A Dissertation on

"A COMPARATIVE STUDY OF THE CHARACTERISTICS OF SUICIDAL IDEATIONS AND ATTEMPTS BETWEEN PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS "

Submitted to

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

In partial fulfillment of the requirements

For the award of degree of **M.D. (PSYCHIATRY)**

(Branch-XVIII)

GOVERNMENT STANLEY MEDICAL COLLEGE & HOSPITAL
THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY,
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CERTIFICATE

This is to certify that this dissertation entitled "**A COMPARATIVE STUDY OF THE CHARACTERISTICS OF SUICIDAL IDEATIONS AND ATTEMPTS BETWEEN PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS "** submitted by **Dr. NILEENA NAMBOODIRIPAD KAKKATTU MANA** to the faculty of PSYCHIATRY, The Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment of the requirements in the award of degree of M.D. (PSYCHIATRY) Branch -XVIII for the April 2017 examination is a bona-fide research work carried out by her during the period of July 2016 to September 2016 at Government Stanley Medical College & Hospital, Chennai, under our direct supervision and guidance of **Prof. Dr. W.J. ALEXANDER GNANADURAI M.D., DPM.**, Professor and Head of the department, Department of Psychiatry at Stanley Medical College, Chennai.

Prof. Dr. W.J. ALEXANDER GNANADURAI M.D., DPM.

Professor and HOD,

Department of Psychiatry,

Government Stanley Medical College and Hospital,

Chennai – 600 001.

Dr. ISAAC CHRISTIAN MOSES M.D.,

DEAN

Government Stanley Medical College and Hospital,

Chennai – 600 001.

CERTIFICATE

This is to certify that this dissertation titled "**A COMPARATIVE STUDY OF THE CHARACTERISTICS OF SUICIDAL IDEATIONS AND ATTEMPTS BETWEEN PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS "** submitted by **Dr. NILEENA NAMBOODIRIPAD KAKKATTU MANA** is an original work done in the Department of Psychiatry, Government Stanley Medical College and hospital, Chennai in partial fulfillment of regulations of The Tamil Nadu Dr. M.G.R. Medical University, for the award of degree of M.D. (PSYCHIATRY) Branch – XVIII , under my supervision during the academic period 2014-2017.

Prof. Dr. W.J. ALEXANDER GNANADURAI M.D., DPM.

Professor and Head of the department,

Department of Psychiatry

Government Stanley Medical College & Hospital,

Chennai.

DECLARATION

I, **Dr. NILEENA NAMBOODIRIPAD KAKKATTU MANA** solemnly declare that the dissertation on "**A COMPARATIVE STUDY OF THE CHARACTERISTICS OF SUICIDAL IDEATIONS AND ATTEMPTS BETWEEN PATIENTS WITH SCHIZOPHRENIA AND BIPOLAR DISORDERS"** is a bona- fide work done by me during the period of July 2016 to September 2016 at Government Stanley Medical College and Hospital, under the expert supervision of **Prof. Dr. W.J. ALEXANDER GNANADURAI M.D., DPM.**, Professor and Head of Department Of Psychiatry, Government Stanley Medical College, Chennai. This thesis is submitted to The Tamil Nadu Dr. M.G.R. Medical University in partial fulfillment of the rules and regulations for the M.D. degree examinations in Psychiatry to be held in April 2017.

DR. NILEENA NAMBOODIRIPAD KAKKATTU MANA

Chennai-1

Date: - - 2016

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Introduction

INTRODUCTION

Psychiatric illnesses form a significant portion of the global disease burden. Many of the mental illnesses are under diagnosed due to overlap of symptoms with those in neurology, not considering personality disorders as pathological, excluding suicide and self-harm separate from psychiatric complications, grouping chronic pain syndromes into musculoskeletal disorders and underestimating the contribution of psychiatric illnesses to mortality. Vigo et al(1) inferred in their study that the global burden of psychiatric illnesses results in 32·4% of years lived with disability and 13·0% of disability-adjusted life-years. These figures have been on the increase in comparison with the earlier estimations and it is indispensable for addressing mental illnesses with utmost care and gravity.

Suicide is the intentional taking of one's own life. Above 800000 people die due to suicide every year. Almost 1.4% of all deaths worldwide were due to suicide. This makes suicide the 15th leading cause of death in 2012. Suicide is second leading cause of death in 15-29 years old. 75% of the suicidal deaths occur in the low and middle-income countries, which includes India (2). For every suicidal death there is 25 times the number of suicidal attempts(3). The spectrum of suicide ranges from suicidal ideations to completed suicide and is a psychiatric emergency. .

- Suicidal thoughts or ideations are thoughts about how to kill oneself, and can vary from a fleeting consideration to a detailed plan and does not include the conclusive act of killing oneself.
- Suicide Attempt is a non-fatal self-directed injurious behavior with any intent to die as a result of the behavior. A suicidal attempt need not result in injury.

- Interrupted attempt is an attempt, which is stopped due to interference by some external factors. Moreover, interrupted attempters are almost three times more likely to ultimately commit suicide than the uninterrupted attempters.
- Aborted attempt is one where the person himself stops the act from progressing it to completion
- Ambiguous attempt is a suicidal act, which seems to be committed with intent to die, but the person denies it and the clinician finds it difficult to come to a conclusion.
- Completed suicide- It is an act which results in the death of the individual(4)

Many determinants have been associated with suicide. Age, gender, race, occupation, education, marital status, stressful events, substance abuse, personality and presence of psychiatric disorders are some of the major factors responsible for suicide. Many of these aforementioned entities can be present in the same case and hence have a cumulative effect in increasing the risk of suicide. Psychiatric morbidity is one of the most important determinants for suicide. Mood disorders, substance use, personality disorders, schizophrenia are significantly associated with suicide. Approximately 95% of all individuals who commit or attempt suicide have a psychiatric diagnosis (3). Depressive disorders comprise 80;schizophrenia account for 10% and dementia or delirium for 5%(3).

Affective disorders incorporate a large group of psychiatric disorders in which pathological moods and vegetative and psychomotor disturbances form the main components (3) . The important affective disorders include major depressive disorder and bipolar affective disorder. The episodes maybe characterized by psychotic

symptoms like hallucinations and delusions. Role of mood disorders in suicide have been extensively studied. Of the various mood disorders, depression is most frequently associated with suicide. The suicide prediction in bipolar depression as opposed to unipolar depression seems to have mixed results. Untreated depression has a lifetime risk of suicide from 2.2% to 15%(5). Mania, though rare has also been shown to lead to increased suicide risk. Male gender, family history of suicide, suicidal ideation, psychotic symptoms, former suicide attempts, hopelessness, comorbid personality disorders, substance use, and anxiety disorders have been found to be contributing determinants towards completed suicide in many prospective cohort studies(6).

After mood disorders, schizophrenia is the most frequently associated psychiatric illness with suicide. It is characterized by positive symptoms and negative symptoms. Positive symptoms include hallucination, delusion, formal thought disorders, and bizarre behavior. Negative symptoms comprise of emotional blunting, lack of volition, lack of interest, reduced communication, and lack of concentration. In people with schizophrenia, it has been demonstrated that there is a suicide risk of 5%(7). Other risk factors in schizophrenia include early onset of disease, male gender, unemployed, higher levels of education, rural, comorbid physical illness, depression, positive symptoms, presence of insight.

Many authors have ventured to unveil the risk factors in both schizophrenia and bipolar disorders as the knowledge of predictors can help in early intervention and hence prevention of an imminent suicide attempt. It has been observed that many of the factors affecting the course of illness are common for both diagnoses. Hence, this

led to the need for assessment of each factor in both mood disorder and schizophrenia and to measure the strength of association in each case. Not many studies have ventured to identify these aspects.

In a retrospective study by Takao Ishii et al (8), comparison of the characteristics of suicide attempters among schizophrenics and those with unipolar and bipolar mood disorders found differing characteristics among the groups in relation to their age, comorbidities, severity of attempt and treatment interruption. Their study was in north Japan. The study did not include patients with suicidal ideations and included patients with both unipolar and bipolar mood disorder. This study focused on the types of the patients diagnosed with schizophrenia and bipolar disorder harbouring suicidal ideations and/or attempts, in the Indian population. On identifying the factors, the strength of association of each factor in each diagnosis was also looked into. The study also tried to seek an association between suicide attempt and mania, for which much literature is not available. The study also tried to analyze regarding the preceding factors behind suicide attempt in schizophrenia whether it was affective, psychotic symptoms or even both.

Review of Literature

SUICIDE IN PSYCHIATRIC ILLNESSES

Bertolote et al(9) studied regarding the incidence of suicide in psychiatric diagnoses. They concluded that mood disorders remain the most common cause of suicide in both psychiatric and general population. The second most frequent association was seen with schizophrenia. In the study, it was also observed that schizophrenia in combination with other psychiatric diagnoses had a 30.3% more risk in causing suicide. In agreement to these findings, Windfuhr et al (10)in their study, found that the most common diagnoses among patient suicide deaths were: mood disorders (32–47%), schizophrenia (15–20%), alcohol dependence (8–17%), personality disorder (8–11%) and drug dependence (3–9%). They also concluded that suicides post-discharge most commonly happen within 3 weeks of discharge, especially within 3 days of discharge.

Tidemalm et al (11)assessed the risk of suicide following a suicide attempt in accordance with coexisting psychiatric disorder. It was a Swedish cohort study with long-term follow-up of 21-31 years and investigated 39 685 people registered as inpatients for attempted suicide. They concurred that most frequently associated diagnoses were schizophrenia, unipolar depression and bipolar depression.

But Qin et al (12) in his study found that recurrent depression and borderline personality disorder predict risk of suicide the most. They observed that risk associated with diagnosis changes along the lifespan. The 35-year-old people were mostly affected by schizophrenia. In the age group of 36-60 years alcohol use was seen to be the strongest predictor for suicide. For the elderly (> 60 years old), reaction

to stress and adjustment disorder increases the risk for suicide the most in both genders.

Tong et al in their exploration for the suicide risk in various mental disorders observed that suicide for mood disorders was highest. Unlike other studies , they observed that the second most frequently associated psychiatric illness was anxiety disorders. Further down, the list, were the psychotic disorders, substance use disorders and organic mental disorders. Urban residents were twice more likely to have suicide behavior than the rural residents.

SUICIDE AND BIPOLAR AFFECTIVE DISORDER

Kurupath et al(13) in their study assessed the patients with bipolar disorder for the presence of suicidal ideation or suicidal attempt. The study found that 10% had suicidal attempt and 28% had suicidal ideations. There was no suicidal attempt without ideation. Four of the attempts were in bipolar depression while one was in bipolar mania. The study established that the presence of a previous episode leads to higher suicidal risk.

In a study by Aaltonen et al(14), most of patients had lifetime suicide ideation without attempts, and 17.1% had a single and 27.5% repeated suicide attempts. Younger age, severe depressive disorder, bipolar disorder type II/nos, hopelessness, and childhood physical abuse predicted suicidal ideation. Younger age, female sex, increased the severity of depressive episode, borderline personality disorder traits, substance use

disorder, bipolar disorder type II/nos and childhood physical abuse prophesied repeated suicidal attempts.

In a study by Fagiolini et al(15) in addition to younger age of onset and higher depression scoring, frequent depressive episodes and higher BMI were associated with increased suicidal behaviour.

In EMBLEM study by Bellivier et al (16) 2219 patients with bipolar disorder were followed up for two years and studied for their suicidality. Apart from aforementioned factors, current benzodiazepine use and reduced compliance to treatment also were found to be significant determinants

Valtonen et al (17) compared the suicidality in the both the types of bipolar disorders. No differences in prevalence of suicidal behavior between bipolar I and II disorders were observed. Again, suicidal attempts were always preceded by suicidal ideation. Severe depressive episode and hopelessness were associated with suicidal ideation. Hopelessness, comorbid personality disorder, and previous suicide attempt were independent risk factors for suicide attempts. In yet another review study by Tondo et al(18), it was determined that suicidality was same in both types of bipolar disorders. Also, suicidality was found to be more in female gender.

Pompili et al(19), in a retrospective case-control study found male gender, unemployment, being single, and comorbid substance use to be associated with increased suicidality.

Isometsä et al(6) in their review of literature, gauged the risk factors for completed and attempted suicide among subjects with depressive and bipolar disorders. The study concluded that there were more suicide attempts in bipolar disorders in comparison with unipolar depression. In bipolar disorder, the determinants included male gender, suicidal ideation, a history of past suicide attempts, family history of suicidal behaviour, subjective rating of depression severity, depressive index phase, or percentage of depressive days during the preceding year, comorbid substance use, hopelessness, hostility, aggression and (or) impulsivity, and young age. In addition to the above-mentioned factors, Abreu et al(4) in his review study also mentioned the significant association between suicidality and comorbid major psychiatric illnesses, history of mixed episode , childhood history of physical or sexual abuse.

In a meta-analytic study by Bostvick et al(20), they established a hierarchy in suicide risk among patients with mood disorders. The estimate of the lifetime prevalence of suicide in those ever hospitalized for suicidality was highest, followed by those hospitalized without specification of suicidality. Next in the list was mixed inpatient/outpatient population. Last came the non-affectively ill population

Regarding suicidality in mania, Strakowski et al(21) showed that the severity of co-occurring depressive symptoms in mania, is more significant than the presence of a depressive syndrome per se (i.e., mixed state), in leading to suicide. Not many studies have been done to explore the suicidal behaviour during pure manic episode.

SUICIDE AND SCHIZOPHRENIA

Alaräisänen et al(22) in his study evaluated the suicide rate in schizophrenia. Hundred patients were found to meet DSM-III-R criteria for schizophrenia. 7.0% patients with schizophrenia had committed suicide; suicide rate was more in men compared to women. Also a majority of the suicide happened within three years of onset.

Limosin et al(23) in a 10-year longitudinal study evaluated the mortality due to suicide in patients with schizophrenia. It was noticed that patients with schizophrenia were 16 times more at risk for suicide, than the general population. Male gender, substance abuse, previous suicide attempts, and short duration of illness were the main predictors for suicidal behavior.

Study by Harkavy-Friedman et al (24) was the first study to investigate the reasons for the suicidal attempt in schizophrenia. They sighted depression, loss of spouse, command hallucinations and substance abuse to be the main causal factors. Also, most of the suicide attempts occurred within 5 years of onset of disease.

Grunebaum et al (25) found that patients with delusions had more severe suicidal ideation and were also more depressed. Presence of delusions did not determine the lethality or number of lifetime suicide attempts.

Fenton et al (26) in their study detected that suspiciousness and delusions were more severe in completed suicide. Presence of negative symptoms reduced the risk of suicidal behavior. As a result, the paranoid schizophrenia subtype was associated with

an elevated risk of suicide compared to the deficit subtype. Kuo et al (27) also analysed the factors leading to completed suicide in schizophrenia. Depression during the residual phase, higher suicide intensity and later age at onset were construed to be the main determinants for completed suicide.

Hawton et al(28) in his meta- analytic deduced that depression, earlier suicide attempts, drug abuse, agitation, fear of mental collapse, poor drug compliance and recent loss were the major elements determining suicidal behavior in schizophrenia. Singleness, living alone, unemployment, positive symptoms, and insight were not seen to have much association.

Hor et al (7) in a similar review deduced that later suicide was determined by young age, male sex, higher level of education, number of former suicide attempts, depression, a hallucinations and delusions, family history of suicide, and comorbid substance abuse. They also gathered the lifetime risk of suicide to be nearly 5%. Brian et al in his review observed the lifetime possibility of suicide in schizophrenia to be 5.6%. Palmer et al (29) in their study construed the same to be 4.9%. In agreement to previous studies, Ventriglio et al (30) observed that higher premorbid functioning, younger age at onset of illness, prior history of suicide attempt, substance misuse and stressors are significant causes for suicide.

SUICIDE IN BIPOLAR AFFECTIVE DISORDER VERSUS SUICIDE IN SCHIZOPHRENIA

Koeda et al(31) in their study assessed the features of suicide attempts in patients living with schizophrenia in comparison with depression. The schizophrenic group had a lesser mean age and added number of preceding suicide attempts. Patients with schizophrenia had an increased risk of attempting suicide within 1 year of onset of illness. Patients with schizophrenia were observed to adopt more severe methods for suicide. In schizophrenia group, more of the elderly suicide attempters were living alone. Unemployment was seen in all age groups in the schizophrenia group.

Winokur et al(32) in their study Iowa 500 suggested that suicide is one of the most outcome indicators in schizophrenia, depression and mania and occurs at an earlier age in schizophrenia than in the other psychiatric ailments.

In a similar comparison, Nakagawa et al(33) noted that patients with schizophrenia had a lesser number of previous attempts, and a higher risk of a subsequent suicide attempt more than 1 year after the previous suicide attempt and a more severe first suicide attempt compared to patients with mood disorders. Also insight was one of the major entities in schizophrenia leading to suicide.

Benvenuti et al(34) construed that suicidality was seen more in patients with mood disorders than in schizophrenia. Ran et al (35) came to a similar conclusion in their evaluation. They also observed that the first attempt occurs at a younger age in schizophrenia. Unlike aforesaid studies, mood disorder patients implemented more severe methods than those in schizophrenia in this study

Dell'osso et al (36) in their analysis noticed that females were more prone to report their suicidal behavior. They found no association between suicidal behavior with age, education, marital and employment status. On the contrary, Shibre et al (37) in their follow up study perceived that being married resulted in suicidal behavior in mood disorders.

Sahoo et al (38) interpreted in their study that males showed more suicidal ideations in mood disorders but females had more suicidal ideas in schizophrenia. Moreover, mood disorders were associated with more severe suicidal ideations in comparison with schizophrenia.

Ishii et al (8) in a similar relative study found non-adherence to treatment to be more severe in schizophrenia group than the affective disorder group. Physical comorbidity was higher in the affective disorder group. As mentioned previously, attempts in schizophrenia were more severe and positive symptoms were associated with increased risk.

Radomsky et al(39) explored the suicidality along various psychiatric diagnoses and found that schizophrenia is associated with higher lethality of attempts.

SCALES

1) PRESUMPTIVE STRESSFUL LIFE EVENTS SCALE (PSLES)

The scale is an Indian version of the Holme's and Rahe's Social Readjustment Rating Schedule constructed by Gurmeet Singh in 1984(40). The items on the scale were grouped into two categories and then into subscales .The categories were referred as desirable, undesirable and ambiguous and also personal and impersonal. The undesirable items are known to be more stressful. It contains a number of possible life events experienced by a common man as well as the presumptive stress score for each event for this population. It can range from 0-100. The consistency and validity of the scale has been established

2) THE MODIFIED SCALE FOR SUICIDAL IDEATION (MSSI)

Beck, Kovacs, and Weissman formulated the Scale for Suicidal Ideation, in 1979. It is a semi-structured, and is a clinician rated measure of suicidal ideations. In 1986, Miller, Norman, Bishop, and Dow revised the scale. The MSSI contains 18 items from the original version, of which 5 are new items. The MSSI evaluates the suicidal symptoms present anytime in the past one year. The initial four items serve as a screening to warrant the necessity of using the entire scale(41). The MSSI presented internal consistency inter-rater reliability, test-retest reliability and concurrent validity. It can be used to discriminate between suicide attempters and non-attempters prior to hospitalization(42).

3) BECK'S SUICIDE INTENT SCALE (BSI)

The Suicidal Intent Scale was framed by Beck, Herman, & Schuyler in 1973. It collects information regarding the suicidal attempt and applies it to assess how serious the attempt was. The scale helps in analyzing consequent suicidal risk. Reliability of the scale was established by Beck, et al. The study also looked into the validity of the rating scale. A cross validation by R.W. Beck (43) corroborates the discoveries.

4) BRIEF PSYCHIATRIC RATING SCALE (BPRS)

BPRS published by Gorham and Overall in 1962(44), originally had 16 items. It was then expanded to 18 items in 1967 by the same authors. The latest version has 24 items by Lukoff et al in 1986. It measures mainly the severity of the psychotic symptoms. Thomas et al did an exploratory factor analysis and estimated presence of acceptable of internal consistency. Dingeman et al(45) conducted the component analysis of the expanded brief psychiatric rating scale especially for schizophrenia spectrum disorders and concluded superior coverage of schizophrenia and affective symptoms than the 18-item version.

5) CALGARY DEPRESSION SCALE FOR SCHIZOPHRENIA (CDSS)

Addington et al(46) had developed the Calgary depression scale for schizophrenia in 1990, to assess depressive symptoms distinct from the positive, negative and even extrapyramidal symptoms in people with schizophrenia. It is an observer scale, semi-structured, goal directed interview. It has nine items. The scale has excellent sensitivity, internal consistency, specificity, and inter-rater reliability. The convergent

and discriminant validity of the scale have been established. In comparison to Hamilton depression rating scale, it has less variance in positive and negative symptoms. The CDSS is more sensitive to detect depression in schizophrenia (47).

6) HAMILTON DEPRESSION RATING SCALE (HDRS)

Hamilton Depression Rating Scale (HDRS), also identified as HAM-D, is a multiple item questionnaire used to provide a severity assessment of depression, and is used to monitor progress along the course of illness. The original 1960 version contained 17 items. HAM-D was revised in 1966,1967,1969,1980. One of the versions has up to 29 items. The extra questions are not added to the score and are for additional information. Jose et al in their meta- analytic review of the reliability of HAM-D inferred that there is a high mean reliability and high heterogeneity across studies. Trajković et al (48) in yet another meta-analytic study of reliability of HAM-D suggested fair levels of inter-rater reliability, internal consistency, and test–retest reliability.

7) CLINICIAN-ADMINISTERED RATING SCALE FOR MANIA (CARS-M)

In 1994, Altman et al(49) developed the CARS- M. It has a total of 15 items. It has two subscales: one for the manic symptoms and another for the psychotic symptoms. Analysis indicates the CARS-M to be a reliable and valid tool, which measures the severity of manic symptomatology. It also integrates a number of procedural enhancements leading to greater precision and clinical utility.

MISCELLANEOUS DETERMINANTS

1) AGE

Radomsky et (39)al studied that the patients who had suicide attempt not long ago were younger than those subjects who did not have any ideation or attempt, in both schizophrenia and depression The suicide ideations and attempts usually begin earlier in the schizophrenic group rather than the depressive group(31) (35). Ishii et al also gathered a similar result. Most of the studies give a mean age at the time of suicide in 20s-30s. In bipolar disorders it is usually higher age group. Fenton et al in their study had a contradictory result that later age of onset in schizophrenia was associated with suicidal behavior. Dell'osso et al in their study could not arrive at any association between age and suicidal behavior.

2) GENDER

There are mixed results regarding the effect of gender on suicide especially bipolar disorders. Some studies have inferred that female gender is more associated with suicidality in mood disorders (14)(18). On the other hand, other studies concluded male gender to be more at risk of suicide (19)(6). In schizophrenia, most of the studies deduced that male sex was more associated with suicidal behavior (22)(23)(7).

Sahoo et al(38) concluded that male schizophrenic patients and female depressive patients were more at risk of suicide. Dell'osso et al (36) construed in their study that females are more susceptible for suicidal behavior in both groups. Hemendra Singh et

al (50) in their investigation came with a similar interpretation. Males with schizophrenia used more lethal methods.

3) RELIGION

Mohr et al(51) studied the implication of religion in schizophrenia. They gathered faith to be a protective factor against suicide as most of the religions consider it blasphemous to take one's own life. Not many studies are done regarding the type of religion, the association with which it can influence suicidality in mental illness. Hinduism was opined to be accepting suicide more than other religions. Kamal et al mentioned in their study that suicide is tolerated to more extent than in the other religions(52).

4) EDUCATION

Mann et al(53) in 1999 had concluded in their study that suicide attempters had fewer years of education. Later, various meta-analytic studies by Hawton et al(54), and by Hor et al(7) concluded that higher education is associated with higher suicidal risk in schizophrenia. A few studies could not come up with any association between years of education and sucidality in schizophrenia and bipolar disorders(55). Level of education has not yet been established as one of the major risk factors for suicide in bipolar disorders.

5) SOCIAL SUPPORT

In schizophrenia, social support, as expected, is a major protective factor in preventing suicide. Koeda et al in their comparative study found that the elderly patients in schizophrenia group who were also living alone were more at risk of suicide. Living alone was not a risk factor according to the study by Hor et al and Kontaxakis et al. Agerbo et al (56) showed in their study showed that being married had more risk for suicide. Shibre et al in their comparison between schizophrenia and mood disorders found that being married increased the risk of suicidal behavior.

6) OCCUPATION

Most of the studies concluded unemployment to be a significant determining mortality due to suicide in schizophrenia(42)(7). Agerbo et al in their study had contradictory conclusion. In their study, presence of a good job was associated with increased the suicidal incidence in schizophrenia. No significant relation was determined between unemployment and suicidal behavior, in bipolar patients, as per the review by Hawton et al. Pompili et al (19) in their enquiry of suicidality in bipolar patients found significant relation between the same. However, Dell'osso et al could not observe any relation between suicidal behaviour and employment in mental illnesses.

7) AGE OF ONSET

Kuo et al(57) found that later onset of schizophrenia was associated with higher risk of suicide. Gupta et al(58) and Abreu et al established that suicide is more probable to happen in schizophrenia patients with earlier onset of illness. Carter et al(59)

analysed the age of onset with outcome in bipolar patients and found that patients with earlier onset of disease tend to have more frequent suicidal ideations and attempts. Latalova et al(60) also had a similar inference regarding bipolar disorders. Hawton et al in their review study also corroborated the observation.

8) ADHERENCE TO TREATMENT

Pinto et al(61) studied that non-adherence to treatment was second main cause of suicidal behaviour in bipolar patients after previous history of suicide attempt.

Novick et al (62) inferred in their study that non-compliance was significantly associated with an added risk of hospitalization, relapse, and suicide attempts. Ishii et al compared the non-adherence in suicidal patients in schizophrenia and bipolar disorder and found that schizophrenia group had more risk of non-adherence to treatment.

9) PREVIOUS SUICIDAL BEHAVIOUR

Hor et al in their review analysis found that presence of previous suicidal attempts was a major predictor for future suicidal behavior. In a comparative study by Radomsky the patients with schizophrenia were more likely to have suicidal behavior if there is a history of previous suicidal attempt, in comparison with patients with bipolar disorder. Tidemalm et al in their study summed up a hierarchy regarding the strength of association of previous suicide attempts on forthcoming suicidal behaviour: depression in females, followed by schizophrenia in males, and bipolar and unipolar disorder in either sex. Study by Shibre et al gives no specific relation between the present suicidal behavior and past suicidal attempts.

10) SEVERITY OF METHOD/ SUICIDAL INTENT

Chen et al found that the suicidal methods adopted in schizophrenia patients were more serious than those with bipolar disorder. Ishii et al and Koeda et al in their comparative studies observed comparable findings. Harkavy-Friedman et al (24) in his study found that suicide attempters in schizophrenia had high intent and hence more severe suicidal method. Abreu et in their review found that in bipolar disorder, rapid cycling is associated with more intent. Also the older tend to have more suicide intent in depression(63).

11) PSYCHOTIC SYMPTOMS

Hawton et al could find a feeble correlation between positive symptoms and suicidal tendencies in schizophrenia. But review study by Hor et al in their analysis exhibited a significant relationship between positive symptoms and risk of suicide. Mann et al in his study found no significant relationship between psychotic symptoms and suicidality. Black et al (64) concluded that psychotic symptoms did not contribute to suicidality in bipolar disorder. Ishii et al concluded in their study that hallucinations and delusions were significant in leading to suicidality in schizophrenics rather than bipolar patients.

12) STRESSOR

Schwartz et al(65) inferred from their study that recent traumatic stressor could pose a greater risk for suicidal behavior in schizophrenia. This element was also supported in the meta-analytic study by Hawton et al. Azorin et al(66) in his study in bipolar patients could establish a temporality between the stressor and suicidal behavior.

Jaiswal et al(67) in their study found that higher scores on presumptive stressful life events score were seen in patients who were suicide attempters and needed psychiatric treatment.

13) SUICIDAL IDEATION

Usually suicidal ideation is precursor to a suicidal attempt. Not many studies have studied suicidal attempts without suicidal ideation. In a follow up study by Fagiolini et al, four out of five suicide attempts did not show any severe suicidal ideation.

Abreu et al concluded in his study that suicide ideation could prompt a suicide as a state-dependent symptom and also as a trait. Kontaxaki et al in their study found that almost 20.4% of patients with schizophrenia had suicidal ideations.

14) BPRS SCORES

Jones et al (68) compared the influence on psychosis in schizophrenics and could not establish any difference, in regards to BPRS scores , in predicting suicide . Grunebaum et al also found no significant differences on BPRS scores of attempters and non-attempters (25). Shoval et al (69) studied suicidality in adolescent-onset schizophrenia and found that the attempter group in comparison with the non-attempter group had lower BPRS scores. Huber et al (70)found that the "Excited" subscale of the BPRS scale is a predictor of suicidality in patients with schizophrenia.

15) DEPRESSION IN SCHIZOPHRENIA

Bagarić et al (71)concluded that higher scores in Calgary depression scale were associated with higher suicidal risk in patients with schizophrenia. Kontaxakis et al inferred from his study on suicidal ideations in schizophrenia that pathological guilt and self-depreciation predicted higher suicidality. Drake et al (72) inferred from their study in 1986 that most of the schizophrenics have depression and have more of psychological symptoms rather than the somatic symptoms.

16) HAM-D SCORES

Greater scores on HAM-D predicted higher suicidality in the EMBLEM study. Fagiolini et al corroborated this finding in their review for bipolar disorders.

17) SUBSTANCE USE

Hawton et al in their meta-analysis regarding suicide in bipolar disease, found comorbid substance abuse to be associated with increased suicidal behaviour. In schizophrenia, meta-analysis by Hor et al. Hawton et al also sighted the impact of substance use in suicidal behaviour.

Aims

&

Objectives

AIM AND OBJECTIVES

1. To compare the characterisitcs of suicide ideations and suicide attempts between patients with schizophrenia and bipolar affective diorders.

2. To evaluate the relationship between the ideation and attempt

3. To study the association between depression to suicidal ideation and behaviour in schizophrenia and bipolar affective disorder

Materials

&

Methods

MATERIALS AND METHODS

STUDY POPULATION

The sample was drawn from patients attending the Psychiatry department at Government Stanley Medical College and Hospital, Chennai.

METHOD OF COLLECTION

Patients fulfilling the criteria for DSM V diagnosis of bipolar affective disorder or schizophrenia were asked for the presence of suicidal ideation and/or attemps within the last month . If present, the patients were included in the study . The informed consent was procured from the subject and the reliable informant. On attaining the consent, socio demographic data will be obtained using a questionnaire designed for this study. The patients were further evaluated with various tools. Data was recorded for this purpose. The information was collected from the patient and a reliable informant.

Inclusion criteria:

- Patients with schizophrenia and bipolar affective disorder, satisfying the criteria for the corresponding DSM V diagnosis, with suicidal ideation and/or history of suicidal attempt within past one month
- Patients of either sex belonging to the age group 18- 60 years
- Participants willing to provide informed consent for the interview and assessment

Exclusion criteria:

- Legal guardian or patient refusal
- Patients with schizoaffective disorder meeting the criteria for the corresponding DSM V diagnosis.
- Any other major psychiatric diagnosis
- Patients not falling into the age group of 18-60 years
- Patients meeting the criteria of schizophrenia or bipolar affective disorder , corresponding to DSM V without suicidal ideation or suicidal attempt.
- Patients with substance abuse meeting the criteria of depenndence.
- Patients with any chronic physical illness and on treatment for the same.

Instruments used

- Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM V)
- Presumptive stressful life events scale (PSLES)
- The Modified Scale for Suicidal Ideation (MSSI)
- Beck's Suicide Intent Scale (BSI)
- Brief Psychiatric Rating Scale (BPRS)
- Calgary Depression Scale for Schizophrenia (CDSS)
- Hamilton Depression Rating Scale (HAM-D)
- Clinician Administered Rating Scale For Mania (CARS-M)

STUDY DESIGN:

The study was a cross-sectional, comparative observational study, evaluating 30 patients with schizophrenia, and 30 patients with bipolar affective disorder. The duration of the study was 6 months.

ASSESSMENT PROCEDURE OF THE STUDY

Detailed socio demographic details (age, sex, education, religion, socio economic status, etc.) and illness details (period of illness, length of treatment, substance abuse, sum of, suicidal ideation, sum of suicidal attempts, ICU admissions, etc.) were recorded in the semi – structured proforma sheet designed for this study. All the patients were evaluated with presumptive stressful life events scale (PSLES), the modified scale for suicidal ideation (MSSI). Patients who had attempted suicide within the last month were assessed for their intent using Beck's Suicide Intent Scale (BSI). All the schizophrenia patients were given Brief Psychiatric Rating Scale (BPRS) and Calgary depression scale for schizophrenia (CDSS). Patients with bipolar depression were assessed with Hamilton depression rating scale (HAM-D). The manic patients were assessed with Clinician Administered Rating Scale For Mania (CARS-M).

1) PRESUMPTIVE STRESSFUL LIFE EVENTS SCALE (PSLES)

The PSLES contains 51 items and the items are arranged in the hierarchy of the stress associated with it. The stress score assigned to the items range from 0 to 100. In this study the aggregate score for each patient was computed. The severity grading of the stress associated to the events were as follows

- 0-40: no stress
- 41-99: mild stress
- 100-199: moderate stress
- >200: severe stress(73)

2) THE MODIFIED SCALE FOR SUICIDAL IDEATION (MSSI)

The MSSI has a total of 18 items and is used to measure the severity of suicidal ideations. Each item ranges from a score of 0-3. The total score varies from 0- 24. The severity of suicidal ideation can be graded as

- 0-8-: low suicidal ideation
- 9-20: mild-moderate suicidal ideation
- 21+: severe suicidal ideation

3) BECK'S SUICIDE INTENT SCALE (BSI)

The BSI is used to measure the severity of intent behind the suicide attempt. In other words, it measures how badly the patient wanted to take his own life. It is also an indicator for the severity of the suicide attempt. It has 19 items of which only 15 are used for scoring. Total score can vary from 1- 44. The grading is based on the totality of the score

- 15-19: low intent
- 20-28: medium intent
- >29: high intent

4) BRIEF PSYCHIATRIC RATING SCALE (BPRS)

The BPRS is a gauge for the categorizing of the symptoms in psychosis. There are 24 items and each item varies from 1-7. In this study, the scale was given to the patients in schizophrenia group only. The scale was mainly used to see the association between each item in the scale with suicidal behaviour.

5) CALGARY DEPRESSION SCALE FOR SCHIZOPHRENIA (CDSS)

The CDSS was used to measure the severity of depression in schizophrenia. Many studies have established that CDSS is more senstitive and specific in comparison with Hamilton depression rating scale (HAM-D) , in respect to the detection of depression

of schizophrenia. Muller et al in their study have recommended the cut off points for each grade of severity which matches with the same grade in HAM-D.

- 0-2: no depression
- 3-6: mild depression
- 7-10: moderate depression
- >11: severe depression (74)

6) HAMILTON DEPRESSION RATING SCALE (HAM-D)

The HAM-D is a frequently used scale to measure depression. In this study, HAM-D with 17 questions were used. It was administered on bipolar patients with depression only. In order to make the Calgarry depression severity gradings, comparable with HAM-D, the following categorisation was used

- 0-9 : no depression
- 10-14 :mild depression
- 15-21: moderate depression
- >22 : severe depression

7) CLINICIAN ADMINISTERED RATING SCALE FOR MANIA (CARS-M)

The CARS-M is used to grade the manic episode. It has two subsets. It has a total of 15 questions of which 10 questions focus on the mood symptoms and 5 questions emphasise on the psychotic symptoms. The severity of the episode is graded as per the following:

- 0-7: none
- 8-15: mild mania
- 16-25 : moderate mania
- > 26 : severe mania

Statistical Analysis

STATISTICAL ANALYSIS

Statistical analysis was done using SPSS trial version 24. Binary variables were analysed by X^2 test. Ordinal variables was analysed by Kendall's tau test. Nominal variables were analysed by phi test. Non- parametric tests were analysed by Fischer's exact for binary. For continuous data, which followed non-parametric distribution Kruskall Wallis, test was used. For multiple measurements Bon Ferroni correction was applied.

The patients with schizophrenia were placed in GROUP SCZ and patients with bipolar disorder were placed in GROUP BP.

Observations & Results

RESULTS

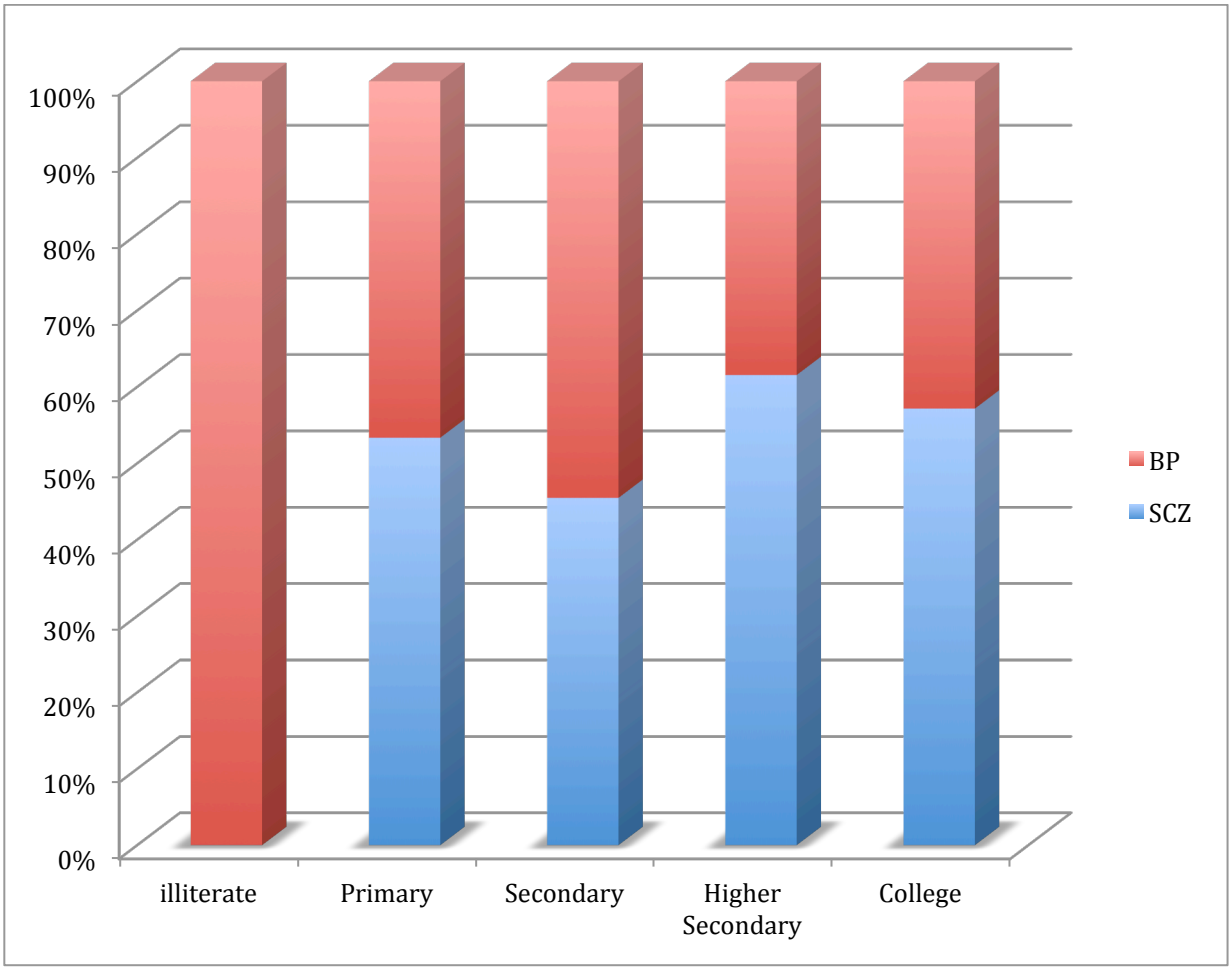
A cross-sectional, comparative observational investigation, was executed to compare the characteristics of suicidal ideations and attempts between patients with schizophrenia and bipolar disorders. Each group had 30 patients

TABLE:1.SOCIODEMOGRAPHIC PROFILE

		SCZ	BP	p VALUE
Gender	Male	14	12	0.602
	Female	16	18	
Age [a]		37.53±8.64	38.57±11.125	0.689
Religion	Christian	4	2	0.162
	Hindu	24	21	
	Muslim	2	7	
Education	Illiterate	0*	7*	0.036*
	Primary	8	3	
	Secondary	10	12	
	Higher secondary	8	5	
	College	4	3	
Marital status	Single	4	7	0.338
	Married	25	20	
	Separated	1	1	
	Divorced	0	2	
	Widowed	0	0	
Type of family	Nuclear	21	18	0.417
	Joint	9	12	
Number of caregivers [a]		1.73±0.785	1.93±0.785	0.328
Socio economic status	Low	22	27	0.095
	Moderate	8	3	
	High	0	0	
Locality	Urban	17	19	0.598
	Rural	13	11	

[a] – mean ± S.D

*- Significant p-value ($p < 0.05$)



There were a total of 26 males 34 females in the study. No association was observed between gender and gender distribution among the patients suffering from schizophrenia and bipolar disorder. The average age in schizophrenia group was 37.53±8.64 and the mean age in bipolar group was computed to be 38.57±11.125. Again, there was no significant association between age distributions in both illnesses. Similar, was the case with religion. However, there was a significant difference in education (p= 0.036). There were 7 illiterates in bipolar disorder patients group, while there was nobody illiterate in the schizophrenia group. Marital status, type of family, socioeconomic status, locality did not show any significant difference in distribution. Mean numbers of caregivers were 1.73±0.785 and 1.93±0.785 in schizophrenia and bipolar disorders respectively.

TABLE:2.OCCUPATION PROFILE

		SCZ	BP	p VALUE
Employed	Yes	22	19	
	No	8	11	0.405
Type of occupation	Semiskilled	10	14	
	Skilled	8	4	0.234
	Semiprofessional	3	1	
	Professional	0	0	
Number of years unemployed[b]		10 (1.90)	4 (3)	0.103
Income	< 1000	1	1	
	1000-5000	8	9	
	5000-10000	8	7	0.753
	>10000	5	2	

($p < 0.05$)

Almost, 73% of patients afflicted with schizophrenia and 63% patients afflicted with bipolar disorder were employed. 33% of GROUP SCZ AND 46% OF GROUP BP were involved in semiskilled profession. Presence of a job, type of job or income was not associated with the diagnosis.

TABLE:3.ILLNESS PROFILE

		SCZ	BP	p Value
DURATION OF ILLNESS[a]		9.425±7.089	13.538±9.894	0.069
YEARS OF TREATMENT[a]		8.076±6.58	9.969±9.08	0.377
INTERRUPTION OF TREATMENT	YES	16	19	0.432
	NO	14	11	
SUBSTANCE ABUSE	YES	12	12	1.0
	NO	18	18	

[a] mean± S.D.,

$p<0.05$ is taken as significant

The mean duration of illness was 9.425±7.089 and 13.538±9.894 in schizophrenia and bipolar disorder respectively. The mean duration of treatment was 8.076±6.58 and 9.969±9.08 for schizophrenia and bipolar disorders, in that order. There was no significant difference in the duration of illness or treatment. There was no difference in the prevalence of substance abuse in either group.

TABLE:4.DEPRESSION AND DIAGNOSIS

		SCZ	BP	P VALUE
DEPRESSION	NONE	0	1	0.217
	MILD	2	2	
	MODERATE	13	16	
	SEVERE	15	10	

$p<0.05$ is taken as significant

50% of schizophrenia patients had severe depression and only 33% of bipolar patients had severe depression. There were more patients in bipolar disorder with moderate depression than those with schizophrenia.

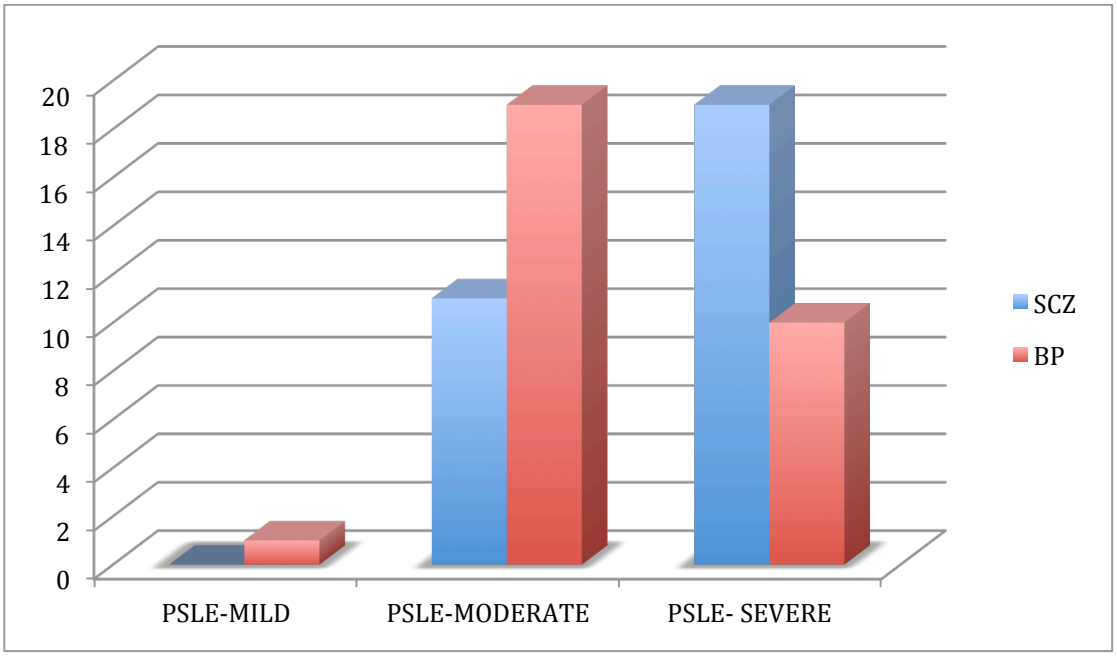
TABLE:5. STRESSOR, SUICIDAL IDEATION.INTENT AND DIAGNOSIS

		SCZ	**BP**	**p VALUE**
PSLE[a]		99.93±28.627		0.017[*]
PSLE	Mild	0	1	0.052
	Moderate	11	19	
	Severe	19	10	
MSSI[a]		21.6±11.933	17.33±11.427	0.163
MSSI	Low	8	9	0.204
	Mild-Moderate	4	9	
	Severe	18	12	
BECK [a]		31.63±3.159[b]	28.13±6.707[b]	0.368
BECK		0	0	0.608
		2	4	
		6	4	

[a] mean± S.D.,

[b] N= 8

$p < 0.05$ is taken as significant



The total PSLE scores were found to be significantly different between patients sorrowed with schizophrenia when compared to those with bipolar disorder, though statistical significance was not observed when PSLE scores were grouped by severity. Mean observed scores were 99.93±28.627 and 79.27±36.26 in schizophrenia and bipolar disorder. The p value obtained was 0.017. The mean scores in BSI were 31.63±3.159 and 28.13±6.707 in schizophrenia and bipolar disorder respectively. There were no significant differences in either group.

TABLE6:.MSSI AND OVERALL SOCIODEMOGRAPHIC CHARACTERSITICS

	MSSI	**LOW**	**MILD-MODERATE**	**SEVERE**	**p VALUE**
Gender	Male	7	3	16	0.647
	Female	10	10	14	
Age [a]		41.24±10.69	38.85± 10.25	35.90±9.02	0.197
Religion	Christian	1	2	3	0.350
	Hindu	14	7	24	
	Muslim	2	4	3	
Education	Illiterate	3	3	1	0.394
	Primary	3	1	7	
	Secondary	5	6	11	
	Higher secondary	5	1	7	
	College	1	2	4	
Marital status	Single	3	1	7	0.594
	Married	13	10	22	
	Separated	0	1	1	
	Divorced	1	1	0	
	Widowed	0	0	0	
Type of family	Nuclear	8	10	21	0.170
	Joint	9	3	9	
Number of caregivers [a]		2±0.086	1.54± 0.776	1.87± 0.73	0.269
Socio economic status	Low	12	11	26	0.373
	Moderate	5	2	4	
	High	0	0	0	
Locality	Urban	8	9	19	0.409
	Rural	9	4	11	

$p < 0.05$ is taken as significant

There were no sociodemographic features that were linking suicidal ideation and overall illness

TABLE:7.MSSI AND SCHIZOPHRENIA

	MSSI	LOW	MILD-MODERATE	SEVERE	p VALUE
Gender	Male	4	1	9	0.647
	Female	4	3	9	
Age [a]		39±10.82	38±8.446	36.78±8.063	0.837
Religion	Christian	1	1	2	0.870
	Hindu	6	3	15	
	Muslim	1	0	1	
Education	Illiterate	0	0	0	0.285
	Primary	2	0	6	
	Secondary	1	3	6	
	Higher secondary	4	0	4	
	College	1	1	2	
Marital status	Single	1	0	3	0.814
	Married	7	4	14	
	Separated	0	0	1	
	Divorced	0	0	0	
	Widowed	0	0	0	
Type of family	Nuclear	5	3	13	0.859
	Joint	3	1	5	
Number of caregivers [a]		1.88±0.991	1.75±0.957	1.67±0.686	0.832
Socio economic status	Low	5	3	14	0.716
	Moderate	3	1	4	
	High	0	0	0	
Locality	Urban	4	3	10	0.704
	Rural	4	1	8	

[a] mean± S.D.,

$p < 0.05$ is taken as significant

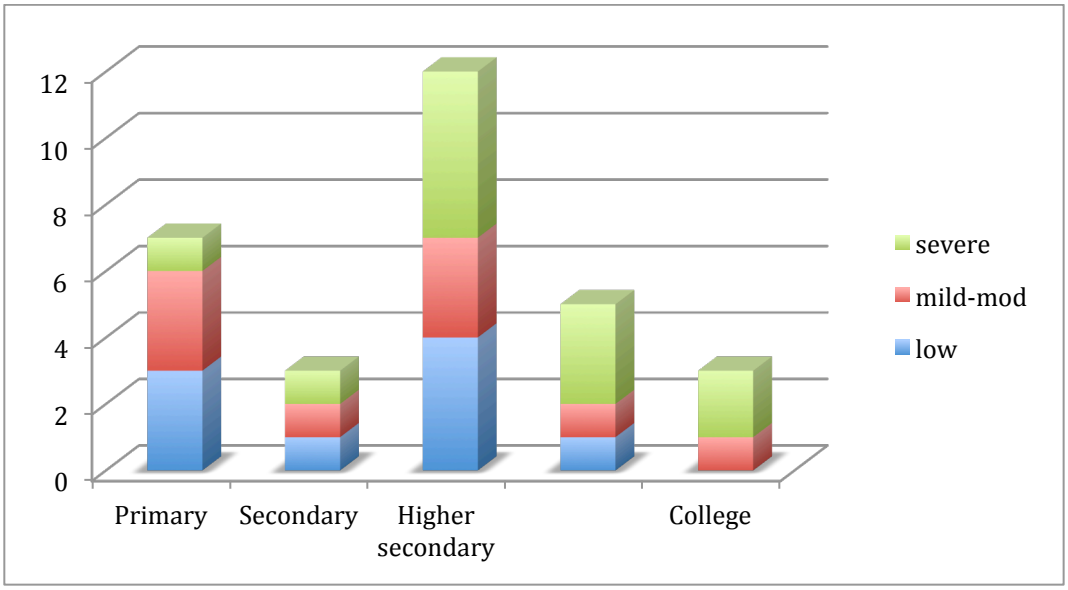
Mean age of patients with schizophrenia with severity on MSSI was 39±10.82, 38±8.446 and 36.78±8.063.

TABLE:8. MSSI AND BIPOLAR DISORDER

	MSSI	LOW	MILD-MODERATE	SEVERE	p VALUE
Gender	Male	3	2	7	0.220
	Female	6	7	5	
Age [a]		43.2±10.81	39.2±11.42	34.58±10.53	0.212
Religion	Christian	0	1	1	0.310
	Hindu	8	4	9	
	Muslim	1	4	2	
Education	Illiterate	3	3	1	0.027*
	Primary	1	1	1	
	Secondary	4	3	5	
	Higher secondary	1	1	3	
	College	0	1	2	
Marital status	Single	2	1	4	0.814
	Married	6	6	8	
	Separated	0	1	0	
	Divorced	1	1	0	
	Widowed	0	0	0	
Type of family	Nuclear	3	7	8	0.130
	Joint	6	2	4	
Number of caregivers [a]		2.11±0.782	1.44±0.726	2.17±0.718	0.077
Socio economic status	Low	7	8	12	0.242
	Moderate	2	1	0	
	High	0	0	0	
Locality	Urban	4	6	9	0.345
	Rural	5	3	3	

[a] mean± S.D.,

$p < 0.05$ is taken as significant



The mean ages of patients with bipolar disorder with each grade of severity in MSSI are 43.2±10.81, 39.2±11.42 and 34.58±10.53. There was also association between education level and suicidal ideation in bipolar disorder. People with higher education tend to have stronger suicidal ideation. There was no association with any of the other entities.

TABLE:9MSSI AND OVERALL OCCUPATIONAL CHARACTERISTICS

	MSSI	LOW	MILD-MODERATE	SEVERE	p-VALUE
Employed	Yes	13	6	22	
	No	4	7	8	0.148
Type of occupation	Semiskilled	9	3	12	
	Skilled	4	1	7	0.256
	Semiprofessional	0	2	2	
	Professional	0	0	0	
Income	< 1000	1	0	1	
	1000-5000	8	2	7	
	5000-10000	1	3	11	0.753
	>10000	3	1	3	

$p < 0.05$ is taken as significant

There was no association between occupational status, which includes types of occupation and income, and overall illnesses.

TABLE:10 MSSI AND SCHIZOPHRENIA- OCCUPATION

	MSSI	LOW	MILD-MODERATE	SEVERE	p-VALUE
Employed	Yes	6	2	14	
	No	2	2	4	0.520
Type of occupation	Semiskilled	3	3	0	
	Skilled	1	0	1	0.455
	Semiprofessional	6	5	2	
	Professional	0	0	0	
Income	< 1000	1	0	0	
	1000-5000	2	1	5	
	5000-10000	1	1	6	0.657
	>10000	2	0	3	

$p < 0.05$ is taken as significant

There was no association between occupational status, which includes types of occupation and income, and schizophrenia.

TABLE:11 MSSI AND BIPOLAR DISORDER- OCCUPATIONAL

	MSSI	LOW	MILD-MODERATE	SEVERE	p-VALUE
Employed	Yes	7	4	8	
	No	2	5	4	0.325
Type of occupation	Semiskilled	6	2	6	
	Skilled	1	1	2	0.256
	Semiprofessional	0	1	0	
	Professional	0	0	0	
Income	< 1000	0	0	1	
	1000-5000	6	1	2	
	5000-10000	0	2	5	0.399
	>10000	1	1	0	

$p < 0.05$ is taken as significant

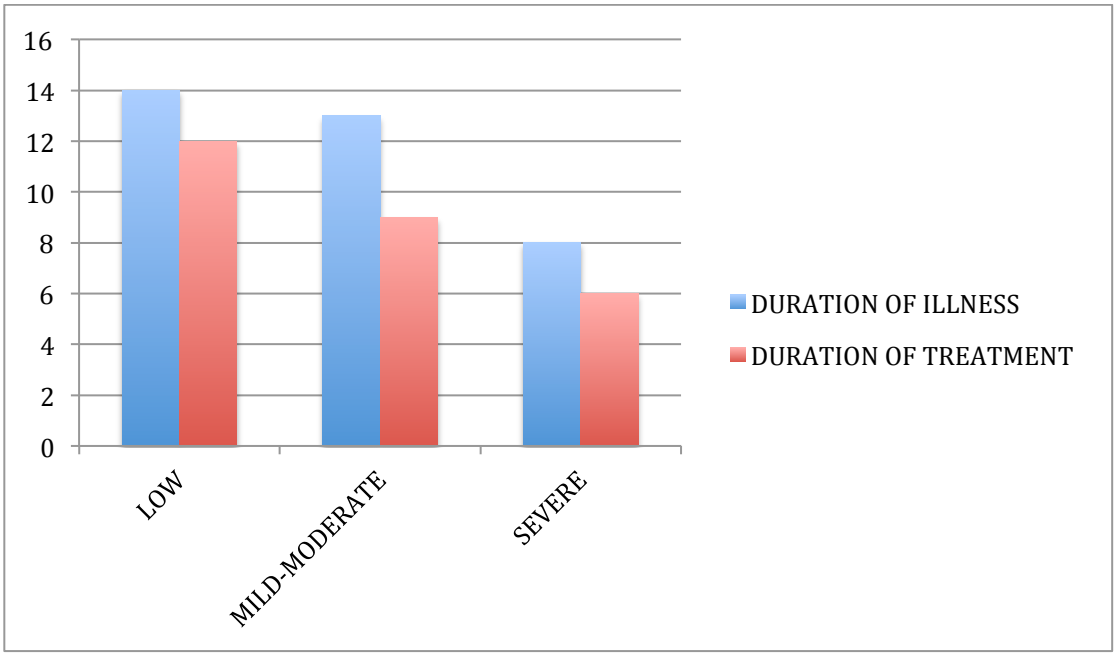
There was no association between occupational status, which includes types of occupation and income, and bipolar disorder.

TABLE:12. MSSI AND OVERALL- ILLNESS CHARACTERISTICS

	MSSI	LOW	MILD-MODERATE	SEVERE	p Value
DURATION OF ILLNESS[a]		14.88±10.21	13.38±8.49	8.73±7.29	0.007*
YEARS OF TREATMENT[a]		12.52±9.58	9.92±8.69	6.64±6.48	0.008*
INTERRUPTION OF TREATMENT	YES	7	9	19	0.223
	NO	10	4	11	
SUBSTANCE ABUSE	YES	7	4	13	0.737
	NO	10	9	17	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant



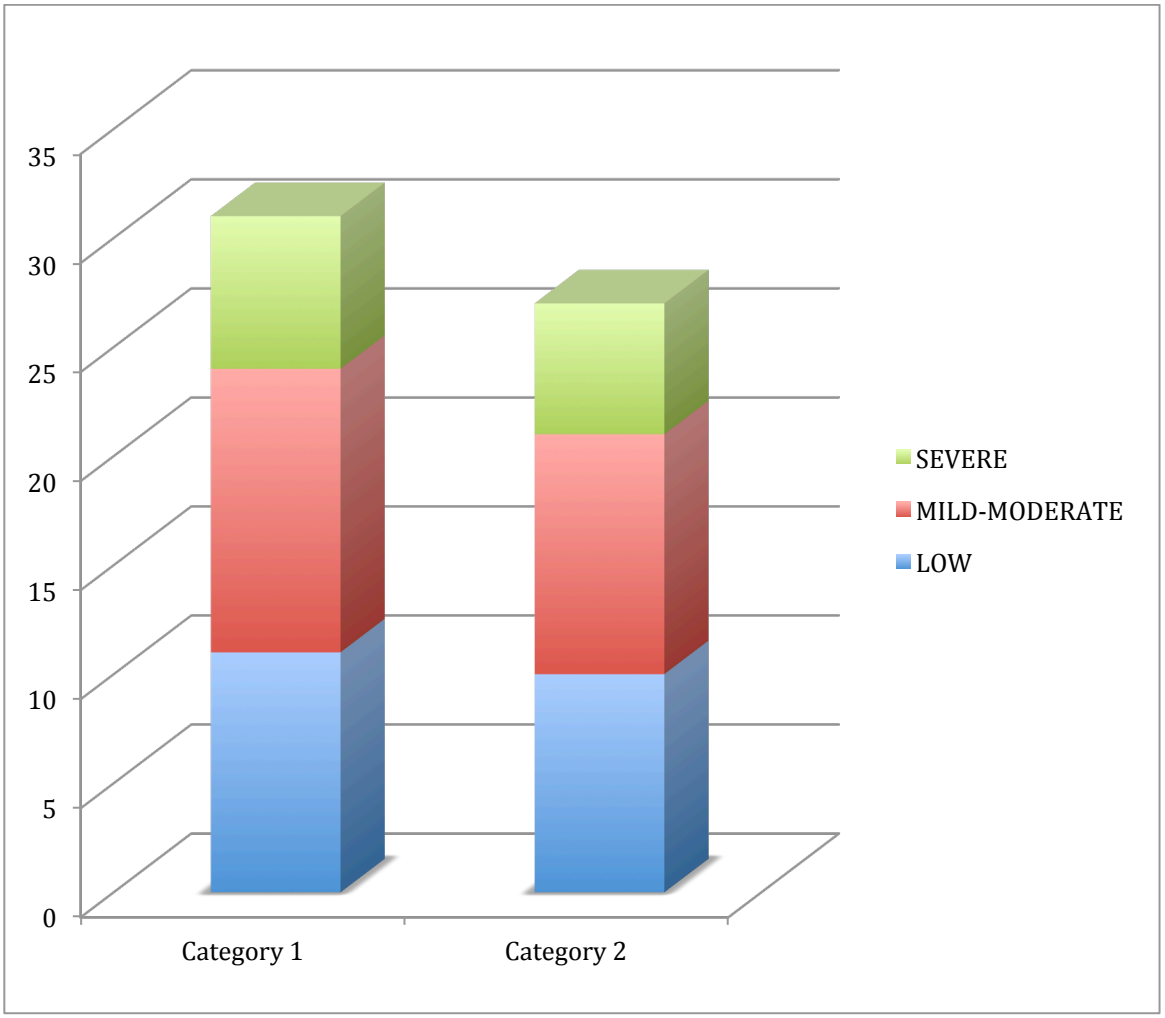
Duration of illness and treatment was observed to have an effect on the suicidal ideation severity. The mean duration of illness for overall illness considering the score on MSSI was 14.88±10.21, 13.38±8.49, and 8.73±7.29. Again, the mean durations for each grade of suicidal ideation were 12.52±9.58, 9.92±8.69 and 6.64±6.48. This shows that the younger age group has more severe suicidal ideation. But this association was lost on Bon Ferroni correction

TABLE:13.MSSI AND SCHIZOPHRENIA- ILLNESS CHARACTERISTICS

	MSSI	LOW	MILD-MODERATE	SEVERE	p Value
DURATION OF ILLNESS[a]		11.75±9.11	13.5±8.66	7.48±5.277	0.303
YEARS OF TREATMENT[a]		10.375±8.667	11.75±7.365	6.238±4.910	0.184
INTERRUPTION OF TREATMENT	YES	2	3	11	0.152
	NO	6	1	7	
SUBSTANCE ABUSE	YES	3	1	8	0.762
	NO	5	3	10	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant



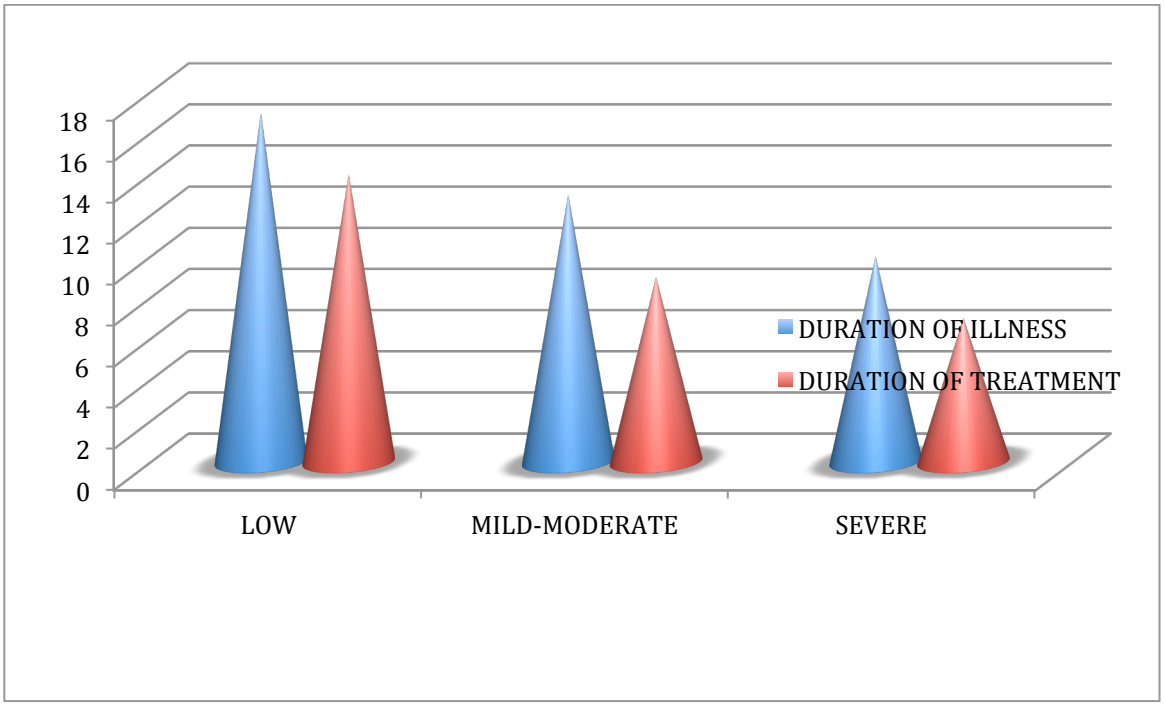
But this association was not seen for schizophrenia. The p value was not significant for schizophrenia and one cannot predict that there is any association between suicidal ideation severity and age, in schizophrenia. Again interruption of treatment and presence of abuse did not have any association with MSSI scores in schizophrenia.

TABLE:14.MSSI AND BIPOLAR DISORDER- ILLNESS CHARACTERISTICS

	MSSI	LOW	MILD-MODERATE	SEVERE	p Value
DURATION OF ILLNESS[a]		17.67± 10.83	13.33±8.94	10.59±9.54	0.056
YEARS OF TREATMENT[a]		14.44± 10.45	9.11±9.51	7.25±8.54	0.014*
INTERRUPTION OF TREATMENT	YES	5	6	8	0.846
	NO	4	3	4	
SUBSTANCE ABUSE	YES	4	3	5	0.880
	NO	5	6	7	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant



$p < 0.05$ is taken as significant

The relation between suicidal ideation and duration of treatment seems to be significant with p values of 0.014. Hence younger individuals have higher suicidal ideations in bipolar disorder. The association was not lost even with post hoc tests. Kruskall Wallis test was used to find the association and the difference held good.

TABLE:15.BSI AND OVERALL SOCIODEMOGRAPHIC CHARACTERSITICS

	BSI	LOW	MEDIUM	HIGH	p VALUE
Gender	Male	0	3	5	0.696
	Female	0	3	5	
Age [a]		0	38.67± 12.6	34.90±8.569	0.696
Religion	Christian	0	0	1	0.691
	Hindu	0	5	8	
	Muslim	0	1	1	
Education	Illiterate	0	1	0	0.318
	Primary	0	2	3	
	Secondary	0	2	2	
	Higher secondary	0	0	5	
	College	0	1	0	
Marital status	Single	0	1	2	0.701
	Married	0	5	7	
	Separated	0	0	1	
	Divorced	0	0	0	
	Widowed	0	0	0	
Type of family	Nuclear	0	2	8	0.092
	Joint	0	4	2	
Number of caregivers [a]		0	2.17± 0.408	1.6± 0.699	0.696
Socio economic status	Low	0	5	9	0.625
	Moderate	0	1	1	
	High	0	0	0	
Locality	Urban	0	3	7	0.392
	Rural	0	3	3	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant

The suicidal intent in overall illness category does not show any association to any of the sociodemographic profile.

TABLE:16.BSI AND SCHIZOPHRENIA

	BSI	LOW	MEDIUM	HIGH	p VALUE
Gender	Male	0	1	3	0.786
	Female	0	1	3	
Age [a]		0	43.5± 6.36	39±8.92	1
Religion	Christian	0	0	1	0.641
	Hindu	0	2	4	
	Muslim	0	0	1	
Education	Illiterate	0	0	0	0.083
	Primary	0	2	3	
	Secondary	0	0	1	
	Higher secondary	0	0	2	
	College	0	0	0	
Marital status	Single	0	0	0	0.537
	Married	0	2	5	
	Separated	0	0	1	
	Divorced	0	0	0	
	Widowed	0	0	0	
Type of family	Nuclear	0	0	5	0.107
	Joint	0	2	1	
Number of caregivers [a]		0	2	1.33±0.516	0.102
Socio economic status	Low	0	1	5	0.464
	Moderate	0	1	1	
	High	0	0	0	
Locality	Urban	0	1	3	0.786
	Rural	0	1	3	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant

No association was seen in any of the categories mentioned above in schizophrenia

TABLE17:.BSI AND BIPOLAR DISORDER

	BSI	LOW	MEDIUM	HIGH	p VALUE
Gender	Male	0	2	2	0.757
	Female	0	2	2	
Age [a]		0	36.25±15.108	28.75±1.893	0.028*
Religion	Christian	0	0	0	0.285
	Hindu	0	3	4	
	Muslim	0	1	0	
Education	Illiterate	0	1	0	0.366
	Primary	0	0	0	
	Secondary	0	2	1	
	Higher secondary	0	0	3	
	College	0	1	0	
Marital status	Single	0	1	2	0.465
	Married	0	3	2	
	Separated	0	0	0	
	Divorced	0	0	0	
	Widowed	0	0	0	
Type of family	Nuclear	0	2	3	0.5
	Joint	0	2	1	
Number of caregivers [a]		0	2.25±0.5	2±0.816	1.00
Socio economic status	Low	0	4	4	NO STAT
	Moderate	0	0	0	
	High	0	0	0	
Locality	Urban	0	2	4	0.214
	Rural	0	2	0	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant

When looking into the suicide intent, in bipolar disorder there is higher suicidal intent in younger individual, the p value being 0.028 .

TABLE:18.BSI AND OVERALL OCCUPATIONAL CHARACTERISTICS

	BSI	**LOW**	**MEDIUM**	**HIGH**	p-VALUE
Employed	Yes	0	4	7	
	No	0	2	3	0.654
Type of occupation	Semiskilled	0	2	2	
	Skilled	0	2	4	0.632
	Semiprofessional	0	0	1	
	Professional	0	0	0	
Income	< 1000	0	1	0	
	1000-5000	0	1	2	
	5000-10000	0	1	4	0.644
	>10000	0	1	1	

$p < 0.05$ is taken as significant

There was no association between occupation and income and suicidal intent in overall illnesses

TABLE:19.BSI AND SCHIZOPHRENIA- OCCUPATION

	BSI	**LOW**	**MEDIUM**	**HIGH**	p-VALUE
Employed	Yes	0	2	4	
	No	0	0	2	0.536
Type of occupation	Semiskilled	0	1	0	
	Skilled	0	1	3	0.269
	Semiprofessional	0	0	1	
	Professional	0	0	0	
Income	< 1000	0	0	0	
	1000-5000	0	1	1	
	5000-10000	0	0	2	1.000
	>10000	0	1	1	

$p < 0.05$ is taken as significant

The suicidal intent did not show any association with occupational profile of a patient with schizophrenia.

TABLE:20.BSI AND BIPOLAR DISORDER- OCCUPATIONAL

	BSI	**LOW**	**MEDIUM**	**HIGH**	p-VALUE
Employed	Yes	0	2	3	
	No	0	2	1	0.5
Type of occupation	Semiskilled	0	1	2	
	Skilled	0	1	1	0.709
	Semiprofessional	0	0		
	Professional	0	0	0	
Income	< 1000	0	1	0	
	1000-5000	0	0	1	
	5000-10000	0	1	2	0.5
	>10000	0	0	0	

$p < 0.05$ is taken as significant

Again, no association was seen in suicidal intent with regards to occupational profile in bipolar disorder.

TABLE:21.BSI AND OVERALL- ILLNESS CHARACTERISTICS

	BSI	**LOW**	**MEDIUM**	**HIGH**	p Value
DURATION OF ILLNESS[a]		0	10.69±10.19	6.65±4.39	1.000
YEARS OF TREATMENT[a]		0	8.01±8.93	4.83±3.81	1.000
INTERRUPTION OF TREATMENT	YES	0	4	6	0.608
	NO	0	2	4	
SUBSTANCE ABUSE	YES	0	2	5	0.451
	NO	0	4	5	

[a] is mean ± S.D.

$p < 0.05$ is taken as significant

There was no association between suicidal intent and illness profile in overall illnesses.

TABLE:21.BSI AND SCHIZOPHRENIA- ILLNESS CHARACTERISTICS

	BSI	**LOW**	**MEDIUM**	**HIGH**	p Value
DURATION OF ILLNESS[a]		0	9.5±0.707	7.08±4.58	1.000
YEARS OF TREATMENT[a]		0	8±1.41	5.55±4.30	0.673
INTERRUPTION OF TREATMENT	YES	0	2	3	0.357
	NO	0	0	3	
SUBSTANCE ABUSE	YES	0	1	1	0.786
	NO	0	3	3	

$p < 0.05$ is taken as significant

Again, there was no association between suicidal intent and illness profile in schizophrenia.

TABLE:22.BSI AND BIPOLAR DISORDER- ILLNESS CHARACTERISTICS

	BSI	**LOW**	**MEDIUM**	**HIGH**	p Value
DURATION OF ILLNESS[a]		0	11.29±13.104	6±4.69	1.000
YEARS OF TREATMENT[a]		0	8.02±11.49	3.75±3.02	1.000
INTERRUPTION OF TREATMENT	YES	0	2	3	0.5
	NO	0	2	1	
SUBSTANCE ABUSE	YES	0	1	2	0.5
	NO	0	3	2	

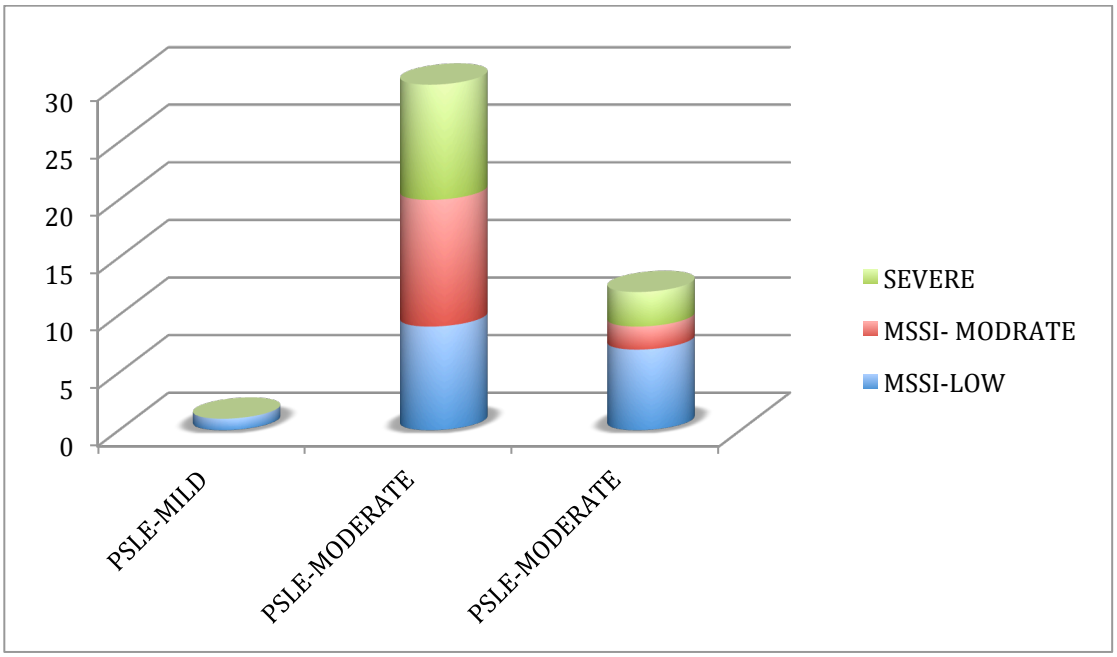
$p < 0.05$ is taken as significant

No association could be established between the suicidal intent and illness profile in bipolar disorder

TABLE:23.MSSI AND PSLE

MSSI		LOW	MILD-MODERATE	SEVERE	P VALUE
PSLE	MILD	1	0	0	0.217
	MODERATE	9	11	10	
	SEVERE	7	2	20	

$p < 0.05$ is taken as significant

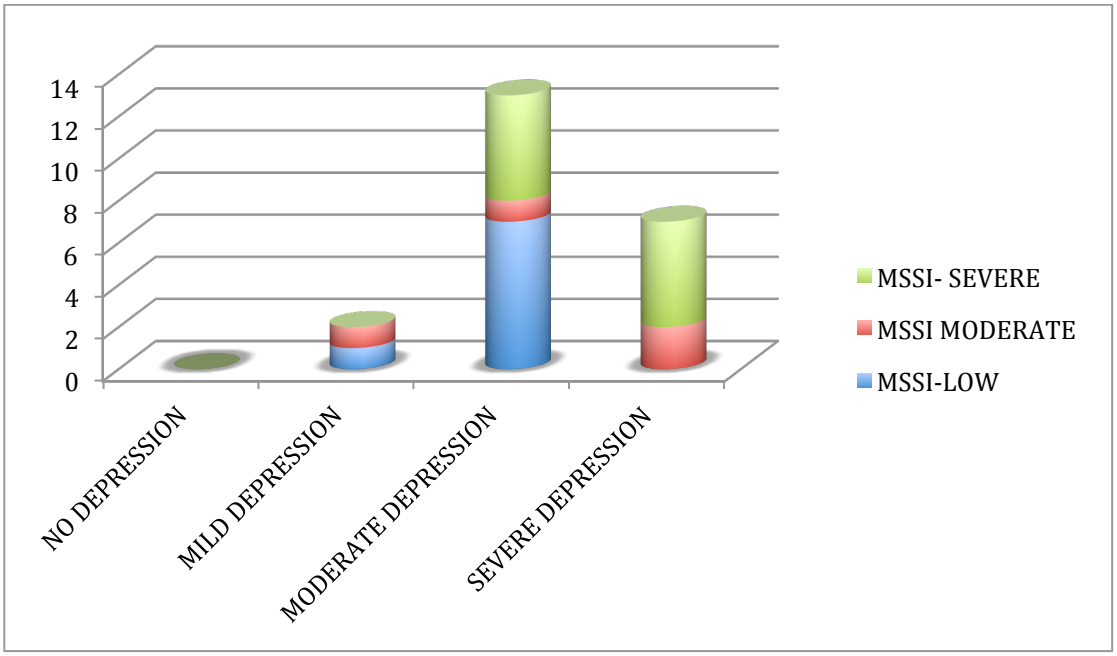


There was no association between severity of suicidal ideation and the rating of the preceding stressor. The p value is 0.217

TABLE:24.DEPRESSION AND MSSI

MSSI		LOW	MILD-MODERATE	SEVERE	p VALUE
DEPRESSION	NONE	0	0	0	0.000*
	MILD	1	1	0	
	MODERATE	7	1	5	
	SEVERE	0	2	13	

$p < 0.05$ is taken as significant



Strong association was seen between presence of depression and suicidal ideation. The p value for overall illness is 0.000. The p Value for schizophrenia is 0.000 and that for bipolar disorder 0.0012 showing good association between the two within the groups.

TABLE:25. MSSI AND SUICIDE INTENT IN SCHIZOPHRENIA

MSSI		LOW	MILD-MODERATE	SEVERE
BECK	MILD	0	0	0
	MEDIUM	0	0	2
	HIGH	0	0	6

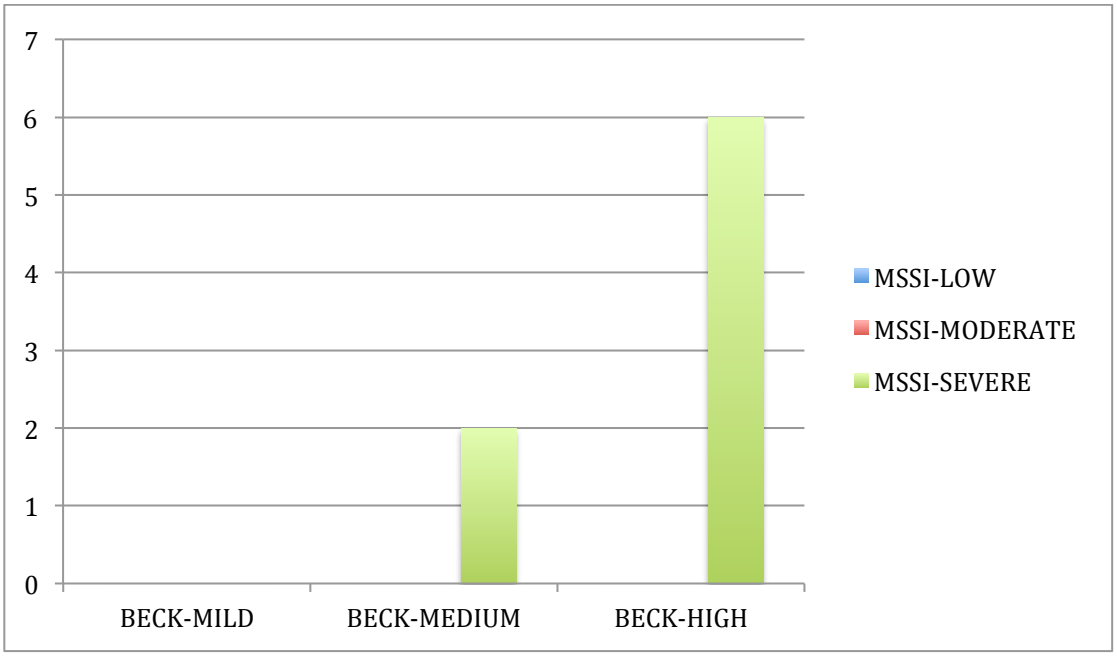
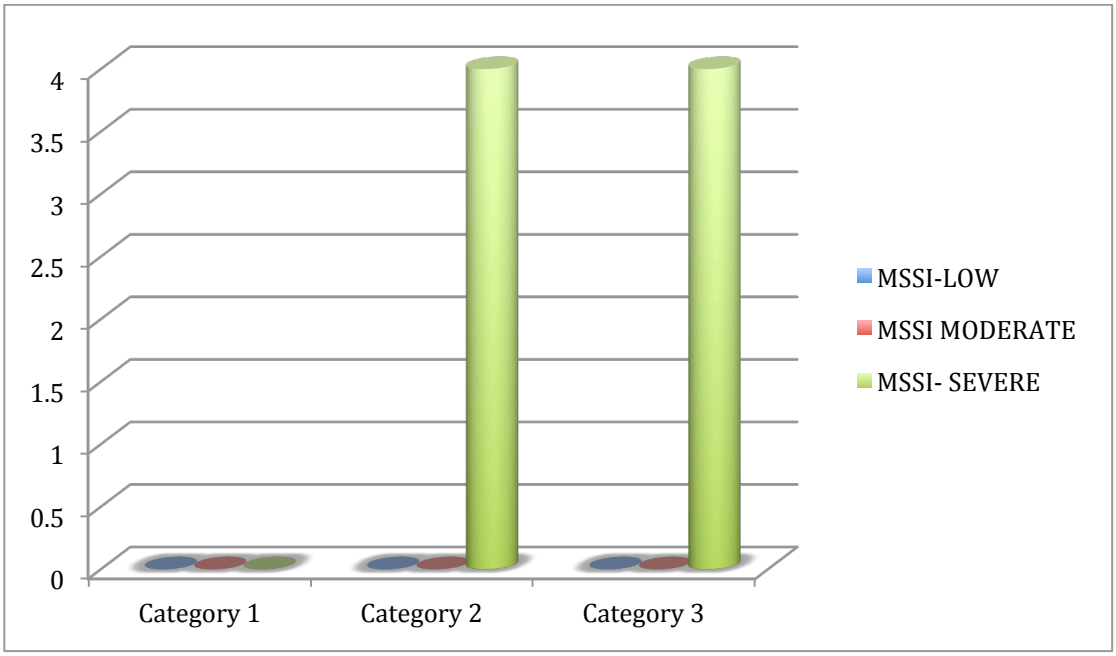


TABLE:26. MSSI AND SUICIDE INTENT IN BIPOLAR DISORDER

MSSI		LOW	MILD-MODERATE	SEVERE
BECK	MILD	0	0	0
	MEDIUM	0	0	4
	HIGH			4



All the suicidal attempts had suicidal ideations temporal to the events. There was always severe suicidal ideation before an attempt.

BPRS- COMPONENT ANALYSIS

On component analysis of BPRS four components came out to be significant they are

TABLE:27. BPRS1

BPRS (SUICIDALITY)		1	2	3	4	5	6	7	p Value
MSSI	LOW	1	2	5	0	0	0	0	
	MILD-MODERATE	0	0	1	3	0	0	0	0.000*
	SEVERE	0	1	1	3	7	3	3	

$p < 0.05$ is taken as significant

TABLE:28.BPRS2

BPRS (DEPRESSION)		1	2	3	4	5	6	7	p Value
MSSI	LOW	0	0	5	2	1	0	0	0.000*
	MILD-MODERATE	1	1	2	0	0	0	0	
	SEVERE	1	1	0	4	4	8	0	

p < 0.05 is taken as significant

TABLE:29.BPRS3

BPRS (SUSPICIOUSNESS)		1	2	3	4	5	6	7	p Value
MSSI	LOW	3	5	0	0	0	0	0	0.001*
	MILD-MODERATE	3	0	0	1	0	0	0	
	SEVERE	3	5	5	3	1	1	0	

` p < 0.05 is taken as significant

TABLE:30.BPRS4

BPRS (UNUSUAL THOUGHT CONTENT)		1	2	3	4	5	6	7	p Value
MSSI	LOW	7	1	0	0	0	0	0	0.007*
	MILD-MODERATE	2	0	1	0	0	1	0	
	SEVERE	7	3	3	1	0	3	1	

p < 0.05 is taken as significant

TABLE:31.BPRS5

BPRS (DISORIENTATION)		1	2	3	4	5	6	7	p Value
MSSI	LOW	8	0	0	0	0	0	0	
	MILD-MODERATE	4	0	0	0	0	0	0	0.010*
	SEVERE	13	5	0	0	0	0	0	

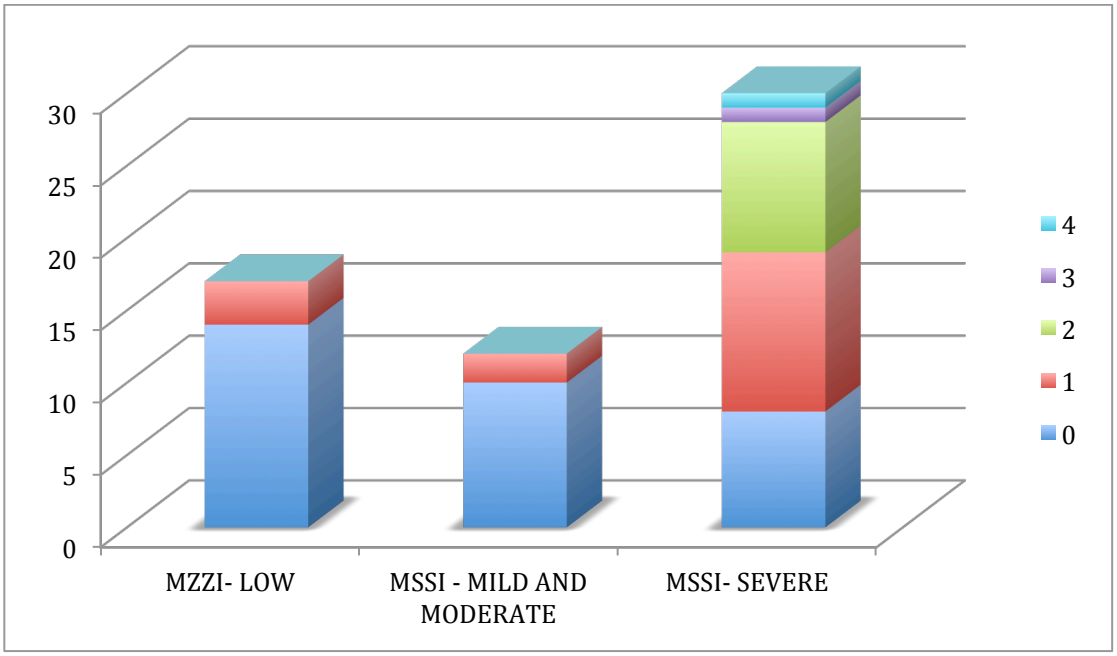
$p < 0.05$ is taken as significant

Hence from the above data it can be inferred that higher scores on depression, suicidality, and suspiciousness were interconnected with higher scores on MSSI. However, disorientation showed suicidality with lower scores on disorientation.

TABLE:32. MSSI AND NO.OF ATTEMPTS

NUMBER OF ATTEMPTS		0	1	2	3	4	p Value
MSSI	LOW	14	3	0	0	0	
	MILD-MODERATE	10	2	0	0	0	0.000*
	SEVERE	8	11	9	1	1	

$p < 0.05$ is taken as significant



Presence of previous suicidal attempts is significantly associated with the severity of suicidal ideations. However, this relationship could not establish for suicide intent.

ALCHOL USE

Alvohol use at the time of attempt showed relation to male gender(p=0.02) This is expected as alcohol use is not so common in females in India. But the association between alcohol and suicide attempt was not significant.

MANIA AND SUICIDE

Out of 30, only one case met the criteria for mania. The patient had only moderate suicidal ideations and was not a suicide attempter.

Discussion

DISCUSSION

The prime intention of the study was to compare the characteristics of suicidal ideations and attempts in patients with schizophrenia and bipolar disorders. Sociodemographic factors, occupational factors, illness profile, comorbid substance use, the severity of the stressor temporal to the commencement of suicidal ideation and/ or attempts, the suicidal intent, severity of suicidal ideation, severity of depression (if present) and severity of psychotic symptoms were the main factors that were scrutinized.

I. SOCIODEMOGRAPHIC CHARACTERISTICS:

Most of the pre existing studies show that suicidal behavior is prominent in the younger age group of psychiatric patients. These studies also emphasize that patients tend to be younger in the schizophrenia group, in comparison with the bipolar disorder faction(39)(31)(75)(8) In this study , there was no major difference in the age distribution. A study by Dell'osso(36) had reached to a similar conclusion. This study was conducted in an Indian population and hence different composition must have resulted in such an inference. This could also explain the absence of any difference in the gender distribution which is also another population determinant. There are mixed reports regarding the influence of gender on suicidality. Some studies show that females are more at risk(36).

Hinduism is often associated with increased tolerance to suicide (52). In this study, 75% of the study population comprised of Hindus. This finding reflects the Indian

population scenario which is also comprised of 75% Hindus. But no significant association could be observed.

In other previous comparative studies, it was found that patients with schizophrenia who had more years of education tend to have more suicidal ideation. Studies on impact of education in bipolar disorder were few and had come up with inconclusive result. But in this study, education was seen to be significantly associated in the bipolar disorder. This association can be explained by the presence of 7 illiterate patients in the bipolar group opposed to zero in the schizophrenia group. But on evaluating the association between education and suicidal ideation a significant difference is seen in the bipolar disorder. Higher education was associated with increased severity of suicidal ideation. This discrepancy could be explained by the fact that mood disorders are more prevalent when compared to schizophrenia and must have resulted in such a finding.

Psychiatric illness impairs a person's occupational functioning to significant levels. A study by Agerbo et al found that presence of a high paying job could increase the risk of suicide. But review studies support the view that unemployment is associated with increased suicidal risk (54). Koeda et al(31) in his comparative study showed that joblessness is a significant feature in schizophrenia in all age groups. In this study most of the patients were engaged in semi-skilled vocations. Grade of the job, income or duration of unemployment were not linked to increased suicidal behavior.

Social support refers to presence of a support system mainly provided by friends and family. Koeda et al(31) in their comparison study emphasized on the risk factor

associated with living alone, or being married. Hor et al(76) in their meta-analysis concluded that there is no significant risk associated with lack of social support. A similar conclusion has been observed in this study. Moreover, the study sample did not contain any patient who was living alone. This could have been the cause of such an interpretation.

II. ILLNESS FACTORS

Duration of illness and treatment when evaluated in respect with suicidal ideation showed significant association. It was present for both the illness taken together. But when categorized, this association held true only in the bipolar disorder group. Longer duration of illness and treatment were associated with less severe suicidal ideation. In other words, suicidal ideations arise in the earlier phases of the course of illness, especially in bipolar disorder. This is in agreement with most of the previous studies. Regarding schizophrenia a meta- analysis had failed to attain a significant correlation between duration of illness and suicidality(54).

Number of previous suicidal attempts was associated with increased severity on suicidal ideation scale. This corroborated with the previous studies.

Considering suicidal intent, most of the studies show a relation between schizophrenia and higher suicidal intent. Also male patients with schizophrenia were associated with more suicidal intent(65). Also studies(63) show higher suicidal intent in older age group.

Regarding relation between suicidal intent and severity, in most of the studies the majority of the attempts are preceded by suicidal ideation. In agreement to the statement, this study also shows that all the suicidal attempters had suicidal ideation and all score high in MSSI.

Number of previous attempts has been postulated to be a major indicator for suicidal behavior.(39)(77). The study is in tandem with the previous conclusions. There is increased severity of suicidal ideations with increased number of previous suicidal attempts.

Suicidality is most commonly associated with mood symptoms especially depression. Depression can be manifested as part of schizophrenia or mood disorder. In this study presence of depression was assessed in both groups. It was concluded from the analysis that depression was significantly associated with suicidal ideation in the whole sample as well as within the specific groups. This is in agreement of the previous studies. 0f the 30 cases in bipolar disorder, there was only one case of mania who harboured suicidal ideations during the episode. On MSSI, he scored only moderately severe suicidal ideation and he was not an attempter.

Temporal stressors are long known to increase suicidal risk. When the total score was considered, there seemed to be a significant variance between the two groups with patients in schizophrenia showing a higher mean score on PSLES. This could reflect the poor problem solving skills in schizophrenia leading to increased adverse situations in life. On conversion into severity grades the difference became insignificant.

Risk of suicide due to psychotic symptoms have been evaluated, but with inconclusive results. T. Ishii et al found the occurrence of hallucinations and delusions to be a proper risk factor. Here, in the study presence of delusions increase the suicidal ideations and hence corroborating with previous studies. There was no correlation with hallucinations though. Also presence of lower scores on disorientation was also associated with more suicidality.

No association was found between substance use and suicidality. It could be due to more number of females in either group and they are less likely to use alcohol and other substances. Also no association could be established between use of alcohol at the time of attempt with the suicidal intent.

Conclusions

CONCLUSIONS

1. There was significant association of education with the disease when compared between the groups. It was found that more illiterates were found in the bipolar disorder group.

2. When considering PSLES total score, there is an increased mean score in the schizophrenia group sufficient enough to show association.

3. When assessing the suicidal ideation severity in bipolar disorders, it was found that patients with higher level of education tended to have higher suicidal ideation.

4. Also, higher suicidal ideations were seen earlier in the path of illness and treatment, in bipolar disorder.

5. The younger patients with bipolar disorder were inclined to harbor higher suicide intent.

6. Depression was one of the main determinants of severity of suicidal ideation.

7. Number of previous suicidal attempts was strongly correlated with the severity of suicidal ideations.

Limitations

LIMITATIONS

- The study is a retrospective one
- The sample size is not sufficient enough
- All the patients were seen after being referred from other departments. Hence there is no inclusion of those who have completed suicide.
- The premorbid personalities, which also play a role in causing suicide, were not considered.

CLINICAL IMPLICATIONS

1. It was inferred that bipolar patients with high level of education have higher suicidal ideations and such individuals should be monitored.

2. Presence of stressors lead to increased suicidality and hence treatment focusing on problem solving skills is highly recommended.

3. Also patients with bipolar disorder develop suicidal ideations earlier in the course. Moreover younger bipolar patients have higher suicidal intent. So bipolar patients should be followed up frequently at least during the early course of illness.

4. Presence of depression showed significant association with suicidality and hence screening for depression should be done regularly.

5. Presence of delusions was associated with higher suiciality and should be addressed as early as possible.

6. Previous number of suicidal attempts increases the severity of suicidal ideation.

7. This study warrants the need for a similar study with a larger sample size, to obtain exact results.

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Annexures

SOCIODEMOGRAPHIC DATA

Age	:	
Gender	:	
Religion	:	
Education	:	
Marital Status	:	Single/Married/Separated/Divorced/Widowed
Family type	:	Nuclear/ Joint
Number of other adult caregivers in the family	:	
Number of Children	:	<5 years: 5-12 years: >12 years:
Socio-Economic Status	:	
Occupation	:	Semiskilled / Skilled /Semiprofessional /Professional
Locality	:	Urban/Rural
Patient's Education	:	Illiterate/Primary/Secondary/Higher Secondary/ College- Bachelor/Masters/Higher
Patient's Occupation Status	:	Unemployed For Past 1year/ >1-5 Years / >5-10 Years
Income	:	<1000/1000-5000/5000-10000/>10000

CLINICAL PROFILE :

Duration Since Diagnosis

Of Schizophrenia :

Duration Since Diagnosis

Of Bipolar Affective Disorder :

Number Of Episodes In Patients

With Bipolar Affective Disorder :

Duration of treatment :

More than 3 months of

Interruption of treatment : yes/ no

Substance abuse : yes/ no

Number Of Suicidal Attempts : 1 2 3 4 5 >5

(including the present one, if present)

Admissions In Psychiatry Ward : 1 2 3 4 5 >5

Number Of Hospital ICU

Admissions : 1 2 3 4 5 >5

Alcohol use at the time of

suicidal attempts : yes/no

Any suicidal ideations at present : yes/no

Method of present suicide attempt

- hanging

- overdosage

- poisoning

- burning

- cutting and slashing

Motive for suicidal attempts

A.In bipolar affective disorder,

- presence of depression

- presence of mixed features

- presence of mania

- presence of psychotic symptoms

B. In schizophrenia,

- presence of hallucination- specify type

- presence of delusion - specify type

- presence of depression

PRESUMPTIVE STRESSFUL LIFE EVENTS SCALE (PSLE)

Sl. No.	LIFE EVENTS	Score
1	Death of spouse	95
2	Extramarital relations of spouse	80
3	Marital separation or divorce	77
4	Suspension or dismissal from job	76
5	Detention in jail of self or close family member	72
6	Lack of child	67
7	Death of close family member	66
8	Marital conflict	64
9	Property or crops damaged	61
10	Death of friend	60

11	Robbery or theft	59
12	Excessive alcohol or drug use by family member	58
13	Conflict with in laws (other than over dowry)	57
14	Broken engagement or love affair	57
15	Major personal illness or injury	56
16	Son or daughter leaving home	55
17	Financial loss or problems	54
18	Illness of family member	52
19	Trouble at work with colleagues, superiors or subordinates	52
20	Prophecy of astrologer or palmist etc	52
21	Pregnancy of wife (wanted or unwanted)	52
22	Conflicts over dowry (self or spouse)	51
23	Sexual problems	51

24	Self or family member unemployed		51
25	Lack of son	51	
26	Large loan	49	
27	Marriage of daughter / dependant sister		49
28	Minor violation of law		48
29	Family conflict		47
30	Break-up with friend	47	
31	Major purchase or construction of house		46
32	Death of pet	44	
33	Failure in examination		43
34	Appearing for an examination/interview		43
35	Getting married or engaged		43

36	Trouble with neighbor	40
37	Unfulfilled commitments	40
38	Change in residence	39
39	Change or expansion of business	37
40	Outstanding personal achievement	37
41	Begin or end schooling	36
42	Retirement	35
43	Change in working conditions or transfer	33
44	Change in sleeping habits	33
45	Birth of daughter	30
46	Gain of new family member	30
47	Reduction in number of family functions	29
48	Change in social activities	28

49	Change in eating habits	27
50	Wife begins or stops work	25
51	Going on a pleasure trip or pilgrimage	20

TOTAL SCORE =

The Modified Scale for Suicidal Ideation

Instructions

The purpose of this scale is to assess the presence or absence of suicide ideation and the degree of severity of suicidal ideas. The time frame is from the point of interview and the previous 48 hours.

1. Wish to die
Over the past day or two have you thought about wanting to die?Do you want to die now?(If the patient wants to die ask: Over the past day or two how often have you had the thought that you wanted to die? A little? Quite often? a lot? When you have wished for death, how strong has the desire been? Weak? Moderately strong? Very strong?)

0. None - no current wish to die, hasn't had any thought about wanting to die.1. Weak - unsure about whether he/she wants to die, seldom thinks about death,or intensity seems low.2. Moderate - current desire to die, may be preoccupied with ideas about death,or intensity seems greater than a rating of 1.3. Strong - current death wish, high frequency or high intensity during the past day or two.

2. Wish to live
Over the past day or two have you thought that you want to live?Do you care if you live or die?(If the patient wants to live ask: Over the past day or two how often have you thought about wanting to live? A little? Quite often? A lot? How sure are you that you really want to live?)

0. Strong - current desire to live, high frequency or high intensity.1. Moderate - current desire to live, thinks about wanting to live quite often, can easily turn his/her thoughts away from death or intensity seems more than a rating of 2.2. Weak - unsure about whether he/she wants to live, occasional thoughts about living or intensity seems low.3. None - patient has no wish to live.

3. Desire to make an active suicide attempt
Over the past day or two when you have thought about suicidedid you want to kill yourself? How often? A little? Quite often? A lot? Do you want to kill yourself now?

0. None - patient may have had thoughts but does not want to make an attempt. 1. Weak - patient isn't sure whether he/she wants to make an attempt.2. Moderate - wanted to act on thoughts at least once in the last 48 hours.3. Strong - wanted to act on thoughts several times and/or almost certain he wants to kill self

4. Passive suicide attempt
Right now would you deliberately ignore taking care of your health?Do you feel like trying to die by eating too much (too little), drinking too much (too little), or by not taking needed medications?Have you felt like doing any of these things over the past day or two?Over the past day or two, have you thought it might be good to leave life or death to chance, for example, carelessly crossing a busy street, driving recklessly, or even walking alone at night in a rough part of town?

0. None - would take precautions to maintain life.1. Weak - not sure whether he/she would leave life/death to chance, or has thought about gambling with fate at least once in the last two days. 2. Moderate - would leave life/death to chance, almost sure he/she would gamble.3. Strong - avoided steps necessary to maintain or save life, e.g., stopped taking needed medications.

CUT-OFF INSTRUCTIONS - If Item 1 and Item 2 are scored less than "2" and Items 3 and 4 are scored 0, then STOP. Otherwise continue with full scale.

5. Duration of thoughts
Over the past day or two when you have thought about suicide how long did the thoughts last?Were they fleeting, e.g., a few seconds?Did they occur for a while, then stop, e.g., a few minutes? Did they occur for longer periods, e.g., an hour at a time?Is it to the point where you can't seem to get them out of your mind?

0. Brief - fleeting periods.1. Short duration - several minutes.2. Longer - an hour of more.3. Almost

continuous - patient finds it hard to turn attention away from suicidal thoughts, can't seem to get them out of his/her mind.

6. Frequency of ideation
Over the last day or two how often have you thought about suicide? Once a day? Once an hour? More than that? All the time?

0. Rare - once in the past 48 hours.1. Low frequency - twice or more over the last 48 hours. 2. Intermittent -approximately every hour3. Persistent - several times an hour.

7. Intensity of thoughts
Over the past day or two, when you have thought about suicide, have they been intense (powerful)?How intense have they been? Weak? Somewhat strong? Moderately strong? Very strong?

0.Very weak. 1. Weak.2. Moderate. 3. Strong.

8. Deterrent to active attempt
Can you think of anything that would keep you from killing yourself? (Your religion, consequences for your family, chance that you may injure yourself seriously if unsuccessful).

0. Definite deterrent - wouldn't attempt suicide because of deterrents. Patient must name one deterrent.1. Probable deterrent -can name at least one deterrent, but does not definitely rule out suicide.2. Questionable deterrent - patient has trouble naming any deterrents, seems focused on the advantages to suicide, minimal concern over deterrents.3. No deterrents - no concern over consequences to self or others.
9. Reasons for living and dying
Right now can you think of any reasons why you should stay alive?What about over the past day or two?Over the past day or two have you thought that there are things happening in your life that make you want to die?(If the patient says there are clear reasons for living and dying, ask what they are and write them verbatim in the section provided. Ask the remaining questions)

Living Dying

Do you think that your reasons for dying are better than your reasons for living? Would you say that your reasons for living are better than your reasons for dying?Are your reasons for living and dying about equal in strength, 50-50?
0. Patient has no reasons for dying, never occurred to him/her to weigh reasons.1. Has reasons for living and occasionally has thought about reasons for dying.2. Not sure about which reasons are more powerful, living and dying are about equal, or those for dying slightly outweigh those for living.3. Reasons for dying strongly outweigh those for living, can't think of any reasons for living.

Method:
Over the last day or two have you been thinking about a way to killyourself, the method you might use?Do you know where to get these materials?Have you thought about jumping from a high place? Where would you jump? Have you thought about using a car to kill yourself? Your own? Someone else's? What highway or road would you use? When would you try to kill yourself? Is there a special event (e.g., anniversary, birthday with which you would like to associate your suicide?Have you thought of any other ways you might kill yourself? (note details verbatim).
(The interviewer should try to get as detailed a description as possible about the patient's plan and degree of specificity - Record this information in narrative fashion below and then rate item 10)
_____
_____
_____
_____
_____
_____

10. Degree of specificity/planning

0. Not considered, method not thought about. 1. Minimal consideration.2. Moderate consideration.3. Details worked out, plans well formulated.

11. Method: Availability/opportunity
Over the past day or two have you thought methods are available to you to commit suicide?Would it take time/effort to create an opportunity to kill yourself?Do you foresee opportunities being available to you in the near future (e.g., leaving hospital)?

0. Method not available, no opportunity.1. Method would take time/effort, opportunity not readily available, e.g., would have to purchase poisons, get prescription, borrow or buy a gun. 2. Future opportunity or availability anticipated - if in hospital when patient got home, pills or gun available.3. Method/opportunity available – pills, gun, car available, patient may have selected a specific time.
12. Sense of courage to carry out attempt
Do you think you have the courage to commit suicide?

0.No courage, too weak, afraid. 1. Unsure of courage.2. Quite sure.3. Very sure.

13. Competence
Do you think you have the ability to carry out your suicide?Can you carry out the necessary steps to insure a successful suicide?How convinced are you that you would be effective in bringing an end to your life?

0. Not competent.1. Unsure.2. Somewhat sure.3. Convinced that he/she can do it.

14. Expectancy of actual attempt
Over the last day or two have you thought that suicide is something you really might do sometime?Right now what are the chances you would try to kill yourself if left alone to your own devices?Would you say the chances are less than 50%? About equal? More than 50%?

0. Patient says he/she definitely would not make an attempt.1. Unsure - might make an attempt but chances are less than 50% or about equal, 50-50.2. Almost certain - chances are greater than 50% that he/she would try to commit suicide?3. Certain - patient will make an attempt if left by self (i.e., if not in hospital or not watched).

15. Talk about death/suicide
Over the last day or two have you noticed yourself talking about death more than usual?Can you recall whether or not you spoke to anybody, even jokingly, that you might welcome death or try to kill yourself?Have you confided in a close friend, religious person, or professional helper that you intend to commit suicide?

0. No talk of death/suicide.1. Probably talked about death more than usual but no specific mention of death wish. May have alluded to suicide using humour.2. Specifically said that he/she wants to die.3. Confided that he/she plans to commit suicide.

16. Writing about death/suicide
Have you written about death/suicide e.g. poetry, in a personal diary?

0. No written material.1. General comments regarding death. 2. Specific reference to death wish.3. Specific reference to plans for suicide.

17. Suicide note
Over the last day or two have you thought about leaving a note or writing a letter to somebody about your suicide?Do you know what you'd say? Who would you leave it for? Have you written it out yet?Where did you leave it?

0. None - hasn't thought about a suicide note.1. "Mental note" - has thought about a suicide note, those he/she might give it to, possibly worked out general themes which would be put in the note (e.g., being a burden to others, etc.)2. Started - suicide note partially written, may have misplaced it.3. Completed note - written out, definite plans about content, addressee.

18. Actual preparation
Over the past day or two have you actually done anything to prepare for your suicide, e.g., collected material, pills, guns, etc.?

0. None - no preparation.1. Probable preparation - patient not sure, may have started to collect materials.2. Partial preparation - definitely started to organize method of suicide. 3. Complete - has pills, gun, or other devices that he needs to kill self.

1. Total Score = sum of the following items:

Item Number	Item Content	Score (0-3)
1	Wish to die	
2	Wish to live	
3	Desire – active attempt	
4	Desire – passive attempt	
5	Duration of thoughts	
6	Frequency	
7	Intensity	
8	Deterrent	
9	Reasons	
10	Method - specificity	
11	Method – availability	
12	Courage	
13	Competence	
14	Expectancy of attempt	
15	Talk of death	
16	Writing of death	
17	Suicide attempt	
18	Actual preparation	
MSSI TOTAL SCORE:		_____

Severity Categories based on MSSI Total Score

0-8 = Low Suicidal Ideation

9-20= Mild-Moderate Suicidal Ideation

21+ = Severe Suicidal Ideation

Beck's 'Suicide ' Intent' Scale '

1.Isolation

a. Somebody present
b. Somebody nearby, or in visual or vocal contact
c. No one nearby or in visual or vocal contact

2.Timing

a. Intervention is probable
b. Intervention is not likely
c. Intervention is highly unlikely

3.Precautions against discovery/intervention

a. No precautions
b. Passive precautions (as avoiding other but doing nothing to prevent their intervention; alone in room with unlocked door)
c. Active precautions (as locked door)

4.Acting

a. Notified potential helper regarding attempt
b. Contacted but did not specifically notify potential helper regarding attempt
c. Did not contact or notify potential helper

5.Final acts in anticipation of death (will, gifts, insurance)

a. None
b. Thought about or made some arrangements
c. Made definite plans or completed arrangements

6. Active preparation for attempt

a. None
b. Minimal to moderate
c. Extensive

7. Suicide Note

a. Absence of note
b. Note written, but torn up; note thought about
c. Presence of note

8. Overt communication of intent before the attempt

a. Equivocal communication

b. Unequivocal communication

Self Report

9. Alleged purpose of attempt

a. To manipulate environment, get attention, get revenge
b. Components of above and below
c. To escape, surcease, solve problems

10. Expectations of fatality

a. Thought that death was unlikely
b. Thought that death was possible but not probable
c. Thought that death was probable or certain

11. Conception of method's lethality

a. Did less to self than s/he thought would be lethal
b. Wasn't sure if what s/he did would be lethal
c. Equaled or exceeded what s/he thought would be lethal

12. Seriousness of attempt

a. Did no seriously attempt to end life
b. Uncertain about seriousness to end life
c. Seriously attempted to end life

13. Attitude toward living/dying

a. Did not want to die
b. Components of above and below
c. Wanted to die

14. Conception of medical rescuability

a. Thought that death would be unlikely if he received medical attention
b. Was uncertain whether death could be averted by medical attention
c. Was certain of death even if he received medical attention

15. Degree of premeditation

a. None; impulsive
b. Suicide contemplated for three hours of less prior to attempt
c. Suicide contemplated for more than three hours prior to attempt

Other Aspects (Not included in total score)

16. Reaction to attempt

    a. Sorry it was made; feels foolish; ashamed
    b. Accepts both attempt and failure
    c. Regrets failure of attempt

17. Visualization of death

    a. Life after death, reunion with descendants
    b. Never-ending sleep, darkness, end of things
    c. No conceptions of or thoughts about death

18. Number of previous attempts

    a. None
    b. One or two
    c. Three or more

19. Relationship between alcohol intake and attempt

    a. Some alcohol intake prior to but not related to attempt; reportedly not enough to impair judgment, reality testing
    b. Enough alcohol intake to impair judgment; reality testing and diminish responsibility
    c. Intentional intake of alcohol in order to facilitate implementation of attempt

20. Relationship between drug intake and attempt

    a. Some drug intake prior to but not related to attempt; reportedly not enough to impair judgment, reality testing
    b. Enough drug intake to impair judgment; reality testing and diminish responsibility

    c. Intentional intake of drug in order to facilitate implementation of attempt

15-19 -Low Intent ;
20-28 -Medium Intent;
29 and above - High Intent

Brief Psychiatric Rating Scale (BPRS) Expanded Version (4.0)

Introduction

This section reproduces an interview schedule, symptom definitions, and specific anchor points for rating symptoms on the BPRS. Clinicians intending to use the BPRS should also consult the detailed guidelines for administration contained in the reference below.

Scale Items and Anchor Points

Rate items 1-14 on the basis of individual's self-report. Note items 7, 12 and 13 are also rated on the basis of observed behaviour. Items 15-24 are rated on the basis of observed behaviour and speech.

1. Somatic Concern

Degree of concern over present bodily health. Rate the degree to which physical health is perceived as a problem by the individual, whether complaints have realistic bases or not. Somatic delusions should be rated in the severe range with or without somatic concern. Note: be sure to assess the degree of impairment due to somatic concerns only and not other symptoms, e.g., depression. In addition, if the individual rates 6 or 7 due to somatic delusions, then you must rate Unusual Thought Content at least 4 or above.

2 Very mild Occasional somatic concerns that tend to be kept to self. 3 Mild Occasional somatic concerns that tend to be voiced to others (e.g., family, doctor).

4 Moderate Frequent expressions of somatic concern or exaggerations of existing ills OR some preoccupation, but no impairment in functioning. Not delusional.

5 Moderately severe Frequent expressions of somatic concern or exaggerations of existing ills OR some preoccupation and moderate impairment of functioning. Not delusional.

6 Severe Preoccupation with somatic complaints with much impairment in functioning OR somatic delusions without acting on them or disclosing to others.

7 Extremely severe Preoccupation with somatic complaints with severe impairment in functioning OR somatic delusions that tend to be acted on or disclosed to others.

"Have you been concerned about your physical health?" "Have you had any physical illness or seen a medical doctor lately? (What does your doctor say is wrong? How serious is it?)”."Has anything changed regarding your appearance?" "Has it interfered with your ability to perform your usual activities and/or work?" "Did you ever feel that parts of your body had changed or stopped working?" [If individual reports any somatic concerns/delusions, ask the following]: "How often are you concerned about [use individual's description]?" "Have you expressed any of these concerns to others?"

2. Anxiety

Reported apprehension, tension, fear, panic or worry. Rate only the individual's

statements - not observed anxiety which is rated under Tension.

2 Very mild Reports some discomfort due to worry OR infrequent worries that occur more than usual for most normal individuals.

3 Mild Worried frequently but can readily turn attention to other things.

4 Moderate Worried most of the time and cannot turn attention to other things easily but no impairment in functioning OR occasional anxiety with autonomic accompaniment but no impairment in functioning.

5 Moderately Severe Frequent, but not daily, periods of anxiety with autonomic accompaniment OR some areas of functioning are disrupted by anxiety or worry.

6 Severe Anxiety with autonomic accompaniment daily but not persisting throughout the day OR many areas of functioning are disrupted by anxiety or constant worry.

7 Extremely Severe Anxiety with autonomic accompaniment persisting throughout the day OR most areas of functioning are disrupted by anxiety or constant worry.

"Have you been worried a lot during [mention time frame]? Have you been nervous or apprehensive? (What do you worry about?)"."Are you concerned about anything? How about finances or the future?""When you are feeling nervous, do your palms sweat or does your heart beat fast (or shortness of breath, trembling, choking)?"

[If individual reports anxiety or autonomic accompaniment, ask the following]: "How much of the time have you been [use individual's description]?" "Has it interfered with your ability to perform your usual activities/work?"

3. Depression

Include sadness, unhappiness, anhedonia and preoccupation with depressing topics (can't attend to TV or conversations due to depression), hopeless, loss of self-esteem (dissatisfied or disgusted with self or feelings of worthlessness). Do not include vegetative symptoms, e.g., motor retardation, early waking or the amotivation that accompanies the deficit syndrome.

2 Very mild Occasionally feels sad, unhappy or depressed. 3 Mild Frequently feels sad or unhappy but can readily turn attention to other things.

4 Moderate Frequent periods of feeling very sad, unhappy, moderately depressed, but able to function with extra effort.

5 Moderately Severe Frequent, but not daily, periods of deep depression OR some areas of functioning are disrupted by depression.

6 Severe Deeply depressed daily but not persisting throughout the day OR many areas of functioning are disrupted by depression.

7 Extremely Severe Deeply depressed daily OR most areas of functioning are disrupted by depression.

"How has your mood been recently? Have you felt depressed (sad, down, unhappy, as if you didn't care)?"."Are you able to switch your attention to more pleasant topics when you want to?"."Do you find that you have lost interest in or get less pleasure from things you used to enjoy, like family, friends, hobbies, watching TV, eating?"

[If individual reports feelings of depression, ask the following]:

"How long do these feelings last?" "Has it interfered with your ability to perform your usual activities?"

4. Suicidality

Expressed desire, intent, or actions to harm or kill self.

2 Very mild Occasional feelings of being tired of living. No overt suicidal thoughts.

3 Mild Occasional suicidal thoughts without intent or specific plan OR he/she feels they would be better off dead.

4 Moderate Suicidal thoughts frequent without intent or plan.

5 Moderately Severe Many fantasies of suicide by various methods. May seriously consider making an attempt with specific time and plan OR impulsive suicide attempt using non-lethal method or in full view of potential saviours.

6 Severe Clearly wants to kill self. Searches for appropriate means and time, OR potentially serious suicide attempt with individual knowledge of possible rescue.

7 Extremely Severe Specific suicidal plan and intent (e.g., "as soon as _____ I will do it by doing X"), OR suicide attempt characterised by plan individual thought was lethal or attempt in secluded environment.

"Have you felt that life wasn't worth living? Have you thought about harming or killing yourself? Have you felt tired of living or as though you would be better off dead? Have you ever felt like ending it all?"

[If individual reports suicidal ideation, ask the following]: "How often have you thought about [use individual's description]?" "Did you (Do you) have a specific plan?"

5. Guilt

Overconcern or remorse for past behaviour. Rate only individual's statements, do not infer guilt feelings from depression, anxiety, or neurotic defences. Note: if the individual rates 6 or 7 due to delusions of guilt, then you must rate Unusual Thought Content at least 4 or above, depending on level of preoccupation and impairment.

2 Very mild Concerned about having failed someone, or at something, but not preoccupied. Can shift thoughts to other matters easily.

3 Mild Concerned about having failed someone, or at something, with some

preoccupation. Tends to voice guilt to others.

4 Moderate Disproportionate preoccupation with guilt, having done wrong, injured others by doing or failing to do something, but can readily turn attention to other things.

5 Moderately Severe Preoccupation with guilt, having failed someone or at something, can turn attention to other things, but only with great effort. Not delusional.

6 Severe Delusional guilt OR unreasonable self-reproach very out of proportion to circumstances. Moderate preoccupation present.

7 Extremely Severe Delusional guilt OR unreasonable self-reproach grossly out of proportion to circumstances. Individual is very preoccupied with guilt and is likely to disclose to others or act on delusions.

"Is there anything you feel guilty about? Have you been thinking about past problems?" "Do you tend to blame yourself for things that have happened?" "Have you done anything you're still ashamed of?" [If individual reports guilt/remorse/delusions, ask the following]:

"How often have you been thinking about [use individual's description]?" "Have you disclosed your feelings of guilt to others?"

6. Hostility

Animosity, contempt, belligerence, threats, arguments, tantrums, property destruction, fights, and any other expression of hostile attitudes or actions. Do not infer hostility from neurotic defences, anxiety or somatic complaints. Do not include incidents of appropriate anger or obvious self-defence.

2 Very mild Irritable or grumpy, but not overtly expressed.

3 Mild Argumentative or sarcastic.

4 Moderate Overtly angry on several occasions OR yelled at others excessively.

5 Moderately Severe Has threatened, slammed about or thrown things.

6 Severe Has assaulted others but with no harm likely, e.g., slapped or pushed, OR destroyed property, e.g., knocked over furniture, broken windows.

7 Extremely Severe Has attacked others with definite possibility of harming them or with actual harm, e.g., assault with hammer or weapon.

"How have you been getting along with people (family, co-workers, etc.)?"."Have you been irritable or grumpy lately? (How do you show it? Do you keep it to yourself?"."Were you ever so irritable that you would shout at people or start fights or arguments? (Have you found yourself yelling at people you didn't know?)"."Have you hit anyone recently?"

7. Elevated Mood

A pervasive, sustained and exaggerated feeling of well-being, cheerfulness, euphoria (implying a pathological mood), optimism that is out of proportion to the circumstances. Do not infer elation from increased activity or from grandiose statements alone.

2 Very mild Seems to be very happy, cheerful without much reason.

3 Mild Some unaccountable feelings of well-being that persist.

4 Moderate Reports excessive or unrealistic feelings of well-being, cheerfulness, confidence or optimism inappropriate to circumstances, some of the time. May frequently joke, smile, be giddy, or overly enthusiastic OR few instances of marked elevated mood with euphoria.

5 Moderately Severe Reports excessive or unrealistic feelings of well-being, confidence or optimism inappropriate to circumstances, much of the time. May describe feeling `on top of the world', `like everything is falling into place', or `better than ever before', OR several instances of marked elevated mood with euphoria.

6 Severe Reports many instances of marked elevated mood with euphoria OR mood definitely elevated almost constantly throughout interview and inappropriate to content.

7 Extremely Severe Individual reports being elated or appears almost intoxicated, laughing, joking, giggling, constantly euphoric, feeling invulnerable, all inappropriate to immediate circumstances.

"Have you felt so good or high that other people thought that you were not your normal self?" "Have you been feeling cheerful and `on top of the world' without any reason?"

[If individual reports elevated mood/euphoria, ask the following]: "Did it seem like more than just feeling good?" "How long did that last?"

8. Grandiosity

Exaggerated self-opinion, self-enhancing conviction of special abilities or powers or identity as someone rich or famous. Rate only individual's statements about himself, not his/her demeanour. Note: if the individual rates 6 or 7 due to grandiose delusions, you must rate Unusual Thought Content at least 4 or above.

2 Very mild Feels great and denies obvious problems, but not unrealistic.

3 Mild Exaggerated self-opinion beyond abilities and training.

4 Moderate Inappropriate boastfulness, e.g., claims to be brilliant, insightful or gifted beyond realistic proportions, but rarely self-discloses or acts on these inflated self-concepts. Does not claim that grandiose accomplishments have actually occurred.

5 Moderately Severe Same as 4 but often self-discloses and acts on these grandiose ideas. May have doubts about the reality of the grandiose ideas. Not delusional.

6 Severe Delusional - claims to have special powers like ESP, to have millions of dollars, invented new machines, worked at jobs when it is known that he/she was never employed in these capacities, be Jesus Christ, or the Prime Minister. Individual may not be very preoccupied.

7 Extremely Severe Delusional - same as 6 but individual seems very preoccupied and tends to disclose or act on grandiose delusions.

"Is there anything special about you? Do you have any special abilities or powers? Have you thought that you might be somebody rich or famous?"

[If the individual reports any grandiose ideas/delusions, ask the following]:

"How often have you been thinking about [use individuals description]? Have you told anyone about what you have been thinking? Have you acted on any of these ideas?"

9. Suspiciousness

Expressed or apparent belief that other persons have acted maliciously or with discriminatory intent. Include persecution by supernatural or other non-human agencies (e.g., the devil). Note: ratings of 3 or above should also be rated under Unusual Thought Content.

2 Very mild Seems on guard. Reluctant to respond to some `personal' questions. Reports being overly self-conscious in public.

3 Mild Describes incidents in which others have harmed or wanted to harm him/her that sound plausible. Individual feels as if others are watching, laughing or criticising him/her in public, but this occurs only occasionally or rarely. Little or no preoccupation.

4 Moderate Says other persons are talking about him/her maliciously, have negative intentions or may harm him/her. Beyond the likelihood of plausibility, but not delusional. Incidents of suspected persecution occur occasionally (less than once per week) with some preoccupation.

5 Moderately Severe Same as 4, but incidents occur frequently, such as more than once per week. Individual is moderately preoccupied with ideas of persecution OR individual reports persecutory delusions expressed with much doubt (e.g., partial delusion).

6 Severe Delusional - speaks of Mafia plots, the FBI or others poisoning his/her food, persecution by supernatural forces.

7 Extremely Severe Same as 6, but the beliefs are bizarre or more preoccupying. Individual tends to disclose or act on persecutory delusions.

"Do you ever feel uncomfortable in public? Does it seem as though others are

watching you? Are you concerned about anyone's intentions toward you? Is anyone going out of their way to give you a hard time, or trying to hurt you? Do you feel in any danger?"

[If individual reports any persecutory ideas/delusions, ask the following]:

"How often have you been concerned that [use individual's description]? Have you told anyone about these experiences?"

10. Hallucinations

Reports of perceptual experiences in the absence of relevant external stimuli. When rating degree to which functioning is disrupted by hallucinations, include preoccupation with the content and experience of the hallucinations, as well as functioning disrupted by acting out on the hallucinatory content (e.g., engaging in deviant behaviour due to command hallucinations). Include thoughts aloud (`gedenkenlautwerden') or pseudohallucinations (e.g., hears a voice inside head) if a voice quality is present.

2 Very mild While resting or going to sleep, sees visions, smells odours or hears voices, sounds, or whispers in the absence of external stimulation, but no impairment in functioning.

3 Mild While in a clear state of consciousness, hears a voice calling the individual's name, experiences non-verbal auditory hallucinations (e.g., sounds or whispers), formless visual hallucinations or has sensory experiences in the presence of a modality- relevant stimulus (e.g., visual illusions) infrequently (e.g., 1-2 times per week) and with no functional impairment.

4 Moderate Occasional verbal, visual, gustatory, olfactory or tactile hallucinations with no functional impairment OR non-verbal auditory hallucinations/visual illusions more than infrequently or with impairment.

5 Moderately Severe Experiences daily hallucinations OR some areas of functioning are disrupted by hallucinations.

6 Severe Experiences verbal or visual hallucinations several times a day OR many areas of functioning are disrupted by these hallucinations.

7 Extremely Severe Persistent verbal or visual hallucinations throughout the day OR most areas of functioning are disrupted by these hallucinations.

"Do you ever seem to hear your name being called?"

"Have you heard any sounds or people talking to you or about you when there has been nobody around?

[If hears voices]: "What does the voice/voices say? Did it have a voice quality?"

"Do you ever have visions or see things that others do not see? What about smell odours that others do not smell?"

[If the individual reports hallucinations, ask the following]:

"Have these experiences interfered with your ability to perform your usual activities/work? How do you explain them? How often do they occur?"

11. Unusual thought content

Unusual, odd, strange, or bizarre thought content. Rate the degree of unusualness, not the degree of disorganisation of speech. Delusions are patently absurd, clearly false or bizarre ideas that are expressed with full conviction. Consider the individual to have full conviction if he/she has acted as though the delusional belief was true. Ideas of reference/persecution can be differentiated from delusions in that ideas are expressed with much doubt and contain more elements of reality. Include thought insertion, withdrawal and broadcast. Include grandiose, somatic and persecutory delusions even if rated elsewhere. Note: if Somatic Concern, Guilt, Suspiciousness or Grandiosity are rated 6 or 7 due to delusions, then Unusual Thought Content must be rated 4 or above.

2 Very mild Ideas of reference (people may stare or may laugh at him), ideas of persecution (people may mistreat him). Unusual beliefs in psychic powers, spirits, UFOs, or unrealistic beliefs in one's own abilities. Not strongly held. Some doubt.

3 Mild Same as 2, but degree of reality distortion is more severe as indicated by highly unusual ideas or greater conviction. Content may be typical of delusions (even bizarre), but without full conviction. The delusion does not seem to have fully formed, but is considered as one possible explanation for an unusual experience.

4 Moderate Delusion present but no preoccupation or functional impairment. May be an encapsulated delusion or a firmly endorsed absurd belief about past delusional circumstances.

5 Moderately Severe Full delusion(s) present with some preoccupation OR some areas of functioning disrupted by delusional thinking.

6 Severe Full delusion(s) present with much preoccupation OR many areas of functioning are disrupted by delusional thinking.

7 Extremely Severe Full delusion(s) present with almost total preoccupation OR most areas of functioning disrupted by delusional thinking.

"Have you been receiving any special messages from people or from the way things are arranged around you? Have you seen any references to yourself on TV or in the newspapers?"."Can anyone read your mind?"."Do you have a special relationship with God?"."Is anything like electricity, X-rays, or radio waves affecting you?"."Are thoughts put into your head that are not your own?"."Have you felt that you were under the control of another person or force?"

[If individual reports any odd ideas/delusions, ask the following]:

"How often do you think about [use individual's description]?"."Have you told anyone about these experiences? How do you explain the things that have been happening [specify]?"

Rate items 12-13 on the basis of individual's self-report and observed behaviour.

12. Bizarre behaviour

Reports of behaviours which are odd, unusual, or psychotically criminal. Not limited to interview period. Include inappropriate sexual behaviour and inappropriate affect.

2 Very mild Slightly odd or eccentric public behaviour, e.g., occasionally giggles to self, fails to make appropriate eye contact, that does not seem to attract the attention of others OR unusual behaviour conducted in private, e.g., innocuous rituals, that would not attract the attention of others.

3 Mild Noticeably peculiar public behaviour, e.g., inappropriately loud talking, makes inappropriate eye contact, OR private behaviour that occasionally, but not always, attracts the attention of others, e.g., hoards food, conducts unusual rituals, wears gloves indoors.

4 Moderate Clearly bizarre behaviour that attracts or would attract (if done privately) the attention or concern of others, but with no corrective intervention necessary. Behaviour occurs occasionally, e.g., fixated staring into space for several minutes, talks back to voices once, inappropriate giggling/laughter on 1-2 occasions, talking loudly to self.

5 Moderately Severe Clearly bizarre behaviour that attracts or would attract (if done privately) the attention of others or the authorities, e.g., fixated staring in a socially disruptive way, frequent inappropriate giggling/laughter, occasionally responds to voices, or eats non-foods.

6 Severe Bizarre behaviour that attracts attention of others and intervention by authorities, e.g., directing traffic, public nudity, staring into space for long periods, carrying on a conversation with hallucinations, frequent inappropriate giggling/laughter.

7 Extremely Severe Serious crimes committed in a bizarre way that attract the attention of others and the control of authorities, e.g., sets fires and stares at flames OR almost constant bizarre behaviour, e.g., inappropriate giggling/laughter, responds only to hallucinations and cannot be engaged in interaction.

"Have you done anything that has attracted the attention of others?" "Have you done anything that could have gotten you into trouble with the police?" "Have you done anything that seemed unusual or disturbing to others?"

13. Self-neglect

Hygiene, appearance, or eating behaviour below usual expectations, below socially acceptable standards or life threatening.

2 Very mild Hygiene/appearance slightly below usual community standards, e.g., shirt out of pants, buttons unbuttoned, shoe laces untied, but no social or medical consequences.

3 Mild Hygiene/appearance occasionally below usual community standards, e.g.,

irregular bathing, clothing is stained, hair uncombed, occasionally skips an important meal. No social or medical consequences.

4 Moderate Hygiene/appearance is noticeably below usual community standards, e.g., fails to bathe or change clothes, clothing very soiled, hair unkempt, needs prompting, noticeable by others OR irregular eating and drinking with minimal medical concerns and consequences.

5 Moderately Severe Several areas of hygiene/appearance are below usual community standards OR poor grooming draws criticism by others and requires regular prompting. Eating or hydration are irregular and poor, causing some medical problems.

6 Severe Many areas of hygiene/appearance are below usual community standards, does not always bathe or change clothes even if prompted. Poor grooming has caused social ostracism at school/residence/work, or required intervention. Eating erratic and poor, may require medical intervention.

7 Extremely Severe Most areas of hygiene/appearance/nutrition are extremely poor and easily noticed as below usual community standards OR hygiene/appearance/nutrition require urgent and immediate medical intervention.

"How has your grooming been lately? How often do you change your clothes? How often do you take showers? Has anyone (parents/staff) complained about your grooming or dress? Do you eat regular meals?"

14. Disorientation

Does not comprehend situations or communications, such as questions asked during the entire BPRS interview. Confusion regarding person, place, or time. Do not rate if incorrect responses are due to delusions.

2 Very mild Seems muddled or mildly confused 1-2 times during interview. Oriented to person, place and time.

3 Mild Occasionally muddled or mildly confused 3-4 times during interview. Minor inaccuracies in person, place, or time, e.g., date off by more than 2 days, or gives wrong division of hospital or community centre.

4 Moderate Frequently confused during interview. Minor inaccuracies in person, place, or time are noted, as in 3 above. In addition, may have difficulty remembering general information, e.g., name of Prime Minister.

5 Moderately Severe Markedly confused during interview, or to person, place, or time. Significant inaccuracies are noted, e.g., date off by more than one week, or cannot give correct name of hospital. Has difficulty remembering personal information, e.g., where he/she was born or recognising familiar people.

6 Severe Disoriented as to person, place, or time, e.g., cannot give correct month and year. Disoriented in 2 out of 3 spheres.

7 Extremely Severe Grossly disoriented as to person, place, or time, e.g., cannot give

name or age. Disoriented in all three spheres.

"May I ask you some standard questions we ask everybody?"

"How old are you? What is the date [allow 2 days]" "What is this place called? What year were you born? Who is the Prime Minister?" Rate items 15-24 on the basis of observed behaviour and speech.

15 Conceptual disorganisation

Degree to which speech is confused, disconnected, vague or disorganised. Rate tangentiality, circumstantiality, sudden topic shifts, incoherence, derailment, blocking, neologisms, and other speech disorders. Do not rate content of speech.

2 Very mild Peculiar use of words or rambling but speech is comprehensible.

3 Mild Speech a bit hard to understand or make sense of due to tangentiality, circumstantiality, or sudden topic shifts.

4 Moderate Speech difficult to understand due to tangentiality, circumstantiality, idiosyncratic speech, or topic shifts on many occasions OR 1-2 instances of incoherent phrases.

5 Moderately Severe Speech difficult to understand due to circumstantiality, tangentiality, neologisms, blocking or topic shifts most of the time, OR 3-5 instances of incoherent phrases.

6 Severe Speech is incomprehensible due to severe impairment most of the time. Many BPRS items cannot be rated by self-report alone.

7 Extremely Severe Speech is incomprehensible throughout interview.

16. Blunted affect

Restricted range in emotional expressiveness of face, voice, and gestures. Marked indifference or flatness even when discussing distressing topics. In the case of euphoric or dysphoric individuals, rate Blunted Affect if a flat quality is also clearly present.

2 Very mild Emotional range is slightly subdued or reserved but displays appropriate facial expressions and tone of voice that are within normal limits.

3 Mild Emotional range overall is diminished, subdued or reserved, without many spontaneous and appropriate emotional responses. Voice tone is slightly monotonous.

4 Moderate Emotional range is noticeably diminished, individual doesn't show emotion, smile or react to distressing topics except infrequently. Voice tone is monotonous or there is noticeable decrease in spontaneous movements. Displays of emotion or gestures are usually followed by a return to flattened affect.

5 Moderately Severe Emotional range very diminished, individual doesn't show emotion, smile, or react to distressing topics except minimally, few gestures, facial

expression does not change very often. Voice tone is monotonous much of the time.

6 Severe Very little emotional range or expression. Mechanical in speech and gestures most of the time. Unchanging facial expression. Voice tone is monotonous most of the time.

7 Extremely Severe Virtually no emotional range or expressiveness, stiff movements. Voice tone is monotonous all of the time.

Use the following probes at end of interview to assess emotional responsivity: "Have you heard any good jokes lately? Would you like to hear a joke?"

17. Emotional withdrawal

Deficiency in individual's ability to relate emotionally during interview situation. Use your own feeling as to the presence of an `invisible barrier' between individual and interviewer. Include withdrawal apparently due to psychotic processes.

2 Very mild Lack of emotional involvement shown by occasional failure to make reciprocal comments, appearing preoccupied, or smiling in a stilted manner, but spontaneously engages the interviewer most of the time.

3 Mild Lack of emotional involvement shown by noticeable failure to make reciprocal comments, appearing preoccupied, or lacking in warmth, but responds to interviewer when approached.

4 Moderate Emotional contact not present much of the interview because individual does not elaborate responses, fails to make eye contact, doesn't seem to care if interviewer is listening, or may be preoccupied with psychotic material.

5 Moderately Severe Same as 4 but emotional contact not present most of the interview.

6 Severe Actively avoids emotional participation. Frequently unresponsive or responds with yes/no answers (not solely due to persecutory delusions). Responds with only minimal affect.

7 Extremely Severe Consistently avoids emotional participation. Unresponsive or

responds with yes/no answers (not solely due to persecutory delusions). May leave during interview or just not respond at all.

18. Motor retardation

Reduction in energy level evidenced by slowed movements and speech, reduced body tone, decreased number of spontaneous body movements. Rate on the basis of observed behaviour of the individual only. Do not rate on the basis of individual's subjective impression of his own energy level. Rate regardless of medication effects.

2 Very mild Slightly slowed or reduced movements or speech compared to most people.

3 Mild Noticeably slowed or reduced movements or speech compared to most people.

4 Moderate Large reduction or slowness in movements or speech.

5 Moderately Severe Seldom moves or speaks spontaneously OR very mechanical or stiff movements

6 Severe Does not move or speak unless prodded or urged. 7 Extremely Severe Frozen, catatonic.

19. Tension

Observable physical and motor manifestations of tension, `nervousness' and agitation. Self-reported experiences of tension should be rated under the item on anxiety. Do not rate if restlessness is solely akathisia, but do rate if akathisia is exacerbated by tension.

2 Very mild More fidgety than most but within normal range. A few transient signs of tension, e.g., picking at fingernails, foot wagging, scratching scalp several times or finger tapping.

3 Mild Same as 2, but with more frequent or exaggerated signs of tension.

4 Moderate Many and frequent signs of motor tension with one or more signs sometimes occurring simultaneously, e.g., wagging one's foot while wringing hands together. There are times when no signs of tension are present.

5 Moderately Severe Many and frequent signs of motor tension with one or more signs often occurring simultaneously. There are still rare times when no signs of tension are present.

6 Severe Same as 5, but signs of tension are continuous.

7 Extremely Severe Multiple motor manifestations of tension are continuously present, e.g., continuous pacing and hand wringing.

20. Unco-operativeness

Resistance and lack of willingness to co-operate with the interview. The unco-operativeness might result from suspiciousness. Rate only unco-operativeness in relation to the interview, not behaviours involving peers and relatives.

2 Very mild Shows non-verbal signs of reluctance, but does not complain or argue. 3 Mild Gripes or tries to avoid complying, but goes ahead without argument.

4 Moderate Verbally resists but eventually complies after questions are rephrased or repeated.

5 Moderately Severe Same as 4, but some information necessary for accurate ratings

is withheld.

6 Severe Refuses to co-operate with interview, but remains in interview situation. 7 Extremely Severe Same as 6, with active efforts to escape the interview

21. Excitement

Heightened emotional tone or increased emotional reactivity to interviewer or topics being discussed, as evidenced by increased intensity of facial expressions, voice tone, expressive gestures or increase in speech quantity and speed.

2 Very mild Subtle and fleeting or questionable increase in emotional intensity. For example, at times seems keyed-up or overly alert.

3 Mild Subtle but persistent increase in emotional intensity. For example, lively use of gestures and variation in voice tone.

4 Moderate Definite but occasional increase in emotional intensity. For example, reacts to interviewer or topics that are discussed with noticeable emotional intensity. Some pressured speech.

5 Moderately Severe Definite and persistent increase in emotional intensity. For example, reacts to many stimuli, whether relevant or not, with considerable emotional intensity. Frequent pressured speech.

6 Severe Marked increase in emotional intensity. For example, reacts to most stimuli with inappropriate emotional intensity. Has difficulty settling down or staying on task. Often restless, impulsive, or speech is often pressured.

7 Extremely Severe Marked and persistent increase in emotional intensity. Reacts to all stimuli with inappropriate intensity, impulsiveness. Cannot settle down or stay on task. Very restless and impulsive most of the time. Constant pressured speech.

22. Distractibility

Degree to which observed sequences of speech and actions are interrupted by stimuli unrelated to the interview. Distractibility is rated when the individual shows a change in the focus of attention as characterised by a pause in speech or a marked shift in gaze. Individual's attention may be drawn to noise in adjoining room, books on a shelf, interviewer's clothing, etc. Do not rate circumstantiality, tangentiality or flight of ideas. Also, do not rate rumination with delusional material. Rate even if the distracting stimulus cannot be identified.

2 Very mild Generally can focus on interviewer's questions with only 1 distraction or inappropriate shift of attention of brief duration.

3 Mild Individual shifts focus of attention to matters unrelated to the interview 2-3 times. 4 Moderate Often responsive to irrelevant stimuli in the room, e.g., averts gaze from the interviewer.

5 Moderately Severe Same as above, but now distractibility clearly interferes with the flow of the interview.

6 Severe Extremely difficult to conduct interview or pursue a topic due to preoccupation with irrelevant stimuli.

7 Extremely Severe Impossible to conduct interview due to preoccupation with irrelevant stimuli.

23. Motor hyperactivity

Increase in energy level evidenced in more frequent movement and/or rapid speech. Do not rate if restlessness is due to akathisia.

2 Very mild Some restlessness, difficulty sitting still, lively facial expressions, or somewhat talkative

3 Mild Occasionally very restless, definite increase in motor activity, lively gestures, 1-3 brief instances of pressured speech.

4 Moderate Very restless, fidgety, excessive facial expressions, or non-productive and repetitious motor movements. Much pressured speech, up to one-third of the interview.

5 Moderately Severe Frequently restless, fidgety. Many instances of excessive non-productive and repetitious motor movements. On the move most of the time. Frequent pressured speech, difficult to interrupt. Rises on 1-2 occasions to pace.

6 Severe Excessive motor activity, restlessness, fidgety, loud tapping, noisy, etc., throughout most of the interview. Speech can only be interrupted with much effort. Rises on 3-4 occasions to pace.

7 Extremely Severe Constant excessive motor activity throughout entire interview, e.g., constant pacing, constant pressured speech with no pauses, individual can only be interrupted briefly and only small amounts of relevant information can be obtained

24. Mannerisms and posturing

Unusual and bizarre behaviour, stylised movements or acts, or any postures which are clearly uncomfortable or inappropriate. Exclude obvious manifestations of medication side effects. Do not include nervous mannerisms that are not odd or unusual.

2 Very mild Eccentric or odd mannerisms or activity that ordinary persons would have difficulty explaining, e.g., grimacing, picking. Observed once for a brief period.

3 Mild Same as 2, but occurring on two occasions of brief duration.

4 Moderate Mannerisms or posturing, e.g., stylised movements or acts, rocking, nodding, rubbing, or grimacing, observed on several occasions for brief periods or infrequently but very odd. For example, uncomfortable posture maintained for 5 seconds more than twice.

5 Moderately Severe Same as 4, but occurring often, or several examples of very odd mannerisms or posturing that are idiosyncratic to the individual.

6 Severe Frequent stereotyped behaviour, assumes and maintains uncomfortable or inappropriate postures, intense rocking, smearing, strange rituals or foetal posturing. Individual can interact with people and the environment for brief periods despite these behaviours.

7 Extremely Severe Same as 6, but individual cannot interact with people or the environment due to these behaviours.

CALGARY DEPRESSION SCALE FOR SCHIZOPHRENIA

Interviewer: Ask the first question as written. Use follow up probes or qualifiers at your discretion. Time frame refers to last two weeks unless stipulated. **N.B.** The last item, #9, is based on observations of the entire interview.

1. DEPRESSION: How would you describe your mood over the last two weeks? Do you keep reasonably cheerful or have you been very depressed or low spirited recently? In the last two weeks how often have you (own words) every day? All day?

0. Absent
1. Mild Expresses some sadness or discouragement on questioning.
2. Moderate Distinct depressed mood persisting up to half the time over last 2 weeks: present daily.
3.Severe Markedly depressed mood persisting daily over half the time interfering with normal motor and social functioning

2. HOPELESSNESS: How do you see the future for yourself? Can you see any future? - or has life seemed quite hopeless? Have you given up or does there still seem some reason for trying?

0. Absent
1.Mild Has at times felt hopeless over the last two weeks but still has some degree of hope for the future
2.Moderate Persistent, moderate sense of hopelessness over last week. Can be persuaded to acknowledge possibility of things being better.
3.Severe Persisting and distressing sense of hopelessness.

3. SELF DEPRECIATION: What is your opinion of your self compared to other people? Do you feel better, not as good, or about the same as others? Do you feel inferior or even worthless?

0. Absent
1. Mild Some inferiority; not amounting to feeling of worthlessness.
2. Moderate Subject feels worthless, but less than 50% of the time.
3. Severe Subject feels worthless more than 50% of the time. May be challenged to acknowledge otherwise

4. GUILTY IDEAS OF REFERENCE: Do you have the feeling that you are being blamed for something or even wrongly accused? What about? (Do not include justifiable blame or accusation. Exclude delusions of guilt.)

0. Absent
1. Mild Subject feels blamed but not accused less than 50% of the time.
2. Moderate Persisting sense of being blamed, and/or occasional sense of being accused.
3. Severe Persistent sense of being accused. When challenged, acknowledges that it is not so.

5. PATHOLOGICAL GUILT: Do you tend to blame yourself for little things you may have done in the past? Do you think that you deserve to be so concerned about this?

0. Absent
1. Mild Subject sometimes feels over guilty about some minor peccadillo, but less than 50% of time.
2. Moderate Subject usually (over 50% of time) feels guilty about past actions the significance of which he exaggerates.
3.Severe Subject usually feels s/he is to blame for everything that has gone wrong, even when not his/her fault.

6. MORNING DEPRESSION: When you have felt depressed over the last 2 weeks have you noticed the depression being worse at any particular time of day?

0. Absent No depression
1.Mild Depression present but no diurnal variation
2.Moderate Depression spontaneously mentioned to be worse in a.m.
3. Severe Depression markedly worse in a.m., with impaired functioning which improves in p.m

7. EARLY WAKENING: Do you wake earlier in the morning than is normal for you? How many

times a week does this happen?

0. Absent No early wakening
1. Mild Occasionally wakes (up to twice weekly) 1 hour or more before normal time to wake or alarm time
2. Moderate Often wakes early (up to 5 times weekly) 1 hour or more before normal time to wake or alarm time
3. Severe Daily wakes 1 hour or more before normal time.

8. SUICIDE: Have you felt that life wasn't worth living? Did you ever feel like ending it all? What did you think you might do? Did you actually try?

0. Absent
1. Mild Frequent thoughts of being better off dead, or occasional thoughts of suicide.
2. Moderate Deliberately considered suicide with a plan, but made no attempt
3. Severe Suicidal attempt apparently designed to end in death (i.e.: accidental discovery or inefficient means).

9. OBSERVED DEPRESSION: Based on interviewer's observations during the entire interview. The question "Do you feel like crying?" used at appropriate points in the interview, may elicit information useful to this observation.

0. Absent
1. Mild Subject appears sad and mournful even during parts of the interview, involving affectively neutral discussion.

2. Moderate Subject appears sad and mournful throughout the interview, with gloomy monotonous voice and is tearful or close to tears at times.

3. Severe Subject chokes on distressing topics, frequently sighs deeply and cries openly, or is persistently in a state of frozen misery if examiner is sure that this is present.

HAMILTON DEPRESSION RATING SCALE

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 th
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. Self reproach, feels he/she has let people down. 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 $^{1}/_{2}$ hour.

2. Complains of nightly difficulty falling

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.

2.Heavy feelings in abdomen.

3.Difficulty eating without staff urging.

4.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.

3.Denies being ill at all.

Total score:

Clinician-Administered Rating Scale For Mania (CARS-M)

PATIENT_____
DATE_____
RATER(S)_____
SUBSCALE 1 SCORE (ITEMS 1-10):_____
SUBSCALE 2 SCORE (ITEMS 11-15):_____
TOTAL SCORE:_____

Note: In completing this scale, information may be obtained, not only from the patient interview, but also from reliable collateral sources, including: family, nursing staff, hospital records, etc. In general, the time period for assessing symptoms should be the last seven days, but may be longer if required.

1. Elevated/Euphoric Mood (Inappropriate optimism about the present or future which lasted at least several hours and was out of proportion to the circumstances.)

0	Absent
1	Slight, e.g., good spirits, more cheerful than others, of questionable clinical significance.
2	Mild, but definitely elevated or expansive mood, overly optimistic and somewhat out of proportion to one's circumstances.
3	Moderate, mood and outlook clearly out of proportion to circumstances.
4	Severe, clear quality of euphoric mood.
5	Extreme, clearly exhausted, extreme feelings of well being, inappropriate laughter and/or singing.

- Have there been times in the past week/month when you felt unusually good, cheerful, or happy?
- Did you feel as if everything would turn out just the way you wanted?
- Is this different from your normal mood? How long did it last?

2. Irritability/Aggressiveness: (Has recently demonstrated, inside or outside of the interview, overt expression of anger, irritability, or annoyance. Do not include mere subjective feelings of anger/ annoyance, unless expressed overtly.)

0	Absent
1	Slight, occasional annoyance, questionable clinical significance.
2	Mild somewhat argumentative, quick to express annoyance with patients, staff or interviewer, occasionally irritable during interview.
3	Moderate, often swears, loses temper, threatening, excessive irritation around certain topics, room seclusion may be required, frequently irritable during interview.
4	Severe, occasionally assaultive, may throw objects, damage property, limit setting necessary, excessive and inappropriate irritation, restraints may be required, interview had to be stopped due to excessive irritability.
5	Extreme, episodes of violence against persons or objects, physical restraint required.

- How have you been getting along with people in general?
- Have you been feeling irritable or angry? How much of the time?
- Have you been involved in any arguments or fights? How often?

3. Hypermotor Activity (Has recently demonstrated, inside or outside of the interview, manifestations of generalized motor hyperactivity. Do not include mere subjective of feelings restlessness - not medication related.)

0	Absent
1	Slight increase, of doubtful clinical significance.
2	Mild, occasional pacing, unable to sit quietly in chair
3	Moderate, frequent pacing on unit, unable to remain seated.
4	Marked, almost constant moving or pacing about.
5	Extreme, continuous signs of hyperactivity such that the patient must be restrained to avoid exhaustion.

- Have there been times when you were unable to sit still or times when you had to be moving or pacing back and forth?

4. Pressured Speech (Accelerated, pressured, or increased amount and rate of speech, inside or outside of the interview.)

0	Absent
1	Slight increase, of doubtful clinical significance.
2	Mild, noticeably more verbose than normal, but conversation is not strained.
3	Moderate, so verbose that conversation is strained; some difficulty interrupting patient's speech.
4	Marked, patient's conversation is so rapid that conversation is difficult to maintain, markedly difficult to interrupt speech.
5	Extreme, speech is so rapid or continuous that patient cannot be interrupted.

5. Flight of Ideas/Racing Thoughts (Accelerated speech with abrupt changes from topic to topic usually based on understandable associations, distracting stimuli, or play on words. When severe, the associations may be so difficult to understand that looseness of association or incoherence may also be present. Racing thoughts refer to the patient's subjective report of having thoughts racing through his mind.)

0	Absent
1	Slight, occasional instances of doubtful clinical significance.
2	Mild, occasional instances of abrupt change in the topic with little impairment in understandable or patient reports occasional racing thoughts.
3	Moderate, frequent instances with some impairment in understandability or patient reports frequent racing thoughts which are disruptive or distressing to the patient.
4	Severe, very frequent instances with definite impairment.
5	Extreme, most of speech consists of rapid changes in topic which are difficult to follow.

- Have you been bothered by having too many thoughts at one time?
- Have you had thoughts racing through your mind? How often? Does it hinder your functioning?

6. Distractibility (Attention is too easily drawn to unimportant or irrelevant external stimuli; i.e., noise in adjoining room, books on a shelf, interviewer's clothing, etc. Exclude distractibility due to intrusions of visual and/or auditory hallucinations or delusions. Rate on the basis of observation only.)

0	Absent
1	Slight, of doubtful clinical significance.
2	Mild, present but does not interfere with task or conversation.
3	Moderate, some interference with conversation or task.
4	Severe, frequent interference with conversation or task.
5	Extreme, unable to focus patient's attention on task or conversation.

7. Grandiosity (Increased self-esteem and unrealistic or inappropriate appraisal of one's worth, value, power, knowledge or abilities.)

0	Absent
1	Slightly increased self-esteem or confidence, but of questionable clinical significance.
2	Mild, definitely inflated self-esteem or exaggeration of abilities somewhat out of proportion to circumstances.
3	Moderate, inflated self-esteem clearly out of proportion to circumstances, borderline delusional intensity.
4	Severe, clear grandiose delusion(s).
5	Extreme, preoccupied with and/or acts on the basis of grandiose delusions.

- Have you felt more self-confident than usual?
- Have you felt that you were a particularly important person or that you had special powers, knowledge, or abilities that were out of the ordinary?
- Is there a special mission or purpose to your life?
- Do you have a special relationship with God?

8. Decreased Need For Sleep (Less need for sleep than usual to feel rested. Do not rate difficulty with initial, middle or late insomnia.)

0	Absent
1	Up to 1 hour less sleep than usual.
2	Up to 2 hours less sleep than usual.
3	Up to 3 hours less sleep than usual.
4	Up to 4 hours less sleep than usual
5	4 or more hours less sleep than usual.

- How much sleep do you ordinarily need?
- Have you needed less sleep than usual to feel rested?
- How much less sleep do/did you need?

9. Excessive Energy (Unusually energetic or more active than usual without expected fatigue, lasting at least several days.)

0	Absent
1	Slightly more energy, of questionable significance.
2	Definite increase in activity level or less fatigued than usual, does not hinder functioning.
3	Clearly more active than usual with little or no fatigue, occasional interference with functioning.
4	Much more active than usual with little fatigue and clear interference with normal functioning.
5	Extreme, active all day long with little or no fatigue or need for sleep.

- Have you had more energy than usual to do things?
- Have you been more active than usual, or had the feeling that you could go all day without feeling tired?

10. Poor Judgment (Excessive involvement in activities without recognizing the high potential for painful consequences; intrusiveness, inappropriate calling of attention to oneself.)

0	Absent
1	Slight, but of questionable clinical significance (i.e., increased phone calling, occasional intrusiveness.)
2	Mild, but definite examples (i.e. somewhat intrusive, sexually provocative, inappropriate singing.)
3	Moderate, assumes tasks or responsibilities without proper training, financial indiscretions, buying sprees within financial limits, frequent intrusiveness.
4	Severe, sexual promiscuity, hypersexuality, extremely intrusive behavior, places self in significant economic difficulty.
5	Extreme, continuous intrusive behavior requiring limit setting, excessive phone calling at all hours, antisocial behavior, excessive involvement in activities without regard to consequences.

- When you were feeling high/irritable, did you do things that caused trouble for you or your family?
- Did you spend money foolishly?
- Did you take on responsibilities for which you were unqualified?

11. Disordered Thinking (Impaired understandability of patient's thoughts as manifested by his/her speech. This may be due to any one or a combination of the following: incoherence, looseness of association(s), neologisms, illogical thinking. Do not rate simple flight of ideas unless severe.)

0	Absent
1	Occasional instances which are of doubtful clinical significance.
2	A few definite instances, but little or no impairment in understandability.
3	Frequent instances and may have some impairment in understandability.
4	Severe, very frequent instances with marked impairment in understandability.
5	Extreme, most or all of speech is distorted, making it impossible to understand what the patient is talking about.

12. Delusions (Fixed false beliefs, ranging from delusional ideas to full delusions - including grandiosity) Specify Type:_____ Determine if mood-congruent _____ or mood-incongruent_____.

0	Absent
1	Suspected or likely.
2	Definitely present but not fully convicted, including referential or persecutory ideas without full conviction.
3	Definitely present with full conviction but little if any influence on behavior.
4	Delusion has a significant effect upon patient's thoughts, feelings, or behavior (i.e., preoccupied with belief that others are trying to

	harm him/her.)
5	Actions based on delusion have major impact on patient or others (i.e., stops eating due to belief that food is poisoned, strikes others due to beliefs that others are trying to harm him/ her.)

- Have you felt that anyone was trying to harm you or hurt you for no reason? Can you give an example?
- Have you felt as if you were being controlled by an external force or power? (Example?)
- Have you felt as if people on the radio or TV were talking to you, about you, or communicating to you in some special way? (Example.)
- Have you had any (other) strange or unusual beliefs or ideas? (Example.)
- Have these beliefs interfered with your functioning in any way?

13. Hallucinations (A sensory perception without external stimulation of the relevant sensory organ.) Specify type:_____ Determine if mood-congruent ____or mood-incongruent_____.

0	Absent
1	Suspected or likely.
2	Present, but subject is generally aware that it may be his/her imagination and can ignore it.
3	Definitely present with full conviction, but with little if any influence on behavior.
4	Hallucinations have significant effect on patient's thoughts, feelings, or actions (e.g., locks doors to avoid imaginary pursuers.)
5	Actions based on hallucinations have major impact on patient or others (e.g., patient converses with voices so much that it interferes with normal functioning.)

- Have you heard sounds or voices of people talking when there was no one around? (Example.)
- Have you seen any visions or smelled odors that others don't seem to notice? (Example.)
- Have you had any (other) strange or unusual perceptions? (Example.)
- Have these experiences interfered with your functioning in any way?

14. Orientation (Impairment in recent or remote memory, or disorientation to person, place or time.)

0	Absent
1	Slight impairment but of doubtful clinical significance (i.e., misses date by one day.)
2	Mild, but definite impairment (i.e., unsure about orientation to place or time, or some impairment in a few aspects of recent or remote memory.)
3	Moderate (i.e., confused about where he is or cannot remember many important events in his life.)
4	Severe (disoriented or gross impairment in memory.)
5	Extreme (i.e., thoroughly disoriented to time, place, person and/or is unable to recall numerous important events in his/her life.)

- Have you recently had trouble remembering who you were, the dates or current events?
- Do you know the day of the week, the month, the year, and the name of this place?

15. Insight (The extent to which patient demonstrates an awareness or understanding of their emotional illness, aberrant behavior and/or a corresponding need for psychiatric/psychological treatment.)

0	Insight is present (i.e., patient admits illness, behavior change and

	need for treatment.)
1	Partial insight is present (i.e., patient feels he/she may possibly be ill or needs treatment, but is unsure.)
2	Patient admits behavior change, illness or need for treatment but attributes it to non delusional or plausible external factors (i.e., marital conflict, job difficulties, stress.)
3	Patient admits behavior change, illness or need for treatment but gives delusional explanations (i.e., being controlled by external forces, dying of cancer, etc.)
4	Complete lack of insight. Patient denies behavior change, illness or need for treatment.

- Do you feel that you currently suffer from emotional or psychological problems of any kind?
- How would you explain your behavior or symptoms?
- Do you currently believe that you may need psychiatric treatment?

INSTITUTIONAL ETHICAL COMMITTEE,
STANLEY MEDICAL COLLEGE, CHENNAI-1

Title of the Work : A Comparative study of the characteristics of suicidal ideations and attempts between patients with Schizophrenia and Bipolar disorders.

Principal Investigator : Dr. Nileena Namboodiripad Kakkattu Mana

Designation : PG MD (Psychiatry)

Department : Department of Psychiatry
Government Stanley Medical College,
Chennai-01

The request for an approval from the Institutional Ethical Committee (IEC) was considered on the IEC meeting held on 10.06.2015 at the Council Hall, Stanley Medical College, Chennai-1 at 2PM

The members of the Committee, the secretary and the Chairman are pleased to approve the proposed work mentioned above, submitted by the principal investigator.

The Principal investigator and their team are directed to adhere to the guidelines given below:

1. You should inform the IEC in case of changes in study procedure, site investigator investigation or guide or any other changes.
2. You should not deviate from the area of the work for which you applied for ethical clearance.
3. You should inform the IEC immediately, in case of any adverse events or serious adverse reaction.
4. You should abide to the rules and regulation of the institution(s).
5. You should complete the work within the specified period and if any extension of time is required, you should apply for permission again and do the work.
6. You should submit the summary of the work to the ethical committee on completion of the work.

29/8/15

MEMBER SECRETARY,
IEC, SMC, CHENNAI.

MEMBER SECRETARY
ETHICAL COMMITTEE,
STANLEY MEDICAL COLLEGE
CHENNAI-600 001.

மனச்சிதைவு மற்றும் இருதுருவ மன நோயாளிகளில் தற்கொலை எண்ணங்கள் மற்றும் தற்கொலை முயற்சிகளின் பண்புகள் குறித்த ஓர் ஒப்பீ ட்டு ஆய்வு

தகவல்:

ஆராய்ச்சியின் நோக்கமும், பயன்களும்:

உங்கள் பங்கேற்பு திட்டமிடப்பட்டுள்ள இந்த மருத்துவ ஆராய்ச்சி ஆய்வின் நோக்கம்:

தற்கொலை எண்ணங்கள் மற்றும் தற்கொலை முயற்சிகள் மனநோய்களில் பெரிய சிக்கல்களை உண்டாக்கும் காரணிகளில் முக்கியமானதாகும். தற்கொலை நடத்தை இருதுருவ மன நோய்களிலும் அடுத்தபடியாக மனச்சிதைவு நோய்களிலும் அதிகப்படியாக காணப்படுவதாக ஆய்வுகள் தெரிவிக்கின்றன. தற்கொலை நடத்தைகளை ஊக்குவிக்கும் பல காரணிகள் இவ்விரு நோய்களிலும் முக்கிய பங்கு வகிக்கின்றன. இவ்விரு நோய்களிலும் இத்தகைய காரணிகள் எவ்வாறு ஒன்றுடன் ஒன்று தொடர்புள்ளன என கண்டுபிடிப்பதே நம் ஆய்வின் நோக்கம். அவ்வாறு ஒப்பீ டுசெய்வதன் மூலம் இந்த மன நோய்களுக்கு தகுந்த மருத்துவம் செய்து நோயாளிகளின் வாழ்க்கை தரத்தை உயர்த்தலாம்.

ஆய்வு நடைமுறைகள்:

மன நல சிறப்பு மருத்துவ பிரிவில் வெளி நோயாளியாகவோ உள் நோயாளியாகவோ சிகிச்சை பெற்று வரும், 18 முதல் 60 வயதுடையவர்களில், கடந்த ஒரு மாதத்தில் தற்கொலை எண்ணங்கள் மற்றும்/அல்லது தற்கொலை முயற்சிகள் உடைய நோயாளிகளும், இன்ன பிற மன நோய் மற்றும் போதைப்பழக்கம் இல்லாதவர்களும் இந்த ஆய்வுக்கு தகுதியானவர்கள்.

அந்தரங்கத் தன்மை:

உங்கள் மருத்துவப் பதிவேடுகள் மிகவும் அந்தரங்கமாக வைத்துக் கொள்ளப்படும் மற்றும் இன்ன பிற மருத்துவர்கள்/விஞ்ஞானிகள்/இந்த ஆய்வின் தணிக்கையாளர்கள் அல்லது ஆராய்ச்சி ஆதரவாளர்களின் பிரதிநிதிகள் ஆகியோரிடமும் அவை வெளிப்படுத்தப்படும். இந்த ஆய்வின் முடிவுகள் அறிவியல் பத்திரிக்கைகளில் பிரசுரிக்கப்படலாம். ஆனால் பெயரை வெளியிடுவதன்மூலம் நோயாளிகள் அடையாளம் காட்டப்பட மாட்டார்கள்.

ஆய்வில் உங்கள் பங்கேற்பு மற்றும் உங்கள் உரிமைகள்:

இந்த ஆய்வில் உங்கள் பங்கேற்பு முழுவதும் உங்களுடைய விருப்பத்தைச் சார்ந்தது. இதில் நீ ங்கள் பங்கேற்க மறுக்கவோ, பாதியில் வெளியேறி விடவோ அல்லது குறிப்பிட்ட கேள்விகளுக்கு விடையளிக்க மறுக்கவோ, உங்களுக்கு முழு உரிமை உண்டு. எப்படி இருந்தாலும் உங்கள் உடல்நிலைக்கேற்ப,

உங்களுக்கு பொருத்தமான சிகிச்சை தொடர்ந்து அளிக்கப்படும். தாங்கள் இது குறித்து வேறு விபரங்கள் தெரிந்து கொள்ள விரும்பினால், எங்களிடம் கேட்டுத் தெரிந்துகொள்ளலாம்.

மேலும் விபரங்கள் அறிய கீழ் கண்ட நபரை அணுகவும்:

(தனியாகப் பிரித்தெடுத்து, ஆய்வில் பங்கேற்பவரிடம் தரப்பட வேண்டும்)

GROUP	NO	HOSP NO	GENDE	AGE	RELIGIO	EDUCATI	MARITAL	FAMILY	no in caregiver	CHILDRE	SES	EMP	OCCU	UE Y	INCOME	LOCALIT	DURATI	NO OF EI	TREATM	INTERRUPTION	abuse	SUICIDE A	ADMISSIO	ICU	ALCOHO	IDEATIO	METHOI	MOTIVE	PSLE T	PSLE
0	7	1110	1	36	1	5	2	1	1	1	2	1	2		4	1	6	4	2	1	0				1		3	99	2
0	2		2	48	2	2	2	2	2	2	1	1	1	1	2	1	10	9	1	2	1			2	1	5	3	47	2
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1	6		1	43	2	1	2	1	1	2	1	1	1		2	2	14	2 13	1	1	0				1		1	47	2
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MSSI T	MSSI	BECK T	BECK	BPRS1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	BPRS T	CAL1	2	3	4	5	6	7
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15	2																																		
19	2																																		
4	1																																		
21	3	28	2																																
2	1																																		
32	3																																		
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14	2																																		
10	2																																		
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21	3																																		
34	3	24	2																																
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4	1																																		
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6	1																																		
29	3	18	2																																
17	2																																		
4	1																																		
5	1																																		
5	1																																		
38	3	35	3																																
14	2																																		
4	1																																		
6	1																																		

14 2
23 3 37 3
11 2

8	9	total	cal sev	HAM1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL HAM	SEV HAM
1	1	9	3																		0	
2	2	13	4																			
1	0	8	3																			
1	1	13	4																			
2	2	15	4																			
2	0	11	4																			
2	1	9	3																			
1	1	12	4																			
2	1	12	4																			
1	1	10	3																			
2	1	14	4																			
1	1	8	3																			
3	1	8	3																			
0	0	4	2																			
3	2	16	4																			
3	3	18	4																			
2	1	9	3																			
2	0	9	3																			
2	0	7	3																			
1	0	8	3																			
2	1	9	3																			
3	3	19	4																			
1	0	4	2																			
3	2	17	4																			
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1	0	9	3																			
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0	2	14	4																			
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