPS

Anhedonia			Group		
	BPD		UPD		P value
	N	%	N	%	
No	11	57.9%	8	42.1%	
Yes	39	48.1%	42	51.9%	
Total	50	50.0%	50	50.0%	0.444
Low self-esteem					
No	20	44.4%	25	55.6%	
Yes	30	54.5%	25	45.5%	
Total	50	50.0%	50	50.0%	0.315
Anxiety					
No	45	47.4%	50	52.6%	
Yes	5	100.0%	0	0.0%	
Total	50	50.0%	50	50.0%	**0.056*** **

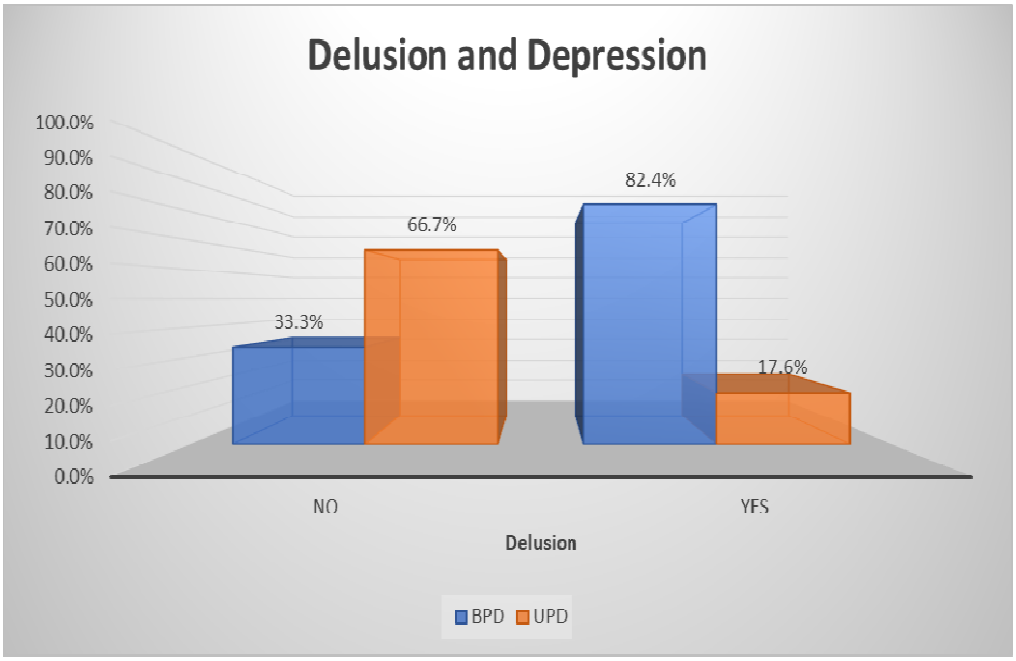
*****- p value<0.05- significant**

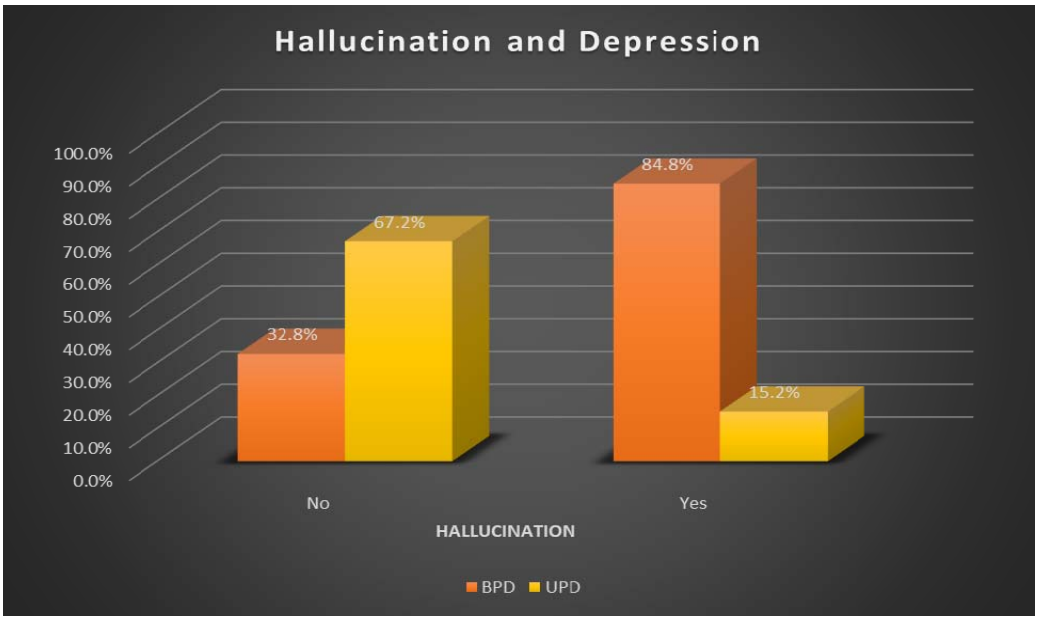
On comparing symptoms like anhedonia, low self-esteem, and anxiety features between two groups, showed that Anxiety features was found significantly higher among bipolar depression(n=5) as compared to unipolar depression, which was found to be statistically significant(p=0.056).

TABLE 15: COMPARISON OF PSYCHOTIC FEATURES BETWEEN TWO GROUPS

Delusion	Group				
	BPD		UPD		P value
	N	%	N	%	
No	22	33.3%	44	66.7%	
Yes	28	82.4%	6	17.6%	
Total	50	50.0%	50	50.0%	**<0.001**
Hallucination	**Group**				
	BPD		**UPD**		**P value**
	N	**%**	**N**	**%**	
No	22	32.8%	45	67.2%	
Yes	28	84.8%	5	15.2%	
Total	50	50.0%	50	50.0%	**<0.001**

*****- p<0.05- significant.**





Psychotic features like delusions and hallucinations found significantly higher in bipolar depression as compared to unipolar depression. in bipolar depression, 82.4% people has delusions and 84.8% people has hallucinations, which was found to be statistically significant.

Table 16:

COMPARISON OF SCALES TO ASSESS ILLNESS SEVERITY BETWEEN TWO GROUPS

Variables	Group	N	Mean	Std. Dev	t-value	p-value
HAM-D	BPD	50	17.14	3.393	0.320	0.750
	UPD	50	17.44	5.704		
BPRS	BPD	32	29.84	7.243	1.853	0.093
	UPD	9	22.67	10.966		

Above table compared the illness severity using standard rating scales between two groups which revealed that HAM-D scores suggestive of moderate to severe depression in both groups with mean of 17.74, hence no difference between severity of depression between two groups. BPRS scale to assess psychotic symptoms severity showed mean score around 29 in bipolar depression and 22 in unipolar depression, hence no significant statistical differences elicited between 2 groups.

Table 17: COMPARISON OF SCALES USING SUBSTANCE USE SEVERITY BETWEEN TWO GROUPS

Variables	Group	N	Mean	Std. dev	t-value	p-value
Audit	BPD	24	21.00	7.151	2.326	**0.027*** **
	UPD	8	14.25	6.964		
Fagerstrom	BPD	23	8.35	1.695	0.470	0.642
	UPD	9	8.67	1.803		

***** P<0.05 – statistically significant.**

Above table, compare the severity of substance use pattern among two groups using rating scales, revealed that Bipolar depression group has increased scores on AUDIT scales as compared to unipolar depression group, which was found to be statistically significant. P=0.027

On Fagerstrom scale for nicotine dependence, showed mean score of around 8 in both groups, which was not statistically significant.

TABLE 18: LOGISTIC REGRESSION TO FIND OUT PREDICTORS OF BIPOLARITY:

Factors	BPD		Odds Ratio	95% CI for OR		p-value
	N	%		LL	UL	
Male	28	65.1%	2.97	1.304	6.764	**0.010*** **
F/H/O substance	31	59.6%	2.25	1.011	5.019	**0.047*** **
Alcohol Abuse	6	50.0%	1.58	.459	5.415	0.469
Alcohol Dependence	18	85.7%	9.46	2.534	35.324	**0.001*** **
Guilt	19	65.5%	2.45	0.999	6.018	**0.050*** **
Forgetfulness	37	57.8%	2.43	1.045	5.626	**0.039*** **
PMA Agitated	26	89.7%	16.97	4.661	61.798	**<0.001*** **
DSH	32	76.2%	7.11	2.885	17.526	**<0.001*** **
Delusion	28	82.4%	9.33	3.367	25.870	**<0.001*** **
Hallucination	28	84.8%	11.46	3.892	33.715	**<0.001*** **

***** p<0.05- significant**

Above table, listed out variables which was found significant differences between two groups were analysed using logistic regression to find out predictors of bipolarity. It showed that, male gender has two-fold increase risk for bipolarity.

Family history of substance use has two-fold risk for bipolarity. People with alcohol dependence has 9-fold more risk for bipolarity.

Symptoms like ideas of guilt and memory disturbances has 2- fold risk for bipolarity. People presented with Psychomotor agitation has 16-fold increased risk for bipolarity. People with deliberate self-harm during course of illness has 7-fold high risk for bipolarity.

Psychotic symptoms like delusions and hallucinations in depression carries 10-fold increased risk for bipolar spectrum disorders.

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DISCUSSION

The aim of this study was to assess the socio demographic profile and clinical features and substance use of unipolar depression and bipolar depression.

Bipolar depression and unipolar depression have overlapping clinical symptoms and presentation, which often leads to misdiagnosis and inadequate treatment. As, both have different treatment guidelines, early detection of signs and symptoms would prevent inadequate treatment.

In our study, regarding mean age of presentation, bipolar depression group was found to be younger compared to unipolar depression group. This result was consistent with previous studies done by Mitchell et al[130]., Solomon et al[131]., Szeman et al[132]., Nisha A et al[133].,

Age of onset of illness in both groups, had showed that bipolar depression group had younger age of onset than unipolar depression group. This result was consistent with previous studies done by Abrams R et al[134]., Anderson et al[65], Solomon et al[131]., Weissman et al[70]., Nisha A et al[134].,

In our study, unipolar depression was found to be more common in females and bipolar depression was found to be more common among males. A study done by Leibenluft et al[135] stated that prevalence of depression and rapid cycling course found to be more common among women.

In our study, most of the people belonged to lower socio-economic status. No significant difference was noticed between both the groups. Other socio-demographic variables such as marital status, family type and religion showed no significant differences between two groups. But study done by Nunez et al[68], had shown contrasting result from our study where unipolar depression people were married and most of the bipolar depression people were single.

Illness variables:

Our study showed that bipolar depression had long duration of illness and increased frequency of episodes and a greater number of hospitalisations as compared to unipolar depression. These results were consistent with previous studies done by Perlis et al[2]., Roybyrne et all[73]., Miller et al[12]., Winokur et al[95]., Benazzi et al[75]., Leonpacher A K et al.,[136]

But study done by Mitchell[11] et al showed that episode of bipolar depression will be shorter and rapid onset, but unipolar depression has chronic course.

Regarding, family history our study showed that bipolar depression group had family history of substance use significantly more compared to unipolar depression group.

Our study did not show any significant differences for family history of mood, psychosis and suicide between two groups. But previous studies done by Benazzi et al[75]., Manning et al[77]., Akiskal et al[78]., showed that patients with bipolar depression has family history of psychosis and mood disorders, more common among first generation relatives, which is contradictory in our study.

In our study, we assessed co morbid medical conditions like hypertension, diabetes and hypothyroidism among unipolar and bipolar depression. There were no significant differences noted for hypertension. But presence of Diabetes was found to be significantly higher among unipolar depression group than bipolar depression group.

This result consistent with previous study by Mezuk et al[79].,

On contrary to our study, Calvin cv et al[137]., in his study showed that bipolarity was associated with both pre-diabetes and diabetes, and the reason he stated for this result was because of wide usage of mood stabilisers and antipsychotics in bipolar disorder leads to complication of metabolic syndrome, hence diabetes found more common among bipolar group.

Individuals having unipolar depression were found to have significant association with co morbid hypothyroidism, compared to bipolar depression group in our study. This result was consistent with previous studies done by Bauer et al[82]., Hendrick et al[83].,

But study done by Chakrabarti et al[138] stated that rarely hypomanic or manic symptoms associated with hypothyroidism, most often hyperthyroidism has associated with bipolar depression.

Substance use:

Our study showed that greater number of people from bipolar depression group had alcohol, cannabis, and nicotine dependence compared to people from unipolar depression group. And regarding severity of alcohol use and nicotine use, there was no significant differences noted between two groups.

These results were consistent with previous studies done by Olfsun et al[109]., Winokaur et al[96]., Moreno et al[90].,

McElroy et al[94]., and Chengappa et al[95]., showed that more people from Bipolar disorder I had substance dependence compared to Bipolar disorder II.

Our study showed that postpartum onset of depression was mostly associated with bipolarity, we had few numbers of cases reported to have postpartum onset. This result was consistent with previous study done by Rybakowski J et al[111].

Phenomenology:

In our study we have compared symptomatology between unipolar and bipolar depression. There was no significant differences found with respect to loss of appetite and insomnia between two groups in our study. But among Atypical symptoms like Hyperphagia was significantly found to be more

among bipolar depression. This result was consistent with previous studies done by Vieta et al[111] and Mitchell et al[11].,

But, studies done by Mitchell et al[130]., had showed that atypical features like hypersomnia, hyperphagia, and hypersexuality most commonly associated with Bipolar depression, which was different from our study.

Our study showed that Irritability and guilt feelings significantly found higher in bipolar depression than unipolar depression. These results were consistent with previous study done by Benazzi et al[75].,

Cognitive symptoms like memory disturbances, decreased attention and decreased concentration was studied between two groups. Our study showed that memory disturbances was found to be more common among bipolar depression group as compared to unipolar depression group.

Our study did not show any significant differences between inattention and decreased concentration. But study done by Abrams and taylor et al[134]. and papadimitiou et al[106]., showed that difficulty in concentration and attention was more common among unipolar depression group, which was in contrary to our study.

Regarding depressive symptoms, our study showed that Ideas of helplessness was found to be significantly higher among unipolar depression group than bipolar depression group. But Miller et al[12]., stated that Ideas of helplessness, hopelessness, worthlessness found to be more common in unipolar depression, which was different from our study.

In Our study, psychomotor retardation was found to be significantly more common among unipolar depression group and psychomotor agitation was found to be more in bipolar depression group. This result was consistent with previous study done by Beigel et al[104].,

But study done by Goodwin and Jamison et al[19]., found that psychomotor retardation was significantly higher in bipolar depression than unipolar depression. Another study, which was done by Benazzi et al[75]., stated that there was no significant difference found between two groups for psychomotor retardation.

In our study, Deliberate self-harm had higher association with bipolar depression group than unipolar depression group, which could probably be due to influence of other factors like personality and substance use.

Our study did not show any significant differences between suicidal ideations and suicidal attempts. But previous studies done by Leonpacher A K et al.,[136]

Oquendo MA et al[139]., Schaffer A et al[117]., Hawton K et al[119]., showed that a greater number of suicidal attempts and suicidal thoughts found to be more common among bipolar depression, which is differed from our result.

Anhedonia was equally seen in both unipolar depression and bipolar depression group. Mitchell et al[11]., found a contrasting result from our study, he showed that anticipatory anhedonia could be a signature symptom of bipolar depression.

Anxiety symptoms were found to be significantly higher among bipolar group in our study. This result was consistent with previous studies done by Vieta et al[111]., Mitchell et al[130]., Leonpacher A K et al.,[136]

Our study showed that psychotic symptoms like delusions and hallucinations were found to be significantly higher among bipolar depression group than unipolar depression group. These results were consistent with previous studies done by Olfson et al[109]., Miller et al[130]., But, one study done by Brockington et al[107]., showed that auditory hallucination and ideas of reference were common among unipolar depression group than bipolar depression group which was different from our results.

Predictors of bipolarity:

In our study, logistic regression was applied for variables which had significant association between two unipolar depression and bipolar depression group. From this analysis, variables that could predict bipolarity were found.

Those variables are

1) Male gender
2) Family history of Substance use
3) Postpartum onset
4) H/O alcohol dependence and abuse

5) Guilt feelings
6) Forgetfulness
7) Psychomotor agitation
8) Deliberate self-harm
9) Delusion and hallucinations.

These results consistent with previous studies done by Coryell et al[74]., gold berg et al[112]., Leonpacher AK et al[136]., Strober et al[140].,

A Study done by Akiskal et al[141]., showed some of features like

1) early onset,
2) family history of bipolar disorder,
3) anti-depressant induced manic-episode,
4) following postpartum onset

were mentioned as common predictors, slightly different from our study. The reason would be as we did not assess about the history of anti-depressant following manic episode among people with bipolar depression group.

Another study done by Mitchell et al[130]., showed that predictors of bipolarity in their study which was different from our study results.

The predictors were

1) early morning awakening
2) difficulty in concentration
3) diurnal variation- symptoms increased in morning
4) psychotic symptoms
5) mixed symptoms.

There were no significant differences in severity of depression between both the groups based on HAM-D, in our study.

But a study done by Heger U et al[76]., mentioned that severity of depression was noticed higher among bipolar depression group compared to unipolar depression group.

LIMITATIONS

1. This is cross- sectional study. Our study had lesser sample size, so not generalized to general population
2. As it was cross-sectional study, the prognosis and episode severity and duration of each episode, course and prognosis of disease were not assessed. Anti-depressant induced manic episodes were not elicited.
3. Relation of co-morbid physical illness and substance use to the illness was not assessed.

CONCLUSION

Certain socio demographic and clinical variables differ between people having unipolar depression and bipolar depression. Detailed history and proper clinical assessment during first episode of depression would help to predict occurence of bipolarity. By early identification of bipolarity spectrum, course and severity of disease can be modified by appropriate treatment. It would also help to prevent further episodes. It could also improve the overall psychosocial functioning and quality of life of such patients.

FUTURE DIRECTIONS

As there are paucity of Indian studies related to neurobiological and structural and functional neuroimaging difference between unipolar and bipolar depression, so future studies should focus more on this basis.

Studies should also be done to identify bio markers that determine the bipolar depression in early stages.

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Information to Participants

Title: A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION".
Principal Investigator: Dr. KANMANI. V.K

Name of Participant:
Site: Department of psychiatry, Institute Of Mental Health, Madras Medical College, Chennai

You are invited to take part in this research. The information in this document is meant to help you decide whether or not to take part. Please feel free to ask if you have any queries or concerns.

What is the purpose of research?

Unipolar and bipolar disorders, the first assumption is that both diagnoses are clear cut and separable diagnostic entities. Unipolar and Bipolar depression differ in genetics, neurobiology, clinical course, treatment regimens, and prognosis.40% patients with BPAD initially receive an incorrect diagnosis of RDD. Diagnosis is complicated by many factors-assumption of similar phenomenology, failure to recognize hypomanic symptoms. All symptoms were significantly higher in bipolar depression than unipolar depression. Use of antidepressants in bipolarity increase switch over to manic episodes and poor response and co morbid substance use may lead to worse outcomes for bipolar disorders and affect quality of life. Diagnostic clarification will be helpful in assessing treatment outcomes.

The study design

This is cross sectional comparative study conducted for 6 months from the date of approval of ethical committee. 100 consecutive subjects in which 50 cases of unipolar depression and 50 cases of bipolar depression diagnosed based on ICD 10 criteria who visit outpatient and inpatient unit in Institute of mental health, are selected as study subjects.

Study Procedures

Those who met criteria for RDD current episode moderate – severe depression with/without psychotic symptoms are under unipolar depression group. Those diagnosed as BPAD current episode moderate -severe depression with/without psychotic and somatic symptoms are under bipolar group. Scales are applied for assessing clinical profile such as Hamilton rating scale for depression (HAM-D), Brief psychiatric rating scale (BPRS), Kuppuswami's socioeconomic status scale, Alcohol use disorders and identification test(AUDIT) and fagerstrom nicotine dependence scale.

. **Confidentiality of the information obtained from you**

You have the right to confidentiality regarding the privacy of your medical information (personal details, results of physical examinations, investigations, and your medical history). By signing this document, you will be allowing the research team investigators, other study personnel, Institutional Ethics Committee and any person or agency required by law like the Drug Controller General of India to view your data, if required.

The information from this study, if published in scientific journals or presented at scientific meetings, will not reveal your identity.

How will your decision to not participate in the study affect you?

Your decision not to participate in this research study will not affect your medical care or your relationship with the investigator or the institution. You will be taken care of and you will not lose any benefits to which you are entitled.

Can you decide to stop participating in the study once you start?

The participation in this research is purely voluntary and you have the right to withdraw from this study at any time during the course of the study without giving any reasons. However, it is advisable that you talk to the research team prior to discontinuing form the study.

Signature of Investigator

Signature of Participant

Signature of the Guardian

Date

Date

INFORMED CONSENT FORM

(This is only a guideline – Relevant changes to be made as per the study requirements)

Title of the study: "A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION".

Name of the Participant: _____.

Name of the Principal (Co-Investigator): _Dr. KANMANI.V.K

Name of the Institution: Institute of mental health _____.

Name and address of the sponsor / agency (ies) (if any):__No_____
_____.

Documentation of the informed consent

I _____ have read the information in this form (or it has been read to me). I was free to ask any questions and they have been answered. I am over 18 years of age and, exercising my free power of choice, hereby give my consent to be included as a participant in **' A COMPARATIVE STUDY ON CLINICAL PROFILE AND SUBSTANCE USE OF PATIENTS WITH BIPOLAR VERSUS UNIPOLAR DEPRESSION'**

1. I have read and understood this consent form and the information provided to me.
2. I have had the consent document explained to me.
3. I have been explained about the nature of the study.
4. I have been explained about my rights and responsibilities by the investigator.
5. I have been informed the investigator of all the treatments I am taking or have taken in the past _____ months including any native (alternative) treatment.
6. I have been advised about the risks associated with my participation in this study.*****
7. I have not participated in any research study within the past _____month(s). *****
8. I have not donated blood within the past _____ months—Add if the study involves extensive blood sampling. *****
9. I am aware of the fact that I can opt out of the study at any time without having to give any reason and this will not affect my future treatment in this hospital. *****
10. I am also aware that the investigator may terminate my participation in the study at any time, for any reason, without my consent. *****
11. I hereby give permission to the investigators to release the information obtained from me as result of participation in this study to the sponsors, regulatory authorities, Govt. agencies, and IEC. I understand that they are publicly presented.
12. I have understand that my identity will be kept confidential if my data are publicly presented
13. I have had my questions answered to my satisfaction.
14. I have decided to be in the research study.

I am aware that if I have any question during this study, I should contact the investigator. By signing this consent form I attest that the information given in this document has been clearly explained to me and understood by me, I will be given a copy of this consent document.

For adult participants:

Name and signature / thumb impression of the participant (or legal representative if participant incompetent)

Name _____ Signature_____ Date_____

Name and Signature of impartial witness (required for illiterate patients):

Name _____ Signature_____ Date_____

Address and contact number of the impartial witness:

ஆய்வு ஒப்புதல் படிவம்

ஆய்வின் தலைப்பு: : ஓர்முனை மற்றும் இருமுனை மனஅழுத்த பிணியாளர்களின் மருத்துவ சுயவிவரம்,மற்றும் போதை பொருள் பயன்பாடு ஆகியவற்றை ஒப்பிடும் ஆய்வு
ஆய்வாளரின் பெயர்: : மரு.வீ.கா.கண்மணி
பங்கு கொள்பவரின் பெயர்:
மருத்துவ நிலையம்: : அரசு மனநல காப்பகம்,சென்னை.

---------- எனும் நான் எனக்கு கொடுக்கப்பட்ட தகவல் தாளினை படித்து புரிந்துகொண்டேன்.
நான் 18 வயதை கடந்திருப்பதால் என்னுடைய சுய நினைவுடனும் மற்றும் முழு சுதந்திரத்துடனும் இந்த ஆய்வில் என்னைச் சேர்த்துக்கொள்ள சம்மதிக்கிறேன்.

நான் எனக்கு கொடுக்கப்பட்ட தகவல் தாளினை படித்து புரிந்துகொண்டேன்.
எனக்கு இந்த ஆய்வின் ஒப்புதல் படிவம் விளக்கப்பட்டது.
எனக்கு இந்த ஆய்வின் நோக்கமும்,விவரங்களும் விளக்கப்பட்டது.
எனக்கு என்னுடைய உரிமைகளை பற்றி விளக்கப்பட்டது.
நான் இதற்கு முன்பு எடுத்துக்கொண்ட அனைத்து மருத்துவ முறைகளைப் பற்றி தெரிவித்திருக்கிறேன்.
இந்த ஆய்வில் இருந்து நான் எந்நேரமும் பின் வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்துகொண்டேன்.
என்னை பற்றிய எந்த தகவல்களும் அடையாளமும் வெளியிடப்படமாட்டாது என்பதை நான் புரிந்துகொண்டேன்.
என்னுடைய முழு சுதந்திரத்துடன் இந்த ஆய்வில் என்னை சேர்த்துக்கொள்ள சம்மதிக்கிறேன்.

பங்கேற்பாளார் பெயர் மற்றும் கையொப்பம்_____தேதி_____
சாட்சியாளரின் பெயர் மற்றும்
கையொப்பம்_____தேதி_____ஆய்வாளரின் பெயர் மற்றும்
கையொப்பம்_____தேதி_____

ஆய்வு ஒப்புதல் தாள்

ஆய்வின் தலைப்பு: ஓர்முனை மற்றும் இருமுனை மனஅழுத்த பிணியாளர்களின் மருத்துவ சுயவிவரம்,மற்றும் போதை பொருள் பயன்பாடு ஆகியவற்றை ஒப்பிடும் ஆய்வு

ஆய்வாளரின் பெயர்: மரு.வீ.கா.கண்மணி

மருத்துவ நிலையம்: அரசு மனநல காப்பகம்,சென்னை.

ஆய்வின் நோக்கம்:

இந்த ஆய்வில் ஓர்முனை மற்றும் இருமுனை மனஅழுத்த பணியாளர்களின் பல்வேறு மருத்துவ சுயவிவரம் மற்றும் உளவியல் சமூக காரணிகளை ஒப்பியல் செய்யப்படுகிறது.இவ்விரண்டு பிணியாளர்களிடையே மருத்துவ அறிகுறிகள் தென்படுவதிலும்,நோயை கண்டறிவதிலும் குறிப்பிடத்தக்க வேறுபாடுகள் உள்ளன.மேலும் இந்த ஆய்வில் மட்டுமீறிய போதை பொருள் நுகர்தல் மற்றும் சிகிச்சைகளின் விளைவுகளையும் ஆராய்ந்து ஒப்பீடு செய்யப்படுகிறது.

செய்முறை விளக்கம்:

இந்த ஆய்வு மனநல காப்பகத்தில் புறநோயாகளிள் பிரிவில் நடைபெறுகிறது. இந்த ஆய்வில் பிணியாளர்களின் முழு சம்மதத்துடன் உட்படத்தபடுவார்கள்.இவர்களுக்க **HAM-D, HCL-32,BPRS,KUPPUSWAMI SOCIOECONOMIC STATUS SCALE,AUDIT** போன்ற கேள்வி தாள் மூலம் மதிப்பீடு செய்யப்படும்.

ஆய்வினால் தாங்கள் அடையும் பயன்கள்: சுய தீங்கிற்கான ஆபத்து காரணிகள் தங்களிடம் கண்டறியப் பட்டால் அதற்குரிய சிகிச்சை தங்களுக்கு அளிக்கப்படும்.

தகவலின் இரகசிய தன்மை: தங்களுடைய சுயவிளக்கம்,மருத்துவக் குறிப்புகள் மற்றும் மருத்துவ சோதனை அறிக்கை அனைத்தும் ரகசியமாக வைப்பதற்கு தனியுரிமை அளிக்கப்படும்.இதன் முடிவுகளை வெளியிடும் போதோ அல்லது ஆய்வின் போதோ தங்களது பெயரையோ, அடையாளங்களையோ வெளியிடமாட்டோம் என்பதையும் தெரிவித்துக்கொள்கிறோம்.

இந்த ஆய்வில் தாங்கள் பங்கேற்காவிட்டாலும் தங்களுடைய மருத்துவ உதவியில் எந்தவொரு பின்விளைவுகளும் ஏற்படாது.

இந்த ஆய்வில் பங்கேற்பது தங்களுடைய விருப்பத்தின் பேரில் தான் மேலும் நீங்கள் எந்நேரமும் இந்த ஆய்விலிருந்து பின்வாங்கலாம் என்பதையும் தெரிவித்துக்கொள்கிறேன்.

ஆய்வாளரின் கையொப்பம் பங்கேற்பாளர் கைப்யொப்பம்

நாள்: நாள்:

Name
Age
Sex: M/F
Education
Occupation
Income
Marital status
Socioeconomic status
Religion
Family type
Place
Informant

Illness parameters:

1. Age of onset-
2. Total duration-
3. No.of. episodes-
4. No.of. hospitalisation-
5. Family history of illness- similar illness/psychotic illness/suicide/substance use
6. Medical co morbidity- HTN/DM/HYPOTHYROID/OTHERS
7. POSTPARTUM onset
8. Peri menopausal onset
9. H/O ECT
10. SUBSTANCE USE: Alcohol abuse/dependence
    Nicotine abuse/dependence
    Cannabis abuse/dependence

Phenomenology:

1) Depressed cognition- forgetfulness/ reduced concentration/ reduced attention
2) Psychomotor activity- retarded/ agitated
3) Catatonic features- yes/no
4) Suicidal thoughts/ ideations/ plans-
5) Suicidal attempts-
6) Deliberate self harm-
7) Anhedonia-
8) Dissociative features
9) Panic symptoms
10) Psychotic symptoms
    - ✓ Delusions- persecutory/referential/guilt/infidelity/hypochondriacal/nihilistic
    - ✓ First rank symptoms-thought echo/ broadcasting/insertion
    - ✓ Hallucinations- auditory (1^{st}/2^{nd}/3^{rd})

The Alcohol Use Disorders Identification Test: Interview Version

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?

   (0) Never [Skip to Qs 9-10]
   (1) Monthly or less
   (2) 2 to 4 times a month
   (3) 2 to 3 times a week
   (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

   (0) 1 or 2
   (1) 3 or 4
   (2) 5 or 6
   (3) 7, 8, or 9
   (4) 10 or more

3. How often do you have six or more drinks on one occasion?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

   Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

4. How often during the last year have you found that you were not able to stop drinking once you had started?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?

    (0) No
    (2) Yes, but not in the last year
    (4) Yes, during the last year

Record total of specific items here

If total is greater than recommended cut-off, consult User's Manual.

The Alcohol Use Disorders Identification Test: Self-Report Version

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Place an X in one box that best describes your answer to each question.

Questions	0	1	2	3	4	
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year	
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year	
					Total	

STANDARD DRINK EQUIVALENTS	APPROXIMATE NUMBER OF STANDARD DRINKS IN:
BEER or COOLER	
12 oz. **~5% alcohol**	12 oz. = 1 16 oz. = 1.3 22 oz. = 2 40 oz. = 3.3
MALT LIQUOR	
8-9 oz. **~7% alcohol**	12 oz. = 1.5 16 oz. = 2 22 oz. = 2.5 40 oz. = 4.5
TABLE WINE	
5 oz.  **~12% alcohol**	a 750 mL (25 oz.) bottle = 5
80-proof SPIRITS (hard liquor)	
1.5 oz.  **~40% alcohol**	a mixed drink = 1 or more* a pint (16 oz.) = 11 a fifth (25 oz.) = 17 1.75 L (59 oz.) = 39 *Note: Depending on factors such as the type of spirits and the recipe, one mixed drink can contain from one to three or more standard drink

Hamilton Depression Rating Scale (HDRS)

Reference: **Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry 1960; 23:56–62**

Rating Clinician-rated

Administration time 20–30 minutes

Main purpose To assess severity of, and change in, depressive symptoms

Population Adults

Commentary

The HDRS (also known as the Ham-D) is the most wide-ly used clinician-administered depression assessment scale. The original version contains 17 items ($HDRS_{17}$) pertaining to symptoms of depression experienced over the past week. Although the scale was designed for completion after an unstructured clinical interview, there are now semi-structured interview guides available. The HDRS was originally developed for hospital inpatients, thus the emphasis on melancholic and physical symptoms of depression. A later 21-item version ($HDRS_{21}$) included 4 items intended to subtype the depression, but which are sometimes, incorrectly, used to rate severity. A limitation of the HDRS is that atypical symptoms of depression (e.g., hypersomnia, hyperphagia) are not assessed (see SIGH-SAD, page 55).

Scoring

Method for scoring varies by version. For the $HDRS_{17}$, a score of 0–7 is generally accepted to be within the normal range (or in clinical remission), while a score of 20 or higher (indicating at least moderate severity) is usually required for entry into a clinical trial.

Versions

The scale has been translated into a number of languages including French, German, Italian, Thai, and Turkish. As well, there is an Interactive Voice Response version (IVR), a Seasonal Affective Disorder version (SIGH-SAD, see page 55), and a Structured Interview Version (HDS-SIV). Numerous versions with varying lengths include the HDRS17, HDRS21, HDRS29, HDRS8, HDRS6, HDRS24, and HDRS7 (see page 30).

Additional references

Hamilton M. Development of a rating scale for primary depressive illness. Br J Soc Clin Psychol 1967; 6(4):278–96.

Williams JB. A structured interview guide for the Hamilton Depression Rating Scale. Arch Gen Psychiatry 1988; 45(8):742–7.

Address for correspondence

Hamilton Depression Rating Scale (HDRS)

PLEASE COMPLETE THE SCALE BASED ON A STRUCTURED INTERVIEW

Instructions: for each item select the one “cue” which best characterizes the patient. Be sure to record the answers in the appropriate spaces (positions 0 through 4).

1 DEPRESSED MOOD *(sadness, hopeless, helpless, worthless)*

0 |__| Absent.
1 |__| These feeling states indicated only on questioning.
2 |__| These feeling states spontaneously reported verbally.
3 |__| Communicates feeling states non-verbally, i.e. through facial expression, posture, voice and tendency to weep.
4 |__| Patient reports virtually only these feeling states in his/her spontaneous verbal and non-verbal communication.

2 FEELINGS OF GUILT

0 |__| Absent.
1 |__| Self reproach, feels he/she has let people down.
2 |__| Ideas of guilt or rumination over past errors or sinful deeds.
3 |__| Present illness is a punishment. Delusions of guilt.
4 |__| Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations.

3 SUICIDE

0 |__| Absent.
1 |__| Feels life is not worth living.
2 |__| Wishes he/she were dead or any thoughts of possible death to self.
3 |__| Ideas or gestures of suicide.
4 |__| Attempts at suicide (any serious attempt rate 4).

4 INSOMNIA: EARLY IN THE NIGHT

0 |__| No difficulty falling asleep.
1 |__| Complains of occasional difficulty falling asleep, i.e. more than ½ hour.
2 |__| Complains of nightly difficulty falling asleep.

5 INSOMNIA: MIDDLE OF THE NIGHT

0 |__| No difficulty.
1 |__| Patient complains of being restless and disturbed during the night.
2 |__| Waking during the night – any getting out of bed rates 2 (except for purposes of voiding).

6 INSOMNIA: EARLY HOURS OF THE MORNING

0 |__| No difficulty.
1 |__| Waking in early hours of the morning but goes back to sleep.
2 |__| Unable to fall asleep again if he/she gets out of bed.

7 WORK AND ACTIVITIES

0 |__| No difficulty.
1 |__| Thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies.
2 |__| Loss of interest in activity, hobbies or work – either directly reported by the patient or indirect in listlessness, indecision and vacillation (feels he/she has to push self to work or activities).
3 |__| Decrease in actual time spent in activities or decrease in productivity. Rate 3 if the patient does not spend at least three hours a day in activities (job or hobbies) excluding routine chores.
4 |__| Stopped working because of present illness. Rate 4 if patient engages in no activities except routine chores, or if patient fails to perform routine chores unassisted.

8 RETARDATION (slowness of thought and speech, impaired ability to concentrate, decreased motor activity)

0 |__| Normal speech and thought.
1 |__| Slight retardation during the interview.
2 |__| Obvious retardation during the interview.
3 |__| Interview difficult.
4 |__| Complete stupor.

9 AGITATION

0 |__| None.
1 |__| Fidgetiness.
2 |__| Playing with hands, hair, etc.
3 |__| Moving about, can't sit still.
4 |__| Hand wringing, nail biting, hair-pulling, biting of lips.

10 ANXIETY PSYCHIC

0 |__| No difficulty.
1 |__| Subjective tension and irritability.
2 |__| Worrying about minor matters.
3 |__| Apprehensive attitude apparent in face or speech.
4 |__| Fears expressed without questioning.

11 ANXIETY SOMATIC (physiological concomitants of anxiety) such as:

gastro-intestinal – dry mouth, wind, indigestion, diarrhea, cramps, belching
cardio-vascular – palpitations, headaches
respiratory – hyperventilation, sighing
urinary frequency

sweating

0 |__| Absent.
1 |__| Mild.
2 |__| Moderate.
3 |__| Severe.
4 |__| Incapacitating.

12 SOMATIC SYMPTOMS GASTRO-INTESTINAL

0 |__| None.
1 |__| Loss of appetite but eating without staff encouragement. Heavy feelings in abdomen.
2 |__| Difficulty eating without staff urging. Requests or requires laxatives or medication for bowels or medication for gastro-intestinal symptoms.

13 GENERAL SOMATIC SYMPTOMS

0 |__| None.
1 |__| Heaviness in limbs, back or head. Backaches, headaches, muscle aches. Loss of energy and fatigability.
2 |__| Any clear-cut symptom rates 2.

14 GENITAL SYMPTOMS (symptoms such as loss of libido, menstrual disturbances)

0 |__| Absent.
1 |__| Mild.
2 |__| Severe.

15 HYPOCHONDRIASIS

0 |__| Not present.
1 |__| Self-absorption (bodily).
2 |__| Preoccupation with health.
3 |__| Frequent complaints, requests for help, etc.
4 |__| Hypochondriacal delusions.

16 LOSS OF WEIGHT *(RATE EITHER a OR b)*

a) According to the patient:

0 |__| No weight loss.
1 |__| Probable weight loss associated with present illness.
2 |__| Definite (according to patient) weight loss.
3 |__| Not assessed.

b) According to weekly measurements:

0 |__| Less than 1 lb weight loss in week.
1 |__| Greater than 1 lb weight loss in week.
2 |__| Greater than 2 lb weight loss in week.
3 |__| Not assessed.

17 INSIGHT

0 |__| Acknowledges being depressed and ill.
1 |__| Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.
2 |__| Denies being ill at all.

Total score: |__|__|

FAGERSTRÖM TEST FOR NICOTINE DEPENDENCE(ADULTS)

	Score
1. How soon after you wake up do you smoke your first cigarette?	
❑ Within 5 minutes	3
❑ 6–30 minutes	2
❑ 31–60 minutes	1
❑ After 60 minutes	0
2. Do you find it difficult to refrain from smoking in the places where it is forbidden (e.g., in church, at the library, in cinema)?	
❑ Yes	1
❑ No	0
3. Which cigarette would you hate most to give up?	
❑ The first one in the morning	1
❑ Any other	0
4. How many cigarettes/day do you smoke?	
❑ 10 or less	0
❑ 11–20	1
❑ 21–30	2
❑ 31 or more	3
5. Do you smoke more frequently during the first hours after waking than during the rest of the day?	
❑ Yes	1
❑ No	0
6. Do you smoke if you are so ill that you are in bed most of the day?	
❑ Yes	1
❑ No	0

Scoring: 7 to 10 points = highly dependent; 4 to 6 points = moderately dependent; less than 4 points = minimally dependent

Total Score: ☐

Heatherton TF, Kozlowski LT, Frecker RC, Fagerström K-O. The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire. *Br J Addict* 1991;86:1119–1127.

Modified Kuppuswamy Socioeconomic scale updated for January 2018.

(a) Occupation of the Head of the Family: -

Sr. No.	Occupation of the Head	Score
1	Legislators, Senior Officials & Managers	10
2	Professionals	9
3	Technicians and Associate Professionals	8
4	Clerks	7
5	Skilled Workers and Shop & Market Sales Workers	6
6	Skilled Agricultural & Fishery Workers	5
7	Craft & Related Trade Workers	4
8	Plant & Machine Operators and Assemblers	3
9	Elementary Occupation	2
10	Unemployed	1

(b)Education of the Head of the Family: -

Sr. No.	Education of the Head	Score
1	Profession or Honours	7
2	Graduate	6
3	Intermediate or diploma	5
4	High school certificate	4
5	Middle school certificate	3
6	Primary school certificate	2
7	Illiterate	1

(c)Total Monthly Income of the Family: -

Sr. No.	Updated Monthly Family Income in Rs. (2012)	Updated Monthly Family Income in Rs. (2016)	Updated Monthly Family Income in Rs. (2018)	Score
1	>30375	≥ 40,430	>126,360	12
2	15188-30374	20,210 40,429	63,182-126,356	10
3	11362-15187	15,160 20,209	47,266-63178	6
4	7594-11361	10,110 15,159	31,591-47262	4
5	4556-7593	6060 10,109	18,953-31589	3
6	1521-4555	2021 6059	6327-18949	2
7	≤1520	≤ 2020	≤6323	1

(d)Kuppuswamy's Socio-Economic Status Scale 2018: -

Sr. No.	Score	Socioeconomic Class
1	26 29	Upper (I)
2	16 25	Upper Middle (II)
3	11 15	Lower Middle (III)
4	5 10	Upper Lower (IV)
5	< 5	Lower (V)

S NO	AGE	SEX	DUCATION	OCCUPATION	INCOME	MARITAL STATUS	SES	RELIGION	TYPE	AGE OF ONSET	DURATION	NO.OF EPISODES	NO,OF HOSP	F/H/O	MOOD	PSYCHOSIS	SUICIDE	SUBSTANCE	MEDICAL	HTN	DM	HYPOTHROID	POSTPARTUM	ECT	SUBSTANCE	ALCOHOL	NICOTINE ABUSE	CANNABIS	DEPRESSED COGNITION	SLEEP	APPETITE	IRRITABILITY	GUILT
1	24	1	3	2	1	2	2	1	1	22yr	2yr	2	0		n	n	n	Y		n	n	n	na	n		1	2	2		1	1	y	n
2	36	1	5	6	2	1	3	1	1	24	12	2	0		n	Y	n	n		n	n	n	na	n		2	0	0		1	1	y	n
3	40	2	1	1	1	1	1	1	1	36	4	2	0		n	n	n	n		n	n	n	n	n		0	0	0		1	2	y	n
4	37	1	1	5	2	1	2	1	1	29	8	5	2		n	n	n	n		n	n	n	na	n		2	0	0		2	2	y	y
5	50	2	2	1	1	1	2	1	1	25	25	4	1		n	n	n	y		n	y	n	n	n		0	0	0		1	1	y	n
6	45	2	4	1	1	1	3	1	3	39	8	6	1		y	n	n	n		n	n	y	n	n		0	0	0		1	1	y	n
7	37	2	1	1	1	1	2	1	2	25	8	4	0		n	n	y	y		n	n	n	n	n		0	0	0		1	2	y	y
8	30	1	2	2	1	2	2	1	1	22	8	2	0		n	n	n	y		n	n	n	na	n		2	2	2		1	1	y	n
9	34	1	3	5	2	1	2	1	1	20	14	3	1		n	n	y	n		n	n	n	na	n		2	0	0		1	1	y	y
10	50	2	2	1	1	1	3	1	1	25	25	4	3		n	n	n	y		n	n	y	na	n		0	0	0		1	2	y	n
11	39	2	3	4	2	1	3	1	1	28	10	0	0		n	n	n	n		n	n	y	n	n		0	0	0		1	1	y	n
12	22	1	4	1	1	2	4	1	1	17	5	4	1		n	n	n	n		n	n	n	na	n		0	0	0		1	2	y	n
13	44	2	4	1	1	3	2	1	1	17	20	6	3		n	y	n	n		n	n	n	n	y		0	0	0		1	1	y	y
14	35	2	1	1	1	1	2	2	3	20	15	5	0		y	n	n	n		y	n	y	y	n		0	0	0		1	1	y	n
15	30	2	3	1	1	1	2	1	1	18	12	4	2		y	n	y	n		n	n	y	n	n		0	0	0		1	1	y	n
16	40	2	3	1	1	1	4	3	2	20	20	6	3		y	n	n	n		n	n	y	y	y		0	0	0		1	2	y	y
17	38	2	3	3	2	1	3	1	2	28	10	2	0		n	n	n	y		n	y	n	n	N		0	0	0		1	2	Y	N
18	19	1	5	1	1	2	4	1	1	16	3	2	1		n	n	n	y		n	n	n	na	n		0	0	0		1	1	Y	N
19	29	2	4	1	1	2	2	1	2	18	11	4	2		Y	N	Y	N		N	N	N	N	N		0	0	0		1	2	y	y
20	30	1	3	5	2	2	3	1		28	2	2	0		N	N	N	Y		N	N	N	na	N		2	2	0		1	2	y	n
21	35	1	3	5	2	1	2	3	2	30	5	3	1		Y	N	Y	Y		N	N	N	na	Y		2	2	0		1	1	y	n
22	40	1	3	1	0	1	1	1	2	26	14	6	3		N	N	N	Y		Y	Y	N	na	N		2	2	0		1	1	y	y
23	29	1	4	5	2	2	2	3	1	27	2	2	0		N	N	N	Y		N	N	N	na	N		1	2	2		1	2	y	n
24	25	2	6	1	0	2	2	1	1	23	2	2	0		Y	N	N	N		N	N	N	n	N		0	0	0		1	1	y	n
25	36	1	2	1	0	1	1	1	1	25	11	6	3		N	N	Y	Y		N	N	N	na	Y		2	2	0		1	1	y	y
26	32	1	3	5	2	1	2	2	3	27	5	3	1		N	N	N	Y		N	N	N	na	N		0	2	0		1	1	y	n
27	33	1	2	4	2	2	2	1	1	25	8	4	1		N	N	Y	N		N	N	Y	N	N		1	2	0		2	1	y	n
28	20	2	4	1	0	2	1	1	1	18	2	2	0		N	Y	N	N		N	N	Y	N	N		0	0	0		1	2	y	n
29	36	1	3	1	1	1	2	1	2	25	11	5	3		y	n	n	y		n	n	n	na	n		0	2	2		1	1	y	y

30	38	1	4	3	1	1	2	3	2	28	10	3	1		n	n	y	y		n	n	n	na	n		2	2	0		1	1	y	y
31	41	2	4	1	1	1	2	1	1	20	21	4	2		y	n	y	y		n	y	y	n	n		0	0	0		2	2	y	n
32	24	1	3	2	2	2	2	2	3	20	4	3	2		n	n	y	y		n	n	n	na	n		2	2	2		1	2	y	n
33	29	1	4	5	1	2	2	1	2	26	3	2	0		n	n	n	y		n	n	n	na	n		2	2	0		1	2	y	y
34	28	2	3	1	1	1	3	1	1	27	1	2	0		y	n	n	n		n	n	y	n	n		0	0	0		1	1	y	n
35	27	1	5	5	2	2	3	3	2	22	7	3	1		n	n	y	y		n	n	n	na	n		2	2	2		1	2	y	y
36	20	2	4	1	1	2	3	1	1	19	1	2	1		y	n	y	y		n	n	n	n	n		0	0	0		1	1	y	n
37	45	1	3	5	2	1	3	1	2	30	15	5	3		y	n	y	y		n	y	n	na	y		2	2	0		1	1	y	y
38	29	1	6	5	2	2	3	1	1	26	2	2	0		n	n	n	y		n	n	n	na	n		1	2	2		1	2	y	y
39	32	1	3	2	1	2	2	1	1	27	5	2	2		y	n	n	y		n	n	n	na	n		2	2	0		1	2	y	y
40	40	1	3	3	1	1	1	1	1	27	13	7	3		y	n	y	y		n	y	n	na	y		2	2	0		1	1	y	n
41	30	1	5	5	2	1	2	2	2	29	1	2	0		n	n	n	y		n	n	n	na	n		2	2	0		1	1	y	n
42	44	1	5	4	2	1	2	3	1	30	14	3	0		y	n	n	y		y	y	n	na	n		1	2	0		2	2	y	y
43	31	2	3	1	1	1	2	1	1	28	3	2	0		n	n	n	y		n	n	y	n	n		0	0	0		1	1	y	n
44	33	1	5	4	2	1	2	1	1	30	3	3	1		n	n	y	y		n	n	n	na	n		2	2	0		1	1	y	y
45	30	2	3	1	1	1	2	1	1	18	12	4	2		y	n	y	n		n	n	y	n	n		0	0	0		1	1	y	n
46	38	2	3	3	2	1	3	1	2	28	10	2	0		n	n	n	y		n	y	n	NA	N		0	0	0		1	2	Y	N
47	38	1	4	3	1	1	2	3	2	28	10	3	1		n	n	y	y		n	n	n	na	n		2	2	0		1	1	y	y
48	29	1	4	5	2	2	2	3	1	27	2	2	0		N	N	N	Y		N	N	N	na	N		1	2	2		1	2	y	y
49	35	2	1	1	1	1	2	2	3	20	15	5	0		y	n	n	n		y	n	y	y	n		0	0	0		1	1	y	n
50	39	2	3	4	2	1	3	1	1	28	10	0	0		n	n	n	n		n	n	y	n	n		0	0	0		1	1	y	n
S NO	AGE	SEX	DUCATION	OCCUPATI	INCOME	MARITAL S	SES	RELIGI	TYPE	AGE O	DURAT	NO.OF	NO,OF	F/H/O	MOOD	PSYCH	SUICID	SUBST	MEDIC	HTN	DM	HYPOT	POSTP	ECT	SUBST	ALCOH	NICOT	CANNA	DEPRE	SLEEP	APPET	IRRITA	GUILT

FORGETFULNESS	reduced attention	concentration difficult	IDEAS OF HELPLESS	hopeless	worthless	lowselfesttem	PMA-AGITATED	PMA-RETARDED	CATATONIA	suic.idea	suic.atte	DSH	ANHEDONIA	DISSOCIATIVE	ANXIETY	PSYCHOSI	DELUSION	HALLUCINATION	SCALES	HAM-D	BPRS	AUDIT	FAGERSTROM	
Y	Y	Y	n	n	n	n	n	y	n	n	Y	y	N	N	n		y	n		22	25	23	8	
n	Y	Y	Y	y	Y	n	n	y	n	Y	Y	n	n	n	n		Y	y		19	30	25	na	
y	y	y	n	n	n	n	n	y	n	n	n	n	y	n	n		y	y		17	27	na	na	
y	n	n	y	n	n	y	n	y	n	n	n	n	y	n	n		n	n		15	na	25	na	
y	y	y	y	n	n	y	n	y	n	n	n	y	y	n	n		n	n		16	na	na	na	
n	y	n	y	y	y	y	n	y	n	y	n	n	n	n	n		n	n		18	na	na	na	
y	n	y	y	y	y	n	n	y	n	y	n	n	y	n	n		n	n		15	na	na	na	
y	y	y	n	y	y	y	n	y	n	y	y	y	y	n	n		y	n		23	31	28	6	
y	y	y	y	y	n	y	y	n	n	y	y	y	y	n	n		y	y		20	22	24	na	
y	y	y	y	y	n	n	n	y	n	y	y	n	y	n	n		n	n		18	na	na	na	
y	y	y	y	y	n	n	y	n	n	n	n	n	y	n	n		n	n		12	na	na	na	
y	n	n	y	y	y	n	y	n	n	y	n	n	n	n	n		n	n		11	na	na	na	
y	y	y	y	y	y	n	n	y	n	y	n	n	y	n	n		n	n		20	na	na	na	
y	y	y	y	y	n	n	y	n	n	y	n	y	y	n	n		n	y		12	15	na	na	
y	y	y	y	y	n	y	y	n	n	n	y	y	n	n	n		y	y		21	23	na	na	
y	y	y	n	y	y	y	n	y	n	y	y	n	y	n	n		y	y		22	14	na	na	
y	y	y	y	y	N	N	Y	N	N	y	N	y	N	N	N		y	y		10	18	na	na	
N	N	y	N	N	N	y	y	N	N	y	y-1	y	y	N	N		y	y		23	29	NA	NA	
Y	Y	Y	Y	N	N	N	Y	N	N	Y	Y	Y	Y	N	Y		Y	Y		22	30	na	na	
Y	Y	Y	Y	Y	N	Y	N	Y	N	N	N	Y	Y	N	N		N	Y		15	27	22	4	
Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	Y	Y	N	N		Y	N		20	22	12	7	
Y	Y	Y	Y	N	N	Y	N	Y	N	Y	N	Y	N	N	N		N	N		17	na	20	7	
Y	Y	Y	Y	Y	N	N	Y	N	N	N	N	N	Y	N	N		Y	Y		18	27	8	8	
Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	Y	N	N		N	N		22	na	na	na	
Y	Y	Y	Y	Y	Y	N	Y	N	N	Y	Y	Y	Y	N	N		Y	Y		22	29	25	8	
Y	Y	Y	Y	N	N	Y	N	Y	N	N	N	N	Y	N	N		Y	Y		16	31		8	
Y	Y	Y	Y	N	N	N	N	N	N	N	N	Y	Y	N	N		N	N		13	na	9	7	
Y	Y	Y	Y	N	N	Y	N	N	N	N	N	N	Y	N	N		Y	Y		12	32	na	na	
y	y	y	y	y	y	y	y	n	n	y	y	y	y	n	y		y	y		20	36	na	10	

y	y	y	y	y	y	y	y	n	n	y	y	y	y	n	n		y	y		16	40	27	9	
y	y	y	y	y	n	y	n	y	n	y	n	n	y	n	n		n	n		18	na	na	na	
n	y	y	y	y	y	y	y	n	n	y	y	y	y	n	y		y	y		16	37	25	9	
n	y	y	y	y	n	y	y	n	n	y	n	y	y	n	n		n	n		15	na	28	10	
n	y	y	y	y	n	y	n	y	n	y	n	n	y	n	n		n	n		19	na	na	na	
n	y	y	y	y	y	y	y	n	n	y	y	y	y	n	y		y	y		20	39	26	10	
n	y	y	y	y	n	y	y	n	n	y	n	y	y	n	n		n	n		21	na	na	na	
y	y	y	y	y	y	y	y	n	n	y	y	y	y	n	n		y	y		16	32	25	9	
n	y	y	y	y	y	y	y	n	n	y	n	y	y	n	n		y	y		15	28	10	8	
n	y	y	y	y	y	y	n	y	n	y	n	y	y	n	n		y	y		15	39	23	11	
y	y	y	y	y	y	y	y	n	n	y	y	y	y	n	n		y	y		21	40	26	12	
n	y	y	y	y	y	y	n	y	n	n	n	y	y	n	n		n	n		15	na	23	7	
y	y	y	y	y	y	y	n	y	n	y	n	y	y	n	y		y	y		17	38	9	8	
n	y	y	y	y	y	y	n	y	n	y	y	y	y	n	n		n	n		16	na	na	na	
n	y	y	y	y	y	y	n	y	n	y	n	y	y	n	n		n	n		14	na	26	9	
y	y	y	y	n	n	n	y	n	n	n	y	y	n	n	n		y	y		17	36	na	na	
y	y	y	y	y	N	N	Y	N	N	y	N	y	N	N	N		y	y		16	38	na	na	
y	y	y	y	y	y	y	y	n	n	y	y	y	y	n	n		y	y		16	40	27	9	
Y	Y	Y	Y	Y	N	N	Y	N	N	N	N	N	Y	N	N		Y	Y		18	27	8	8	
y	n	n	n	n	n	n	y	n	n	y	n	y	n	n	n		n	y		13	29	na	na	
y	y	y	n	n	n	n	y	n	n	n	n	n	n	n	n		n	n		12	24	na	na	
GETFUL	reduce	concer	IDEAS	hopele	worthl	lowsel	PMA-A	PMA-R	CATAT	suic.id	suic.at	DSH	ANHED	DISSO	anxiet	PSYCH	DELUS	HALLU	SCALES	HAM-D	BPRS	AUDIT	FAGERSTROM	

S NO	AGE	SEX	DUCATION	OCCUPATION	INCOME	MARITAL STATUS	SES	RELIGION	TYPE	AGE OF ONSET	DURATION	NO.OF EPISODES	NO,OF HOSP	F/H/O	MOOD	PSYCHOSIS	SUICIDE	SUBSTANCE	MEDICAL	HTN	DM	HYPOTHROID	POSTPARTUM	ECT	SUBSTANCE	ALCOHOL	NICOTINE ABUSE	CANNABIS ABUSE	DEPRESSED COGNITION
1	42	2	1	1	1	1	2	2	1	20	20	10	6		y	N	N	y		N	N	y	N	N		0	0	0	
2	40	2	1	1	1	1	3	1	1	35	5	2	0		N	N	N	N		N	N	N	N	N		0	0	0	
3	38	2	3	1	1	1	3	1	1	25	13	4	0		y	N	N	N		N	N	y	N	N		0	0	0	
4	50	2	2	1	1	1	2	1	1	40	10	3	0		N	N	N	N		N	N	y	N	N		0	0	0	
5	50	2	1	1	1	1	4	1	1	30	20	10	0		N	N	N	N		y	y	N	N	N		0	0	0	
6	35	2	1	1	1	1	2	1	1	30	5	2	1		N	N	N	N		N	N	N	N	N		0	1	0	
7	47	1	3	5	2	1	2	1	1	43	5	2	0		N	N	y	N		N	y	N	NA	N		0	0	0	
8	46	2	1	1	1	1	3	2	3	46	5month	2	0		N	N	N	N		N	N	N	N	N		0	0	0	
9	50	2	3	1	1	1	2	1	1	45	4	2	0		N	N	N	N		N	N	y	N	N		0	0	0	
10	26	2	6	8	3	2	4	3	1	18	8	3	0		N	N	N	y		N	N	y	N	N		0	0	0	
11	29	1	6	8	3	2	4	1	1	24	5	2	0		N	N	N	N		N	N	N	NA	N		1	0	0	
12	40	1	3	5	2	1	2	1	1	34	6	3	1		N	y	N	N		y	N	N	NA	N		0	2	0	
13	20	2	4	7	2	2	4	1	1	20	3month	1	0		N	N	y	N		N	N	N	N	N		0	0	0	
14	30	2	4	1	1	1	3	1	1	28	2	2	0		n	n	n	n		n	n	Y	N	N		0	0	0	
15	45	2	3	1	1	1	3	1	3	35	10	3	0		N	N	N	N		N	Y	Y	N	N		0	0	0	
16	36	1	3	5	2	2	2	1	1	30	6	2	1		N	N	N	Y		N	N	N	NA	N		2	0	0	
17	28	1	6	8	3	2	4	1	2	28	2MONTHS	1	0		N	N	Y	N		N	N	N	NA	N		1	0	0	
18	46	1	3	4	1	1	2	1	1	46	3MONTHS	1	0		N	Y	N	N		Y	Y	N	NA	N		0	0	0	
19	38	1	4	5	2	1	2	1	2	35	3	3	1		N	N	N	Y		N	Y	N	NA	N		0	2	0	
20	47	1	6	7	3	1	3	1	2	40	7	2	0		N	N	N	N		Y	Y	N	NA	N		1	2	0	
21	35	1	5	5	2	3	1	1	1	30	5	2	0		N	N	N	Y		N	N	N	NA	N		1	0	0	
22	41	1	3	4	2	1	2	1	1	41	2MONTHS	1	0		N	N	Y	N		N	N	N	NA	N		2	2	0	
23	43	1	3	2	1	1	1	1	1	35	8	3	2		Y	N	N	Y		N	Y	N	NA	N		1	2	0	
24	24	1	4	5	1	2	3	3	1	24	1MONTH	1	0		N	N	N	N		N	N	N	NA	N		0	2	0	
25	38	1	2	5	2	1	2	1	1	30	8	3	1		N	N	N	Y		Y	Y	N	NA	N		2	2	0	
26	30	2	3	1	1	1	2	1	1	28	2	2	1		y	n	n	n		n	n	y	NA	n		0	0	0	
27	35	2	4	2	2	1	2	1	2	30	5	3	1		Y	N	Y	Y		N	Y	Y	N	N		0	0	0	
28	40	2	4	2	2	1	2	1	1	35	5	2	0		Y	N	N	N		N	Y	Y	N	N		0	0	0	
29	45	2	1	1	1	1	1	1	3	35	10	3	1		N	N	Y	Y		Y	Y	Y	N	N		0	0	0	
30	30	2	4	2	1	1	2	1	1	25	5	2	1		Y	Y	Y	Y		N	N	Y	N	N		0	0	0	
31	25	2	5	3	2	2	3	1	1	25	3MONTH	1	1		Y	N	N	Y		N	N	Y	Y	N		0	0	0	
32	20	2	6	1	1	2	3	1	1	18	2	2	1		Y	N	N	Y		N	N	N	N	N		0	0	0	
33	35	2	1	1	1	1	2	1	1	30	5	2	1		N	N	N	N		N	N	N	N	n		0	1	0	
34	50	2	1	1	1	1	4	1	1	30	20	10	0		N	N	N	N		y	y	N	N	n		0	0	0	
35	42	2	1	1	1	1	2	2	1	20	20	10	6		y	N	N	y		N	N	y	N	n		0	0	0	
36	40	2	1	1	1	1	3	1	1	35	5	2	0		N	N	N	N		N	N	N	N	n		0	0	0	
37	38	2	3	1	1	1	3	1	1	25	13	4	0		y	N	N	N		N	N	y	N	n		0	0	0	
38	50	2	2	1	1	1	2	1	1	40	10	3	0		N	N	N	N		N	N	y	N	n		0	0	0	
39	46	2	1	1	1	1	3	2	3	46	5month	2	0		N	N	N	N		N	N	N	N	n		0	0	0	
40	50	2	3	1	1	1	2	1	1	45	4	2	0		N	N	N	N		N	N	y	N	n		0	0	0	
41	26	2	6	8	3	2	4	3	1	18	8	3	0		N	N	N	y		N	N	y	N	n		0	0	0	
42	47	1	3	5	2	1	2	1	1	43	5	2	0		N	N	y	N		N	y	N	NA	n		0	0	0	
43	36	2	3	2	2	1	1	1	2	34	2	2	1		N	N	N	Y		N	Y	Y	N	N		0	0	0	
44	31	2	4	4	2	2	2	1	1	30	1	2	0		N	N	N	Y		N	N	Y	N	N		0	0	0	
45	40	2	4	2	2	1	2	1	1	35	5	2	0		Y	N	N	N		N	Y	Y	N	N		0	0	0	
46	45	2	1	1	1	1	1	1	3	35	10	3	1		N	N	Y	Y		Y	Y	Y	N	N		0	0	0	
47	43	1	3	2	1	1	1	1	1	35	8	3	2		Y	N	N	Y		N	Y	N	NA	N		1	2	0	
48	33	2	2	1	1	1	2	1	2	30	3	2	0		Y	N	N	Y		N	N	Y	N	N		0	0	0	
49	36	2	1	1	1	1	1	1	3	33	3	2	0		N	N	N	Y		N	Y	N	N	N		0	0	0	
50	30	2	4	2	1	1	2	1	1	25	5	2	1		Y	Y	Y	Y		N	N	Y	N	N		0	0	0	
S NO	AGE	SEX	DUCATION	OCCUPAT	INCOME	MARITAL S	SES	RELIGION	TYPE	AGE OF OI	DURATION	NO.OF EPI	NO,OF HO	F/H/O	MOOD	PSYCHOSIS	SUICIDE	SUBSTANC	MEDICAL	HTN	DM	HYPOTHRO	POSTPART	ECT	SUBSTANC	ALCOHOL	NICOTINE	CANNABIS	DEPRESSE

SLEEP	APPETITE	IRRITABILITY	GUILT	FORGETFULNESS	red.attention	red.concentraion	IDEAS OF HELPLESS	HOPELESS	worthless	low selfestee	PMA-AGITATED	PMA-RETARDED	CATATONIA	sui.idea	sui.attemp	DSH	ANHEDONIA	DISSOCIATIVE	ANXIETY	PSYCHOSI	DELUSION	HALLUCINATION	SCALES	HAM-D	BPRS	AUDIT	FAGERSTROM	
1	1	n	n	N	y	y	y	y	N	N	N	y	N	y	N	y	N	N	N		N	N		15	NA	NA	NA	
1	1	n	n	N	y	y	y	y	N	y	N	y	N	y	y	y	y	N	N		N	N		15	NA	NA	NA	
1	1	n	n	y	y	y	y	y	y	N	N	y	N	y	N	N	y	N	N		y	N		10	12	NA	NA	
1	1	n	n	N	N	y	y	y	N	N	N	y	N	y	N	N	y	N	N		N	N		15	NA	NA	NA	
1	1	n	n	y	y	y	y	N	N	N	N	N	N	N	N	N	y	N	N		N	N		14	NA	NA	NA	
1	1	n	n	y	N	N	y	N	N	N	N	y	N	y	N	N	y	N	N		N	N		9	NA	NA	7	
1	1	y	n	N	y	y	y	N	N	N	N	N	N	y	N	N	N	N	N		N	N		16	NA	NA	NA	
1	1	n	y	y	y	y	y	y	N	y	N	y	N	N	N	N	N	N	N		N	N		18	NA	NA	NA	
1	1	n	n	y	y	y	y	y	N	N	N	y	N	N	N	N	y	N	N		N	N		14	NA	NA	NA	
1	1	n	n	N	y	y	y	N	N	N	N	y	N	Y	N	N	y	N	N		N	N		13	NA	NA	NA	
1	1	n	n	y	N	y	y	y	N	y	N	y	N	N	N	N	y	N	N		N	N		14	NA	8	NA	
1	1	n	n	y	y	y	N	y	y	y	N	y	N	N	N	y	N	N	N		Y	N		16	14	NA	7	
1	1	n	n	N	N	y	y	y	N	N	N	y	N	y	y	y	y	N	N		N	N		19	NA	NA	NA	
1	1	n	y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	N		N	N		20	NA	NA	NA	
1	1	n	y	Y	Y	Y	Y	Y	N	Y	N	Y	N	Y	Y	N	Y	N	N		Y	N		22	27	NA	NA	
1	1	n	n	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	N	Y	N		Y	Y		18	20	22	NA	
1	1	n	n	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	N	Y	N	N		N	N		20	NA	11	NA	
1	1	n	n	Y	Y	Y	Y	Y	N	Y	N	Y	N	Y	N	N	Y	N	N		N	N		18	NA	NA	NA	
1	1	n	n	Y	Y	Y	Y	N	N	Y	N	Y	N	Y	N	Y	Y	N	N		N	N		17	NA	NA	8	
1	1	n	n	Y	Y	Y	Y	N	N	N	Y	N	Y	N	N	N	Y	N	N		N	N		15	NA	6	6	
1	1	n	n	Y	Y	Y	Y	N	N	Y	N	Y	N	N	N	N	Y	N	N		N	N		11	6	NA	NA	
1	1	n	n	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	N		N	N		22	NA	24	9	
1	1	n	n	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	N		22	NA	11	11	
1	1	n	n	Y	Y	Y	Y	N	N	Y	N	Y	N	Y	N	N	Y	N	N		N	N		50	NA	NA	10	
1	1	n	n	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	Y		22	20	21	9	
1	1	n	y	n	y	y	y	n	n	y	n	y	n	y	n	n	y	n	n		n	n		15	NA	NA	NA	
1	1	N	Y	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		Y	Y		20	37	NA	NA	
1	1	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	N	N	N	Y	N	N		N	N		18	NA	NA	NA	
1	1	N	N	Y	Y	Y	Y	N	N	N	Y	Y	N	Y	N	N	Y	N	N		N	N		15	NA	NA	NA	
1	1	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	Y		22	34	NA	NA	
1	1	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	Y	N	N		N	N		19	NA	NA	NA	
1	1	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	N		17	NA	NA	NA	
1	1	n	n	y	N	N	y	N	N	N	N	y	N	y	N	N	y	N	N		N	N		15	NA	NA	NA	
1	1	n	n	y	y	y	y	N	N	N	N	N	N	N	N	N	y	N	N		N	N		16	NA	NA	NA	
1	1	n	n	N	y	y	y	y	N	N	N	y	N	y	N	y	N	N	N		N	N		20	NA	NA	NA	
1	1	n	n	N	y	y	y	y	N	y	N	y	N	y	y	y	y	N	N		N	N		13	NA	NA	NA	
1	1	n	n	y	y	y	y	y	y	N	N	y	N	y	N	N	y	N	N		y	N		14	NA	NA	NA	
1	1	y	y	N	N	y	y	y	N	N	N	y	N	y	N	N	y	N	N		N	N		17	NA	NA	NA	
1	1	n	n	y	y	y	y	y	N	y	N	y	N	N	N	N	N	N	N		N	N		19	NA	NA	NA	
1	1	n	n	y	y	y	y	y	N	N	N	y	N	N	N	N	y	N	N		N	N		15	NA	NA	NA	
1	1	n	n	N	y	y	y	N	N	N	N	y	N	Y	N	N	y	N	N		N	N		17	NA	NA	NA	
1	1	y	n	N	y	y	y	N	N	N	N	N	N	y	N	N	N	N	N		N	N		19	NA	NA	NA	
1	1	N	N	N	Y	Y	Y	Y	Y	N	N	Y	N	Y	N	N	Y	N	N		N	N		16	NA	NA	NA	
1	1	N	N	N	Y	Y	Y	Y	Y	N	N	Y	N	N	N	N	Y	N	N		N	N		14	NA	NA	NA	
1	1	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	N	N	N	Y	N	N		N	N		18	NA	NA	NA	
1	1	N	N	Y	Y	Y	Y	N	N	N	Y	Y	N	Y	N	N	Y	N	N		N	N		15	NA	NA	NA	
1	1	n	n	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	N		22	NA	11	11	
1	1	N	N	N	Y	Y	Y	Y	N	Y	N	Y	N	N	N	N	Y	N	N		N	N		13	NA	NA	NA	
1	1	N	N	N	Y	Y	Y	Y	N	Y	N	Y	N	N	N	N	Y	N	N		N	N		16	NA	NA	NA	
1	1	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	N		N	Y		22	34	NA	NA	
SLEEP	APPETITE	IRRITABILI	GUILT	FORGETFU	red.attent	red.conce	IDEAS OF	HOPELESS	worthless	low selfest	PMA-AGIT	PMA-RETA	CATATONI	sui.idea	sui.attemp	DSH	ANHEDON	DISSOCIAT	PANIC	PSYCHOSI	DELUSION	HALLUCIN	SCALES		BPRS	AUDIT	FAGERSTROM	
																								HAM-D				