A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME

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CERTIFICATE

This is to certify that the dissertation titled, **"A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME"** is the bonafide work of **Dr. G. SURESH,** submitted in partial fulfillment of the requirements for M.D. Branch-XVIII [Psychiatry] examination of The Tamilnadu Dr. M.G.R. Medical University, to be held in May 2018.

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CERTIFICATE OF GUIDE

This is to certify that the dissertation titled, **"A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME"** is the bonafide work of **Dr.G. SURESH,** done under my guidance submitted in partial fulfillment of the requirements for M.D. Branch-XVIII [Psychiatry] examination of The Tamilnadu Dr. M.G.R. Medical University, to be held in May 2018.

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DECLARATION

I, **Dr. G. SURESH,** solemnly declare that the dissertation titled, **"A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY SYMPTOMS IN THE ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME"** is a bonafide work done by me at the Institute of Mental Health, Chennai, during the period from March 2017 – July 2017 under the guidance and supervision of **Dr. SHANTHI NAMBI M.D., F.I.P.S,** Professor of psychiatry, Madras Medical College.

The dissertation is submitted to the The Tamilnadu Dr. M.G.R. Medical University towards partial fulfillment of requirement for M.D. Branch XVIII [Psychiatry] examination to be held in May 2018.

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Dear Dr.G.Suresh,

The Institutional Ethics Committee has considered your request and approved your study titled **"A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME " - NO.26012017 (III)**

The following members of Ethics Committee were present in the meeting hold on **31.01.2017** conducted at Madras Medical College, Chennai 3

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2.Dr.M.K.Muralidharan,MS.,M.Ch.,Dean, MMC,Ch-3	:Deputy Chairperson
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We approve the proposal to be conducted in its presented form.

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

Member Secretary – Ethics Committee

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Instances where selected sources appear:

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ABBREVATIONS

ADHD	-	Attention deficit hyperactivity disorder
BPAD	-	Bipolar affective disorder
ASPD	-	Anti social personality disorder
QOL	-	Quality of Life
ADS	-	Alcohol dependence syndrome
DALY	-	Disability adjusted life years
WHO	-	World Health Organization
APA	-	American Psychiatric Association
ICD	-	International Classification of Diseases
DSM	-	Diagnostic and Statistical Manual
YMRS	-	Young Mania Rating Scale
HAM D	-	Hamilton Depression Rating Scale
VADPRS	-	Vanderbilt Parent rating Scale for ADHD.
WHO	-	QOL BREF- World Health Organization Quality of Life Brief version
DR	-	Dopamine Receptor
DAT	-	Dopamine Transporter
DBH	-	Dopamine beta Hydroxylase

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INTRODUCTION

BPAD – Bipolar Affective Disorder is one among the serious mental disorders. It is characterized by alternating manic and depressive symptoms which may be accompanied with psychotic symptoms with inter current periods with or without major affective symptoms. The lifetime prevalence of Bipolar Affective Disorder ranges from 2 to 5%[1]. The annual years of healthy life lost due to Bipolar Affective Disorder has increased in India since 1990. It was 14.3% increase with an average of 0.6% per year[2]. "BPAD is responsible for the loss of more DALYs (Disability – Adjusted Life years) than all forms of cancer or major neurologic disorders due to its onset early in life and chronicity throughout the life. Merikangas et al did a large community study involving many countries with a sample of 61,392 subjects estimated that the prevalence of Bipolar Affective Disorder is 2.4% worldwide. In BPAD, ¾ th present with other comorbid disorder like anxiety disorders."[3]

Attention Deficit Hyperactivity Disorder is a common and disabling disorder that occurs in childhood. It has been substantiated by previous studies that Attention Deficit Hyperactivity Disorder is a serious risk factor for various comorbid psychiatric disorders like Anti-Social Personality Disorder, substance abuse and affective disorders. And also it has been suggested the Attention Deficit Hyperactivity Deficit persists in adulthood in high proportion of cases.[4]

Attention Deficit Hyperactivity Disorder is characterized by significantly higher levels of distractibility, inattention, impulsivity and physical restlessness than expected in a person of similar age and development.

To diagnose Attention Deficit Hyperactivity Disorder, these symptoms should be present consistently and should be impairing.[5]

An inspiring component in understanding Attention Deficit Hyperactivity Disorder, bipolar disorder connection is to understand a simple statistics. Attention Deficit Hyperactivity Disorder affects 3 – 5% of children. Bipolar affective disorder affects around 1% of adults approximately 1 in 25 chance that if a child has Attention Deficit Hyperactivity Disorder but for BPAD it is less than 1 in 1000 chance.

Various studies performed to assess the association of adult Attention Deficit Hyperactivity Disorder with BPAD. In a study done by Tamam et al[6], they found at the rate of 27% BPAD had been in associated with adulthood Attention Deficit Hyperactivity Disorder in 16%. Sitholey et al[7] in India conducted a study in 2009 and found that 8% had BPAD in a sample of adult Attention Deficit Hyperactivity Disorder subjects.

Various genetic studies were also done to assess the genetic association of BPAD and Attention Deficit Hyperactivity Disorder. Sharp et al in 2014 did a study on genetic association of specific gene in Attention Deficit Hyperactivity Disorder, BPAD and ADS. They found that single nucleotide polymorphism in TACR 1 gene (Tachykinin receptor 1 gene) associated with these disorders. Thus they concluded that shared molecular pathophysiology present between BPAD, ADHD and ADS.[8]

Hence adult Attention Deficit Hyperactivity Disorder is recognized now a days increasingly and frequently reported to coexist with Bipolar Affective

Disorder. Adult Attention Deficit Hyperactivity Disorder appeared to be a common comorbidity in adults with Bipolar Affective Disorder. It is prevalent in Bipolar disorder than MDD (Major Depressive Disorder). It has been suggested by few studies that the course of mood disorder is severe when presented with co morbid Attention Deficit Hyperactivity Disorder. Hence they suggested screening for Attention Deficit Hyperactivity Disorder in all Bipolar disorder patients.[9]

Few researchers also thought on a concept that Attention Deficit Hyperactivity Disorder and Bipolar disorder were regarded as continuum and Bipolar disorder in the extreme end. There are only very few studies on childhood Attention Deficit Hyperactivity Disorder symptoms and bipolar disorder. Sach et al did a study and found that bipolar patients with Attention Deficit Hyperactivity Disorder history had onset of disease earlier than those without Attention Deficit Hyperactivity Disorder. And also they found that those with comorbid Attention Deficit Hyperactivity Disorder had increased number of manic and depressive episodes, more violence, more substance abuse and more suicidal attempts.[10]

Similarly Ryden et al did a study in 2009 and confirmed these findings. In India, there were still very few studies on this context. Hence in our study we tried to find the prevalence of Attention Deficit Hyperactivity Disorder symptoms in childhood in those with Bipolar Affective Disorder and is there any difference in clinical variables of BPAD with and without Attention Deficit Hyperactivity Disorder symptoms.

REVIEW OF LITERATURE

BIPOLAR DISORDER

Bipolar affective disorder is a serious mental disorder characterized by fluctuating "poles" of mood - depressive and manic symptoms with inter-episodic period of near normal functioning. The disorder has a polymorphic presentation. In addition to the classical manic-depressive course, the disorder also has varied courses. The varied symptom profile can be accounted more scientifically by considering it as a spectrum illness- bipolar spectrum disorder[11]. "Mood disorders are best considered as syndromes (rather than discrete diseases) consisting of a cluster of signs and symptoms, sustained over a period of weeks to months, that represent a marked departure from a person's habitual functioning and tend to recur, often in periodic or cyclical fashion"[12] Bipolar disorder is responsible for the loss of more disability-adjusted life years (DALYs) than all forms of cancer or than major neurologic conditions such as epilepsy and Alzheimer's disease"[3].

The sociodemographic characteristics of bipolar disorder are low education, unemployment, being unmarried and low socioeconomic status as a consequence of the above mentioned factors.[13,14,15] Being a phenomenon of contrasts both in mood and in functioning as illustrated by famous writers , musicians , actors etc., suspected to suffer from bipolar disorder[16] and a study of prevalence among writers[17], bipolar disorder is associated with achievement and artistic creativity. At the same time, severe impairment is also noted in

many areas of social, occupational and other important areas of functioning, like impoverished work performance, high rates of marital separation and substance abuse[18,19]. Persons with bipolar disorder also have 12.3 times higher rates of suicide compared to the general population[20]. Bipolar disorder stands as the sixth leading cause of disability among physical and psychological disorders worldwide[21] contributing to economic burden for the society. Bipolar disorder appears to be an illness with a continuum or spectrum of severity from the milder cyclothymia, to bipolar II disorder, to full-blown bipolar I disorder[22,23,24,25] with the milder forms often progressing to the more severe forms[22,26]. However, not all research supports a bipolar spectrum model idea[27].

HISTORICAL PERSPECTIVE:

The idea of relationship between the 2 opposite spectrums of mood dates back to Ancient Greeks particularly Areataeus of Cappacodia, a physician during the era of Nero who described a group of patients who laughed, played, danced night and day and seemed dull & sorrowful at other times.

The modern concept of bipolar disorder has its genesis in the 19th century. Jean Pierre Falret & Jules Ballairger independently presented descriptions of the disorder to the Paris Academy of medicine in the name of 'Folie de circulaire' (circular insanity) & folie a double form (dual form insanity) respectively.

In 1907, Emil Kraeplin the eminent psychiatrist from Germany studied the natural course of outcome of the disorder when left untreated and he found

that marked by symptom free intervals of near perfect normal functioning. He classified this disorder as a separate entity from dementia precox (schizophrenia) & named it as 'Manic depressive psychosis[28], as it had a more benign & episodic course with a positive family history in most of the person. In the late 1950s and early 1960s, Leonard proposed the division of affective disorders into bipolar and unipolar disorders (Leonard, 1959).[29]

The identification of unipolar and bipolar disorder as a two separate entities was also introduced in 1960s. 10 years later the concept of bipolar Type I and bipolar Type II was introduced when the aspect of hypomania differentiated bipolar Type II from bipolar Type I. In 1980 these were incorporated in the Diagnostic Statistical Manual of Mental Disorders III.

PREVALENCE

As per the World Mental Health Survey Initiative done to find the Prevalence and Correlates of Bipolar Spectrum Disorder**,** the lifetime prevalence of bipolar disorder was found to be 0.6% for Bipolar Affective Disorder type I disorder and 0.4% for Bipolar Affective Disorder type II disorder , 1.4% for sub threshold symptoms.[30] 75 % of these met criteria for at least one other comorbid disorder. However, less than 50 % received mental health treatment, with only 25% in low income countries reporting to the mental health system[30]. Bebbington 1995 and Weissman 1997 reported a life time prevalence of bipolar disorder between 0.4 % to 1.6. “The conventional figure of 1 percent for bipolar disorders in the general population is being

challenged, and there are now convincing data that this group of disorders may account for 5 percent of the population and up to 50 percent of all depressions"[31]. When the whole spectrum of bipolar disorder is considered, the prevalence increases to 5 %. (Akiskal et al). Recent estimates by Kessler et al reported a prevalence as high as 4% (Kessler et al., 2005)[32]. Merikangas et al in 2011, reported a global lifetime prevalence of about 2.4% reported across Asia, Europe, Middle East, America and New Zealand[3] . Males and females are approximately equally affected with the mean age of onset being 18 years for bipolar I and 20 years for bipolar II (Merikangas et al., 2007)[3].

The prevailing course and pattern of bipolar disorder in Asia is yet to be explored in the South Asian region though 1/5th of the burden of global mental illness is contributed by this population. (Trivedi 2007)[33], especially with a higher rate of Bipolar Affective Disorder I prevalence in Asians compared to Caucasians (Hwang et al)[34]. Due to the scarcity of large-scale epidemiologic studies done in the Asian continent, the course and quality of life also remains to be explored (Chiu,2004)[35] . The mortality rate of bipolar disorder is two to three times higher than that of the general population with an estimated suicide risk of around 10–20% with suicide attempts in >33%.

CAUSES OF BIPOLAR DISORDER:

Analysis of family studies and twin studies suggests a genetic basis for Bipolar Affective Disorder. It is well known that bipolar disorder runs in families, occurring 5-10 times more common in first-degree relative than

general population.[36] “Even after twenty years of demonstration of this genetic component for bipolar disorder, the search for susceptible genes remains inconclusive because of the conflicting results between association and linkage studies”.[37] “For mood disorders, there is no 1-to-1 relationship between the genes (genotype) and the expressed trait (phenotype) that is transmitted in a simple and predictable fashion as observed for Mendelian traits. Therefore, mood disorders are said to be complex genetic disorders”.[38] Twin studies have demonstrated that 93% of variance for bipolar is explained by genes and 7% by environmental factors[39].

The diverse symptomatology, and environmental and developmental factors of the disorder suggest a possibility of both genetic and environmental factors with a greater role of factors attributed in childhood such as stressful life events.[40,41]. Evidence from twin studies indicate that environmental factors account for approximately one quarter to one third of the population variance in bipolar disorder.[42] Smoller and Finn,2003 reported that Bipolar disorder is highly heritable, with 60%–85% of variance in risk accounted by genetic influences[43].

PATHOPHYSIOLOGY:

The 1970’s was the era of discovering the various possible pathophysiological processes in Bipolar disorder. The possibilities of neurotransmitter imbalance and membrane transporter defects were put forward. The neurotransmitters implicated were serotonin, dopamine and nor

epinephrine. Results of a study with photo emission tomography showed greatly reduced 5-hydroxytryptamine-1A receptor binding in the midbrain raphe and mesotemporal cortex (amygdala, hippocampus) of drug naïve patients with bipolar depression compared to healthy controls[44]. Also, on autopsy of patients with bipolar disorder, the concentrations of the serotonin metabolite, 5-hydroxyindol acetic acid, and 5-hydroxytryptamine were found to be reduced.

These findings suggested the implication of serotonergic system in bipolar disorder. Similarly the concentration of homovanillic acid, the metabolite of dopamine, is found to be usually decreased in the cerebrospinal fluid of depressed patients[45]. Another hypothesis is that bipolar disorder is caused by an imbalance between cholinergic and catecholaminergic neuronal activity, since centrally active cholinergic agonists had antimanic properties[46]. Lower concentrations of choline, a direct precursor of acetylcholine, has been reported in red blood cells of patients with bipolar disease especially a history of predominantly manic episodes. Another hypothesis suggests that the change of electrolyte fluxes in bipolar disorder is caused by a deficit of the membrane sodium potassium-ATPase which has been supported by studies which demonstrated lower concentrations of erythrocyte ATPase compared to healthy controls[47].

CLINICAL FEATURES

Bipolar disorder is characterized by episodes of mania (expansive, elated or irritable mood) and depression (e.g. pervasive and persistent low mood and/or a profound loss of interest and pleasure). Kessler et al reported based on a retrospective study that about 50% of cases reported the first manic episode by 25 years of age (Kessler et al., 2005a)[48]. Bipolar disorder is diagnosed using operationalized criteria – Diagnostic and statistical manual – V or ICD 10. Bipolar Affective Disorder can cause dramatic swings in mood – from manic, hypomanic to depressive mood with inter-episodic normal or euthymic mood. But variance in the intensity of symptoms is seen from one individual to other individual.

There are many types of Bipolar Affective Disorder based on intensity of prevailing mood during a particular episode. Bipolar type I is characterized by recurrent episodes of mania and depression- featuring either one or more manic or mixed episodes, or both manic and mixed episodes and at least one major depressive episode. Bipolar affective disorder type II has milder episodes of high mood – hypomania alternating with depression- more specifically characterised by one or more episodes of major depression and at least one hypomanic episode. According to the American Psychiatric Association, “a manic episode is defined as a distinct period during which patients experience abnormally and persistently raised, expansive, or irritable mood. Although manic episodes and hypomanic episodes have many similar symptoms, the

mood disturbance in hypomanic episodes is not sufficiently severe to cause pronounced impairment in social or occupational functioning."[49]

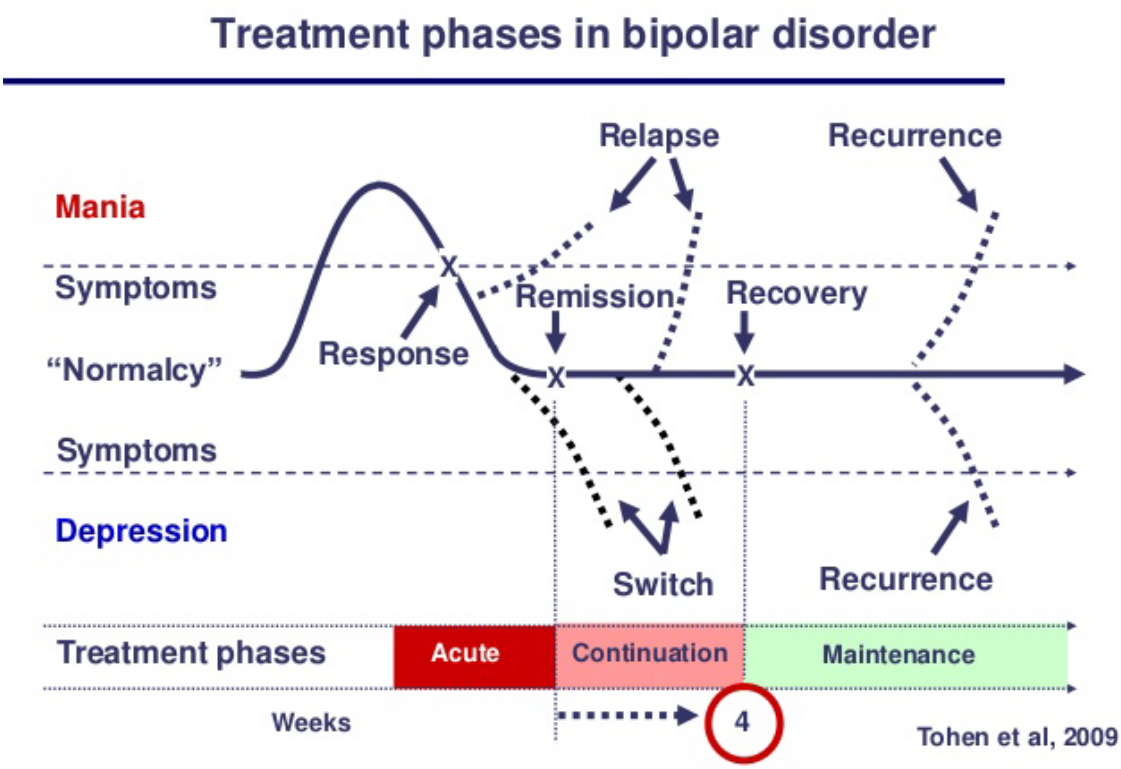
A mixed episode is characterised by a period of at least 1 week in which the criteria are met for both manic and major depressive episodes. The characteristic feature of a major depressive episode is a period of at least 2 weeks with either depressed mood or with a loss of interest or pleasure in almost all activities"[49]. Manic episodes occur much less frequently than episodes of depression. Rapid cyclers are those who experience four or more episodes within a year. Some experience within a month or within a week or day and are classified accordingly. Recently, bipolar disorder has been defined as a continuum of phenotypes, ranging from a pattern of mild depression and brief hypomania to the other extreme of severe rapid cycling or predominantly mania with psychotic features. Any episode, depressive or manic is preceded by 1 or 2 weeks of disturbance in sleep activity cycle, goal directed activity, cognitive or affective function. But this pattern varies from individual to individual but is mostly always same in the individual.[50] Thus it is apt to identify this type of prodrome where we can develop preventive steps, to prevent from impending episode, which in turn reduce rates of relapse.[51]

To assess the patient's clinical course, there are clinical definitions for defining remission and various quantifying rating scales are used to assess the course in the patient when they are in treatment. One such definition by APA (2002) about remission is "a complete return to baseline level of functioning

and virtual lack of symptoms" This in turn can be measured by clinical rating scales. That is a score of 12 in the YMRS (Young Mania Rating scale) defines remission in some literature and some use less than four for defining absolute reduction in symptoms. With regards to HAM-D (Hamilton Rating scale for Depression), ≤ 7 is considered remission."[49]

A more practical way of defining remission adopted in DSM-IV and ICD-10 (World Health Organization; American Psychiatric Association)[52,53], states interval of at least 8 weeks remission in between episodes, without any regard to treatment. This means after 8 weeks there is complete symptomatic remission. The time criteria for phase of continuation therapy as per International Society of Bipolar Disorder (ISBD) suggested, 4 weeks for previous manic episodes and 8 weeks for previous depressive episodes (Tohen et al. 2009a)[54], taking into account that mania and depression takes different course in recovery (Solomon et al. 2010)[55]. Calabrese et al. in 2006 gave a more conservative estimate, setting a cut-off point of 90 for mania/hypomania and 180 days for bipolar depression.[56]

The following figure 1 depicts the various phase of treatment in Bipolar Affective Disorder (as adopted from Frank et al).[57]



The treatment of acute episodes of depressive and manic episodes and the prevention of future episodes or recurrences are the major goals in the treatment of bipolar disorders[58,59]. As full recovery between episodes is not achieved in all patients, bipolar disorder remains as one of the leading causes of disability[60]. The high rate of disability coupled with the loss of life through suicide contributes to the economic burden of bipolar illness to the society. Truly, the impact of bipolar disorder on the quality of life of the individual becomes a significant one.

COURSE OF BIPOLAR DISORDER

The peak age of onset is usually between 15 and 24 years and there exists a 5–10-year interval before treatment is obtained usually[61].The natural course of bipolar disorder is highly variable. The clinical subtypes of bipolar disorder could have distinct biological variations and hence respond differently to treatment and run a different course overall. Bipolar disorder presents with a high rate of recurrence - more than 90% of individuals who have a single manic episode present with further episodes in future.[60]

Around 10 to 15% of patients will have more than ten episodes in their entire lifetime. In approximately 10–15% of individuals, rapid cycling is observed (i.e) a variant of bipolar disorder in which four or more episodes , that meet the criteria for a major depressive, manic, mixed, or hypomanic episode, occur during 12 months. In these individuals, episodes are demarcated either by full or partial remission for at least 2 months, or by a switch to an episode of the opposite polarity-eg, manic episode to major depressive episode.[61] Factors associated with rapid cycling include female gender, the presence of overt or subclinical hypothyroidism and the use of tricyclic antidepressants. If the onset of symptoms occurs after age 60 years, bipolar disorder secondary to other medical causes should be suspected-eg, neurological (neoplasm, trauma ,epilepsy, multiple sclerosis),inflammatory (systemic lupus erythematosus), endocrine (Cushing's disease, hyperthyroidism), infectious (AIDS) disorders.

The highly variable course led to the concept of 'soft' bipolar and bipolar 'spectrum' disorder as a continuum.

THE BIPOLAR 'SPECTRUM' DISORDER – Akiskal's classification[62]

Bipolar I	:	full-blown mania
Bipolar I ½	:	depression with protracted hypomania
Bipolar II	:	depression with hypomanic episodes
Bipolar II ½	:	cyclothymic disorder
Bipolar III	:	hypomania due to antidepressant drugs
Bipolar III ½	:	hypomania and/or depression associated with substance use
Bipolar IV	:	depression associated with hyperthymic temperament
Bipolar V	:	recurrent depressions that are admixed with dysphoric hypomania
Bipolar VI	:	late onset depression with mixed mood features, progressing to a dementia-like syndrome.

CO MORBIDITY IN BIPOLAR DISORDER

Bipolar disorder frequently co occurs with other psychiatric disorders, both axis I and axis II. There is a 50 – 70% rate of axis I comorbidity co-occurrence with bipolar disorder (Mc Elroy 2001[63] , Vietta 2001[64]) which is

associated with early onset of mood disorder with severe, frequent and long lasting episodes, more prone for rapid cycling and associated drug dependence problem.[65] Study done by Sasson et[66] al further augmented these findings and showed that the presence of co morbidities was associated with onset with depressive episode, increase in rates of suicide attempts and poor response to lithium therapy.[66] The pathophysiology of bipolar disorder associated with other psychiatric conditions may be explained by the fact that bipolar disorder acts as a potential risk factor for the development of other co morbidities or it could be due to overlapping symptoms or it could be due to a common neurobiological basis (Mcelroy 2001)[63].

Karaahmet et al 2013 compared the co morbidities between 3 groups consisting of patients – those having bipolar disorder alone, bipolar with adult ADHD and bipolar with childhood ADHD . They found that the most frequent axis I diagnosis among first and second groups was Generalized Anxiety Disorder, while among those I the third group was Obsessive Compulsive Disorders. Also the first and third groups had the first episode to be more frequently a manic episode while the second group patients developed a depressive episode at disease onset.[67]

Based on clinical severity when bipolar and ADHD are both comorbid, Faraone et al. 2001[68] and Masi et al. 2006[69] suggested that ADHD-BPAD-comorbidity may represent a distinct clinical phenotype of BD. Recent familial studies by Doyle and Faraone in 2002 have further supported this hypothesis[70].

Furthermore, this hypothesis is supported by the increasing evidence of neuroanatomical differences between Bipolar disorder, ADHD with bipolar (Biederman et al. 2008[71]; Monuteaux et al. 2008[72]).

The prevalence of bipolar disorder with ADHD in adults has been reported to vary between 9.5% (Tamam et al. 2008)[6] and 27% (Nierenberg et al. 2005)[73]. This variation in prevalence might be due to the previously discussed similarity between bipolar and ADHD symptoms that has often led to mistakenly assumed ADHD symptoms as part of bipolar disorder itself (Klassen et al. 2009)[74] and due to methodological artefacts (i.e) deficiencies related to the retrospective analysis of ADHD diagnosis (Miller et al. 2009)[75]. .On the basis of decrease of the Bipolar-ADHD comorbidity with age, some authors have hypothesized that Bipolar-ADHD comorbidity is a "phenocopy "rather than a phenotype (Geller et al. 1998)[76].

QUALITY OF LIFE

It is not merely good health, but more than that and is difficult to explain easily in simple terms. There is no uniform definition to describe QOL. There are only few studies regarding QOL in BPAD patients. QOL concept was first used by Ordway and Fairfield Osborn (American Economist), regarding concern over uncontrolled economic growth[77]. Since 1960, social scientists began to use this term QOL and observed a very positive and stable relationship between social indicators and QOL. Calman in 1984 defined QOL as the relationship between a person's expectations and achievements[78].

The World Health Organization has described QOL as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"[79] A more specific concept by name of 'health-related quality of life' (HRQOL) refers to those aspects of an individual's life that impact directly upon their health.[80]

While there is no consensus regarding correct concept of defining, many would agree that QOL is

a) A multidimensional construct, with all aspects of psychological, social and physical wellbeing, and more importantly,

b) Rather than a professionals view it is more of patients own subjective evaluation.

The problem of describing QOL is frequently been solved by taking a “psychometric short-cut” by operating the construct as a score on a questionnaire or set of scale.

Assessment of various domains of daily functioning like physical, mental and social is carried out based on patient’s self-report. It is important to take note that the term subjective, doesn’t mean soft or unreliable, as opposed to objective as is often assumed but it is referring to the source of information. Subjective Data can be obtained using reliable, objective methodologies for that purpose.

The term QOL in psychiatry refers to the body of research work on psychological well-being, life satisfaction, emotional functioning, social support, etc. Initially, within the field of psychiatric research, the important intention of QOL assessment had been on the symptoms, impairments and disabilities of severely mentally ill persons. Since the early 1980s, there was an attempt to go for the disease models for these disorders and the majority of the new measures have been based on the perspective of general health QOL.

QUALITY OF LIFE IN BIPOLAR DISORDER

BPAD is associated with impairment in functioning with significant disability. According to W.H.O Bipolar disorder is the 6th leading cause of disability among young adults worldwide.[81] For example, if a woman develops BPAD in her 30's, 9 years of life expectancy is lost to her mainly due to medical and cardiac problems, productivity loss of fourteen years, and loss of twelve years in good health[82]. Lifetime rates of suicide in BPAD Bipolar disorder whether a treated patient or not is estimated to be 15 %[83].

While outcomes in patients with BPAD outcomes are generally assessed objectively by rates of relapse, number of inpatient admissions, reduction in symptoms assessed by rating scales by clinician traditionally, there is more view point about adding QOL (quality of life) and functional measures[84]. It has been observed clinically functioning does not correlate with severity of symptoms, whether less or more symptoms[85]. QOL relatively lags behind symptomatic remission and there is evidence for the same[86]. Thus moving

towards a wide set of outcome measures, like that in schizophrenia research, bio-psychosocial model is proposed, thereby leading to efficacious adjunctive treatments in psychosocial aspects[87]. So we see an urge of expanding therapeutic targets where more contributions is from the psychosocial aspect.[88] As asserted by Harvey, for example: "recovery should not be defined merely by symptomatic remission or even syndromal remission; rather, recovery should include symptomatic recovery, syndromal recovery, functional recovery, and a return to an acceptable quality of life for the patient[89]." Education, occupation, medication side-effects, environment, physiological domain, health care facilities, leisure time activities, sexuality and daily routines all contributes as factors influencing QOL. On the contrary, many patients were doing exceptionally admiring inspite of the diagnosis leading for new opportunities in life. But it is described by those patients, that it took many hardships to get back on track[90].

Based on Kraepelin's work, previous belief held was that schizophrenia and manic depressive disorder differ mainly in cognitive impairment and life events and QOL, where the latter did not get affected much. Literature shows evidence that 1/3rd of subjects have intellectual and social dysfunctions even in euthymic period, thereby affecting their level of functioning and well –being studies[91]. Due to the cyclical nature of BPAD, remissions and exacerbation of symptoms directly affect one's emotional, social, physical and functional well-being. However, the conceptual model declares subclinical symptoms affect

QOL considerably[92]. A recent literature review on BPAD-quality of life[93] came up with 4 groups:

1] Studies comparing BPAD patient QOL with that of schizophrenic patients and patients with unipolar depression.[94]

2] Different subgroups BPAD patients within themselves [95,96,97].

3] Evaluating the different characteristics of the instruments used for measuring QOL [98,99,100,101] and

4] Comparing the QOL of different BPAD subgroups and evaluating instrument characteristics [102,103]

In contrast to previously held beliefs, recent studies show that individuals with bipolar disorder frequently experience lower quality of life[104] and worse functioning than earlier believed, especially in comparison with the general population (Abraham et al. 2014[105];Sierra et al. in 2005[106] and Sylvia et al. in 2013[107]). Surprisingly few studies by Gazalle et al.in 2007[108], Shabani et al. in 2013[109], Fulford et al.in 2014[110] demonstrate a poor quality of life in these individuals even when not in a mood episode. Gazalle et al. (2006)[111] used WHOQOL-bref scale to assess the QOL in bipolar- and bipolar remitted patients showed that higher domains score were reported for the remitted patients compared to lower score for the depressed patients[112]. Furthermore , those who experience a lower quality of life exhibit more cognitive impairment, higher inter-episode impulsivity and residual depressive and

psychotic symptoms (Depp et al. 2006[113]; Victor et al. 2011[114]).Bipolar disorder creates a major health concern, both for the individual and for the society, which needs further evaluation to analyse the impact of the condition upon QoL.

ATTENTION-DEFICIT HYPERACTIVITY DISORDER:

"Attention-Deficit Hyperactivity Disorder is a childhood onset disorder, characterised by pervasive, developmentally inappropriate and impairing levels of inattention, overactivity and/or impulsivity".

ADHD frequently presents with difficulty in school performance, problems of adaptation in children and adolescents, substance abuse and dependence, risk behaviors in adults.1. Practically children with ADHD present with poor academic achievement, negative parent–child interactions, family problems, social dysfunction in the form of peer rejection, neuropsychological deficits. ADHD classically demonstrates the phenomenology of 'multifinality' – presenting as highly dispersed pattern of impairment across behavioral, affective, family, social and academic domains.

These problems are common in both boys and girls, may start even in pre-school children and many studies have replicated the same findings when these children were followed prospectively into adolescence and young adulthood (Biederman et al., 2010[115]; Lee, Lahey, Owens, & Hinshaw, 2008[116]; Owens, Hinshaw, Lee, & Lahey, 2009[117])

ADHD is associated with comorbid disruptive behavior disorders (oppositional defiant disorder and conduct disorder) and mood disorders (e.g., depression, anxiety). Particularly in recent years, many studies have been done regarding comorbidity of attention deficit hyperactivity disorder with the above mentioned disorders and replicated positive results with high levels of co-morbidity. This high level of comorbidity has been unanimously found in diverse epidemiologic samples[118,119,120] as well as in clinical samples[121], indicating attention deficit hyperactivity disorder to be a heterogeneous condition with potentially diverse etiologic, modifying risk factors and different outcomes rather than a single homogeneous clinical entity.

HISTORICAL PERSPECTIVE:

Sir Alexander Crichton published "An enquiry into the nature and origin of mental derangements, on attention and its diseases". This was the first publishing in 1798 which first explained Attention-Deficit Hyperactivity Disorder, but which was then called 'the disease of attention'. He described the constitutional deficit of attention as "incapacity of attending with a necessary degree of constancy to any one object, arising from unnatural or morbid sensibility of the nerves"[122].

In 1902, George Still described in a series of lectures from his experience in clinical practice of "restless, impulsive, with little inhibitory volition, defiant, resistant to discipline, aggressive, excessively emotional, having serious problems with sustained attention and inability to learn from

consequences of their action". He hypothesized the possibility of an underlying common neurobiological mechanism in these children which prospectively gave way to the concept of ADHD comorbid with oppositional defiant disorder and conduct disorder[123].

In the 1930's the role of stimulants in treatment of ADHD was put forward and later confirmed by studies in 1950's (Laufer & Denhof, 1957)[124]. After the second world war, following an outbreak of encephalitis which affected millions of people, children started showing inattention, hyperactivity, impulsivity and restlessness; which led to the naming of the condition as post encephalitic syndrome or post encephalitic behavior disorder[125]. In the 1960's and 1970's the term given was minimal brain dysfunction, as symptoms similar to ADHD occurred after a pandemic of influenza. Since the organic etiology was not found to have a temporal relationship with the onset of symptoms always, it was renamed as hyperkinetic and inattentive symptoms. Minimal brain dysfunction as described by Paul Sender included dysfunctions in the following parameters: attentions perception, cognition, learning, motor function, impulse control, emotional regulation and interpersonal relations (Wood et all.,1976)[126]. In 1970, Sykes et al established the hallmark of the syndrome to be inattention, by means of Nero psychological testing (Sykes et al., 1973)[127]. It was described as a diagnostic entity first in the International classification of disease and health problems ICD 9 and Diagnostic Statistic Manual (DSM II) in the name of hyperkinetic syndrome of childhood. The term hyper kinetic disorder in DSM II was replaced by Attention Deficit

Disorder (ADD) in DSM III, which was finally replaced by the current term Attention Deficit Hyperactivity Disorder in DSM IV.

DEFINITION AND CLINICAL FEATURES OF ADHD:

"The fifth edition of the American Psychiatric Association's (APA) Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published in May 2013, describes ADHD as a pattern of inattentive and/or hyperactive–impulsive behavior inconsistent with developmental level which interferes with functioning in social, educational, or work settings. Symptoms are divided into two categories: inattention; hyperactivity and impulsivity. "There are five main diagnostic criteria: (1) onset before age 12 years old; (2) duration greater than 6 months; (3) children must have at least six symptoms from the inattention and/or hyperactive/impulsive symptom list, while older adolescents and adults must have at least five; (4) several symptoms must be present in two or more settings and interfere with functioning; and (5) symptoms that do not occur exclusively during the course of schizophrenia or other psychotic disorder and are not better accounted for by another mental disorder, such as depression. DSM-5[128] has no exclusion criteria for those with Autism Spectrum Disorder (ASD), allowing both Autism and ADHD to be diagnosed simultaneously in the same patient" (Comprehensive textbook of psychiatry, 10th edition)[129]. Barkley et al in 2002 postulated that ADHD presents as deficits in attention, activity level, impulsivity which tend to occur together, further proving that ADHD is a valid construct[130].

PREVALENCE OF ADHD:

Worldwide prevalence of childhood ADHD is approximately 5% (Polanczyk et al., 2007)[131]. ADHD occurs in 5–10% of school-age children (Scahill& Schwab-Stone, 2000)[132] Among children a prevalence of 5-10% has been studied (Faraone et al.,2003)[133] and among adults a rate of 4.5% is observed (Kessler at al.,2006)[134]. In 1994, Lahey et al documented a 6 times higher prevalence rate in males compared to females[135].

CAUSES OF ADHD:

Both genetic and environmental factors have been implicated in the causation of ADHD. A review of 20 twin studies estimated the mean heritability to be 0.76 which is comparable to bipolar disorder and schizophrenia (Faraone et al., 2005[136]; Levy et al., 1997[137]; Thapar et al.,1995[138]). Though a substantial portion of etiology is explained by genetic factors, evidence from studies had done by few authors like Banerjee et al 2007 supports the possibility of involvement of environmental factors like lead exposure, maternal cigarette and alcohol exposure in utero, premature or low birth weight[139]. In 2002, Max et al suggested the possibility of traumatic brain injury to be a possible risk factor for ADHD[140]. Caspi and Moffitt in 2006 suggested the possibility of gene - environment interaction[141]. Recent studies have suggested that ADHD might be the result of the interaction between genetic vulnerability and early life events, the latter accounting for a significant

part of the variance in ADHD (Philipsen et al.,2008[142];Rucklidge et al.,2006[143]; Spencer,2002[144])

PATHOPHYSIOLOGY OF ADHD:

Wender in 1974[145], proposed the catecholamine theory of Minimal brain dysfunction, followed on the same line by Levy who launched the dopamine theory of ADHD in 1991. Several lines of evidence support this hypothesis. First, the efficacy of stimulant drugs like amphetamine, methyl phenidate in treatment of ADHD whose mechanism of action is facilitation of catecholamine transmission (Arnstein& Li.,2005[146]; Shaywitz et al.,2001[147]; Wender et al., 2001[148]; Volkow et al.,2005[149]). Secondly, in a PET study done by Volkow et al in 2009[150], symptoms of inattention was found to be associated with a reduction in dopamine synaptic markers- a strong evidence in favour of dopamine hypothesis of ADHD is that dopamine receptor coding genes have been proposed to be the candidate genes in ADHD (DR4,DR5,DAT1,DBH). The most investigated candidate genes have been DAT1, DR4, DR5 and DBH, and inconsistent results have been obtained from COMT, MAOA and DBH analysis. MRI studies of ADHD subjects demonstrated a smaller brain regions of dopamine receptors dense brain regions compared to healthy controls (Swanson et al.,2007)[151]. Furthermore, few studies have shown correlation of symptoms severity and measures of homovanillic acid (dopamine metabolite) in CSF of ADHD patients.

Similarly, serotonin has been the other neurotransmitter implicated in ADHD, though evidence supporting it is few compared to dopamine. Molly Nikolas et al. note that the emotional dysregulation seen in ADHD is not mediated by dopamine or nor epinephrine. Serotonin is found to be related to impulse control and aggression. It was found that two variants of the serotonin transporter gene - 5HTTLPR, the “short” allelic variant and the “long” allelic variant, have been linked to ADHD and to the other disorders comorbid with attention deficit disorder, like mood disorder and conduct disorder. These 5HTTLPR alleles result in either low or high serotonin transporter activity. Furthermore, a correlation between the 5HTTLPR and self-blame was found by Nikolas et al[152]. The combination of the genetic predisposition and self-blame were postulated to result in hyperactivity and impulsiveness symptoms. However, the serotonin neurotransmission was not found to have any relation with cognitive or inattentive component of ADHD.

COURSE OF ADHD:

Initially regarded as a disorder of childhood, ADHD has been shown to persist in adulthood in 10 to 60%of cases (Zametkin, 1995)[153]. The rate of ADHD symptoms progressing to adulthood varies. While some authors report a rate of 60% (Wood et al. 1976[154]; Kessler et al. 2006[134]), others report a rate as low as 10%. In 2008, Young and Gudjonsson suggested that ADHD cases that persist into adulthood have generally more severe symptoms[155]. Conversely, in 2009 Karam et al proposed that compared to children with ADHD, adults with

ADHD present with less externalizing symptoms but with a higher rate of other psychiatric comorbidities like substance abuse, major depressive disorder and anxiety disorder, which in turn might mask the impulsive, hyperactive symptoms and determine the prognosis of ADHD symptoms per se difficult[156]. The mystery still remains to be unfolded whether the age-dependent symptom decline constitutes real remission or a methodological artifact & our inability to study the masked symptoms of ADHD.

COMORBIDITY IN ADHD:

Gilberg et al reported from their study finding that ADHD presents with comorbidity in 60-100% of cases[157]. Among children, the most frequent comorbid condition being oppositional defiant disorder and conduct disorder, followed by autistic traits, motor incoordination problems, anxiety and specific learning disability (Thapar et al,2001[158]; Gilbert et al 2004[159]). Among adults, ADHD is found to be highly comorbid with mood disorders (40%), including 20% bipolar disorder, anxiety disorders (50%) and substance use disorders (15%) (Kessler et al, 2006)[134].

BIPOLAR DISORDER AND ATTENTION DEFICIT HYPERACTIVITY DISORDER :

Both bipolar disorder and attention deficit hyperactivity disorder have overlapping symptom domains (Kent and Craddock, 2003[160]; Klassen et al., 2010[161]). “Mania as per diagnostic criteria requires elevated, expansive or irritable mood lasting for a minimum period of one week or if it is severe

enough to cause hospitalization, the duration criterion is relaxed. The secondary symptoms required as per criterion B are increased talkativeness, decreased need for sleep, psychomotor agitation, grandiosity and distractibility. In the DSM-V diagnostic criteria for ADHD, distractibility, over talkativeness and motor restlessness are noted as cardinal symptoms, which creates an overlap of symptomology in bipolar disorder and attention deficit hyperactivity disorder"[128].

The resulting diagnostic uncertainty continues to cause confusion and problems for confirming diagnosis and further management. However, on the other side of the coin, it is worth noting that although superficially, the two disorders appear very similar, the key features that distinguish one from each other are as follows: symptoms of ADHD are 'trait' like and continuous, persistent while bipolar symptoms are authentically considered as 'episodic' changes from an individual's normal functioning. Better illustrated by an example - distractibility and talkativeness in ADHD is defined as an abnormal increase in comparison to other members of the child's age group but within the normalcy of the child's usual level. Conversely in bipolar disorder, the difference in distractibility and activity is mentioned with reference to the individual's usual state. (Skirrow)[162]

ADHD and BPAD are suggested to be two spectrums of disorders with bi directional relationship by few authors, while others propose it to be a neurodevelopmental continuum with overlapping symptom domains.

In children, co morbidity is almost always the rule. Many have attempted to research the co morbidity, neurodevelopmental prospects and association between ADHD and BPAD. Cross-sectional studies by Singh et al in 2006 suggests that up to 85% of prepubertal children with bipolar disorder also meet the criteria for ADHD, and conversely, that up to 22% of children with ADHD also meet the criteria for bipolar disorder[163]. Rates of comorbidity of Bipolar disorder with ADHD was reported by Pavuliri et al to be 11% to 75%[164]. Systematic studies of children and adolescents show that rates of ADHD range from 57% to 98% in bipolar patients (Borchardt and Bernstein, 1995[165]; Geller et al., 1995[166]; West et al.,1995[167]; Wozniak et al., 1995a[168]) and rates of Bipolar disorder range from 11% to 22% in ADHD patients (Biederman et al.,1996[169]; Butler et al., 1995[170]). Birmaher et al.,2006[171]; Delbello et al., 2004[172]; Patel et al., 2006[173] reported 22–61% of ADHD in patients with Bipolar disorder.

Both epidemiological studies done by Anderson et al 1987 and Bird et al 1988[175], clinical research done by Staton 1981[176] and Woolston 1989[177] demonstrated an average of 15-75% co morbidity between bipolar and ADHD. At the same time, few authors like Stewart et el 1973[178] and Lahey et al 1988[179] reported a much lesser rate of comorbidity between the two disorders. Findings from a study done by Faroene at al in 1997 suggested the possibility of a male predominant syndrome that exhibits childhood onset Bipolar with ADHD, and high familial risks for ADHD, BPD, and major depression (Faroene at al 1997)[180]. They also postulated the possibility that the atypical picture seen in

these children may indicate that they will grow up to become atypical bipolar adults. McElroy et al. (1992) suggested that their mixed presentation, rapid cycling and chronicity in childhood progressed to dysphoric or mixed mania when they grow up to become adults[181].

Genes are considered to constitute an important etiologic factor in both affective disorders and ADHD. The heritability of ADHD has been estimated to be as high as 80%[182]. The heritability rates of bipolar disorder and major depressive disorder have been estimated between 36% and 70%, respectively[182,183]. Considering these facts, these studies suggest the possibility that mood disorders and ADHD might share some common genetic characteristics and might even operate on a common genetic pathway involving multiple genes[184].

So far, three independent studies have been done to analyse the familial association of ADHD with pediatric bipolar disorder. In 1995, as mentioned earlier, Wozniak et al did 2 studies of first-degree relatives of children with comorbid ADHD and bipolar disorder. They employed the Schedule for Affective Disorders and Schizophrenia for School-Age Children–Epidemiologic Version, using blinded structured interviews and they found high rates of ADHD in bipolar children and additionally also high rates of both bipolar disorder and ADHD in their first-degree relatives. The other study done by Faraone et al in 1997 found that ADHD and bipolar disorders co-segregated among the relatives of children with bipolar disorder and ADHD (Faraone et al

1997a)[180]. These three studies provide evidence independently that comorbid ADHD with bipolar disorder is familiarly distinct from other forms of bipolar disorder and furthermore might represent a subtype of either bipolar disorder or ADHD. In stark contrast, Kim-Cohen et al (2003), on comparison of 29 subjects with mania and 922 subjects without mania, did not find any association between childhood ADHD and adult mania. They specifically compared the history of ADHD in those with and those without mania, and they justified their results with a modest statement that "group sizes were small and statistical power was modest." Hence the application of this study to the general population becomes questionable and furthermore favours the results of the previous studies demonstrating an association between childhood ADHD and adult Bipolar disorder[185].

In adults, ADHD is found in approximately 6% and 15% of females and males diagnosed with bipolar disorder respectively with some studies reporting rates higher than 20%(McIntyre et al.,2010[186];Nierenberg et al.,2005[187];Perugi et al.,2013[188];Wingo and Ghaemi,2007[189]). Also large scale studies have shown that bipolar disorder is found in approximately 20% of subjects diagnosed with ADHD and could even account for as much as 50% of ADHD cases if bipolar symptoms are included (Halmoy et al., 2010[190]; Kessler et al., 2006[134]; McGough et al., 2005[191]). This higher-than-chance association has been explained by many hypotheses ranging from clinical dimensions, such as impulsivity, to shared genetic vulnerability (Youngstrom et al.,2010)[192].

ADHD in individuals with bipolar disorder is found to be associated with younger age at onset of bipolar disorder, comorbid anxiety and depressive episodes with substance use disorders (Karaahmet et al., 2013[67]; Nierenberg et al., 2005[73]; Tamam et al., 2008[6]). Many a times, as they grow up to become adults, patients with ADHD lose a part of the full syndromic presentation of ADHD and this increases the chance of ADHD being overlooked or underdiagnosed in individuals with bipolar disorder(Murphy and Barkley, 1996[193]; Spencer et al., 1994[194]) .

On assessment of the first consecutive 1000 adults with bipolar disorder enrolled in the National Institute of Mental Health's Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) for lifetime ADHD, it was found that the overall lifetime prevalence of comorbid ADHD in this large cohort of bipolar patients was 9.5% (95% confidence interval 7.6%–11.4%) of which 14.7% male patients and 5.8% female patients with bipolar disorder had lifetime history of ADHD, projecting a possible gender pre-ponderance[195].

This analysis was carried out based on the priori hypothesis that those adult bipolar patients who had lifetime ADHD would be more ill (i.e) more likely to be in a symptomatic state and would have a worse retrospective lifetime course of their mood disorder compared with bipolar patients without lifetime ADHD. Also it was found that patients with co-morbid bipolar disorder and ADHD had the onset of their mood disorder approximately 5 years earlier. After adjusting for age of onset, it was found that those with

ADHD comorbidity had shorter periods of wellness and were more frequently depressed. Also those with bipolar disorder comorbid with ADHD had a greater number of other comorbid psychiatric diagnoses, with considerably higher rates of substance abuse and dependence and anxiety disorders. Hence it was concluded in the STEP-BD review that lifetime ADHD is a frequent comorbid condition in adults with bipolar disorder which is associated with a worse course of bipolar disorder and greater burden of other psychiatric comorbid conditions and the STEP-BD program also further suggested studies to focus on the efficacy and safety of treating ADHD comorbid with bipolar disorder[195]. The similar finding that anxiety and substance use comorbidity is strongly present in bipolar patients with co-morbid ADHD or a childhood history of ADHD was replicated in other studies by Feske et al (2000)[196], Frank et al (2002)[197], McElroy et al (2001)[198]. Furthermore it was found that anxiety comorbidity was linked to earlier-onset bipolar disorder (MacKinnon et al 2002[199]; Rotondo et al 2002[200]). Any co-morbidity especially anxiety disorders comorbid with ADHD suggested an earlier and poorer course of Bipolar disorder.

Meta-analysis of follow up studies of children with ADHD confirms the continuity of ADHD symptoms and persistent impairment into adulthood in an average of two-thirds of patients (Faraone et al., 2006)[201]. Due to the co morbid occurrence of bipolar disorder with disruptive disorders like ADHD, a hypothesis has been suggested that maybe ADHD represents a prodrome and a developmental precursor of bipolar disorder (Hassan et al., 2011[202]; Henin et

al., 2007[203]) which needs to be confirmed with follow up studies to examine the potential neurodevelopmental trajectories and a temporal relationship between the two disorders. Masi et al[69] suggested based on the chronic course and the irritable mood common to bipolar disorder and childhood ADHD that it might be a symptomatological continuum between ADHD and early onset bipolar disorder. In their study, Sachs and Thase in 2000 reported the proportion of bipolar adults with comorbid ADHD in their sample to be 14.3%. Sachs et al found in their study that childhood ADHD was associated with an earlier onset of bipolar disorder by an average of eight years giving way to the possibility that co-occurring ADHD may be a marker for early onset (juvenile-onset/ pediatric) bipolar disorder. Also their study sample demonstrated a unique interpretation - ADHD was present only in those who had an onset of bipolar disorder before the age of 19 years. Because comorbid ADHD appears to be linked to the age of onset of bipolar disorder, the prevalence of ADHD in any study sample depends on the study sample's distribution of the age of onset of bipolar disorder. In the study by Sachs et al, approximately 60% of patients had their age of onset of bipolar disorder before age 18, of which 13% met criteria for ADHD, which in turn could have led to bias.[10]

Studies done by Chang et al 2000, Wilens et al 2003[204], Biederman et al 2004[205] and Masi et al 2006[69] suggested childhood ADHD to be a condition synonymous to lifetime 'prebipolar' . Some studies of ADHD document a 10-fold increase in risk for bipolar disorder in boys and girls with ADHD relative to age- and gender-matched control subjects without ADHD. Children with

ADHD present with early onset of bipolar disorder in their adolescence. In a study done by Biederman et al in 1996 of 140 ADHD children and 120 normal control subjects and their first-degree relatives, bipolar disorder was detected in 11% of children with ADHD at baseline (mean age 11 years) and in an additional 12% at 4-year follow-up[169]. In another longitudinal study by Carlson et al in 2000, of boys with ADHD (n =75) followed into young adulthood, 17% were diagnosed with bipolar disorder[206]. In 1998, Strober et al postulated from their study that for those adolescents who developed mania later in their life with history of ADHD in their childhood, the presence of childhood ADHD predicted a worse response to lithium[207].

These findings suggest an association between ADHD and bipolar disorder, but Neirenberg at al put forward the notion that the possibility of Berkson's bias must also be kept in mind i.e., treatment-seeking patients tend to have more comorbid conditions compared with the general population (Berkson 1946)[208]., and hence this may be serve as more of a chance association.

Further exploration done on the relationship between bipolar disorder and attention deficit hyperactivity disorder by analyzing the incidence of ADHD among the relatives of Bipolar probands has reported an elevated rate of ADHD among children of Bipolar parents compared to offspring of healthy controls and the children of individuals with other psychiatric disorders (Akdemir and Gokler 2008)[209] Studies among children of individuals with

bipolar disorder have found a greater prevalence of attention deficit hyperactivity disorder in them.(Keller et al 1988[210], Orvaschel et al 1988[211]) Studies of adopted children with attention deficit hyperactivity disorder demonstrated higher rates of major depressive disorder in their biological relatives than in their adoptive relatives.(Deutsch et al 1982)[212]

In 1981, Dvoredsky reported 2 case reports of children with attention deficit hyperactivity disorder who later developed manic depressive illness. (dvoredesky)[213]. Also Winokur et al. (1993) demonstrated an increase of childhood hyperactivity traits on retrospective analysis of Bipolar patients and their relatives. In a consecutive series of 189 adults with bipolar disorder (mean age 37 years), Winokur et al (1993) reported childhood hyperactivity in 21.3% of their probands and also surprisingly in 19% of their first-degree adult relatives as well[214].

However the major drawback of this study was that the determination of childhood hyperactivity syndrome was made by self-report questionnaire which required the presence of only two out of five possible traits (restlessness, hyperactivity, impulsiveness, short attention span, and irritability). A formal diagnosis based on DSM-IV ADHD which required at least six core symptoms that began before the age of 7 years was not implemented. Hence it was suggested that Winokur et al's documentation of rates of "childhood hyperactivity" was likely to have been over-inclusive relative to DSM-IV

ADHD and furthermore could also have included subjects with childhood mania rather than ADHD[214].

Beiderman et al in 1996, on follow up of 260 children with ADHD for a 4 year period found 12% of them to have a clinical picture of BPAD with predominant irritability, rapid cycles, by mid adolescence[169]. Studies done on treatment response in co morbid bipolar with ADHD show conflicting results with Strober et al 1998[215] and State et al 2004[216] demonstrating poor response to lithium therapy while study done by Kafantaris et al did not replicate the same findings. Kafantaris et al (1998) compared lithium response in 33 bipolar patients without a childhood history of ADHD with that in 10 bipolar patients with a childhood history of ADHD[217].

The data in this report only allowed for an estimate of the power because the Young Mania Rating Scale (YMRS) scores are provided for the entire sample and those with a childhood history of ADHD. Statistical power could be calculated for the differences in the final YMRS scores after lithium for these two groups. With the sample size of 10 with ADHD, and 43 for the entire group, the study has a statistical power of 20.9%, which indicates that the statement “presence of ADHD in children did not affect response to lithium treatment” is not supported by data with sufficient power.

Neirenberg at al suggested that ADHD occurrence I associated with multiple co- morbidity like substance use disorder, anxiety disorder, as the child grows into an adult which further worsens treatment compliance and

paves way for the development of earlier affective symptoms especially with atypical features, frequent episodes of mania and depression, more intense episodes, more suicide attempts and a severe disease course. Brent et al[218] through his study on suicide among adolescents reported higher rates of bipolarity and attention deficit hyperactivity disorder in suicide completers compared to suicide attempters. Delbello et al[219] suggested that among children with ADHD, the possible cumulative effect of stimulants leading to a stimulant induced manic state could be a risk factor for later-onset BD. The risk of developing unipolar or bipolar depression is elevated in those with ADHD (Biederman 2004[220], Pliszka 1998[221]). Alpert et al concurred that 16% of individuals with a diagnosis of major Depressive Disorder fulfilled the diagnostic criteria of childhood ADHD, also ADHD symptoms were found to have continued into adulthood in 75% of these patients. In support with these findings and with familial studies implicating a genetic link between ADHD and depression, Marks et al proposed that ADHD and Major depressive disorder may be different phenotypic expressions of the same genotype[222].

Follow-up of children with either attention deficit hyperactivity disorder or major depressive disorder demonstrated a higher risk of them developing substantial long-term psychiatric morbidity. With the added burden of comorbidity, the risk of developing other psychiatric disorder heightens leading to a poor social outcome (Kovacs et al 1984, 1988)[223]. Co-occurrence of attention deficit hyperactivity disorder and bipolar disorder places the children at higher risk for developing greater psychiatric morbidity and disability

(Weinberg et al 1989)[224] Bipolar disorder when comorbid with ADHD makes the individual to be at a higher risk for disruptive behavior disorders namely Oppositional defiant disorder and Conduct disorder, which in turn can lead to psychosocial impairment, decrease in quality of life and the subsequent risk for developing substance dependence, antisocial traits.

A study done by Eyestone et al to evaluate the presence of ADHD and MDD in prison population found a substantial proportion of the sample meeting criteria for childhood ADHD on retrospective analysis with a prevalence rate higher than the general population giving rise to the hypothesis that whomever in those symptoms of ADHD persisted into adulthood, the chances of remission of ADHD is rare and observed to be associated with other comorbidities like substance dependence, overlapping with symptoms of depression as well[225].

In a study done by Karaahmet et al in 2013, the authors suggest that screening for ADHD should be done even during the childhood period as its highly chronic, highly comorbid with Bipolar disorder and has significant positive impact on treatment course if it is treated adequately[67].

In 2009, Ryden Thase studied 159 patients with bipolar disorder and comprehensively analysed the course and symptomatology of affective symptoms with respect to ADHD symptoms. They took rigorous measures to assess childhood and current ADHD which was done by independent psychiatrists, and further confirmed by interview with the individuals' parents.

The prevalence of adult ADHD in their study was found to be 16%. Also an additional 12% met the criteria for childhood ADHD without meeting criteria for adult ADHD. Individuals with both childhood ADHD and adult ADHD were found to have significantly earlier onset of their first affective episode, more frequent affective episodes (except manic episodes), and more interpersonal violence. Hence they concluded that bipolar patients with a history of childhood attention-deficit hyperactivity disorder (ADHD) have a different course of illness regardless of whether they meet the ADHD criteria in adulthood or not, suggesting that this group of bipolar patients with childhood ADHD represents a distinct early-onset phenotype of bipolar disorder[226].

In 2008, Tamam et al. conducted a meticulous survey of comorbid ADHD in 159 bipolar adults, in which they rated self-reported childhood symptoms in addition to present symptoms of ADHD (5). They thereby identified a group of bipolar patients (10.7%) who reported a history of childhood ADHD but did not meet the criteria for adult ADHD. The clinical outcome in the group with childhood ADHD was similar to the group with adult ADHD. However, although Tamam et al. used a validated rating scale to assess childhood ADHD symptoms, they relied solely on patient reports. The accuracy of patients own recollections of attention-deficit symptoms remains questionable, as the illness characteristics in adulthood could have affected the recall of childhood symptoms thus confounding the results. This deficiency could have been rectified by including parent questionnaire as well, thus validating the findings of the individual's self-reports[6].

Eun-Jeong Joo et al retrospectively investigated childhood ADHD features in 1305 adults with mood disorders. Childhood ADHD features were measured with the Korean version of the Wender Utah Rating Scale (WURS). Also the scores on 3 factors - impulsivity, inattention, and mood instability was assessed. 4 different diagnostic groups were identified among the 1305 subjects- 108 subjects with bipolar disorder type I, 41 with bipolar disorder type II, 101 with major depressive disorder, and 1055 served as normal controls. They found that the group with bipolar disorder type II obtained the highest total scores on the WURS. Similarly, the impulsivity and inattention associated with childhood ADHD were more significantly related to bipolar disorder type II than with bipolar disorder type I[227].

The question whether childhood ADHD has an impact on the occurrence, course of bipolar disorder, quality of the individual is critical, because it opens up the possibility that a mere history of childhood ADHD symptoms defines an etiologically distinct, early onset bipolar sub-phenotype, thus becoming a course modifier as well.

AIMS AND OBJECTIVES

AIM :

To assess the childhood attention deficit hyperactivity disorder symptoms in the adult bipolar patients and their outcome.

OBJECTIVES:

Primary Objective:

To study the relationship between clinical characteristics of bipolar affective disorder with childhood externalizing factors.

Secondary objective:

1. To study the correlation between bipolar affective disorders severity & attention deficit hyperactivity disorder symptoms
2. To assess the symptoms severity of the bipolar affective disorder patients & quality of life in with (or) without ADHD symptoms.

HYPOTHESIS

NULL HYPOTHESIS

There are no significant differences in the childhood ADHD symptoms between the bipolar affective disorders patients and healthy controls.

There are no significant differences in the clinical presentation, course outcome between the bipolar affective disorder patients with childhood ADHD symptoms and those without childhood ADHD symptoms.

There are no significant differences in the childhood externalizing symptoms on the clinical presentation, course, outcome, quality of life of the bipolar affective disorder.

MATERIALS & METHODS

SETTINGS

The study was conducted at Institute of Mental health, Madras Medical College, Chennai, a tertiary care centre for Tamil Nadu. The necessary prior permission for conduct of the study was obtained from Institutional Ethics Committee, Madras Medical College, Chennai.

STUDY POPULATION:

Bipolar affective disorder (BPAD) subjects who are in remission attending the outpatient department with parents as care givers in Institute of Mental Health. Healthy controls and their parents as attenders were selected from the community.

SAMPLE SIZE:

A total of 150 sample size with 120 BPAD patients under remission and age, sex, socio economic status matched 30 healthy controls was collected.

SAMPLE SIZE CALCULATION:

Sample size was calculated according to the below mentioned formula:

$n= r+1/r*p*q*(Z_{ß}+Z_{ą})^2/(p1-p2)^2$

n- number of sample in cases arm

P1- prevalence of ADHD in general population-1.2-7.3% (Burden of ADHD).[228]

P2- prevalence of ADHD in bipolar affective disorder- 23-37% (Ryden et al).[226]

P= p1+p2/2= 6+24/2=15

Alpha error- 0.05 $Z_{ą}$-1.96

Beta error-80% $Z_{ß}$-0.84

r- ratio of controls to cases 1:4=0.25

$n= 0.25+1/0.25* 15*85*(1.96+0.84)^2/ 18^2$

=126.12

Hence we took 120 samples in cases arm and 30 samples in control arm.

PERIOD OF STUDY

The study was conducted for a total of 4months from March 2017 to August 2017.

SAMPLING METHOD

Consecutive sampling

METHOD OF STUDY

Case control study

RESEARCH DESIGN

150 individuals and their parents as attenders were participated the study, 120 bipolar affective disorder patients in remissions were included and 30 healthy controls (Age, Sex, Socio Economic Status matched) recruited from the community in Chennai.

INCLUSION CRETERIA:

1) Individuals between 18-45 years of age
2) Individuals diagnosed to have bipolar affective disorder as per ICD-10.
3) Cognitively able individuals capable of giving written consent to participate in the study.

EXCLUSION CRITERIA:

1) Individuals diagnosed with ADHD in childhood.
2) Individuals without parents as attender.
3) Individuals with other mental/ neurological disorders.

4) Individuals with substance dependence.

5) Individuals unwilling to participate in the study**.**

OPERATIONAL DESIGN:

After obtaining the written informed consent from the participants as required by the Institutional ethical committee, the following procedures were followed.

IN CASES:

1. All subjects with bipolar affective disorder as per ICD-10 were administered mini plus to rule out the other comorbid psychiatric illness and they were qualified for remission with the help of YMRS and HAM D scales.

2. Using a semi structured questionnaire from patients for their socio demographic details.

3. Collecting disease related information from the patients and parents

4. Administration of Vanderbilt ADHD assessment scale for parent informant to bipolar patients parent attenders

5. Administration of WHO Quality of life for patients to assess outcome

IN CONTROLS

1. Age , sex, socioeconomic status matched first
2. MINI-Plus questionnaire was used to rule out other comorbid psychiatric illness.
3. VADPRS was used to assess childhood externalizing symptoms from parents

THE INSTRUMENTS USED ARE:

- MINI-Plus structured clinical interview.
- Semi- structured questionnaire for sociodemographic profile.
- VADPRS parent informant scale
- Semi –structured questionnaire for aggression, psychotic episodes, suicidal attempts
- WHO – BREF quality of life

MINI-PLUS structured clinical interview:

The MINI-PLUS is a brief structured interview to rule out Axis I psychiatric illness as per DSM-IV and ICD-10, which include 26 disorders in it. The biggest advantage is, it can be administered with a median time of 15 minutes when compared to SCID-P for DSM-III and CIDI (ICD-10 developed

for lay interviewers by WHO). It has more comparably high validity and reliability scores[229].

SEMI STRUCTURED PROFORMA:

It was used to collect subject's sociodemographic details like name, age, Sex, education, occupation, marital status, address, socioeconomic status according to modified Kuppuswamy scale, along with clinical variables like age of onset of illness, duration of illness, number of episodes, suicide Attempts, aggression, psychotic features.

AGGRESSION:

History of aggressive behaviors in the previous episodes from the clinical records taken.

PSYCHOTIC SYMPTOMS:

History of presence of psychotic symptoms like lifetime presence/absence of delusions [including persecutory, grandiose, depressive, nihilistic, guilt, reference];auditory hallucinations [including mood congruent hallucinations, accusatory/ abusive and running commentary] and visual hallucinations taken from the clinical records .

SUICIDE ATTEMPTS:

Information regarding suicide attempts was gathered directly through three interview questions and from the clinical records:

1) “Have you ever thought about committing suicide?” and

2) “Have you ever attempted suicide?”

3) How many attempts made till now?

HAMILTON’S RATING SCALE:

Max Hamilton first introduced this Hamilton’s rating scale [HAM-D orHDRS] in 1960. It is accepted widely and used to assess the severity of the depression and helps as a follow up guide in the recovery phase. Though the original author does not provide a specific guidelines to administer and rating, it has high inter-rater reliability and validity. Many versions of HDRS are available. In HAM-D 21 item version only 17 items were scored and others are taken up for clinical information like hypersomnia, increased appetite and concentration and indecision. It takes about 20 minutes to administer. Eight items scored from 0to 4 and other 9 items are scored from 0 to 2. [0= not present;4=very severe][230].

NORMAL	MILD	MODERATE	SEVERE	VERY SEVERE
0-7	8-13	14-18	19-22	$\geq$ 23

YOUNG MANIA RATING SCALE:

This Young Mania Rating scale (YMRS)[167]is used to quantify the severity of the manic symptoms during the episode and as well during the

recovery phase in the treatment. It consists of 11 items scored on a likert scale 0 to 8 for four items, 0 to 4 for 7 items. Reliability is good based on inter-rater reliability and consistency studies[231].

THE VANDERBILT ADHD DIAGNOSTIC PARENT RATING SCALE (VADPRS)

The Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS) is a gold standard stool to assist clinicians especially Paediatricians and Psychiatric consultants in child psychiatry settings .This scale is widely used as it assesses five dimensions, namely three domains of ADHD-Inattention ,Hyperactivity and Impulsivity as also the comorbidities like disruptive behaviour disorders(Oppositional Defiant and Conduct Disorders) and the mood symptoms (Anxiety/Depression).It includes a parent and teacher informant versions.The Parent rating version is selected for this study as they are the primary care givers.The VADPRS have overall Cronbach's alpha of >0.90 in every case.

VADPRS Scale contains 55 items, each item scored 0-3 according to parent response 0-Never, 1-occasionally, 2-Often, 3- Very Often

1 – 9 : for Inattention

10 – 15 :for Hyperactivity

16 – 18 : for Impulsivity

19 -26 : for ODD

27 – 40 : for Conduct Disorder

41 – 47 : for Mood/Anxiety symptoms

And also Academic Performance (1-3) items and class room behaviour (1-5) items to assess their impairments in these areas of functioning[232] .

World Health Organization Quality of Life (WHOQOL)-BREF:

(Annexure)

The QOL assessment was made with this scale in a Tamil version with letter of permission from W.H.O – Geneva. It was chosen, as it is generic scale developed simultaneously in 15 field centres including India. It is 26 –item scale and measures four domains.

Physical health Domain – question 3, 4, 10, 15, 16, 17, 18

Psychological Health Domain – question 5, 6, 7, 11, 19, 26

Environment domain – questions 8, 9, 12, 13, 14, 24, 25

Social relationship Domain – questions 20, 21, 22 and

Overall perception of Generalwell being (QOL) – questions 1

Overall perception of Health – questions 2

All questions are scored from 1 to 5 likert scale, with a total score ranging from 26 – 130.

Higher score indicates better quality of life in each Domain. The psychometric properties are in comparison with WHO- QOL-100. Both have a good correlation in the four domains with a value of 0.89 or above.

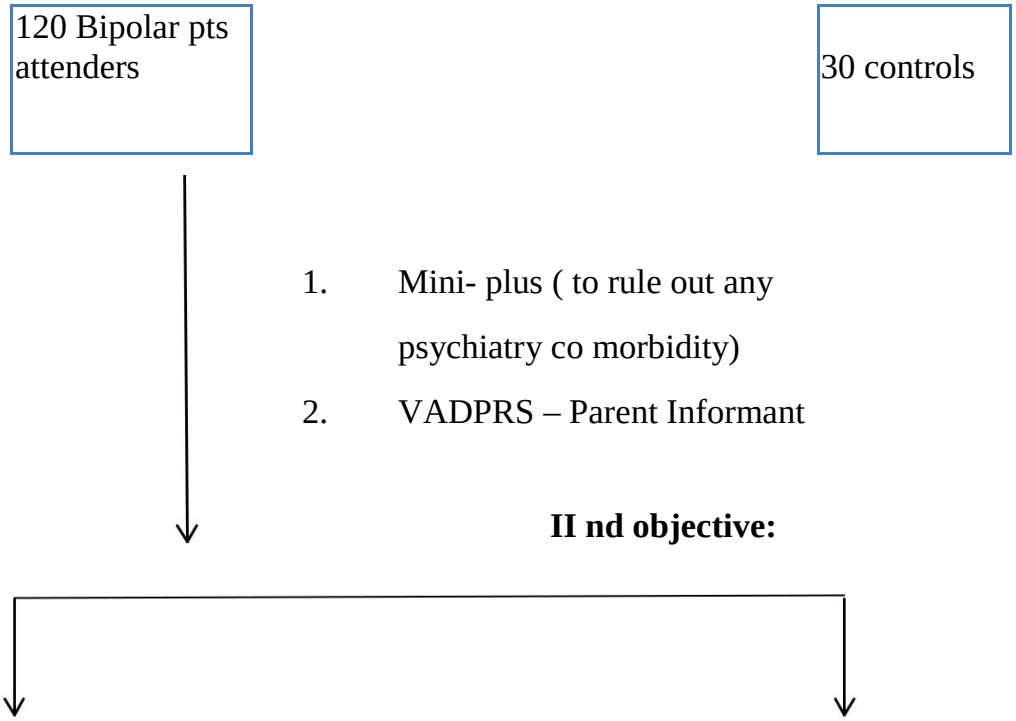
As a whole this scale has good test-retest validity, internal consistency, good discriminate validity and content validity[233].

STATISTICAL DESIGN:

Significance level is fixed as 5% ($\alpha = 0.05$). **(If P-Value is <0.05 then statistically significant)**. The Normality tests Kolmogorov-Smirnov and Shapiro-Wilks tests results reveal that the variables follow Normal distribution. Therefore to analyse the data Parametric methods are applied. To compare the mean values between groups independent samples t-test is applied. To compare proportions Chi-Square test is applied. If any expected cell frequency is less than 5, then Fisher's exact Chi-Square test is used.

OPERATIONAL DESIGN

Ist objective:



Comparing both groups on the following clinical presentation

1. Age of Onset
2. Duration of illness
3. No of episodes
4. Aggression
5. Suicidal attempts
6. Psychotic episodes
7. Quality of life

IIIrd Objective :

Comparing the various subtypes of childhood externalising symptoms in the adult bipolar patients in the above set clinical presentations.

RESULTS AND OBSERVATIONS

COMPARISON OF SOCIODEMOGRAPHIC VARIABLES BETWEEN CASES AND CONTROLS

TABLE 1: COMPARISON OF GENDER AMONG CASES AND CONTROLS

Gender	Cases	Controls
Male	64 (53.3%)	15 (50%)
Female	56 (46.7%)	15 (50%)

Chi square value	0.107
P value	0.839

The prevalence of bipolar disorder is more among males. 53.3% of males and 46.7% of females presented with BPAD in our sample. 30 controls with equal sex distribution taken. P value is 0.839 which shows there is no significant difference between cases and controls.

CHART REPRESENTING THE DISTRIBUTION OF GENDER IN BOTH GROUPS

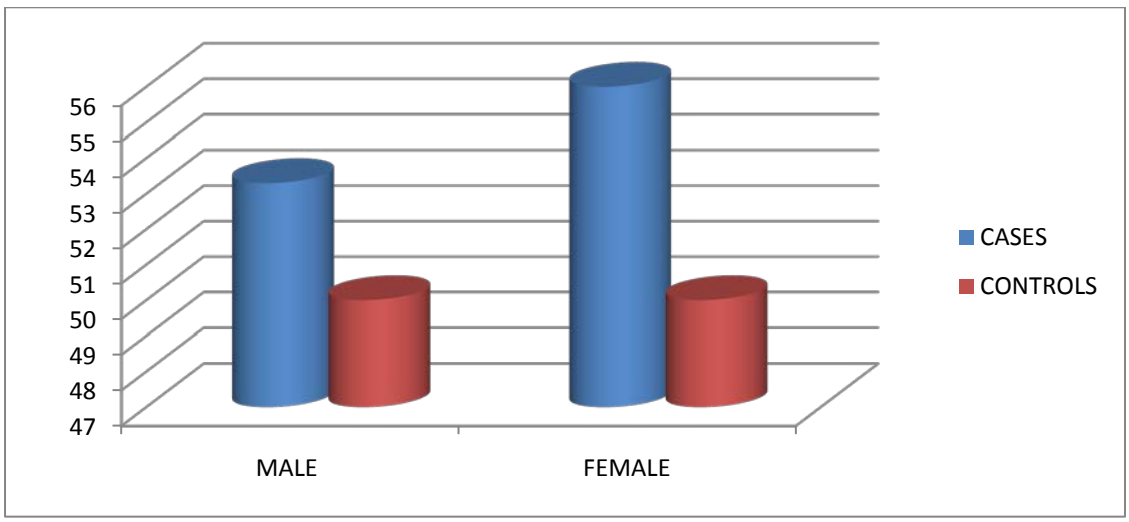


TABLE 2: COMPARISON OF EDUCATIONAL STATUS AMONG CASES AND CONTROLS

Educational status	Cases	Controls
Illiterate	4 (3.3%)	0
1 – 5	12 (10%)	2 (6.7%)
6 – 10	57 (47.5%)	14 (46.7%)
Hsc	21 (17.5%)	6 (20%)
Degree / Diploma	26 (21.7%)	8 (26.7%)

Chi square value	1.637
P value	0.802

Only 3.3% subjects were illiterate. 57.5% were grades between 1 and 10. 21.7% were degree or diploma holders. P value is 0.802 which states that there is no significant difference between the two groups.

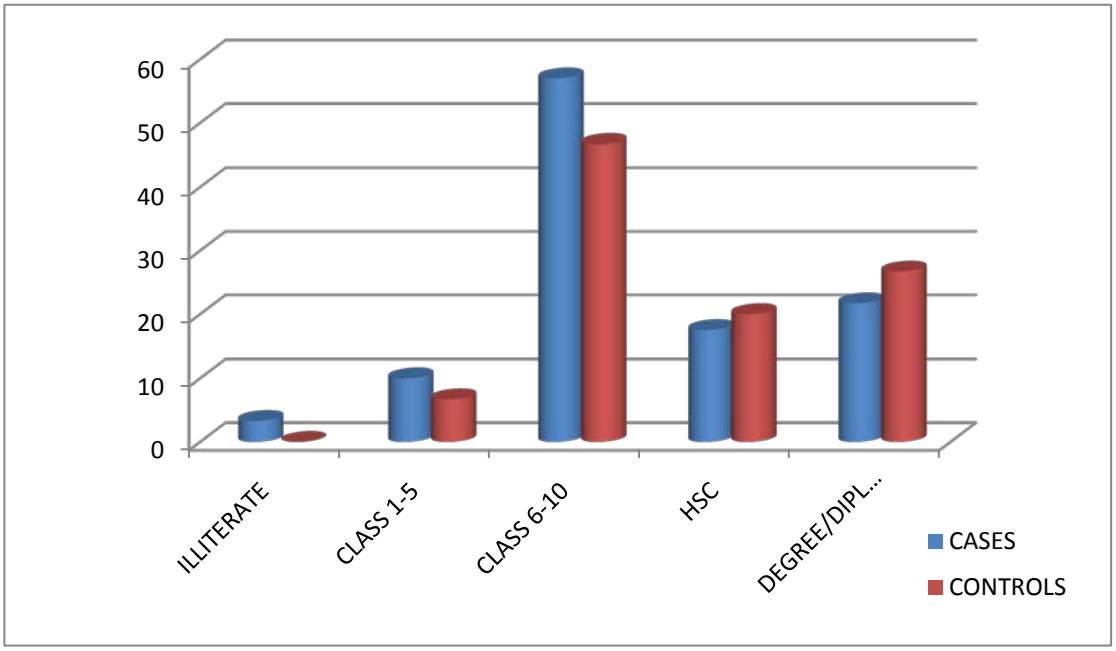
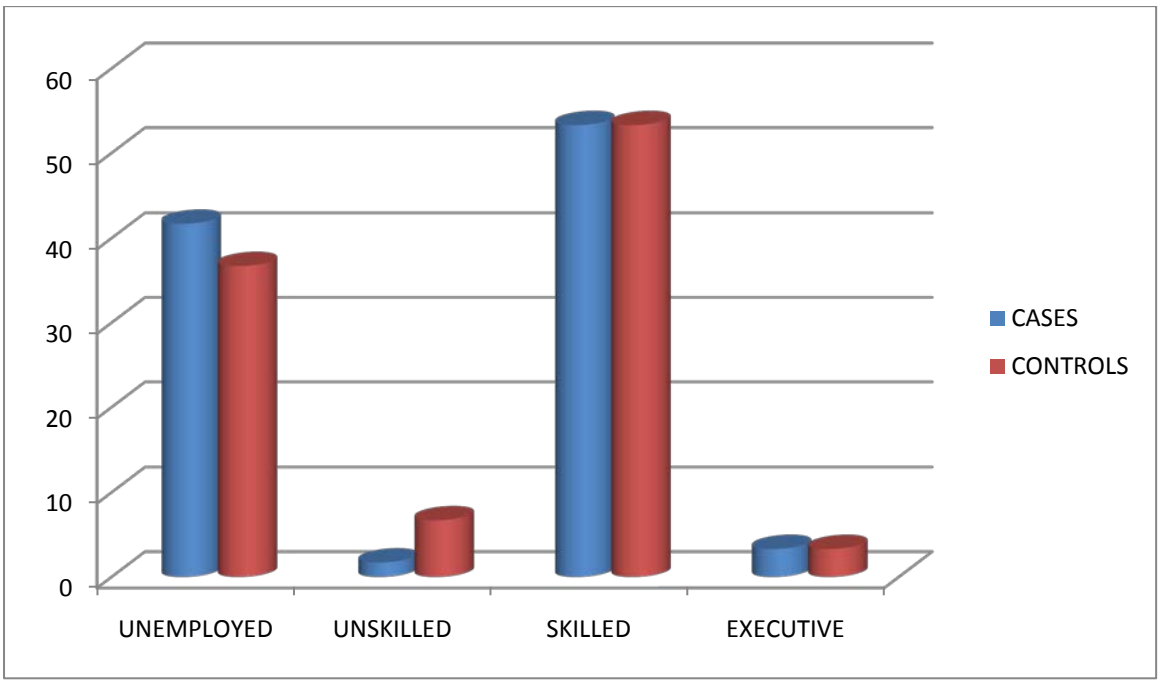


TABLE 3: COMPARISON OF OCCUPATIONAL STATUS AMONG CASES AND CONTROLS

Occupational status	Cases	Controls
Unemployed	50 (41.7%)	11 (36.7%)
Unskilled	2(1.7%)	2(6.7%)
Skilled	64(53.3%)	16(53.3%)
Executive	4(3.3%)	1(3.3%)

Chi square value	2.398
P value	0.494



This table and chart showed the occupational status of our sample. Since P value was 0.494, there was no statistical difference between the groups. But the prevalence of unemployment was around 42% in BPAD subjects.

TABLE 4: COMPARISON OF PLACE OF RESIDENCE AMONG CASES AND CONTROLS

Place of residence	Cases	Controls
Rural	33 (27.5%)	7 (23.3%)
Urban	87 (72.5%)	23 (76.7%)

Chi square Value	0.213
P value	0.644

Distribution of residential place was more or less equal between cases and controls. 72.5% of cases belong to urban area.P value of 0.644 shows that there was no statistical difference between the groups.

CHART SHOWING COMPARISON OF RESIDENTIAL PLACE

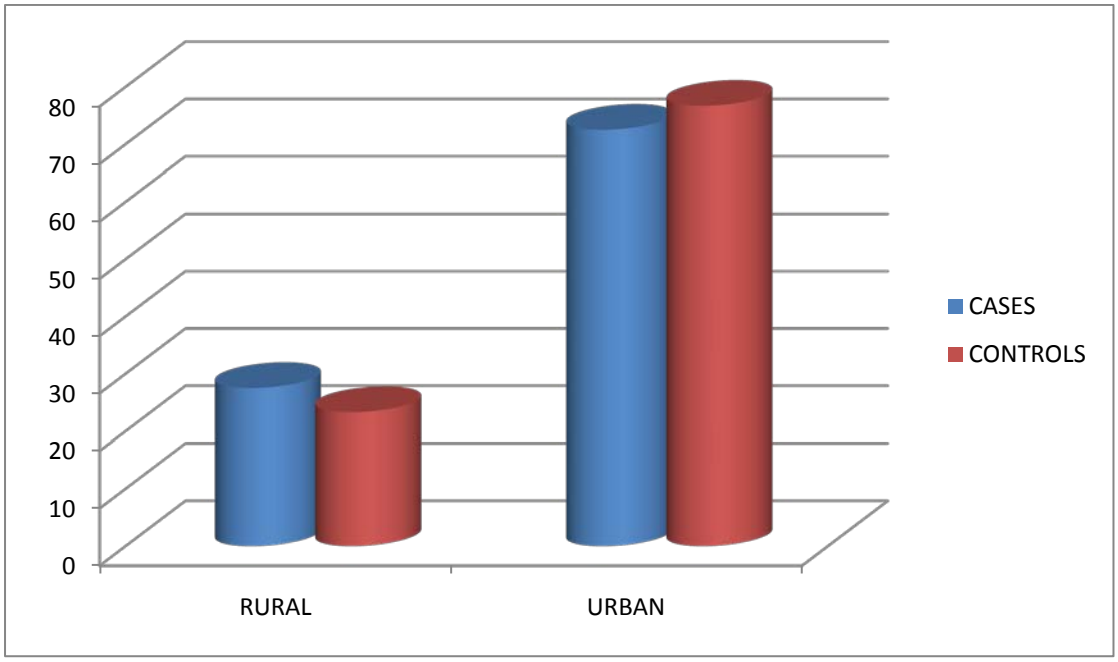


TABLE 5: COMPARISON OF SE STATUS AMONG CASES AND CONTROLS

SE status	Cases	Controls
Lower	114 (95.0%)	27 (90%)
Middle	6 (5.0%)	3 (10%)

Chi square value	2.271
P value	0.321

95% of cases belong to lower socioeconomic status. P value of 0.321 shows that there was no significant difference between the groups.

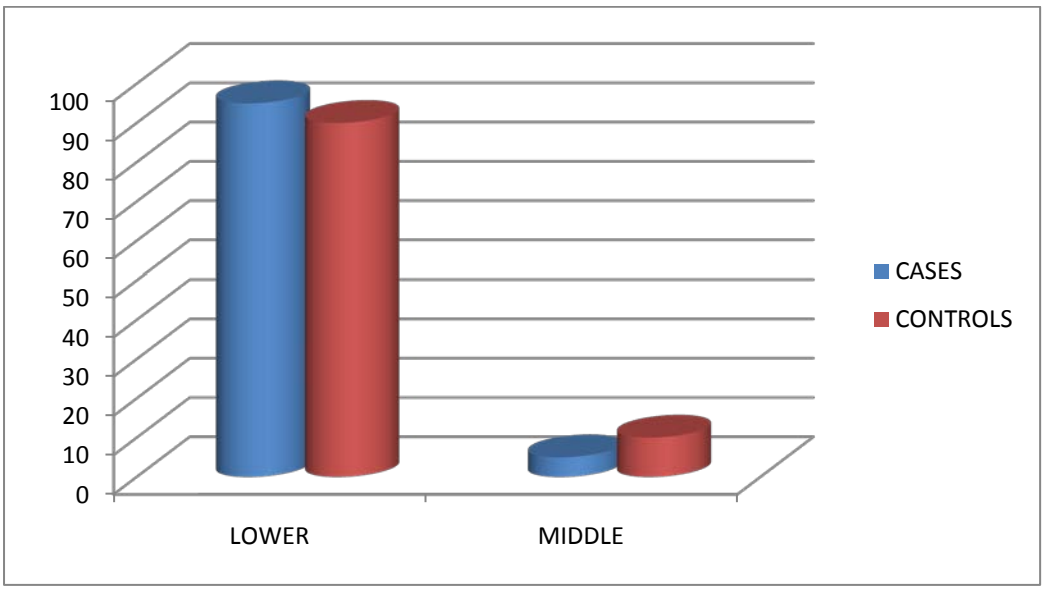


TABLE 6: COMPARISON OF MARITAL STATUS AMONG CASES AND CONTROLS

Marital status	Cases	Controls
Married	77 (64.2%)	23 (76.7%)
Single	42 (35.0%)	7 (23.3%)
Separated	1 (0.8%)	

Chi square value	1.813
P value	0.404

35% were unmarried in BPAD whereas in controls it is 23.3%. P value of 0.404 signifies that there is no significant difference between the two groups.

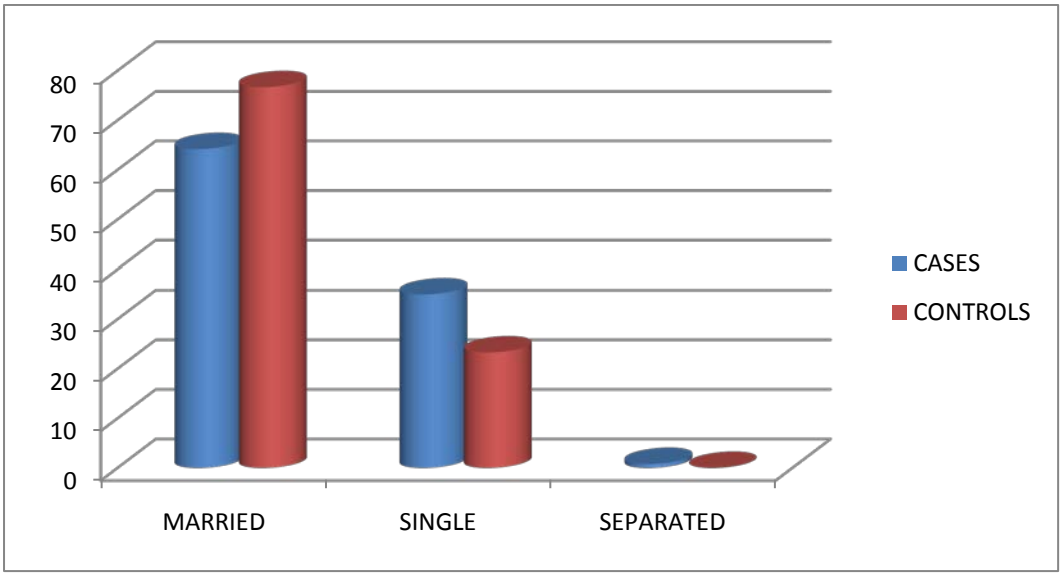


TABLE 7: COMPARISON OF RELIGION

AMONG CASES AND CONTROLS

Religion	**Cases**	**Controls**
Hindu	102 (85%)	25 (83.3%)
Christian	13 (10.8%)	4 (13.3%)
Islam	5 (4.2%)	1 (3.3%)

Chi square value	0.182
P value	0.913

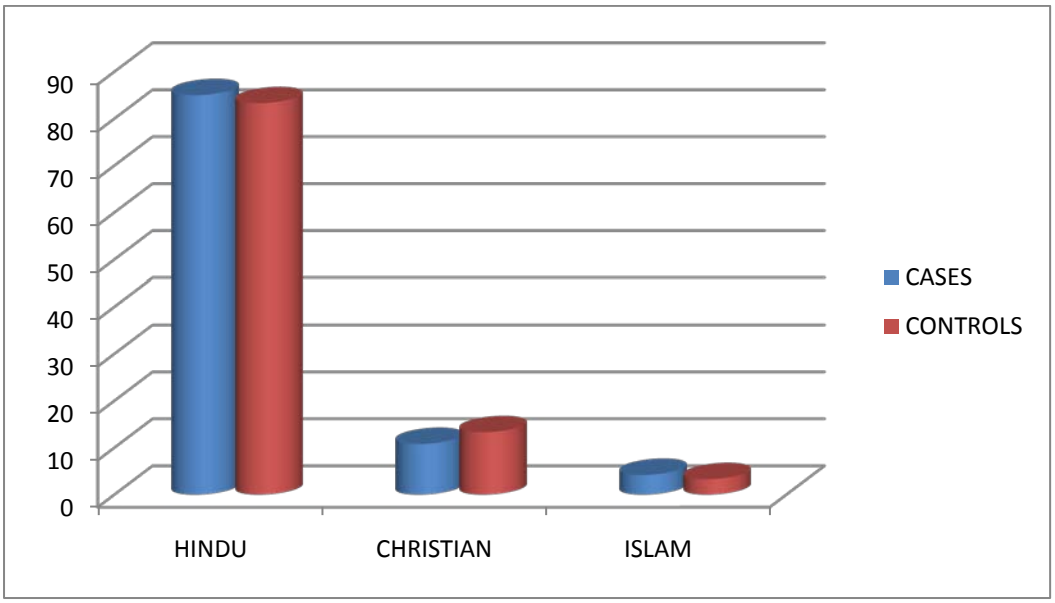
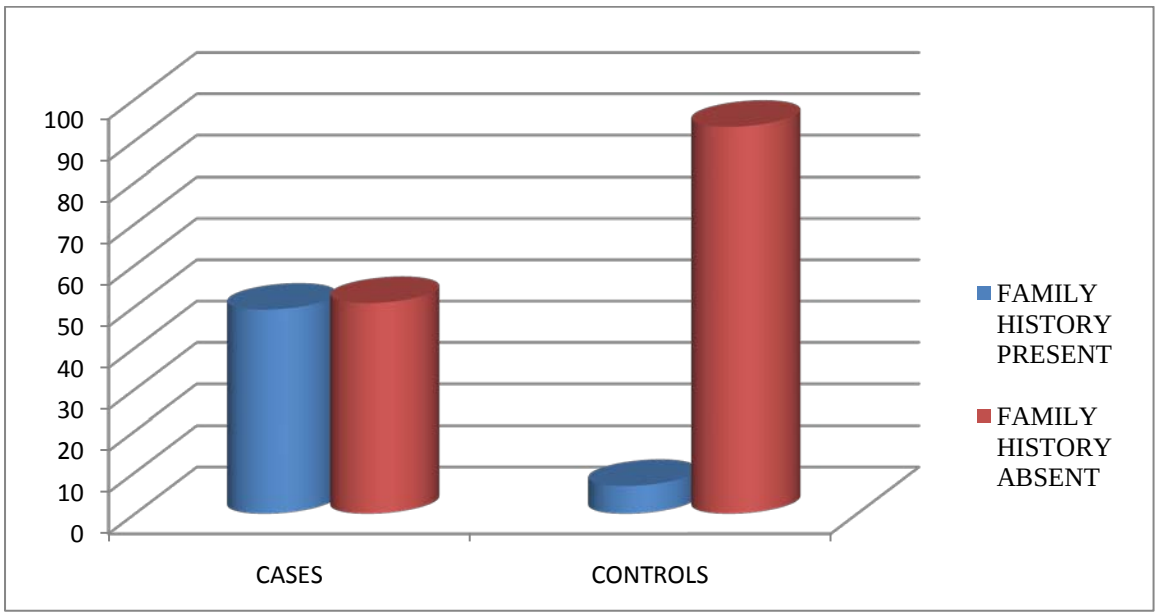


TABLE 8: PREVALENCE OF FAMILY HISTORY OF PSYCHIATRIC ILLNESS AMONG CASES AND CONTROLS

Family History	Cases	Controls
Present	59(49.2%)	2(6.7%)
Absent	61 (50.8%)	28 (93.3%)

Chi square value	17.966
P value	0.000



This table and chart compares the family history of psychiatry illness between cases and controls. This shows that nearly 50% of cases have positive family history for psychiatric illness whereas it was 6.7% among controls. The difference was significant statistically too.

TABLE 9: PREVALENCE OF VADPRS SCORES AMONG CASES

	Frequency	Percentage
Inattention	26	21.7%
Hyperactivity	31	25.8%
ODD features	15	12.5%
Conduct features	12	10%
Anxiety	39	32.5%

This table shows the prevalence of ADHD symptoms in VADPRS scale in various domains in our sample. In this it showed 32.5% had anxiety symptoms, 25.8% had hyperactivity symptoms, 21.7% had inattention symptoms, 12.5% had ODD features and 10% had conduct features.

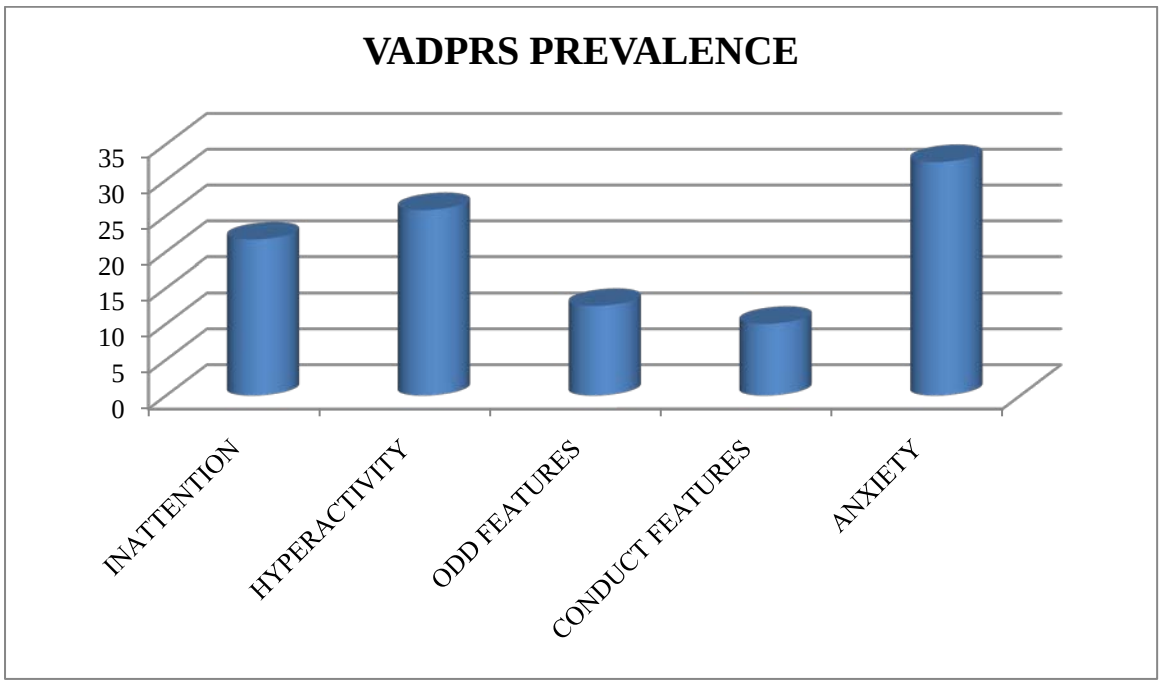
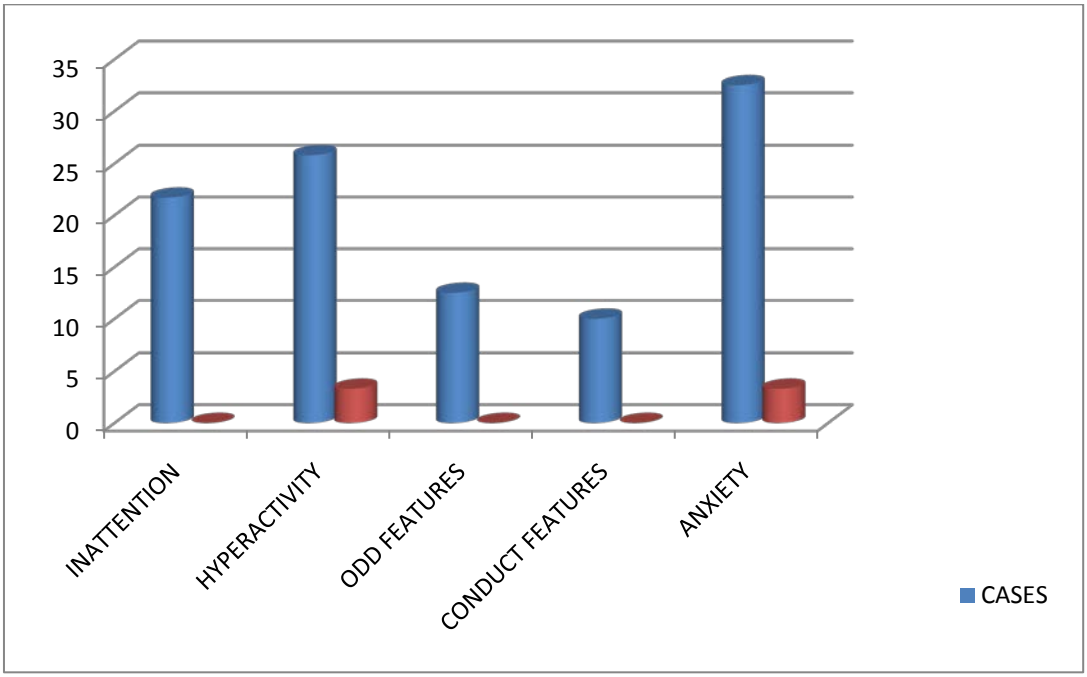


TABLE 10: COMPARISON OF VADPRS SCORES

BETWEEN CASES AND CONTROLS

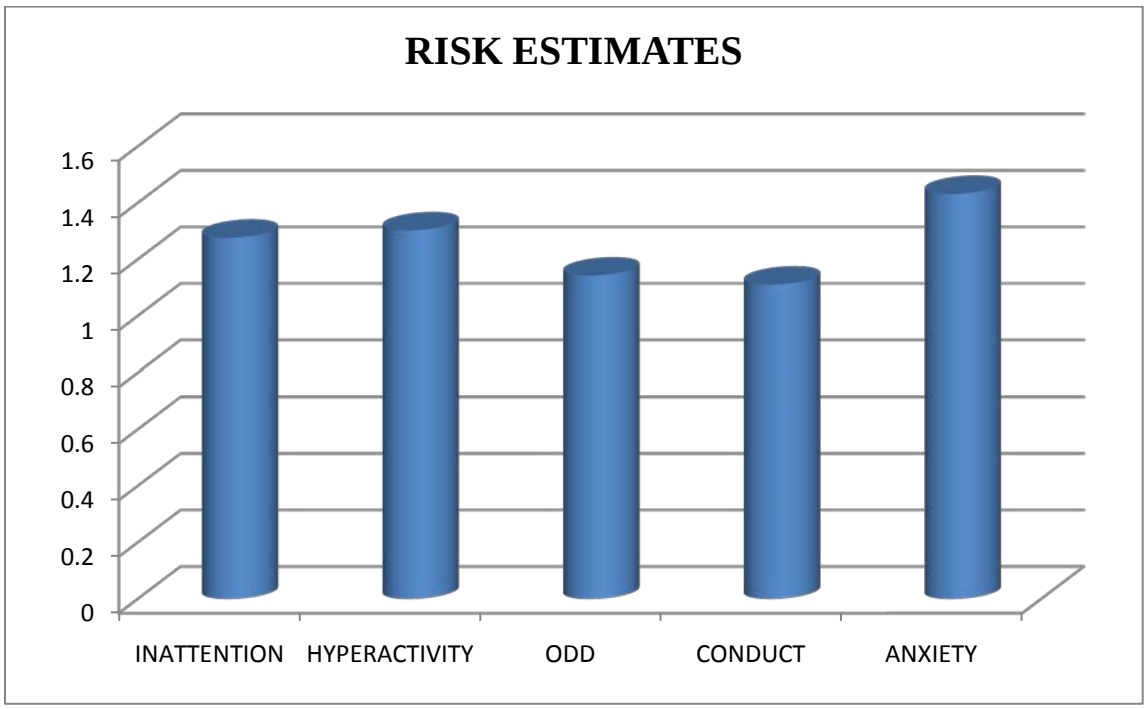
	Case N (%)	Control N (%)	Fishers
Inattention	26 (21.7%)	0 (0%)	0.002
Hyperactivity	31 (25.8%)	1 (3.3%)	0.005
ODD features	15 (12.5%)	0 (0%)	0.042
Conduct features	12 (10%)	0 (0%)	0.125
Anxiety	39 (32.5%)	1 (3.3%)	0.001



This table and chart showed the comparison of VADPRS variables among cases and controls. All five sub scores were elevated in BPAD than in healthy controls. When applying chi square test, scores of hyperactivity, inattention, odd features and anxiety were significantly more among BPAD cases than controls.

TABLE 11: RISK ESTIMATES OF VADPRS SCORES TO BPAD

	Risk estimate	95%CI
Inattention	1.277	1.162 – 1.403
Hyperactivity	1.303	1.150 – 1.477
ODD	1.143	1.068 – 1.223
Conduct	1.111	1.047 – 1.179
Anxiety	1.432	1.244 – 1.649



This table and chart showed the risk estimate of each sub scale of VADPRS to the development of BPAD. All the five sub scales were associated with increased risk of BPAD. The increasing order of the risk estimate was conduct features, ODD features, inattention, hyperactivity and anxiety features. This implied that those who have higher anxiety features were increased risk of BPAD.

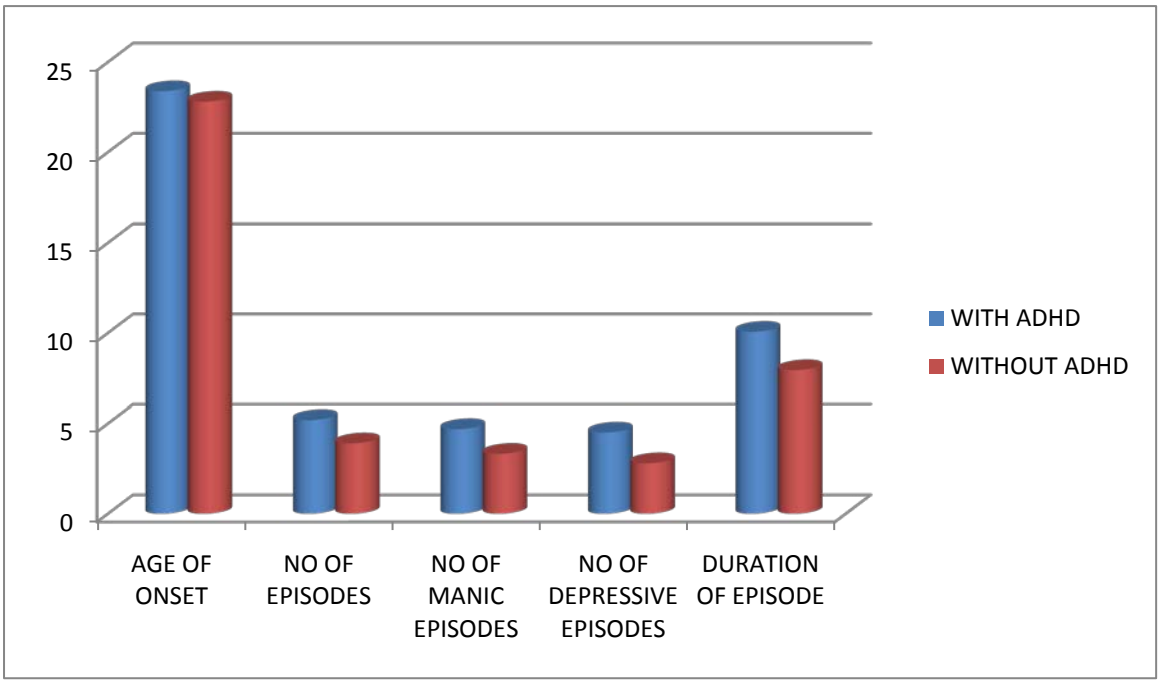
TABLE 12: PREVALENCE STATISTICS OF ILLNESS RELATED VARIABLES AMONG CASES

	Mean	Standard deviation
Age at presentation	31.59	7.570
Age of onset	22.88	6.102
No of episodes	4.08	2.544
No of manic episode	3.50	2.234
No of depressive episode	0.49	0.889
Duration of episode	8.22	6.259
Inattention	0.62	1.427
Hyperactivity	0.98	1.1912
ODD	0.28	0.850
Conduct	0.24	0.879
Anxiety	0.62	0.954
Performance	0.43	0.886

This table showed the descriptive statistics of BPAD in our sample of cases. The mean age of presentation was 31.59years with standard deviation of 7.570years. The mean age of onset of illness was 22.88years with standard deviation of 6.102years. The mean number of episodes was 4.08 with standard deviation 2.544. The average numbers of manic and depressive episodes were 3.50 and 0.49.

TABLE 13: COMPARISON OF ILLNESS RELATED VARIABLES BETWEEN CASES WITH AND WITHOUT ADHD:

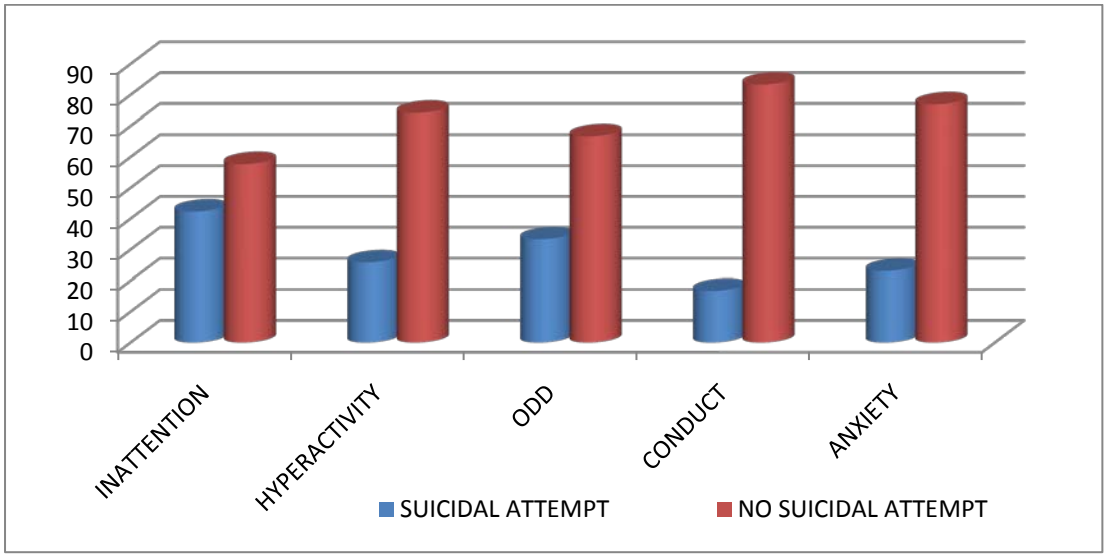
S No	Variable	With ADHD N=16 mean (S.D)	Without ADHD N=104	F	Sig
1	Age of onset	23.38 (6.323)	22.80 (6.095)	0.556	0.457
2	No of episodes	5.19 (3.311)	3.90 (2.379)	5.090	0.026
3	No of manic episodes	4.69 (3.177)	3.32(2.001)	6.780	0.010
4	No of depressive episode	0.50 (0.730)	0.49 (0.914)	0.120	0.730
5	duration of episode	10.06 (7.452)	7.93 (6.047)	2.977	0.087
6	Suicidal attempt	7	25		0.128



This table and chart showed the comparison of illness associated variables between bipolar patients with and without childhood ADHD. The number of diagnosable ADHD in childhood was 16. The mean age of onset was lower among those without ADHD in childhood. But this was not statistically significant. The number of episodes and the number of manic episodes were higher among those with ADHD. The duration of an episode was also high among ADHD group.

TABLE 14: ASSOCIATION OF VADPRS VARIABLES WITH SUICIDAL ATTEMPT

		Present	Absent	P value
Inattention	Present (26)	11 (42.3%)	15 (57.7%)	0.049
	Absent (94)	21 (22.3%)	73 (77.7%)	
Hyperactivity	Present (31)	8 (25.8%)	23 (74.2%)	1.000
	Absent (89)	24 (27.0%)	65 (73%)	
ODD features	Present (15)	5 (33.3%)	10 (66.7%)	0.541
	Absent (105)	27 (25.7%)	78 (74.3%)	
Conduct features	Present (12)	2 (16.7%)	10 (83.3%)	0.512
	Absent (108)	30 (27.8%)	78 (72.2%)	
Anxiety	Present (39)	9 (23.1%)	30 (76.9%)	0.661
	Absent (81)	23 (28.4%)	58 (71.6%)	

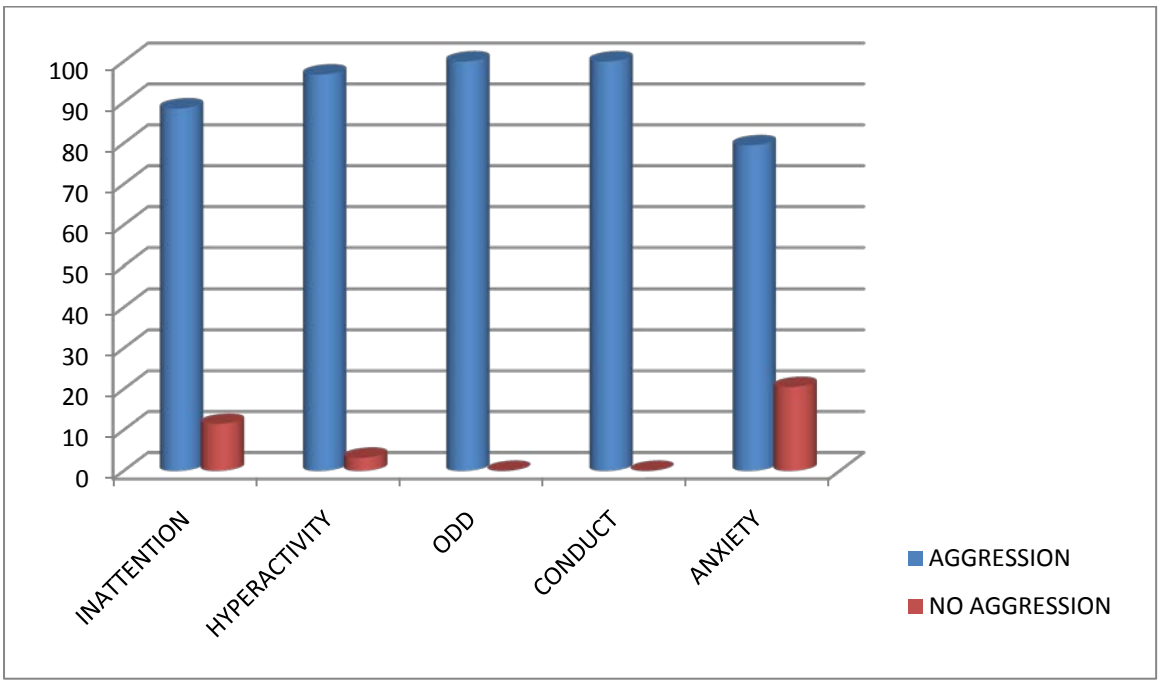


This table shows that prevalence of suicidal attempt among cases who has ADHD features in childhood. When we just compare suicidal attempt with each sub scale of VADPRS showed increase in suicidal attempt among those whom did not have ADHD features. When we calculated P value inattention component was significantly associated with suicidal attempt by preventing it.

TABLE 15: ASSOCIATION OF VADPRS

VARIABLES WITH AGGRESSION

		Present	Absent	P value
Inattention	Present (26)	23 (88.5%)	3 (11.5%)	0.124
	Absent (94)	69 (73.4%)	25 (26.6%)	
Hyperactivity	Present (31)	30 (96.8%)	1 (3.2%)	0.001
	Absent (89)	62 (69.7%)	27 (30.3%)	
ODD features	Present (15)	15 (100%)	0 (0%)	0.021
	Absent (105)	77 (73.3%)	28 (26.7%)	
Conduct features	Present (12)	12 (100%)	0 (0%)	0.006
	Absent (108)	80 (47.1%)	28 (25.9%)	
Anxiety	Present (39)	31 (79.5%)	8 (20.5%)	0.653
	Absent (81)	61 (75.3%)	20 (24.7%)	

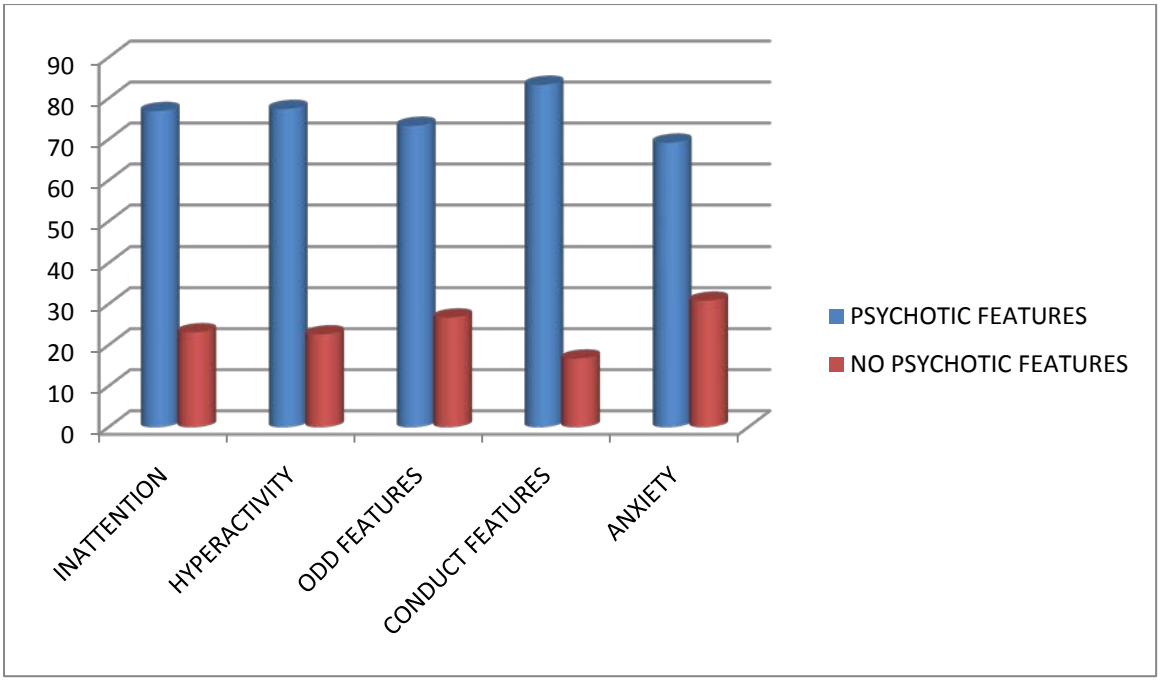


This table and chart showed the prevalence of aggression with each VADPRS sub scale. 2*2 tables created between each subscale and aggression. Odds ratio calculated and thus arrived to P value. The P value showed that aggression was significantly associated with those who had hyperactivity, ODD features and Conduct features.

TABLE 16: ASSOCIATION OF VADPRS

VARIABLES WITH PSYCHOTIC SYMPTOMS

		Present	**Absent**	**P value**
Inattention	Present (26)	20 (76.9%)	6 (23.1%)	0.472
	Absent (94)	63 (67%)	31 (33%)	
Hyperactivity	Present (31)	24 (77.4%)	7 (22.6%)	0.270
	Absent (89)	59 (66.3%)	30 (33.7%)	
ODD features	Present (15)	11 (73.3%)	4 (26.7%)	1.000
	Absent (105)	72 (68.6%)	33 (31.4%)	
Conduct features	Present (12)	10 (83.3%)	2 (16.7%)	0.339
	Absent (108)	73 (67.6%)	35 (32.4%)	
Anxiety	Present (39)	27 (69.2%)	12 (30.8%)	1.000
	Absent (81)	56 (69.1%)	25 (30.9%)	



This table and chart showed the prevalence of psychotic features among VADPRS sub scale. These showed psychotic features were increased in all the subscales. When we get P value no significant association found between those who had high VADPRS scores and those who did not had.

TABLE 17: CORRELATION BETWEEN VARIABLES OF VADPRS WITH CLINICAL FEATURES OF BPAD:

	Age of onset	**No of episodes**	**No of manic episodes**	**No of depressive episodes**	**duration of episodes**
Inattention	- 0.067	0.272**	0.221*	0.156	0.156
Hyperactivity	0.063	0.178	0.213*	- 0.097	0.073
ODD features	- 0.039	0.111	0.117	- 0.036	0.136
Conduct features	- 0.146	- 0.008	0.002	- 0.003	0.038
Anxiety	- 0.154	0.209*	0.142	0.105	0.072
Performances	0.051	- 0.003	0.000	- 0.049	- 0.037

**P<0.01, *P<0.05

This table shows Pearson correlation of ADHD features with clinical features of BPAD. Inattention showed significantly associated with number of episodes and number of manic episodes positively. Similarly hyperactivity significantly had positive correlation with number of manic episodes.

TABLE 18: CORRELATION BETWEEN VARIABLES OF VADPRS

	Inattention	**Hyperactivity**	**ODD**	**Conduct**	**Anxiety**
Inattention	1	0.181*	0.524*	.121	0.027
Hyperactivity	0.181*	1	0.320**	0.009	- 0.15
ODD features	0.524**	0.320**	1	- 0.338**	- 0.45
Conduct features	0.121	0.001	0.338**	1	- 0.129
Anxiety	0.027	- 0.015	- 0.045	- 0.129	1

**P<0.01, *P<0.05

Pearson correlation analysis between the sub scales of Vanderbilt parent rating scale was also performed. That shows that there was significant positive correlation between hyperactivity, inattention and ODD features. As ODD features increase there will be significant increase in inattention, hyperactivity and conduct domains

TABLE 19: PREVALENCE OF CHILDHOOD ADHD IN OUR SAMPLE

	WITH ADHD	WITHOUT ADHD
CASES	16	104
CONTROLS	NIL	30

We found that 16% of the sample with bipolar disorder had childhood diagnosis of ADHD. ADHD is diagnosed as per DSM 5 criteria using Vanderbilt parent rating scale.

CHART SHOWING PREVALENCE OF ADHD IN OUR SAMPLE

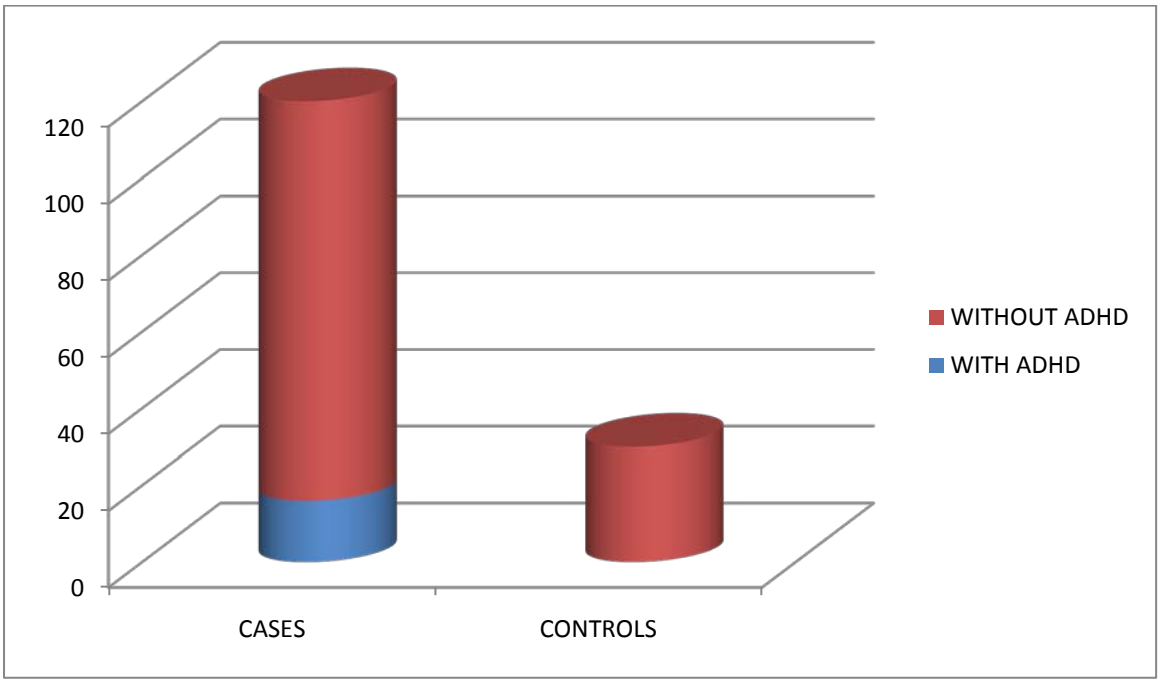
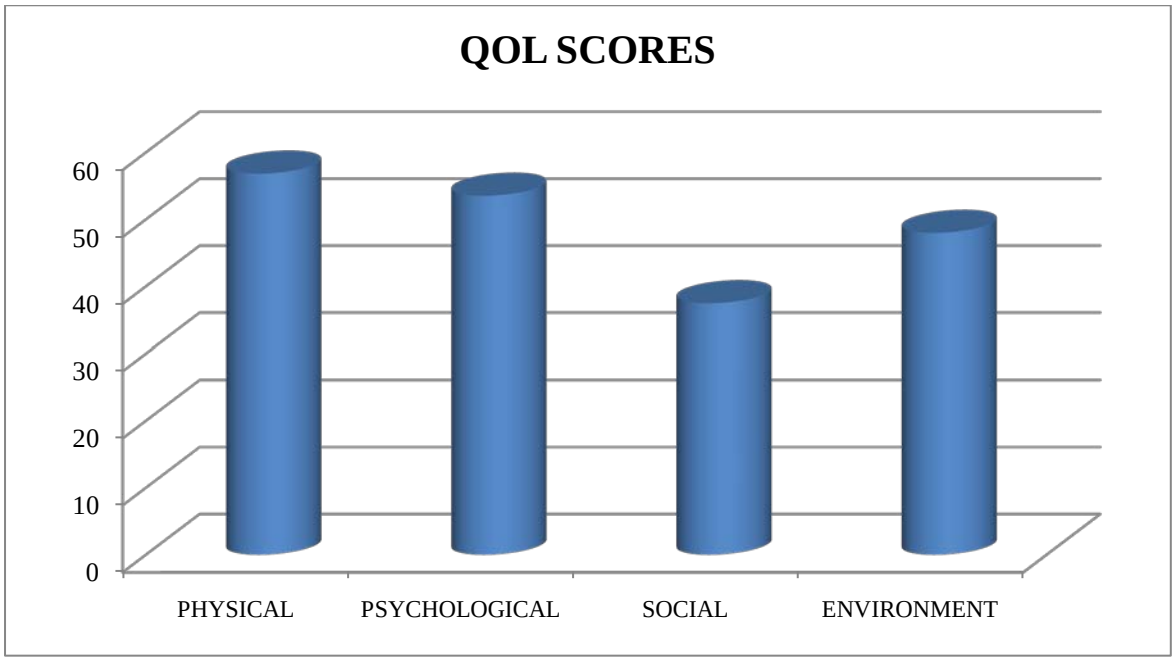


TABLE 20: QUALITY OF LIFE IN BPAD:

	Mean	**S.D**
Physical Health	56.83	9.583
Psychological	53.53	9.406
Social relationship	37.47	14.330
Environment	47.98	9.256



This table and chart showed the quality of life scores in WHO QOL BREF scale in various domains in BPAD subjects. The physical, psychological, social and environmental health was 56.83, 53.53, 37.47 and 47.98 respectively.

TABLE 21: PEARSON CORRELATION

ANALYSIS OF QUALITY OF LIFE IN BPAD:

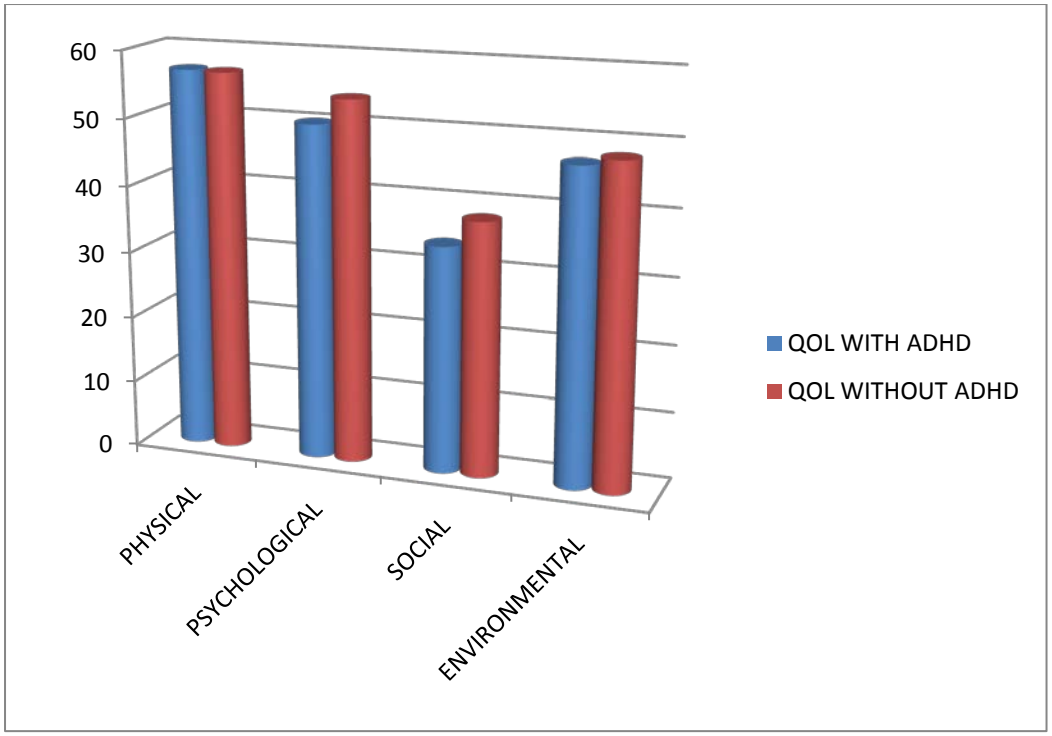
	Physical	**Psychological**	**Social**	**Environment**
Physical	1	0.440**	0.128	0.469**
Psychological	0.440**	1	0.092	0.506**
Social	0.128	0.092	1	0.109
Environment	0.469**	0.506**	0.109	1

**P<0.01, *P<0.05

The correlation analysis between various domains of quality of life in BPAD showed that physical health, psychological health and environmental health inter related in direct relationship.

TABLE 22: COMPARISON OF QOL IN BPAD WITH AND WITHOUT CHILDHOOD ADHD

	With ADHD N=16	**Without ADHD N=104**	**F**	**Significant**
Physical	56.94 (10.103)	56.81 (9.552)	0.542	0.463
Psychological	50.13 (9.972)	54.06 (9.225)	0.003	0.957
Social	33.94 (17.445)	38.01 (13.810)	0.818	0.368
Environment	47.06 (13.082)	48.12 (8.597)	5.911	0.017



This table and chart compared the quality of life among groups with and without ADHD in childhood. All domains of QOL decreased in subjects with ADHD in childhood. But these were not statistically significant.

TABLE 23: CORRELATION ANALYSIS OF ADHD FEATURES WITH QOL

	Physical	**Psychological**	**Social**	**Environment**
Conduct	- 0.006	0.087	- 0.057	0.109
ODD	- 0.007	- 0.070	0.161	0.004
Hyperactivity	- 0.004	- 0.060	- 0.005	- 0.145
Inattention	- 0.241**	- 0.185*	0.047	- 0.120

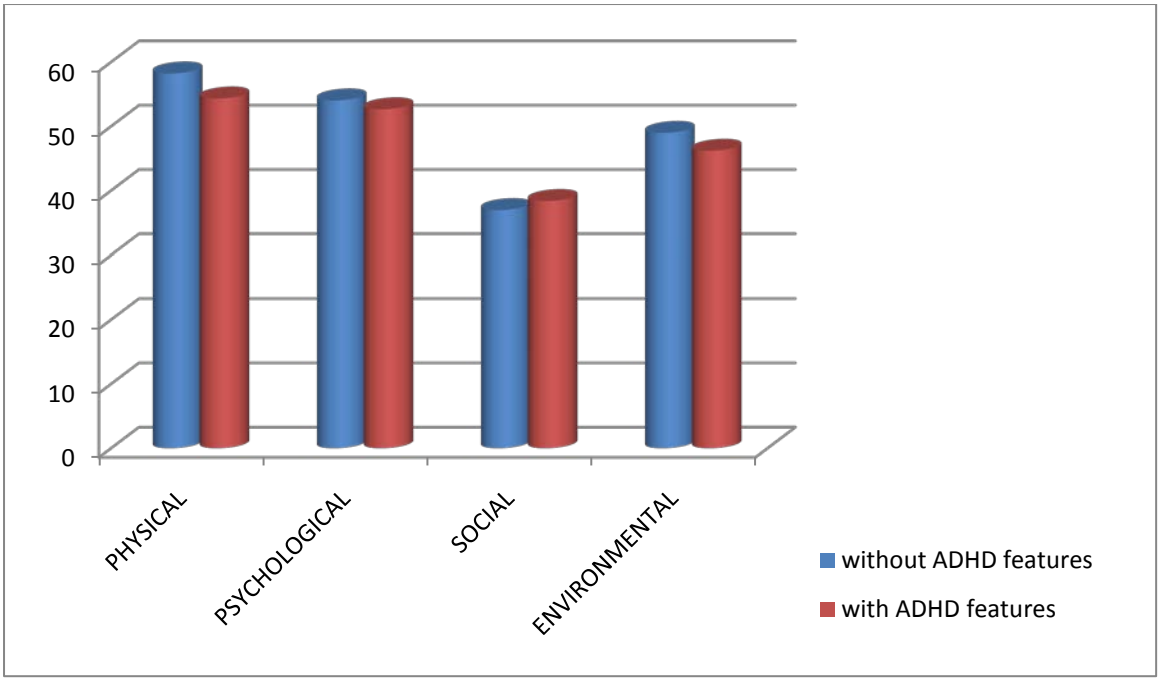
**P<0.01, *P<0.05

This table shows the correlation analysis of quality of life domains with VADPRS variables. It showed there was negative correlation of quality of life with all domains of VADPRS scores. But there was statistically significant negative correlation of physical and psychological health with inattention domain.

TABLE 24: COMPARISON OF WHO –

QOL VARIABLES WITH AND WITHOUT ADHD FEATURES

		N	**Mean**	**S.D**	**F**	**Sig**
Physical	No	77	58.22	8.655	7.488	0.007
	Yes	43	54.33	10.710		
Psychological	No	77	54.03	8.622	2.207	0.140
	Yes	43	52.65	10.719		
Social	No	77	36.96	12.961	5.424	0.022
	Yes	43	38.37	16.630		
Environment	No	77	48.97	7.379	11.642	0.001
	Yes	43	46.19	11.794		



This table and chart compares the quality of life in BPAD subjects with and without ADHD features in childhood. This showed there was statistically significant reduction in scores of physical and environmental health in those subjects with ADHD features.

DISCUSSION

The aim of our study was to find the prevalence of childhood externalizing factors in BPAD subjects and to find any relationship between clinical characteristics of bipolar affective disorder with childhood externalizing factors- by comparing the mean age of onset, number of episodes, number of manic episodes, suicidal attempt, aggression and psychotic features. As well as to compare the quality of life by WHO QOL BREF scale among BPAD with and without ADHD symptoms.

The study sample consists of 120 cases of bipolar disorder with their parent to obtain childhood history. We took 30 healthy controls to asses ADHD features in general population.

RESULTS IN SOCIODEMOGRAPHIC DATA:

The mean age of onset of BPAD in our sample was 22.88 years with standard deviation of 6.102 years. This is consistent with the large population study done by Merikangas et al in 11 countries in Asia, Europe and America. It included around 61,392 adults. It was published in the year 2011. They concluded that more than half of the patients reported the onset of illness before the age of 25 years. They stated that mean age for BPAD I was 18.4 ± 0.7 years[3].

This mean age of onset also similar to a report given by Bruno Muller in Germany that age of onset usually peaks between 15 and 24 years[234].

In our sample we found BPAD was more among males, married and those belonging to Hinduism lower educational status, lower social economic status and in urban background. This was consistent with the study done by SanthoshRamdurg et al in Karnataka, India. They concluded that BPAD occur commonly in young, usual age of onset range from 12 – 70 with mean age 27.38 ± 12.7 years. Similarly they stated those who presented BPAD were married and male gender. The reason what they state in their study hold good in our setting too that India is probably male dominated society and they are the sole bread winner for their family. Mental illness in males affects the family entirely; hence treatment seeking is more among males than females[1].

Also they stated that prevalence of BPAD was high among persons with lower education, housewives, farmer and those from rural background. In our student we found more prevalence among urban. This may be due to location of our centre which caters more of urban population.

RESULTS ON ILLNESS RELATED VARIABLES:

Out of 120 BPAD sample, 32 had history of suicidal attempt. This amounts for 26.3% approximately 1 in every 4 persons. This was very much corroborated with the study done by Merikangas et al in 2011; they also stated that one in every four persons with BPAD – 1 reported a suicidal attempt history. They also stated that as the severity of bipolar illness increases, suicidal behaviour also increases[3].

On comparing the number of episodes, average number of manic episodes was 3.50(2.544) and that of depression is 0.49(0.889). From that we came to know that manic episodes outnumber the depressive episode. This was in par with a meta – analysis done by Subramanian et al in Asian countries on the course of Bipolar illness in Asia. They also concluded that episodes of Mania predominates the course of bipolar illness in Asian and Middle East regions[235].

Similarly the study done by Santhosh Ramdurg et al stated that mean number of episode were 2.1 with range 1 – 6 for depression and 3.7 with range 1 to 25 for mania. And also the mean duration of episode was 116.2 days (~ 4 months) for depression and 109.3 days (~ 3½ months) for mania. The average duration reported by previous studies was 3 – 6 months. In our sample also we found the mean number of manic episode was 3.50 ± 2.234 and for depression 0.49 ± 0.889. And the duration of episode was 8.22 ± 6.259. They all fall within the range of those studies[1].

PREVALENCE OF CHILDHOOD ADHD IN BPAD

We found that the prevalence of ADHD symptoms in VADPRS scale in various domains in our sample were 32.5% had anxiety symptoms, 25.8% had hyperactivity symptoms, 21.7% had inattention symptoms, 12.5% had ODD features and 10% had conduct features. Out of 120, 43 had some features of ADHD but not fulfilling for the diagnosis of ADHD. We could find any studies to compare these findings in other settings.

The important finding in our study was 16 out of 120 sample of BPAD patients had ADHD in their childhood. This accounts for 13.3%. The STEP-BD study discovered that 9.5% in their sample had comorbid ADHD. Another study done by Ryden et al which was published in the year 2009. They interviewed a total of 159 bipolar patients. They found that 45 (28.3%) had childhood ADHD. And also they found that those who had ADHD in childhood have earlier onset of illness, more episodes and more interpersonal violence and psychotic features[226]. We found that numbers of episodes were more among childhood ADHD group. But there was no statistical difference in the age of onset of illness. Similarly when we compare self-reported aggression, those who had hyperactive and ODD features had statistically significant increased aggression. There was no statistically significant association between ADHD features and psychotic features.

In a meta-analysis done by Subramanian et al studied the Bipolar disorder and behavioral disorder in childhood period. They noted that ADHD in adolescents particularly with conduct and ODD had higher risk of developing BPAD. Similarly they found comorbid ADHD induces early onset of BPAD with increase in mood episodes, substance use disorders, comorbid anxiety and decrease the individual's social functioning[236].

RESULTS ON QUALITY OF LIFE

WHO – QOL BREF scale was administered to our sample of 120 subjects. This scale was not given to healthy controls as our main aim was to compare QOL between subjects with and without ADHD in BPAD. The overall mean QOL scores in various domains were physical domain – 56.83 (9.583), psychological domain – 53.53 (9.406), social domain – 37.47 (14.33), Environmental domain – 47.98 (9.256). The mean QOL in various domains in healthy subjects were taken as reference from a study done by Brissos et al in 2008 among 55 euthymic bipolar patients. They were physicals domain – 78.76 (16.14) and environmental domain – 67.84 (9.78). Hence when compared with this score in healthy subjects, quality in life in bipolar illness were affected grossly in all domains[236].

Also we compared quality of life between the groups who had ADHD features in childhood (N=43) and also between those who onset diagnostic criteria for ADHD (N=16) When we compare QOL among BPAD patients with and without ADHD features, we found that there was statistically significant reduction in scores in physical, social and environmental domains of QOL among the subjects who had ADHD features in childhood. But when compare subjects who met diagnostic criteria for ADHD in childhood with those who not had, we found that these was no significant difference in quality of life scores across all domains thought both groups score less on all domains.

Similarly when we did correlation analysis of WHO QOL variables with ADHD features, those who had inattention scores, they were negatively correlated particularly in physical and psychological domains of WHO – QOL. Other scores were also has negative correlation but this one was statistically significant. Other findings are conduct features has negative correlation with physical and social domains, ODD features has negative correlation with physical and psychological domains, hyperactivity scores has negative correlation with all the domains of WHO QOL.

Atlast when we inter correlate the domains of WHO QOL bipolar patients, we found statistically significant positive correlation between physical, psychological and environment domains of QOL.

CONCLUSION

- The prevalence of diagnosable ADHD during the childhood period of patients with bipolar affective disorder was found to be 13.3% in our study.
- The prevalence of ADHD features but not fulfilling the criteria was found to be 35.83%.
- This prevalence of ADHD was significantly higher among cases than controls.
- When compared BPAD subjects with and without ADHD has statistically significant increased frequency of episodes and more number of manic episodes.
- Quality of life was found to be lower among BPAD subjects.
- On comparing quality of life with and without ADHD by WHO-QOL BREF scale, we found that there was statistically significant reduction in environmental domain rather than physical, psychological and social domains.
- There was significant increased association between inattention sub scale and suicidal attempts.
- There was significant direct association between hyperactive and ODD sub scales with aggression.

- Regarding socio demographics, BPAD was common among male gender, those belong to lower socio economic status and from urban background. The mean age of onset illness was 22.88years, average number of episodes were 4.08, the average numbers of manic and depressive episodes were 3.50 and 0.49 respectively.

STRENGTH OF THE STUDY

1. The study was conducted in a tertiary care hospital with good maintenance of records, with quantifying the severity of illness by scales in the longitudinal follow up.

2. The sample is matched for age, sex, socioeconomic status.

3. The scales used in the study, has good test-retest and inter rater reliability.

4. The BPAD patients were taken under remission or euthymia to minimize the under or over reporting of childhood events due to current mood symptoms.

LIMITATIONS

1. This is retrospective study, so more chances for recall bias in participants is present.

2. It is a case –control study done at one time, rather than a longitudinal study.

3. The study was conducted in a tertiary care hospital, predominantly people belonging to low socioeconomic status and have low education level, so results obtained cannot be generalized to the bipolar patient as a whole as well as to the community setting.

4. The sample size particularly controls was small so more chances for type II errors. Larger sample size is required for more refined analysis and might have revealed more differences between groups.

5. The interviewer was not blinded to the subjects.

FUTURE DIRECTIONS

1. The childhood Attention deficit hyperactive disorder does not lead only to mood disorder in adulthood. It may also lead to anxiety disorder, substance abuse and psychosis hence studying the entire psychological sequelae will benefit more.

2. The identification of neurobiological substrates, involved in the childhood ADHD and BPAD would lead to the development of more effective treatments for bipolar disorder.

3. Identification of childhood ADHD in bipolar patients, with more severe illness will help in planning personalizes treatment strategies so the childhood ADHD should be routinely assessed in the bipolar patients in the clinical practice.

4. Longitudinal study with further follow up at periodic intervals will show better results.

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A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMTOMS IN ADULT BIPOLOR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME

SI NO: OP NO: IP NO: UNIT: DATE:

NAME: AGE/SEX: EDUCATION:

OCCUPATION: INCOME: SOCIOECONOMIC: STATUS

MARRIED: ADDRESS:

PHONE NUMBER:

RELIGION: LANGUAGE:

NAME OF THE INFORMANT: RELATIONSHIP:

NO OF YEARS LIVING WITH THE PATIENT:

FAMILY H-O:

1. MINI PLUS:
2. YOUNG MANIA RATING SCALE:
3. HAMILTON RATING SCALE FOR DEPRESSION:
4. VANDERBILT ADHD ASSESSMENT SCALE:
5. ADMINISTRATION OF WHO QUALITY OF LIFE FOR PATIENTS TO ASSESS OUTCOME:

6. AGE OF ONSET:

7. NO OF EPISODES:

8. DURATION OF ILLNESS:

9. SUICIDE ATTEMPTS: IF YES - NO OF EPISODES:

10. PSYCHOTIC EPISODES: HALLUCINATION/DELUSIONS

11. AGGRESSIONS:

12. MEDICATIONS ONLY ON MOOD STABILISER/ WITH ANTIPSYCHOTICS

13. COMORBID SUBSTANCE USE:

INFORMATION TO PARTICIPANTS

Title:

"A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME "

Principal Investigator:

Dr. G. SURESH
2nd year MD Psychiatry Postgraduate,
INSTITUTE OF MENTAL HEALTH,
Madras Medical College,
Chennai – 600 010.

Participant Details:

Name : **Age/ Sex:**

Address: **Telephone:**

Place of Study: INSTITUTE OF MENTAL HEALTH, MMC, Chennai.

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

What is the purpose of research?

Bipolar affective disorder is a serious,debilitating disease . This study aims to assess the relationship between childhood attention deficit hyperactivity symptoms and adult bipolar disorder . We have obtained permission from the Institutional Ethics Committee.

The study design:

You will be interviewed while you are attending our hospital.

Study procedures:

We will be interviewing you with various questionnaires. You will be required to spare roughly one and half an hour for a one-time interview.

Possible benefits to other people:

The results of research may provide benefits to the society in terms of advancement of medical knowledge and / or therapeutic benefit to future patients.

Confidentially of the information obtained from you:

You have the right to confidentially regarding the privacy of your medical information (personal details, results of physical examinations, investigations, and your medical history). By signing this document, you will be allowing the research team investigations, other study personnel and the Institutional Ethics Committee, to view your data, if required. The information from this study, if published in scientific journals or presented at scientific meetings, will not reveal your identity.

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

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

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

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

Signature of Investigator: Signature of Participant

Date : Date :

INFORMED CONSENT FORM

Title:

"**A STUDY OF CHILDHOOD ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN ADULT BIPOLAR AFFECTIVE DISORDER PATIENTS AND THEIR OUTCOME** "

Name of the Participant:

Name of Principal Investigator: **Dr. SURESH. G**

Name of Institution: Institute of Mental Health, Chennai.

I _____(name of participant), have read the information in this form or it has been read out to me. I was free to ask any questions and they have been answered. I am exercising my free power of choice, hereby voluntarily give my consent to be included as a participant in this study.

1) I have read and understood this consent form and the information provided to me.
2) I have had the consent document explained to me.
3) I have been explained about the nature of the study.
4) I have been explained about my rights and responsibilities by the investigator.
5) I have informed the investigator of all the treatments I am taking or have taken in the past, including any native (alternative) treatments.
6) I am aware of the fact that I can opt out of the study at any time without having to give any reason and this will not affect my future treatment in the hospital.
7) I hereby give permission to the investigators to release the information obtained from me as a result of participation in this study to the regulatory authorities, Government agencies, and ethics committee. I understand that they may inspect my original records.
8) I understand that my identity will be kept confidential if my data are publicly presented.
9) I have had my questions answered to my satisfaction.
10) I consent voluntarily to participate as a participant in the research study.

I am aware, that I can opt out of the study, I should contact the investigators. By signing this consent from, I attest that the information given in this document has been clearly explained to me and understood by me. I will be given a copy of this consent document.

ஆராய்ச்சி தகவல் தாள்

ஆராய்ச்சி தலைப்பு : **வயது வந்தோர் இருதுருவ மனநிலை கோளாறு உள்ளோர்க்கு காணப்பட்ட குழந்தைப் பருவ நிலைகொள்ள கவனச்சிதைவு நிலையின் அறிகுறிகள் மற்றும் அவர்களின் விளைவுகள் பற்றிய ஆய்வு**

ஆராய்ச்சியாளர் : மரு. **க. சுரேஷ்**

பங்குகொள்பவர் பெயர் :

இடம் : அரசு மனநல காப்பகம், சென்னை- 600010

தாங்கள் இந்த ஆராய்ச்சியில் பங்குபெறுவதற்கேற்ப தகவல்கள் கொடுக்கப்பட்டுள்ளது. தங்கள் சந்தேகங்களை கேட்டு அறிந்து கொள்ளலாம்.

ஆராய்ச்சியின் நோக்கம் :
வயது வந்தோர் இருதுருவ மனநிலை கோளாறு உள்ளோர்க்கு காணப்பட்ட குழந்தைப் பருவ நிலைகொள்ள கவனச்சிதைவு நிலையின் அறிகுறிகள் பற்றியஆய்வு ஒன்று மேற்கொள்கிறோம்.

ஆராய்ச்சி முறை :

எங்களுடைய மருத்துமனையை அணுகும் பொழுது உங்கள் விருப்பத்துடன் நேர்காணல் செய்யப்படும். நீங்களும் இந்த ஆராய்ச்சியில் பங்கேற்க விரும்புகிறோம்.

இந்த ஆய்வின் முடிவுகளை ஆராய்ச்சியின் போது அல்லது ஆராய்ச்சியின் முடிவின் போது தங்களுக்கு அறிவிக்கப்படும் என்பதையும் தெரிவித்துக்கொள்கிறோம்.

இந்த ஆராய்ச்சியில் பங்க்கேற்பது தங்களுடைய விருப்பத்தின் பேரில் தான் இருக்கிறது. மேலும் நீங்கள் எநநேரமும் இந்த ஆராய்ச்சியில் இருந்து பின் வாங்கலாம் என்பதையும் தெரிவித்துக்கொள்கிறோம்.

முடிவுகளை அல்லது கருத்துகளை வெளியிடும் போதோ அல்லது ஆராய்ச்சியின் போதோ தங்களது பெயரையோ அல்லது அடையாளங்களையோ வெளியிட மாட்டோம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

ஆராய்ச்சியாளர் கையொப்பம்: பங்கேற்பாளர் கையொப்பம்:

இடம் & தேதி :

ஆராய்ச்சி ஒப்புதல் கடிதம்

ஆராய்ச்சி தலைப்பு:

வயது வந்தோர் இருதுருவ மனநிலை கோளாறு உள்ளோர்க்கு காணப்பட்ட குழந்தைப் பருவ நிலைகொள்ள கவனச்சிதைவு நிலையின் அறிகுறிகள் மற்றும் அவர்களின் விளைவுகள் பற்றிய ஆய்வு

பங்கு கொள்பவர் பெயர்:

ஆராய்ச்சியாளர் : மரு. **க. சுரேஷ்**

மருத்துவ நிலையம்: அரசு மனநல காப்பகம், சென்னை- 600010

…….. எனும்
நான் எனக்கு கொடுக்கப்பட்ட தகவல் தாளினை படித்து புரிந்துகொண்டேன். என்னுடைய சுய நினைவுடனும் மற்றும் முழு சுதந்திரத்துடனும் இந்த ஆராய்ச்சியில் என்னை சேர்த்துக்கொள்ள சம்மதிக்கிறேன்.

எனக்கு இந்த ஆராய்ச்சியின் ஒப்புதல் படிவம் விளக்கப்பட்டது.

எனக்கு இந்த ஆராய்ச்சியின் நோக்கமும், விவரங்களும் விளக்கப்பட்டது.

எனக்கு என்னுடைய உரிமைகளை பற்றி விளக்கப்பட்டது.

நான் இதுவரை எடுத்துக்கொண்ட அனைத்து மருத்துவ முறைகளைப் பற்றி தெரிவித்திருக்கிறேன்.

இந்த ஆராய்ச்சியில் இருந்து எநநேரமும் பின் வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்துகொண்டேன்.

என்னை பற்றீய எந்த தகவல்களும், அடையாளமும் வெளியிடப்பட மாட்டாது என்பதை புரிந்துகொண்டேன்.

என்னை பற்றிய எந்த தகவல்களும், அடையாளமும் வெளியிடப்பட மாட்டாது என்பதை நான் புரிந்துகொண்டேன். என்னுடைய முழு சுதந்திரத்துடனும் இந்த ஆராய்ச்சியில் என்னை சேர்த்துக்கொள்ள சம்மதிக்கின்றேன்.

பங்கேற்பாளர் பெயர் மற்றும்
கையொப்பம்……தேதி:……..

ஆராய்ச்சியாளர் பெயர் மற்றும் கையொப்பம் ..... தேதி : .....

MINI PLUS

M.I.N.I. Plus 5.0.0

Patient's Initials: ☐☐☐ Patient's ID Number (PID): ☐☐☐☐☐☐

Data Entrant (initials): ☐☐☐ Date (Day/Month/Year) ☐☐ / ☐☐ / ☐☐☐☐

Rater's Initials: ☐☐☐

MODULES	TIME FRAME	DSM-IV	ICD-10	Page	Meets Criteria
A. Major Depressive Episode	Current (2 weeks) Recurrent	296.20-296.26 single 296.30-296.36 recurrent	F32.x F33.x	3 4	☐
Mood Disorder due to a Medical Condition	Current Past	293.83 293.83	F06.xx none	4	☐
Substance Induced Mood Disorder	Current Past	29x.xx 29x.xx	none none		☐
MDE with Melancholic	Current (2 weeks)	296.20-296.26 single	F32.x	5	☐
B. Dysthymia	Current (past 2 years) Past	300.4 300.4	F34.1 F34.1	6	☐
C. Suicidality	Current (past month) Risk: ____ Low ____Medium ____High	none	none	7	☐
D. Manic Episode	Current Past	296.00-296.06 296.00-296.06	F30.x-F31.9 F30.x-F31.9	8	☐
Hypomanic Episode	Current Past	296.80-296.89 296.80-296.89	F31.8-F31.9/F34.0 F31.8-F31.9/F34.0	8	☐
Bipolar II Disorder	Current Past	296.89 296.89	F31.8 F31.8		☐
Manic Episode due to a Medical Condition	Current Past	293.83 293.83	F06.30 F06.30		☐
Hypomanic Episode due to a Medical Condition	Current Past	293.83 293.83	none none		☐
Substance Induced Manic Episode	Current Past	291.8-292-84 291.8-292-84	none none		☐
Substance Induced Hypomanic Episode	Current Past	291.8-292.84 291.8-292.84	none none		☐
E. Panic Disorder	Current (past month)	291.8-292.84	none	11	☐
Anxiety Disorder with Panic due to a General Med. Condition	Current	293.89	F06.4	12	☐
Substance induced Anxiety Disorder with Panic Attacks	Current	291.8-292.89	none	12	☐
F. Agoraphobia	Current	300.22	F40.00	13	☐
G. Social Phobia (Soc.AnxDis.)	Current(past month)	300.23	F40.1	14	
H. Specific Phobia	Current	300.3	F42.8	15	☐
OCD due to general medical condition	Current	293.89	F06.4	16	☐
Substance induced OCD	Current	291.8-292.89	none	16	
I. Obsessive-Compulsive Disorder	Current (past month)	300.3	F42.8		☐
J. Posttraumatic Stress Disorder	Current (past month)	309.81	F43.1	17	☐
K. Alcoholic Dependence	Past 12 months	303.9	F10.2x	18	☐
Alcoholic Dependence	Lifetime	303.9	F10.2x	19	☐
Alcoholic Abuse	Past 12 months	305.9	F10.1	18	☐
Alcoholic Abuse	Lifetime	305.00	F10.1	18	☐
L. Substance Dependence (non-alcohol)	Past 12 months	304.00-.9/305.20-.90	F11.0-F19.1	20	☐
Substance Dependence(non-alcohol)	Lifetime	304.00-.9/305.20-.90	F11.0-F19.1	20	☐
M. Psychotic Disorders	Lifetime Current	295.10-295.90//297.1/ 297.3/297.81/293.82/ 293.89/298.8/298.9	F20.xx.F29	24 24	☐
Mood Disorder with Psychotic Features	Current	296.24	F32.3/F33.3	29	☐

MODULES	TIME FRAME	DSM-IV	ICD-10	Page	Meet Criteria
Schizophrenia	Current Lifetime	295.10-295.60 295.10-295.60	F20.xx F20.xx		☐
Schizoaffective Disorder	Current Lifetime	295.70 295.70	F25..x F25.x		☐
Schizophreniform Disorder	Current Lifetime	295.40 295.40	F20.8 F20.8		☐
Brief Psychotic Disorder	Current Lifetime	298.8 298.8	F23.80-F23.81 F23.80-F23.81		☐
Delusional Disorder	Current Lifetime	297.1 297.1	F22.0 F22.0		☐
Psychotic Disorder due to a General Medical Condition	Current Lifetime	293.xx 293.xx	F06.0-F06.2 F06.0-F06.2		☐
Substance Induced Psychotic	Current	291.5-292.12	none		☐
Disorder	Lifetime	291.5-292.12	none		☐
Psychotic Disorder NOS	Current Lifetime	298.9 298.9	F29 F29		☐
Mood Disorder with Psychotic	Lifetime		F31.X3/F31.X2/		☐
Features			F31.X5		☐
Mood Disorder NOS	Lifetime	296.90	F39		☐
Major Depressive Disorder with Psychotic Features	Current Past	296.24 296.24	F33.X3 F33.X3		☐
Bipolar I Disorder with Psychotic Features	Current Past	296.04-296.64 296.04-296.64	F31.X2/F31.X5 F31.X2/F31.X5		☐
N. Anorexia Nervosa	Current (past 3 months)	307.1	F50.0	30	☐
O. Bulimia Nervosa	Current (past 3 months)	307.51	F50.2	32	☐
Bulimia Nervosa Purging Type	Current	307.51	F50.2		☐
Bulimia Nervosa Non-Purging Type	Current	307.51	F50.2		☐
Anorexia Nervosa, Binge Eating/	Current	307.1	F50.0		☐
Purging Type					☐
Anorexia Nervosa, Restricting Type	Current	307.1	F50.0		☐
P. Generalized Anxiety Disorder	Current (past 6 months)	300.02	F41.1	34	☐
Generalized Anxiety Disorder due to a General Medical Condition	Current	293.89	F06.4		☐
Substance induced GAD	Current	291.8-292.89	none		☐
Q. Antisocial Personality Disorder	Lifetime	301.7	F60.2	36	☐
R. Somatization Disorder	Lifetime Current	330.81	F45.0	37	☐
S. Hypochondriasis	Current	300.7	F45.2	38	☐
T. Body Dysmorphic Disorder	Lifetime	300.7	F45.2	39	☐
U. Pain Disorder	Current	300.89/307.8	F45.4	39	☐
V. Conduct Disorder	Past 12 months	312.8	F91.8	40	☐
W. Attention Deficit/Hyperactivity Disorder (children/adolescents)	Past 6 months	314.00/314.01	F90.0/F90.9/ F98.8	41	☐
Attention Deficit Hyperactivity Disorder (adults)	Lifetime	314.00/314.01	F90.0/F98.8	42	
X. Adjustment Disorders	Current	309.xx		43	☐
Y. Premenstrual Dysphoric Disorder	Current			44	☐
Z. Mixed Anxiety-Depressive Disorder	Current			45	☐

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

For patients who appear psychotic before starting the interview, or who are suspected to have schizophrenia, please adopt the following order of administration of modules:

1) Part 1 of module M (psychotic disorders M1-M18).
2) Sections A-D (depression to (hypo)manic episode).
3) Part 2 of module M (psychotic disorders M19-M23).
4) Other modules in their usual sequence.

If module M has already been explored and psychotic symptoms have been identified (M1 to M10b), examine for each positive response to the following questions if the depressive symptoms are not better explained by the presence of a psychotic disorder and code accordingly.

A. MAJOR DEPRESSIVE EPISODE

A1 a Have you **ever** been consistently depressed or down, most of the day, nearly every day, for at least two weeks? O No O Yes

IF **A1a = YES**:

b Have you been consistently depressed or down, most of the day, nearly every day, for the past 2 weeks? O No O Yes

A2 a Have you **ever** been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time over at least 2 weeks? O No O Yes

IF **A2a = YES**:

b In the past 2 weeks, have you been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time. O No O Yes

=>

IS **A1a** OR **A2a** CODED YES? O No O Yes

IF CURRENTLY DEPRESSED (A1b OR A2b = YES): EXPLORE ONLY CURRENT EPISODE.
IF **NO:** EXPLORE THE MOST SYMPTOMATIC PAST EPISODE.

A3 **Over the two week period when you felt depressed or uninterested,**

	Current Episode	Past Episode
a Was your appetite decreased or increased nearly every day? If unclear, did your weight decrease or increase without trying intentionally (i.e., by +/-5% OF BODY WEIGHT OR +/-8 LBS. OR +/-3.5 KGS. PERSON IN A MONTH)? IF **YES** TO EITHER (increase/decrease), CODE **YES**	O No O Yes	O No O Yes
b Did you have trouble sleeping nearly every night (*difficulty falling asleep, waking up in the middle of the night, waking early in the morning*) or sleeping excessively?	O No O Yes	O No O Yes
c Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	O No O Yes	O No O Yes
d Did you feel tired or without energy almost every day?	O No O Yes	O No O Yes
e Did you feel worthless or guilty almost every day?	O No O Yes	O No O Yes

IF A3e = YES ASK FOR AN EXAMPLE.
THE EXAMPLE IS CONSISTENT WITH A DELUSIONAL O No O Yes

	Current Episode	Past Episode
f Did you have difficulty concentrating or making decisions almost every day?	O No O Yes	O No O Yes
g Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?	O No O Yes	O No O Yes
A4 TO MEET FOR A CURRENT OR PAST EPISODE: AT LEAST ONE SYMPTOM OF **A1** OR **A2** PLUS **4** OF A3 ARE CODED **YES;** OR BOTH **A1 AND A2 PLUS 3** OR MORE ARE CODED **YES** FOR **A3*.**	O No O Yes	=> O No O Yes

IF **A4** IS CODED **NO** FOR CURRENT EPISODE ONLY THEN EXPLORE **A3a - A3g** FOR MOST SYMPTOMATIC PAST EPISODE.

Best estimate of duration (in weeks) of the current episode to date from onset of first signs of change in usual condition to time of evaluation. ☐☐☐

A5 Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way? => O No O Yes

A6 Are the symptoms due entirely to the loss of a loved one (bereavement) and are they similar in severity, level of impairement, and duration to what most others would suffer under similar circumstances? If so, this is uncomplicated bereavement.

HAS UNCOMPLICATED BEREAVEMENT BEEN RULED OUT? => O No O Yes

A7 a Were you taking any drugs or medicines just before these symptoms began?

O No O Yes

b Did you have any medical illness just before these symtpoms began?

O No O Yes

IN THE CLINICIAN'S JUDGMENT: ARE EITHER, **A7a** or **A7b**, LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S DEPRESSION? IF NECESSARY ASK

A7 (SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT? O No O Yes O Uncertain

A8 CODE **YES** IF **A7(SUMMARY)=YES** OR **UNCERTAIN.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

O No O Yes

Major Depressive Episode

Current O
Past O

A9 CODE **YES** IF **A7b=YES** AND **A7(SUMMARY) = NO.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

O No O Yes

Mood Disorder Due to a General Medical Condition

Current O
Past O

A10 CODE **YES** IF **A7a=YES** AND **A7(SUMMARY)= NO.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

O No O Yes

Substance-Induced Mood Disorder

Current O
Past O

CHRONOLOGY

A11 How old were you when you first began having symptoms of depression? : ☐☐ years

A12 During your lifetime, how many distinct times did you have these symptoms of depression (daily for at least 2 weeks)? ☐☐☐

MAJOR DEPRESSIVE EPISODE WITH MELANCHOLIC FEATURES

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

IF THE PATIENT CODES POSITIVE FOR A CURRENT MAJOR DEPRESSIVE EPISODE (A8=YES, CURRENT) EXPLORE THE FOLLOWING:

A13

a IS **A2b** CODED **YES**? ○ No ○ Yes

b During the most severe period of the current depressive episode, did you lose your ability to respond to things that previously gave you pleasure, or cheered you up? ○ No ○ Yes
IF NO, DOUBLE CHECK ANSWER BY ASKING:
When something good happens, does it fail to make you feel better, even temporarily?

=>

IS EITHER **A13a** OR **A13b** CODED YES? ○ No ○ Yes

A14 **Over the past two week period, when you felt depressed and uninterested:**

a Did you feel depressed in a way that is different from the kind of feeling you experienced when someone close to you dies? ○ No ○ Yes

b Did you regularly feel worse in the morning, almost every day? ○ No ○ Yes

c Did you wake up at least 2 hours before the usual time of awakening and have difficulty getting back to sleep, almost every day? ○ No ○ Yes

d IS A3c CODED YES (PSYCHOMOTOR RETARDATION OR AGIATION)? ○ No ○ Yes

e IS A3a CODED YES FOR ANOREXIA OR WEIGHT LOSS? ○ No ○ Yes

f Did you feel excessive guilt or guilt out of proportion to the reality of the situation? ○ No ○ Yes

ARE **3 OR MORE A14 ANSWERS CODED YES**?

○ No ○ Yes

Major Depressive Episode with Melancholic Features Current

IF **A8** OR **A9** OR **A10 = YES**, SKIP TO SUICIDALITY => **PLEASE NOTE: This section is for administrative purposes only**

SUBTYPES OF MAJOR DEPRESSIVE EPISODE (Mark all that apply)

Mild	O	296.21/296.31
Moderate	O	296.22/296.32
Severe without psychotic features	O	296.23
Severe with psychotic features	O	296.24
In partial remission	O	296.25
In full remission	O	296.26
Chronic	O	
With catatonic features	O	
With melancholic features	O	
With atypical features	O	
With postpartum onset	O	
With seasonal pattern	O	
With full interepisode recovery	O	
Without full interepisode recovery	O	

B. DYSTHYMIA

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

If symptoms <u>currently</u> meet criteria for major depressive episode, <u>do NOT</u> explore <u>current</u> dysthymia, but <u>do</u> explore <u>past</u> dysthymia.

Make sure that the past dysthymia explored is not one of the past major depressive episodes, and that it was separated from any prior major depressive episode by at least 2 months of full remission. [APPLY THIS RULE ONLY IF YOU ARE INTERESTED IN EXPLORING DOUBLE DEPRESSION.]

SPECIFY WHICH TIME FRAME IS EXPLORED BELOW: O Current O Past

B1	Have you felt sad, low or depressed most of the time for the last two years? (OR IF EXPLORING PAST DYSTHYMIA: "In the past, did you every feel sad, low or depressed for 2 years continuously?")	=> O No	O Yes
B2	Was this period interrupted by your feeling OK for two months or more?	=> O No	O Yes
B3	**During this period of feeling depressed most of the time:**		
	a Did your appetite change significantly?	O No	O Yes
	b Did you have trouble sleeping or sleep excessively?	O No	O Yes
	c Did you feel tired or without energy?	O No	O Yes
	d Did you lose your self-confidence?	O No	O Yes
	e Did you have trouble concentrating or making decisions?	O No	O Yes
	f Did you feel hopeless?	O No	O Yes
	ARE **2** OR MORE **B3** ANSWERS CODED **YES?**	=> O No	O Yes

B4 Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way? => O No O Yes

B5 Were you taking any "street" drugs or medicines just before these symptoms began?
Did you have any medical illness just before these symptoms began?
IN THE CLINICIAN'S JUDGMENT: ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S DEPRESSION?

HAS AN ORGANIC CAUSE BEEN RULED OUT? O No O Yes

IS **B5** CODED **YES?**

O No O Yes

DYSTHYMIA

O Current

O Past

CHRONOLOGY

B6 How old were you when you first began having symptoms of 2 years of continuous depression? ☐☐ years

C. SUICIDALITY

In the past month did you:

				Points
C1	Think you would be better off dead or wish you were dead?	O No	O Yes	1
C2	Want to harm yourself?	O No	O Yes	2
C3	Think about suicide?	O No	O Yes	6
C4	Have a suicide plan?	O No	O Yes	10
C5	Attempt suicide?	O No	O Yes	10
C6	**In your lifetime:** Did you ever make a suicide attempt?	O No	O Yes	4

IS AT LEAST **1** OF THE ABOVE CODED **YES?**

IF **YES,** ADD THE TOTAL NUMBER OF POINTS FOR THE ANSWERS (C1-C6) CHECKED 'YES' AND SPECIFY THE LEVEL OF SUICIDE RISK AS FOLLOWS:

O No O Yes

SUICIDE RISK CURRENT

1-5 points Low O

6-9 points Moderate O

>=10 points High O

D. (HYPO) MANIC EPISODE

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

FOR PATIENTS WHO APPEAR PSYCHOTIC BEFORE STARTING THE INTERVIEW OR WHO ARE SUSPECTED TO HAVE SCHIZOPHRENIA, PLEASE ADOPT THE FOLLOWING ORDER OF ADMINISTRATION OF MODULES:

1) PART I OF MODULE M (PSYCHOTIC DISORDERS M1-M18).
2) SECTIONS A-D (DEPRESSION TO (HYPO)MANIC EPISODE).
3) PART 2 OF MODULE M (PSYCHOTIC DISORDERS M19-M23).
4) OTHER MODULES IN THEIR USUAL SEQUENCE.

IF THE MODULE M HAS ALREADY BEEN EXPLORED AND PSYCHOTIC SYMPTOMS HAVE BEEN IDENTIFIED (M1 T M10b), EXAMINE FOR EACH POSITIVE RESPONSE TO THE FOLLOWING QUESTIONS IF THE (HYPO)MANIC SYMPTOMS ARE NOT BETTER EXPLAINED BY THE PRESENCE OF A PSYCHOTIC DISORDER AND CODE ACCORDINGLY.

D1 a Have you **ever** had a period of time when you were feeling 'up' or 'high' or so full of energy or full of yourself that you got into trouble, or that other people thought you were not your usual self? (Do not consider times when you were intoxicated on drugs or alcohol.) O No O Yes

IF **YES** TO **D1a:**

b Are you **currently** feeling 'up' or 'high' or full of energy? O No O Yes

IF THE PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN BY 'UP OR 'HIGH', CLARIFY AS FOLLOWS: BY 'UP' OR 'HIGH' MEAN: HAVING ELATED MOOD; INCREASED ENERGY; NEEDING LESS SLEEP;HAVING RAPID THOUGHTS; BEING FULL OF IDEAS; HAVING AN INCREASE IN PRODUCTIVITY, MOTIVATION, CREATIVITY, OR IMPULSE BEHAVIOUR.

D2 a Have you **ever** been persistenly irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to other poeple, even in situations that you felt were justified? O No O Yes

IF **YES** TO **D2a:**

b Are you **currently** feeling persistently irritable? O No O Yes

IS **D1a** OR **D2a** CODED **YES?** => O No O Yes

D3 IF **D1b** OR **D2b** = **YES:** EXPLORE ONLY **CURRENT** EPISODE, OTHERWISE
IF **D1b** AND **D2b = NO**: EXPLORE THE MOST SYMPTOMATIC **PAST** EPISODE

During the times when you felt high, full of energy, or irritable did you:	Current Episode	Past Episode
a Feel that you could do things others couldn't do, or that you were an especially important person? If YES, ASK FOR EXAMPLES.	O No O Yes	O No O Yes
THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. O No O Yes		
b Need less sleep (for example, feel rested after only a few hours sleep)?	O No O Yes	O No O Yes
c Talk too much without stopping, or so fast that people had difficulty understanding?	O No O Yes	O No O Yes
d Have racing thoughts?	O No O Yes	O No O Yes

	Current	Past Episode
e Become easily distracted so that any little interruption could distract you?	O No O Yes	O No O Yes
f Become so active or physically restless that others were worried about you?	O No O Yes	O No O Yes
g Want so much to engage in pleasurable activities that you ignored the risks or consequences (for example, spending sprees, reckless driving, or sexual indescretions)?	O No O Yes	O No O Yes
D3(SUMMARY): ARE **3** OR MORE **D3** ANSWERS CODED **YES** (OR 4 OR MORE IF **D1a** IS **NO**(IN RATING PAST EPISODE) OR D1b IS NO(IN RATING CURRENT EPISODE))? RULE: ELATION/EXPANSIVENESS REQUIRES ONLY THREE D3 SYMPTOMS WHILE IRRITABLE MOOD ALONE REQUIRES **4** OF THE **D3** SYMPTOMS.	O No O Yes	=> O No O Yes

VERIFY IF THE SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD.

D4

a Were you taking any drugs or medicines just before these symptoms began?

O No O Yes

b Did you have any medical illness just before these symptoms began?

O No O Yes

IN THE CLINICIAN'S JUDGEMENT: ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S (HYPO)MANIA? IF NECESSARY, ASK ADDITIONAL OPEN ENDED QUESTIONS.

	Current Episode	Past Episode
D4(SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT?	O No O Yes O Uncertain	O No O Yes O Uncertain
D5 Did these symptoms last at least a week and cause problems beyond your control at home, work school, or were you hospitalized for these problems?	O No O Yes	O No O Yes

IF **D5** IS CODED **NO** FOR CURRENT EPISODE, THEN EXPLORE **D3,** D4 AND **D5** FOR THE MOST SYMPTOMATIC PAST EPISODE.

D6 IF **D3(SUMMARY)=YES** AND **D4(SUMMARY)=YES** OR **UNCERTAIN** AND **D5=NO**, AND **NO DELUSIONAL IDEA** WAS DESCRIBED IN **D3a,** CODE **YES** FOR HYPOMANIAC EPISODE.

SPECIFY IF THE EPISODE INDENTIFIED IS CURRENT OR PAST.

O No O Yes

HYPOMANIC EPISODE

Current O
Past O

D7 IF **D3(SUMMARY)=YES** AND **D4(SUMMARY)=YES** OR UNCERTAIN AND EITHER **D5=YES** OR A DELUSIONAL IDEA WAS DESCRIBED IN **D3a,** CODE **YES** FOR MANIC EPISODE.

SPECIFY IF THE EPISODE IDENTIFIED IS CURRENT OR PAST.

O No O Yes

MANIC EPISODE

Current O
Past O

D8 IF **D3(SUMMARY**) AND **D4b** AND **D5=YES** AND **D4(SUMMARY)=NO**, CODE **YES.**
SPECIFY IF THE EPISODE IDENTIFIED IS CURRENT OR PAST.

O No O Yes

(Hypo) Manic Episode Due to a General Medical Condition

Current O
Past O

D9 IF **D3(SUMMARY)** AND **D4a** AND **D5=YES** AND **D4(SUMMARY)=NO**, CODE **YES.**
SPECIFY IF THE EPISODE IDENTIFIED IS CURRENT OR PAST.

IF **D8** OR **D9=YES**, GO TO NEXT MODULE.

O No O Yes
Substance Induced (Hypo)Manic Episode
Current O
Past O

SUBTYPES

Rapid Cycling
Have you had four or more episodes of mood disturbance in 12 months?

O No O Yes
Rapid Cycling

Mixed Episode
PATIENT MEETS CRITERIA FOR BOTH MANIC EPISODE AND MAJOR DEPRESSIVE EPISODE NEARLY EVERY DAY DURING AT LEAST A ONE WEEK PERIOD.

O No O Yes
Mixed Episode

Seasonal Pattern
THE ONSET AND REMISSIONS OR SWITCHES FROM DEPRESSION TO MANIA OR HYPOMANIA CONSISTENTLY OCCUR AT A PARTICULAR TIME OF YEAR.

O No O Yes
Seasonal Pattern

With Full Interepisode Recovery
Between the two most recent mood episodes did you fully recover?

O No O Yes
With Full Interepisode Recovery

MOST RECENT EPISODE WAS A:
O Manic Episode O Hypomanic Episode O Mixed Episode O Depressed Episode

SEVERITY
- O X1 Mild
- O X2 Moderate
- O X3 Severe without psychotic features
- O X4 Severe with psychotic features
- O X5 In partial remission
- O X6 In full remission

CHRONOLOGY

Age

D10 How old were you when you first began having symptoms of manic/hypomanic episodes? ☐☐

D11 Since the first onset how many distinct times did you have significant symptoms of mania/hypomania? ☐☐

E. PANIC DISORDER

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

E1	a Have you, on more than one occasion, had spells or attacks when you suddenly felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way?	=> O No	O Yes
	b Did the spells peak within 10 minutes?	=> O No	O Yes
E2	At any time in the past, did any of those spells or attacks come on unexpectedly or spontaneously, or occur in an unpredictable or unprovoked manner?	=> O No	O Yes
E3	Have you ever had one such attack followed by a month or more of persistent concern about having another attack, or worries about the consequences of the attacks?	O No	O Yes
E4	During the worst spell that you can remember:		
	a Did you have skipping, racing or pounding of your heart?	O No	O Yes
	b Did you have sweating or clammy hands?	O No	O Yes
	c Were you trembling or shaking?	O No	O Yes
	d Did you have shortness of breath or difficulty breathing?	O No	O Yes
	e Did you have a choking sensation or a lump in your throat?	O No	O Yes
	f Did you have chest pain, pressure or discomfort?	O No	O Yes
	g Did you have nausea, stomach problems or sudden diarrhea?	O No	O Yes
	h Did you feel dizzy, unsteady, lightheaded or faint?	O No	O Yes
	i Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body?	O No	O Yes
	j Did you fear that you were losing control or going crazy?	O No	O Yes
	k Did you fear that you were dying?	O No	O Yes
	l Did you have tingling or numbness in parts of your body?	O No	O Yes
	m Did you have hot flushes or chills?	O No	O Yes
	E4 (SUMMARY): ARE 4 OR MORE E4 ANSWERS CODED YES?	O No	O Yes
E5			
	a Were you taking any drugs or medicines just before these symptoms began?	O No	O Yes
	b Did you have any medical illness just before these symptoms began?	O No	O Yes
	In the clinician's judgement: are either of these likely to be direct causes of the patient's panic disorder?	O No	O Yes
	E5 (SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT? IF **E5 (SUMMARY)** IS CODED **NO,** SKIP TO **E9.**	O No	O Yes

E6 DO **E3** AND **E4 (SUMMARY)** AND **E5 (SUMMARY)=YES**?

IF **E6=YES**, SKIP TO **E8.**

O No O Yes

PANIC DISORDER
LIFETIME

E7 IF **E6=NO**, ARE ANY **E4** ANSWERS CODED **YES?**

THEN SKIP TO **F1.**

O No O Yes

LIMITED SYMPTOM ATTACKS
LIFETIME

E8 In the past month, did you have such attacks repeatedly (2 or more), followed by persistent concern about having another attack?

IF THIS IS DENIED BY THE PATIENT - CHALLENGE BY REVIEWING THE SYMPTOMS ENDORSED IN E4

O No O Yes

PANIC DISORDER
CURRENT

E9 ARE **E3** AND **E4(SUMMARY)** AND **E5b** ALL CODED **YES** AND **E5 (SUMMARY)** CODED NO?

O No O Yes

Anxiety Disorder with Panic Attacks Due to a General Medical Condition
CURRENT

E10 ARE **E3** AND **E4(SUMMARY)** AND **E5a** ALL CODED **YES** AND **E5 (SUMMARY)** CODED **NO**?

O No O Yes

Substance Induced Anxiety Disorder with Panic Attacks
CURRENT

E11 How old were you when you first began having symptoms of panic attacks?

Age ☐☐

E12 During the past year, for how many months did you have significant symptoms of panic attacks or worries about having an attack?

☐☐ months

F. AGORAPHOBIA

F1 Have you ever **felt anxious** or uneasy in places or situations where you might have a panic attack or panic-like symptoms where help might not be available or escape might be difficult; like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, traveling in a bus, train or car? ○ No ○ Yes

IF **F1=NO**, ANSWER **NO** IN **F2** AND IN **F3**

F2 Have you ever feared these situations so much that you avoided them, or suffered through them, or needed a companion to face them?

○ No ○ Yes
AGORAPHOBIA LIFETIME

F3 Do you **NOW** fear or avoid these places or situations?

○ No ○ Yes
AGORAPHOBIA CURRENT

CHECK ONLY IF **YES**

IS AGORAPHOBIA CODED **YES?**	**F2** ○ lifetime	**F3** ○ current
IS PANIC DISORDER CODED **YES?**	**E6** ○ lifetime	**E8** ○ current

F4

a IS PANIC DISORDER, CURRENT (**E8**), CODED **YES**,

AND

IS AGORAPHOBIA, CURRENT (**F3**), CODED **NO?**

○ No ○ Yes
Panic Disorder, Current without AGORAPHOBIA

b IS PANIC DISORDER, CURRENT (**E8**), CODED **YES**,

AND

IS AGORAPHOBIA, CURRENT(**F3**), CODED **YES?**

○ No ○ Yes
Panic Disorder, Current with AGORAPHOBIA

c IS PANIC DISORDER, LIFETIME (**E6**), CODED **NO**,

AND

IS AGORAPHOBIA, CURRENT (**F3**), CODED **YES**?

○ No ○ Yes
AGORAPHOBIA, CURRENT without history of Panic Disorder

d IS AGORAPHOBIA, CURRENT (**F3**) CODED **YES**,

AND IS PANIC DISORDER CURRENT (**E8**) CODED **NO**,

AND IS PANIC DISORDER, LIFETIME (**E6**) CODED **YES**?

○ No ○ Yes
AGORAPHOBIA, CURRENT without current Panic Disorder but with a past history of Panic Disorder

e IS AGORAPHOBIA, CURRENT (**F3**) CODED **YES**,

AND LIMITED SYMPTOM ATTACKS (**E7**) CODED **NO**?

O No O Yes

AGORAPHOBIA CURRENT without history of Limited Symptom Attacks

CHRONOLOGY

F5 How old were you when you first began to fear or avoid these situations (agoraphobia)? ☐☐ years

F6 During the past year, for how many months did you have significant fear or avoidance of these situations (agoraphobia)? ☐☐

G. SOCIAL PHOBIA (Social Anxiety Disorder)

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

G1 In the past month, were you fearful or embarrassed about being watched, being the focus of attention, or fearful of being humiliated? This includes situations like speaking in public, eating in public or with others, writing while someone watches, or being in social situations. =>

O No O Yes

G2 Is this fear excessive or unreasonable? =>

O No O Yes

G3 Do you fear these situations so much that you avoid them or suffer through them? =>

O No O Yes

G4 Does this fear disrupt your normal work or social functioning or cause you significant distress?

O No O Yes

SOCIAL PHOBIA (Social Anxiety Disorder) CURRENT

SUBTYPES

Do you fear and avoid 4 or more social situations? O No O Yes

If YES --> generalized social phobia (social anxiety disorder)
If NO --> social phobia (social anxiety disorder), not generalized.

CHRONOLOGY

G5 How old were you when you first began to fear social situations? ☐☐ years

G6 During the past year, for how many months did you have significant fear of social situations? ☐☐

H. SPECIFIC PHOBIA

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

H1 In the past month, have you been excessively afraid of things like: flying, driving, heights, storms, animals, insects, or seeing blood or needles?

=> O No O Yes

H2 Is this fear excessive or unreasonable?

=> O No O Yes

H3 Do you fear these situations so much that you avoid them or suffer through them?

=> O No O Yes

H4 Does this fear disrupt your normal work or social functioning or cause you significant distress?

O No O Yes

SPECIFIC PHOBIA CURRENT

CHRONOLOGY

H5 How old were you when you first began to fear or avoid this situation?

Age ☐☐

H6 During the past year, how many times have you had significant fear of this situation?

☐☐

I. OBSESSIVE-COMPULSIVE DISORDER

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

I1 In the past month, have you been bothered by recurrent thoughts, impulses, or images that were unwanted, distasteful, inappropriate, intrusive, or distressing? (For example, the idea that you were dirty, contaminated or had germs, **or** fear of contaminating others, **or** fear of harming someone even though you didn't want to, **or** fearing you would act on some impulse, **or** fear or superstitions that you would be responsible for things going wrong, **or** obsessions with sexual thoughts, images or impulses, **or** hoarding, collecting, **or** religious obsessions).

DO NOT INCLUDE SIMPLY EXCESSIVE WORRIES ABOUT REAL LIFE PROBLEMS. DO NOT INCLUDE OBSESSIONS DIRECTLY RELATED TO EATING DISORDERS, SEXUAL DEVIATIONS, PATHOLOGICAL GAMBLING, OR ALCOHOL OR DRUG ABUSE BECAUSE THE PATIENT MAY DERIVE PLEASURE FROM THE ACTIVITY AND MAY WANT TO RESIST IT ONLY BECAUSE OF ITS NEGATIVE CONSEQUENCES.

O No O Yes

=> **to # I4**

I2 Did they keep coming back into your mind even when you tried to ignore or get rid of them?

O No O Yes

=> **to #I4**

I3 Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside?

O No O Yes

obsessions

I4 In the past month, did you do something repeatedly without being able to resist doing it, like washing or cleaning excessively, counting or checking things over and over, or repeating, collecting, arranging things, or other superstitious rituals?

O No O Yes

compulsions

IS **I3** OR **I4** CODED **YES?**

=> O No O Yes

I5 Did you recognize that either these obsessional thoughts or compulsive behaviors were excessive or unreasonable?

=> O No O Yes

I6 Did these obsessions or compulsions significantly interfere with your normal routine, occupational functioning, usual social activities, or relationships, or did they take more than one hour a day? ○ No ○ Yes

I7 a Were you taking any drugs or medicines just before these symptoms began? ○ No ○ Yes

b Did you have any medical illness just before these symptoms began? ○ No ○ Yes

IN THE CLINICIAN'S JUDGEMENT: IS EITHER OF THESE LIKELY TO BE DIRECT CAUSE OF THE PATIENT'S OBSESSIVE COMPULSIVE DISORDER?

I7 (SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT? ○ No ○ Yes

ARE **I6** AND **I7 (SUMMARY**) CODED **YES?** ○ No ○ Yes

O.C.D. CURRENT

I8 ARE **I6** AND **I7b** CODED **YES,** AND **I7 (SUMMARY)** CODED **NO?** ○ No ○ Yes

O.C.D. CURRENT Due to a General Medical Condition

I9 ARE **I6** AND **I7a** CODED **YES,** AND **I7 (SUMMARY)** CODED **NO?** ○ No ○ Yes

CURRENT Substance Induced O.C.D.

CHRONOLOGY

I10 How old were you when you first began having symptoms of O.C.D.? ☐☐ Years

I11 During the past year, for how many months did you have significant symptoms of O.C.D.? ☐☐ Months

J. POSTTRAUMATIC STRESS DISORDER (optional)

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

J1	Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else? EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE, DISCOVERING A BODY, SUDDEN DEATH OF SOMEONE CLOSE TO YOU, WAR, OR NATURAL DISASTER.	=> O No	O Yes
J2	Did you respond with intense fear, helplessness or horror?	=> O No	O Yes
J3	During the past month, have you re-experienced the event in a distressing way (such as, dreams, intense recollections, flashbacks or physical reactions)?	=> O No	O Yes

J4 **In the past month**:

a	Have you avoided thinking about the event, or have you avoided things that remind you of the event?	O No	O Yes
b	Have you had trouble recalling some important part of what happened?	O No	O Yes
c	Have you felt detached or estranged from others?	O No	O Yes
d	Have you become much less interested in hobbies or social activities?	O No	O Yes
e	Have you noticed that your feelings are numbed?	O No	O Yes
f	Have you felt that your life will be shortened or that you will die sooner than other people?	O No	O Yes
	J4 (SUMMARY): ARE **3** OR MORE **J4** ANSWERS CODED **YES?**	=> O No	O Yes

J5 **In the past month:**

a	Have you had difficulty sleeping?	O No	O Yes
b	Were you especially irritable or did you have outbursts of anger?	O No	O Yes
c	Have you had difficulty concentrating?	O No	O Yes
d	Were you nervous or constantly on your guard?	O No	O Yes
e	Were you easily startled?	O No	O Yes
	J5 (SUMMARY): ARE **2** OR MORE **J5** ANSWERS CODED **YES?**	=> O No	O Yes

J6 During the past month, have these problems significantly interfered with your work or social activities, or caused significant distress? O No O Yes

IS **J6** CODED **YES?**

O No O Yes

Posttraumatic Stress Disorder CURRENT

CHRONOLOGY

J7 How old were you when you first began having symptoms of PTSD? ☐☐ years

J8 Since the first onset how many illness periods of PTSD did you have? ☐☐ # of episodes

J9 During the past year, for how many months did you have significant symptoms of PTSD? ☐☐ months

---

K. ALCOHOL ABUSE AND DEPENDENCE

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

K1 **In the <u>past 12 months</u>**, have you had 3 or more alcoholic drinks within a 3 hour period on 3 or more occasions? => ○ No ○ Yes

K2 **In the past 12 months:**

a Did you need to drink more in order to get the same effect that you got when you first started drinking? ○ No ○ Yes

b When you cut down on drinking, did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms or to avoid being hungover, for example, "the shakes", sweating or agitation? If **YES** to either question, code **YES.** ○ No ○ Yes

c During the times when you drank alcohol, did you end up drinking more than you planned when you started? ○ No ○ Yes

d Have you tried to reduce or stop drinking alcohol but failed? ○ No ○ Yes

e On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol? ○ No ○ Yes

f Did you spend less time working, enjoying hobbies, or being with others because of your drinking? ○ No ○ Yes

g Have you continued to drink even though you knew that the drinking caused you health or mental problems? ○ No ○ Yes

ARE 3 OR MORE **K2** ANSWERS CODED **YES?** ○ No ○ Yes *

* IF **YES,** SKIP **K3** QUESTIONS, ANSWER N/A IN ABUSE BOX MOVE TO NEXT DISORDER. DEPENDENCE PREEMPTS ABUSE

ALCOHOL DEPENDENCE CURRENT

K3 **In the past 12 months:**

a Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE **YES** ONLY IF THIS CAUSED PROBLEMS.) O No O Yes

b Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.? O No O Yes

c Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct? O No O Yes

d Did you continue to drink even though your drinking caused problems with your family or other people? O No O Yes

ARE 1 OR MORE **K3** ANSWERS CODED **YES?** O No O N/A O Yes

ALCOHOL ABUSE CURRENT

K. LIFETIME ALCOHOL ABUSE AND DEPENDENCE

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

K4 **Did you <u>ever</u>** have 3 or more alcoholic drinks within a 3 hour period on 3 or more occasions? => O No O Yes

K5 **In your lifetime:**

a Did you need to drink more in order to get the same effect that you did when you first started drinking? O No O Yes

b When you cut down on drinking did your hands shake, did you sit or feel agitated? Did you drink to avoid these symptoms or to avoid being hungover, for example, "the shakes", seating or agitation? IF **YES** TO EITHER QUESTIONS, CODE **YES.** O No O Yes

c During the times when you drank alcohol, did you end up drinking more than you planned when you started? O No O Yes

d Have you tried to reduce or stop drinking alcohol but failed? O No O Yes

e On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol? O No O Yes

f Did you spend less time working, enjoying hobbies, or being with others because of your drinking? O No O Yes

g Have you continued to drink even though you knew that the drinking caused you health or mental problems? O No O Yes

ARE **3** OR MORE **K5** ANSWERS CODED **YES?** O No O Yes *

* IF **YES**, SKIP **K6** QUESTIONS, ANSWER N/A IN ABUSE BOX MOVE TO NEXT DISORDER. DEPENDENCE PREEMPTS ABUSE

ALCOHOL DEPENDENCE
LIFETIME

K6 **In your lifetime:**

a Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE YES ONLY IF THIS CAUSED PROBLEMS.) O No O Yes

b Were you intoxicated in any situation where you were physically at risk, for example,drivng a car, driving a motorbike, using machinery, boating etc.? O No O Yes

c Have you had any legal problems because of your drinking, for example, an arrest or disorderly conduct? O No O Yes

d Have you continued to drink even though your drinking caused problems with your family or other people? O No O Yes

ARE **1** OR MORE **K6** ANSWERS CODED **YES?** O No O N/A O Yes

ALCOHOL ABUSE
LIFETIME

L. NON-ALCOHOL PSYCHOACTIVE SUBSTANCE USE DISORDERS

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

Now, I am going to show you/read to you a list of street drugs or medicines.

L1

a **Have you ever taken** any of these drugs more than once to get high, to feel better, or to change your mood? => O No O Yes

Fill IN THE CIRCLE ON THE LEFT OF EACH DRUG TAKEN:

Stimulants: O amphetamines O "speed" O crystal meth O "rush" O Dexedrine O Ritalin O diet pills

Cocaine: O snorting O IV O freebase O crack O "speedball"

Narcotics: O heroin O morphine O Dilaudid O opium O Demerol O methadone O codeine O Percodan O Darvon O OxyContin

Hallucinogens: O LSD ("acid") O mescaline O peyote O PCP ("Angel Dust", "peace pill") O psilocybin O STP O "mushrooms" O ecstasy O MDA O MDMA

Inhalants: O "glue" O ethyl chloride O nitrous oxide ("laughing gas") O amyl O butyl nitrate ("poppers")

Marijuana: O hashish ("hash") O THC O "pot" O "grass" O "weed" O "reefer"

Tranquilizer: O Quaalude O Seconal ("reds") O Valium O Xanax O Librium O Ativan O Dalmane O Halcion O Barbiturates O Miltown

Miscellaneous: O steroids O nonprescription sleep or diet pills O GHB Any others?

Specify most used drugs on the next page

Please specify any drugs if any other drugs have been taken*:

ONLY ONE DRUG/DRUG CLASS HAS BEEN USED	O
ONLY THE MOST USED DRUG CLASS IS INVESTIGATED	O
EACH DRUG CLASS USED IS EXAMINED SEPARATELY	O

b SPECIFY WHICH DRUG/DRUG CLASS WILL BE EXPLORED IN THE INTERVIEW BELOW IF THERE IS CONCURRENT OR SEQUENTIAL POLYSUBSTANCE USE:

L2 **Considering the (name of drug /drug class selected), in your lifetime:**

a	Have you found that you needed to use more (name of drug / drug class selected) to get the same effect that you did when you first started taking it?	O No	O Yes
b	When you reduced or stopped using (name of drug /drug class selected), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable or depressed)? Did you use any drug(s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better? IF **YES** TO EITHER QUESTION, CODE **YES.**	O No	O Yes
c	Have your often found that when you used (name of drug/drug class selected), you ended up taking more than you thought you would?	O No	O Yes
d	Have you tried to reduce or stop taking (name of drug /drug class selected), but failed?	O No	O Yes
e	On the days that you used (name of drug / drug class selected), did you spend substantial time (> 2 hours) in obtaining, using or in recovering from drug(s), or thinking about drug(s)?	O No	O Yes
f	Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use?	O No	O Yes
g	Have you continued to use (name of drug / drug class selected) even though it caused you health or mental problems?	O No	O Yes

ARE **3** OR MORE **L2** ANSWERS CODED **YES?** O No O Yes

SUBSTANCE DEPENDENCE LIFETIME

Please specify drugs:

L3

a Have you used (most used drug, any drug) in the past 12 months? => O No O Yes

b ARE **3** OR MORE **L2** ANSWERS CODED **YES** WITHIN THE PAST 12 MONTHS? O No O Yes

ARE **L3a** AND **b** CODED **YES?** => O No O Yes

SUBSTANCE DEPENDENCE CURRENT

Please specify drugs:

L4 **Considering your use of (name the drug / drug class selected), in the past 12 months:**

a Have you been intoxicated, high, or hungover from (name of drug /drug class selected) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem? (CODE **YES** ONLY IF THIS CAUSED PROBLEMS). O No O Yes

b Have you been high or intoxicated from (name of drug /drug class selected) more than once, in any situation where you were physically at risk, (for example, driving a car, riding a motorbike, using machinery, boating, etc.)? O No O Yes

c Did you have legal problems more than once, because of your drug use, for example, an arrest or disorderly conduct? O No O Yes

d Did you continue to use (name of drug / drug class selected) even though it caused problems with your family or other poeple? O No O Yes

ARE **1** OR MORE **L4** ANSWERS CODED **YES?** O No O Yes

SUBSTANCE ABUSE
CURRENT

Please specify drugs:

CHRONOLOGY

L5 How old were you when you first began having problems with drug abuse? ____ years

M. PSYCHOTIC DISORDERS - PART 1

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE **YES** ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE. BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS "BIZARRE".

DELUSIONS ARE "BIZARRE" IF: CLEARLY IMPLAUSIBLE, ABSURD, NOT UNDERSTANDABLE, AND CANNOT DERIVE FROM ORDINARY LIFE EXPERIENCE.

HALLUCINATIONS ARE SCORED "BIZARRE" IF A VOICE COMMENTS ON THE PERSON'S THOUGHTS OR BEHAVIOR, OR WHEN TWO OR MORE VOICES ARE CONVERSING WITH EACH OTHER.

ALL OF THE PATIENT'S RESPONSES TO THE QUESTIONS SHOULD BE CODED IN COLUMN A. USE THE CLINICIAN JUDGMENT COLUMN (COLUMN B) ONLY IF THE CLINICIAN KNOWS FROM OTHER OUTSIDE EVIDENCE (FOR EXAMPLE, FAMILY INPUT) THAT THE SYMPTOM IS PRESENT BUT IS BEING DENIED BY THE PATIENT.

Now I am going to ask you about unusual experiences that some people have.

		COLUMN A Patient Response			COLUMN B Clinician Response (if necessary)		
		No	Yes	Yes/Bizarre	No	Yes	Yes/Bizarre
M1 a	Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you?	○	○	○	○	○	○
b	If **YES:** Do you currently believe these things? **NOTE:** ASK FOR EXAMPLES, TO RULE OUT ACTUAL STALKING	○	○	○ **==> M6**	○	○	○ **==> M6**
M2 a	Have you ever believed that someone was reading your mind or could hear your thoughts or that you could actually read someone's mind or hear what another person was thinking?	○	○	○	○	○	○
b	If **YES:** Do you currently believe these things?	○	○	○ **==> M6**	○	○	○ **==> M6**
M3 a	Have you every believed that someone or some force outside of yourself put thoughts in your mind that were not your own, or made you act in a way that was not your usual self? Have you ever felt that you were possessed? CLINICIAN: ASK FOR EXAMPLES AND DISCOUNT ANY THAT ARE NOT PSYCHOTIC.	○	○	○	○	○	○
b	If **YES:** Do you currently believe these things?	○	○	○ **==> M6**	○	○	○ **==> M6**
M4 a	Have you ever believed that you were being sent special messages through the TV, radio, or newspaper, or that a person you did not personally know was particularly interested in you?	○	○	○	○	○	○
b	If **YES:** Do you currently believe these things?	○	○	○ **==> M6**	○	○	○ **==> M6**

		COLUMN A Patient Response			COLUMN B Clinician Response		
		No	Yes	Yes/Bizarre	No	Yes	Yes/Bizarre
M5 a	Have your relatives or friends ever considered any of your beliefs strange or unusual?	○	○	○	○	○	○
	INTERVIEWER: ASK FOR EXAMPLES. CODE YES ONLY IF THE EXAMPLES ARE **CLEARLY** DELUSIONAL IDEAS (FOR EXAMPLE, SOMATIC OR RELIGIOUS DELUSIONS OR DELUSIONS OF GRANDIOSITY, JEALOUSY, GUILT, RUIN OR DESTITUTION OR OTHERS NOT EXPLORED IN **M1** TO **M4).**						
b	IF **YES:** Do they currently consider your beliefs strange?	○	○	○	○	○	○
M6 a	Have you ever heard things other people couldn't hear, such as voices?	○	○		○	○	○
	HALLUCINATIONS ARE SCORED "BIZARRE" ONLY IF PATIENT ANSWERS YES TO THE FOLLOWING:						
	IF **YES**:Did you hear a voice commenting on your thoughts or behavior, or did you hear two or more voices talking to each other?			○			
b	IF **YES:** Have you heard these things in the past month?	○	○	○ **==> M8**	○	○	○ **==> M8**
	SCORE AS "YES/BIZARRE" IF PATIENT HEARD A VOICE COMMENTING ON HIS/HER THOUGHTS OR BEHAVIOR OR HEARD TWO OR MORE VOICES TALKING TO EACH OTHER.						
M7 a	Have you ever had visions when you were awake or have you ever seen things other people couldn't see?	○	○		○	○	
	CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE.						
b	If YES: Have you seen these things in the past month?	○	○		○	○	

CLINICIAN'S JUDGMENT

M8 b Is the patient currently exhibiting incoherence, disorganized speech, or marked loosening of associations? ○ No ○ Yes

M9 b Is the patient currently exhibiting disorganized or catatonic behavior? ○ No ○ Yes

M10 b Are negative symptoms of schizophrenia, for example, significant affective flattening, poverty of speech (alogia) or an inability to initiate or persist in goal-directed activities (avolition) prominent during the interview? ○ No ○ Yes

M11 a IS THERE AT LEAST ONE "**YES**" FROM **M1** TO **M10b?** ○ No ○ Yes

M11 b

ARE THE ONLY SYMPTOMS PRESENT THOSE IDENTIFIED BY THE CLINICIAN FROM **M1** TO **M7** (COLUMN B) AND FROM **M8b** OR **M9b** OR **M10b?**

IF **YES,** SPECIFY IF THE LAST EPISODE IS CURRENT (AT LEAST ONE "b" QUESTION IS CODED "**YES"** FROM **M1** TO **M10b)** AND/OR LIFETIME (ANY QUESTION CODED YES FROM M1 TO M10b AND PASS TO THE NEXT DIAGNOSTIC SECTION.

IF **NO,** CONTINUE.

WARNING:
IF AT LEAST ONE **"b"** QUESTION IS CODED **YES,** CODE **M11c** AND **M11d.**
IF ALL **"b"** QUESTIONS ARE CODED **NO,** CODE ONLY **M11d.**

O No O Yes

PSYCHOTIC DISORDER NOT OTHERWISE SPECIFIED*

Current O

Lifetime O

* Provisional diagnosis due to insufficient information available at this time.

M11 c

FROM **M1** TO **M10b:** ARE ONE OR MORE "b" ITEMS CODED "**YES BIZARRE**"?
ARE TWO OR MORE "b" ITEMS CODED "**YES"** BUT NOT "**YES BIZARRE**"?

O No

Then Criterion "A" of Schizophrenia is not currentlv met

O Yes

Then Criterion "A" of Schizophrenia is currently met

M11 d

FROM **M1** TO **M10b:** ARE ONE OR MORE "a" ITEMS CODED "**YES BIZARRE**"

OR

ARE TWO OR MORE "a" ITEMS CODED "YES" BUT NOT "**YES BIZARRE**"?
(CHECK THAT THE 2 ITEMS OCCURRED DURING THE SAME TIME PERIOD.)

O No

Then Criterion "A" of Schizophrenia is not met Lifetime

OR IS **M11c** CODED "**YES"**

O Yes

Then Criterion "A" of Schizophrenia is met Lifetime

M12

a Were you taking any drugs or medicines just before these symptoms began? ○ No ○ Yes

b Did you have any medical illness just before these symptoms began? ○ No ○ Yes

c IN THE CLINICIAN'S JUDGMENT, IS EITHER OF THESE LIKELY TO BE DIRECT CAUSE OF THE PATIENT'S PSYCHOSIS? ○ No ○ Yes

IF NECESSARY, ASK OTHER OPEN-ENDED QUESTIONS

d HAS AN ORGANIC CAUSE BEEN RULED OUT? ○ No ○ Yes ○ Uncertain

IF **M12d=NO:** SCORE **M13(a,b**) AND GO TO THE NEXT DISORDER
IF **M12d=YES:** CODE NO IN **M13(a,b)** AND GO TO **M14**
IF **M12D=UNCERTAIN:** CODE UNCERTAIN IN **M13 (a,b)** AND GO TO **M14**

M13

a IS **M12d** CODED **NO** BECAUSE OF A GENERAL MEDICAL CONDITION? ○ No ○ Yes

IF **YES,** SPECIFY IF THE LAST EPISODE IS

CURRENT (AT LEAST ONE "b" QUESTION IS CODED **YES** FROM **M1** TO **M10b)**
AND/OR LIFETIME ("a" OR "b") QUESTION IS CODED **YES** FROM **M1** TO **M10b.**

PSYCHOTIC DISORDER Due to a General Medical Condition

Current ○
Lifetime ○
Uncertain ○

M13

b IS **M12d** CODED NO BECAUSE OF A DRUG? ○ No ○ Yes

IF **YES,** SPECIFY IF THE LAST EPISODE IS
CURRENT (AT LEAST ONE QUESTION "b" IS CODED **YES** FROM **M1** TO **M10b**)
AND/OR LIFETIME (ANY "a" OR "b" QUESTION CODED **YES** FROM **M1** TO **M10b**).

Substance Induced *PSYCHOTIC DISORDER*

Current ○
Lifetime ○
Uncertain ○

M14

How long (days) was the longest period during which you had those beliefs or experiences?
IF <1 DAY, GO TO THE NEXT SECTION

				Days

M15

a During or after a period when you had these beliefs or experiences, did you have difficulty working, or difficulty in your relationship with others, or in taking care of yourself? ○ No ○ Yes

b IF **YES,** how long (weeks) did these difficulties last?
IF>=6 MONTHS, GO TO **M16** ☐☐☐ Weeks

c Have you been treated with medications or were you hospitalized because of these beliefs or experiences, or the difficulties caused by these problems? ○ No ○ Yes

d IF **YES,** what was the longest time you were treated with medication or were hospitalized for these problems? ☐☐☐ Weeks

M16

a THE PATIENT REPORTED DISABILITY **(M15a CODED YES**) OR WAS TREATED OR HOSPITALIZED FOR PSYCHOSIS (**M15c=YES**) ○ No ○ Yes

b CLINICIAN'S JUDGMENT: CONSIDERING YOUR EXPERIENCE, RATE THE PATIENT'S **LIFETIME** DISABILITY CAUSED BY THE PSYCHOSIS.

1 ○ absent
2 ○ mild
3 ○ moderate
4 ○ severe

M17

WHAT WAS THE DURATION OF THE PSYCHOSIS, TAKING INTO ACCOUNT THE ACTIVE PHASE (**M14)** AND THE ASSOCIATED DIFFICULTIES (**M15b)** AND PSYCHIATRIC TREATMENT (**M15d)**

1 ○ >=1 day to <1 month
2 ○ >=1 month to <6 months
3 ○ >=6 months

CHRONOLOGY

M18

a How old were you when you first began having these unusual beliefs or experiences? ☐☐ Years

b Since the first onset how many distinct times did you have significant episodes of these unusual beliefs or experiences? ☐☐ Number of Episodes

PSYCHOTIC DISORDERS - PART 2

DIFFERENTIAL DIAGNOSIS BETWEEN PSYCHOTIC AND MOOD DISORDERS

CODE THE QUESTIONS **M19** TO **M23** ONLY IF THE PATIENT DESCRIBED AT LEAST 1 PSYCHOTIC SYMPTOM (**M11a=**YES AND **M11b=**NO), NOT EXPLAINED BY AN ORGANIC CAUSE (**M12d=YES** OR **UNCERTAIN**).

M19

a DOES THE PATIENT CODE POSITIVE FOR CURRENT AND/OR PAST MAJOR DEPRESSIVE EPISODE (QUESTION **A8** CODED **YES**)? O No O Yes

b IF **YES:** IS **A1** (DEPRESSED MOOD) CODED **YES**? O No O Yes

c DOES THE PATIENT CODE POSITIVE FOR CURRENT AND/OR PAST MANIC EPISODE (QUESTION **D7** IS CODED **YES**)? O No O Yes

d IS **M19a** OR **M19c** CODED **YES?** O No O Yes

↓

STOP!
Skip to M24

NOTE: VERIFY THAT THE RESPONSES TO THE QUESTIONS **M20** TO **M23** REFER TO THE PSYCHOTIC, DEPRESSIVE (**A8**) AND MANIC EPISODES (**D7**), ALREADY IDENTIFIED IN **M11c** AND **M11d, A8** AND **D7.** IN CASE OF DISCREPANCIES, REEXPLORE THE SEQUENCE OF DISORDERS, TAKING INTO ACCOUNT IMPORTANT LIFE ANCHOR POINTS/MILESTONES AND CODE **M20** TO **M23** ACCORDINGLY.

M20 When you were having the beliefs and experiences you just described (GIVE EXAMPLES TO PATIENT), were you also feeling depressed/high/irritable at the same time? O No O Yes

↓

STOP! Skip to M24

M21 Were the beliefs or experiences you just described (GIVE EXAMPLES TO PATIENT) restricted exclusively to times you were feeling depressed/high/irritable? O No O Yes

↓

STOP! Skip to M24

M22 Have you ever had a period of two weeks or more of having these beliefs or experiences when you were not feeling depressed/high/irritable? O No O Yes

↓

STOP! Skip to M24

M23 Which lasted longer: these beliefs or experiences or the periods of feeling depressed/high/irritable?

1 O mood
2 O beliefs, experiences
3 O same

M24

AT THE END OF THE INTERVIEW, GO TO THE DIAGNOSTIC ALGORITHMS FOR PSYCHOTIC DISORDERS.

CONSULT ITEMS **M11a** AND **M11b:**

IF THE CRITERION "A" OF SCHIZOPHRENIA IS MET (**M11c** AND/OR **M11d=YES**) GO TO DIAGNOSTIC ALGORITHMS I

IF THE CRITERION "A" OF SCHIZOPHRENIA IS NOT MET (**M11c** AND/OR **M11d=NO**) GO TO DIAGNOSTIC ALGORITHMS II

FOR MOOD DISORDERS GO TO DIAGNOSTIC ALGORITHM III

N. ANOREXIA NERVOSA

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

N1

a How tall are you? ft [ ][ ] in [ ][ ] **OR** cm [ ][ ][ ]

b What was your lowest weight in the past 3 months? lbs [ ][ ][ ] **OR** kgs. [ ][ ][ ]

=>

IS PATIENT'S WEIGHT LOWER THAN THE THRESHOLD CORRESPONDING TO HIS/HER HIEGHT? (SEE TABLE BELLOW) O No O Yes

TABLE HEIGHT/WEIGHT THRESHOLD (height-without shoes; weight-without clothing)

Female Height/Weight

ft/in.	4'9	4'10	4'11	5'0	5'1	5'2	5'3	5'4	5'5	5'6	5'7	5'8	5'9	5'10
lbs.	84	85	86	87	89	92	94	97	99	102	104	107	110	112
cms.	145	147	150	152	155	158	160	163	165	168	170	173	175	178
kgs.	38	39	39	40	41	42	43	44	45	46	47	49	50	51

Male Height/Weight

ft/in.	5'1	5'2	5'3	5'4	5'5	5'6	5'7	5'8	5'9	5'10	5'11	6'0	6'1	6'2	6'3
lbs.	105	106	108	110	111	113	115	116	118	120	122	125	127	130	133
cms.	155	156	160	163	165	168	170	173	175	178	180	183	185	188	191
kgs.	47	48	49	50	51	51	52	53	54	55	56	57	58	59	61

The weight thresholds above are calculated as a 15% reduction below the normal range for the patient's height and gender as required by DSM-IV. This table reflects weights that are 15% lower than the low end of the normal distribution range in the Metropolitan Life Insurance Table of Weights.

In the past 3 months:

=>

N2 In spite of this low weight, have you tried not to gain weight? O No O Yes

=>

N3 Have you feared gaining weight or becoming fat? O No O Yes

N4

a Have you considered yourself fat or that part of your body was too fat? O No O Yes

b Has your body weight or shape greatly influenced how you felt about yourself? O No O Yes

c Have you thought that your current low body weight was normal or excessive? O No O Yes

=>

N5 ARE 1 OR MORE ITEMS FROM **N4** CODED **YES?** O No O Yes

=>

N6 **FOR WOMEN ONLY:** During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)? O No O Yes

FOR WOMEN: ARE **N5** AND **N6** CODED **YES?**

FOR MEN: IS **N5** CODED **YES?**

=>

○ No ○ Yes

ANOREXIA NERVOSA
CURRENT

CHRONOLOGY

N7 How old were you when you first began having symptoms of anorexia? ☐☐ Years

N8 Since the first onset how many distinct illness periods of anorexia did you have? ☐☐☐ Number of Episodes

N9 During the past year, for how many months did you have significant symptoms of anorexia? ☐☐☐ Months

O. BULIMIA NERVOSA

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT**

O1 In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period? => O No O Yes

O2 In the last 3 months, did you have eating binges as often as twice a week? => O No O Yes

O3 During these binges, did you feel that your eating was out of control? => O No O Yes

O4 Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications? => O No O Yes

O5 Does your body weight or shape greatly influence how you feel about yourself? => O No O Yes

O6 DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA? O No O Yes

↓ **Skip to O8**

O7 Do these binges occur only when you are under(_____lbs/kgs)? O No O Yes
INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT/WEIGHT TABLE IN THE ANOREXIA NERVOSE MODULE (PAGE 29)

O8 IS **O5** CODED **YES** AND **O7** CODED NO OR SKIPPED? O No O Yes

BULIMIA NERVOSA
CURRENT

CHRONOLOGY

O9 How old were you when you first began having symptoms of bulimia? ☐☐ Age

O10 Since the first onset how many illness periods of bulimia did you have? ☐☐☐ Number of Episodes

O11 During the past year, for how many months did you have significant symptoms of bulimia? ☐☐☐ Months

SUBTYPES OF BULIMIA NERVOSA

Do you regularly engage in self induced vomiting, misuse of laxatives, diuretics or enemas?

O No O Yes

IN THE NON-PURGING TYPE, HAS THE PATIENT USED OTHER COMPENSATORY BEHAVIORS SUCH AS FASTING OR EXCESSIVE EXERCISE, BUT NOT PURGING?

Non-Purging Type

Purging Type

BULIMIA NERVOSA

SUBTYPES OF ANOREXIA NERVOSA

Binge-Eating/Purging Type

IS **O7** CODED **YES?**

O No O Yes

ANOREXIA NERVOSA
Binge Eating/Purging Type
CURRENT

Restricting Type

Do you lose weight without purging?

O No O Yes

ANOREXIA NERVOSA
Restricting Type
CURRENT

P. GENERALIZED ANXIETY DISORDER

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

P1 a	Have you worried excessively or been anxious about several things over the past 6 months?	=> O No	O Yes
b	Are these worries present most days?	=> O No	O Yes
	IS THE PATIENT'S ANXIETY RESTRICTED EXCLUSIVELY TO , OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT?	O No	=> O Yes
P2	Do you find it difficult to control the worries or do they interfere with your ability to focus on what you are doing?	=> O No	O Yes
P3	FOR THE FOLLOWING, CODE **NO,** IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT.		
	When you were anxious over the past 6 months, most of the time did you:		
a	Feel restless, keyed up or on edge?	O No	O Yes
b	Feel tense?	O No	O Yes
c	Feel tired, weak or exhausted easily?	O No	O Yes
d	Have difficulty concentrating or find your mind going blank?	O No	O Yes
e	Feel irritable?	O No	O Yes
f	Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening) or sleeping excessively?	O No	O Yes
	SUMMARY OF P3: ARE 3 OR MORE **P3** ANSWERS CODED **YES?**	=> O No	O Yes
P4	Did these symptoms of anxiety cause you significant distress or impair your ability to function at work, socially, or in some other important way?	=> O No	O Yes
P5 a	Were you taking any drugs or medicines just before these symptoms began?	O No	O Yes
b	Did you have any medical illness just before these symptoms began?	O No	O Yes
	IN THE CLINICIAN'S JUDGMENT: IS EITHER OF THESE LIKELY TO BE DIRECT CAUSE OF THE PATIENT'S GENERALIZED ANXIETY DISORDER?		
	P5 (SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT?	O No	O Yes

IS **P5 (SUMMARY)** CODED **YES?** O No O Yes

GENERALIZED ANXIETY DISORDER CURRENT

P6 IS **P5 (SUMMARY)** CODED **NO** AND **P5b** CODED **YES?**

O No O Yes

CURRENT
GENERALIZED ANXIETY DISORDER
Due to a General
Medical Condition

P7 IS **P5 (SUMMARY)** CODED **NO** AND **P5a** CODED **YES?**

O No O Yes

CURRENT
Substance Induced
Generalized Anxiety Disorder

CHRONOLOGY

P8 How old were you when you first began having symptoms of generalized anxiety?

☐☐ Age

P9 During the past year, for how many months did you have significant symptoms of generalized anxiety?

☐☐☐ Months

Q. ANTISOCIAL PERSONALITY DISORDER (optional)

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

Q1 **Before you were 15 years old, did you:**

a	repeatedly skip school or run away from home overnight?	O No	O Yes
b	repeatedly lie, cheat, "con" others, or steal?	O No	O Yes
c	start fights or bully, threaten, or intimidate others?	O No	O Yes
d	deliberately destroy things or start fires?	O No	O Yes
e	deliberately hurt animals or people?	O No	O Yes
f	force someone to have sex with you?	O No	O Yes
		=>	
	ARE **2** OR MORE **Q1** ANSWERS CODED **YES?**	O No	O Yes

DO NOT CODE **YES** TO THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED

Q2 **Since you were 15 years old, have you:**

a	repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself?	O No	O Yes
b	done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony?)	O No	O Yes
c	been in physical fights repeatedly (including physical fights with your spouse or children)?	O No	O Yes
d	often lied or "conned" other people to get money or pleasure, or lied just for fun?	O No	O Yes
e	exposed others to danger without caring?	O No	O Yes
f	felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property?	O No	O Yes

ARE **3** OR MORE **Q2** QUESTIONS CODED **YES?** O No O Yes

ANTISOCIAL PERSONALITY DISORDER LIFETIME

R. SOMATIZATION DISORDER (optional)

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

R1 a Have you had **many** physical complaints not clearly related to a specific disease beginning before age 30? => O No O Yes

b Did these physical complaints occur over several years? => O No O Yes

c Did these complaints lead you to seek treatment? => O No O Yes

d Did these complaints cause significant problems at school, at work, socially, or in other important areas? => O No O Yes

R2 Did you have pain in your:

head	O No	O Yes
abdomen	O No	O Yes
back	O No	O Yes
joints, extremities, chest, rectum	O No	O Yes
during menstruation	O No	O Yes
during sexual intercourse	O No	O Yes
during urination	O No	O Yes

ARE **2** OR MORE **R2** ANSWERS CODED **YES?** => O No O Yes

R3 Did you have any of the following abdominal symptoms:

nausea	O No	O Yes
bloating	O No	O Yes
vomiting	O No	O Yes
diarrhea	O No	O Yes
intolerance of several different foods	O No	O Yes

ARE **2** OR MORE **R3** ANSWERS CODED **YES?** => O No O Yes

R4 Did you have any of the following sexual symptoms:

loss of sexual interest	O No	O Yes
erection or ejaculation problems	O No	O Yes
irregular menstrual bleeding	O No	O Yes
excessive menstrual bleeding	O No	O Yes
vomiting throughout pregnancy	O No	O Yes

ARE **2** OR MORE **R4** ANSWERS CODED **YES?** => O No O Yes

R5 Did you have any of the following symptoms:

paralysis or weakness in parts of your body	O No	O Yes
impaired coordination or imbalance	O No	O Yes
difficulty swallowing or lump in throat	O No	O Yes
difficulty speaking	O No	O Yes
difficulty emptying your bladder	O No	O Yes
loss of touch or pain sensation	O No	O Yes
double vision or blindness	O No	O Yes
deafness, seizure, loss of consciousness	O No	O Yes
significant episodes of forgetfulness	O No	O Yes
unexplained sensations in your body	O No	O Yes

CLINICIAN: PLEASE EVALUATE IF THESE ARE SOMATIC HALLUCINATIONS

ARE **2** OR MORE **R5** ANSWERS CODED **YES?** => O No O Yes

R6 Were the symptoms investigated by your physician? O No O Yes

R7 Was any medical illness found, or were you using any drug or medication that could explain these symptoms? O No O Yes

R6 AND R7 (SUMMARY): CLINICIAN: HAS AN ORGANIC CAUSE BEEN RULED OUT? O No O Yes

R8 Were the complaints or disability out of proportion to the patient's physical illness? O No O Yes

=>

IS **R7 (SUMMARY)** OR **R8** CODED **YES?** O No O Yes

=>

R9 Were the symptoms a pretense or intentionally produced (as in factitious disorder)? O No O Yes

IS **R9** CODED **NO**

O No O Yes

SOMATIZATION DISORDER LIFETIME

R10 Are you currently suffering from these symptoms?

O No O Yes

SOMATIZATION DISORDER CURRENT

S. HYPOCHONDRIASIS

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

S1 In the past six months, have you worried a lot about having a serious physical illness? => O No O Yes

DO NOT CODE YES IF ANY PHYSICAL DISORDER CAN ACCOUNT FOR THE PHYSICAL SENSATIONS OR SIGNS THE PATIENT DESCRIBES.

S2 Have you had this worry for 6 months or more? => O No O Yes

S3 Have you ever been examined by a doctor for these symtpoms? => O No O Yes

S4 Have your illness fears persisted in spite of the doctor's reassurance? => O No O Yes

S5 Does this worry cause you significant distress, or does it interfere with your ability to function at work, socially, or in other important ways? O No O Yes

S6 IS **S5** CODED **YES?**

O No O Yes

HYPOCHONDRIASIS CURRENT

U. PAIN DISORDER

=> **MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE**

U1	Currently, is pain your main problem?	=> O No	O Yes
U2	Currently, is the pain severe enough to need medical attention?	=> O No	O Yes
U3	Currently, is the pain causing you significant distress, or interfering significantly with your ability to function at work, socially, or in some other important way?	=> O No	O Yes
U4	Did psychological factors or stress have an important role in the onset of the pain, or did they make it worse, or keep it going?	=> O No	O Yes
U5	Observed Rating: Is the pain a pretense or intentionally produced or feigned? (As in factitious disorder)?	O No	=> O Yes
U6	Did a medical condition have an important role in the onset of the pain, or did the medical condition make it worse, or keep it going?	O No	O Yes
U7	Has the pain been present for more than 6 months?	O No	O Yes
		↓ Acute	↓ Chronic

U8 IS **U6** CODED **NO?**

O No O Yes

PAIN DISORDER associated with psychological factors CURRENT

U9 IS **U6** CODED **YES?**

O No O Yes

PAIN DISORDER associated with psychological factors and general medical conditions CURRENT

IF **U8** OR **U9** ARE CODED **YES**
AND **U7=NO**, ACUTE DIAGNOSIS IS AUTOMATICALLY REPORTED
AND **U7=YES**, CHRONIC DIAGNOSIS IS AUTOMATICALLY REPORTED.

ATTENTION DEFICIT/HYPERACTIVITY DISORDER

(Adult)

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

W5 As a child:

a	Were you active, fidgety, restless, always on the go?	O No	O Yes
b	Were you inattentive and easily distractible?	O No	O Yes
c	Were you unable to concentrate at school or while doing your homework?	O No	O Yes
d	Did you fail to finish things, such as school work, projects, etc.?	O No	O Yes
e	Were you short tempered, irritable, or did you have a "short fuse", or tend to explode.	O No	O Yes
f	Did things have to be repeated to you many times before you did them?	O No	O Yes
g	Did you tend to be impulsive without thinking of the consequences?	O No	O Yes
h	Did you have difficulty waiting for your turn, frequently needing to be first?	O No	O Yes
i	Did you get into fights and/or bother other children?	O No	O Yes
j	Did your school complain about your behavior?	O No	O Yes
		=>	
	W5 (SUMMARY):ARE **6** OR MORE **W5** ANSWERS CODED **YES?**	O No	O Yes

=>

W6 Did you have some of these hpyeractive-impulsive or inattentive symptoms before you were 7 years old? O No O Yes

W7 As an adult:

a	Are you still distractible?	O No	O Yes
b	Are you intrusive, or do you butt in, or say things that you later regret either to friends, at work, or home?	O No	O Yes
c	Are you impulsive, even if you have better control than when you were a child?	O No	O Yes
d	Are you still fidgety, restless, always on the go, even if you have better control than when you were a child?	O No	O Yes
e	Are you still irritable and get angrier than you need to?	O No	O Yes
f	Are you still impulsive? For example, do you tend to spend more money than you really should?	O No	O Yes
g	Do you have difficulty getting work organized?	O No	O Yes
h	Do you have difficulty getting organized even outside of work?	O No	O Yes
i	Are you under-employed or do you work below your capacity?	O No	O Yes
j	Are you not achieving according to people's expectations of your ability?	O No	O Yes
k	Have you changed jobs or have been asked to leave jobs more frequently than other people?	O No	O Yes
l	Does your spouse complain about your inattentiveness or lack of interest in him/her and/or the family?	O No	O Yes
m	Have you gone through two or more divorces, or changed partners more than others?	O No	O Yes
n	Do you sometimes feel like you are in a fog, like a snowy television or out of focus?	O No	O Yes
		=>	
	W7 (SUMMARY):ARE **9** OR MORE **W7** ANSWERS CODED **YES?**	O No	O Yes

W8 Have some of these symptoms caused significant problems in two or more of the following situations: at school, at work, at home, or with family or friends?

=> ○ No ○ Yes

IS **W8** CODED **YES?**

○ No ○ Yes

ADULT ATTENTION DEFICIT / HYPERACTIVITY DISORDER

Y. PREMENSTRUAL DYSPHORIC DISORDER

=> MEANS: GO TO THE NEXT DIAGNOSTIC BOX, FILL IN NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE

Y1 During the past year, were most of your menstrual periods preceded by a period lasting about one week when your mood changed significantly?

=> ○ No ○ Yes

Y2 During these periods, do you have difficulty in your usual activities or relationships with others, are you less efficient at work, or do you avoid other people?

=> ○ No ○ Yes

Y3 During these premenstrual episodes (but not in the week after your period ends) do you have the following problems most of the time.

a Do you feel sad, low, depressed, hopeless, or self-critical ○ No ○ Yes

b Do you feel particularly anxious, tense, keyed up or on edge? ○ No ○ Yes

c Do you often feel suddenly sad or tearful, or are you particulary sensitive to others' comments? ○ No ○ Yes

d Do you feel irritable, angry or argumentative? ○ No ○ Yes

ARE **1** OR MORE **Y3** ANSWERS CODED **YES?**

=> ○ No ○ Yes

e Are you less interested in your usual activities, such as work, hobbies or meeting with friends? ○ No ○ Yes

f Do you have difficulty concentrating? ○ No ○ Yes

g Do you feel exhausted, tire easily, or lack energy? ○ No ○ Yes

h Does your appetite change, or do you overeat or have specific food cravings? ○ No ○ Yes

i Do you have difficulty sleeping or do you sleep excessively? ○ No ○ Yes

j Do you feel you are overwhelmed or out of control? ○ No ○ Yes

k Do you have physical symptoms such as breast tenderness or swelling, headache, joint or muscle pain, a sensation of bloating, or weight gain? ○ No ○ Yes

ARE **5** OR MORE **Y3** ANSWERS CODED **YES?**

IF **YES,** DIAGNOSIS MUST BE CONFIRMED BY PROSPECTIVE DAILY RATINGS DURING AT LEAST 2 CONSECUTIVE CYCLES.

○ No ○ Yes

Premenstrual Dysphoric Disorder Probable
CURRENT

THE HAMILTON RATING SCALE FOR DEPRESSION

(to be administered by a health care professional)

Patient's Name _____

Date of Assessment _____

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

For each item, write the correct number on the line next to the item. (Only one response per item)

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 spontaneous verbal and non-verbal communication

2. FEELINGS OF GUILT

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

3. SUICIDE

_____
- **0=** Absent
- **1=** Feels life is not worth living
- **2=** Wishes he were dead or any thoughts of possible death to self
- **3=** Suicidal ideas or gesture
- **4=** Attempts at suicide (any serious attempt rates 4)

4. INSOMNIA EARLY

_____
- **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 asleep

5. INSOMNIA MIDDLE

_____
- **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)

Adapted from Hedlung and Vieweg, The Hamilton rating scale for depression, *Journal of Operational Psychiatry*, 1979;10(2):149-165.

6. **INSOMNIA LATE**

_____ **0=** No difficulty
1= Waking in early hours of the morning but goes back to sleep
2= Unable to fall asleep again if he 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 patient, or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)
3= Decrease in actual time spent in activities or decrease in productivity
4= Stopped working because of present illness

8. **RETARDATION: PSYCHOMOTOR** (Slowness of thought and speech; impaired ability to concentrate; decreased motor activity)

_____ **0=** Normal speech and thought
1= Slight retardation at interview
2= Obvious retardation at 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 (PSYCHOLOGICAL)**

_____ **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, (i.e., effects of autonomic overactivity, "butterflies," indigestion, stomach cramps, belching, diarrhea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (i.e., dry mouth, constipation)

_____ **0=** Absent
1= Mild
2= Moderate
3= Severe
4= Incapacitating

12. SOMATIC SYMPTOMS (GASTROINTESTINAL)

_____ **0**= None
1= Loss of appetite but eating without encouragement from others. Food intake about normal
2= Difficulty eating without urging from others. Marked reduction of appetite and food intake

13. SOMATIC SYMPTOMS GENERAL

_____ **0**= None
1= Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability
2= Any clear-cut symptom rates 2

14. GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; 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

_____ **A.** When rating by history:
0= No weight loss
1= Probably weight loss associated with present illness
2= Definite (according to patient) weight loss
3= Not assessed

17. INSIGHT

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

18. DIURNAL VARIATION

_____ **A.** Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none
0= No variation
1= Worse in A.M.
2= Worse in P.M.

_____ **B.** When present, mark the severity of the variation. Mark "None" if NO variation
0= None
1= Mild
2= Severe

19. DEPERSONALIZATION AND DEREALIZATION (Such as: Feelings of unreality; Nihilistic ideas)

_____ **0**= Absent
1= Mild
2= Moderate
3= Severe
4= Incapacitating

20. PARANOID SYMPTOMS

_____ **0**= None
1= Suspicious
2= Ideas of reference
3= Delusions of reference and persecution

21. OBSESSIONAL AND COMPULSIVE SYMPTOMS

_____ **0**= Absent
1= Mild
2= Severe

Total Score _____

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MEASURE™
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PATIENT EDUCATION TOOLS

Young Mania Rating Scale (YMRS)

OVERVIEW

The Young Mania Rating Scale (YMRS) is one of the most frequently utilized rating scales to assess manic symptoms. The scale has 11 items and is based on the patient's subjective report of his or her clinical condition over the previous 48 hours. Additional information is based upon clinical observations made during the course of the clinical interview. The items are selected based upon published descriptions of the core symptoms of mania. The YMRS follows the style of the Hamilton Rating Scale for Depression (HAM-D) with each item given a severity rating. There are four items that are graded on a 0 to 8 scale (irritability, speech, thought content, and disruptive/aggressive behavior), while the remaining seven items are graded on a 0 to 4 scale. These four items are given twice the weight of the others to compensate for poor cooperation from severely ill patients. There are well described anchor points for each grade of severity. The authors encourage the use of whole or half point ratings once experience with the scale is acquired. Typical YMRS baseline scores can vary a lot. They depend on the patients' clinical features such as mania (YMRS = 12), depression (YMRS = 3), or euthymia (YMRS = 2). Sometimes a clinical study entry requirement of YMRS $\geq$ 20 generates a mean YMRS baseline of about 30. Strengths of the YMRS include its brevity, widely accepted use, and ease of administration. The usefulness of the scale is limited in populations with diagnoses other than mania.

The YMRS is a rating scale used to evaluate manic symptoms at baseline and over time in individuals with mania.

The scale is generally done by a clinician or other trained rater with expertise with manic patients and takes 15–30 minutes to complete.

REFERENCES

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McIntyre RS, Mancini DA, Srinivasan J, McCann S, Konarski JZ, Kennedy SH. The antidepressant effects of risperidone and olanzapine in bipolar disorder. *Can J Clin Pharmacol.* 2004;11:e218-226.

Young RC, Biggs JT, Ziegler VE, Meyer DA. Young Mania Rating Scale. In: *Handbook of Psychiatric Measures*. Washington, DC: American Psychiatric Association; 2000:540-542.

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Young Mania Rating Scale (YMRS)

GUIDE FOR SCORING ITEMS:

The purpose of each item is to rate the severity of that abnormality in the patient. When several keys are given for a particular grade of severity, the presence of only one is required to qualify for that rating.

The keys provided are guides. One can ignore the keys if that is necessary to indicate severity, although this should be the exception rather than the rule.

Scoring between the points given (whole or half points) is possible and encouraged after experience with the scale is acquired. This is particularly useful when severity of a particular item in a patient does not follow the progression indicated by the keys.

1. **Elevated Mood**
   - 0 Absent
   - 1 Mildly or possibly increased on questioning
   - 2 Definite subjective elevation; optimistic, self-confident; cheerful; appropriate to content
   - 3 Elevated; inappropriate to content; humorous
   - 4 Euphoric; inappropriate laughter; singing

2. **Increased Motor Activity-Energy**
   - 0 Absent
   - 1 Subjectively increased
   - 2 Animated; gestures increased
   - 3 Excessive energy; hyperactive at times; restless (can be calmed)
   - 4 Motor excitement; continuous hyperactivity (cannot be calmed)

3. **Sexual Interest**
   - 0 Normal; not increased
   - 1 Mildly or possibly increased
   - 2 Definite subjective increase on questioning
   - 3 Spontaneous sexual content; elaborates on sexual matters; hypersexual by self-report
   - 4 Overt sexual acts (toward patients, staff, or interviewer)

4. **Sleep**
   - 0 Reports no decrease in sleep
   - 1 Sleeping less than normal amount by up to one hour
   - 2 Sleeping less than normal by more than one hour
   - 3 Reports decreased need for sleep
   - 4 Denies need for sleep

5. **Irritability**
   - 0 Absent
   - 2 Subjectively increased
   - 4 Irritable at times during interview; recent episodes of anger or annoyance on ward
   - 6 Frequently irritable during interview; short, curt throughout
   - 8 Hostile, uncooperative; interview impossible

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6. Speech (Rate and Amount)
- 0 No increase
- 2 Feels talkative
- 4 Increased rate or amount at times, verbose at times
- 6 Push; consistently increased rate and amount; difficult to interrupt
- 8 Pressured; uninterruptible, continuous speech

7. Language-Thought Disorder
- 0 Absent
- 1 Circumstantial; mild distractibility; quick thoughts
- 2 Distractible, loses goal of thought; changes topics frequently; racing thoughts
- 3 Flight of ideas; tangentiality; difficult to follow; rhyming, echolalia
- 4 Incoherent; communication impossible

8. Content
- 0 Normal
- 2 Questionable plans, new interests
- 4 Special project(s); hyper-religious
- 6 Grandiose or paranoid ideas; ideas of reference
- 8 Delusions; hallucinations

9. Disruptive-Aggressive Behavior
- 0 Absent, cooperative
- 2 Sarcastic; loud at times, guarded
- 4 Demanding; threats on ward
- 6 Threatens interviewer; shouting; interview difficult
- 8 Assaultive; destructive; interview impossible

10. Appearance
- 0 Appropriate dress and grooming
- 1 Minimally unkempt
- 2 Poorly groomed; moderately disheveled; overdressed
- 3 Disheveled; partly clothed; garish make-up
- 4 Completely unkempt; decorated; bizarre garb

11. Insight
- 0 Present; admits illness; agrees with need for treatment
- 1 Possibly ill
- 2 Admits behavior change, but denies illness
- 3 Admits possible change in behavior, but denies illness
- 4 Denies any behavior change

VANDERBILT ADHD DIAGNOSTIC PARENT RATING SCALE

Child's Name: _____ Today's Date: _____

Date of Birth: _____ Age: _____

Grade: _____

Each rating should be considered in the context of what is appropriate for the age of your child.

Frequency Code: 0 = Never 1 = Occasionally 2 = Often 3 = Very Often

1. Does not pay attention to details or makes careless mistakes, for example homework 0 1 2 3
2. Has difficulty sustaining attention to tasks or activities 0 1 2 3
3. Does not seem to listen when spoken to directly 0 1 2 3
4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand) 0 1 2 3
5. Has difficulty organizing tasks and activities 0 1 2 3
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort 0 1 2 3
7. Loses things necessary for tasks or activities (school assignments, pencils or books) 0 1 2 3
8. Is easily distracted by extraneous stimuli 0 1 2 3
9. Is forgetful in daily activities 0 1 2 3
10. Fidgets with hands or feet or squirms in seat 0 1 2 3
11. Leaves seat when remaining seated is expected 0 1 2 3
12. Runs about or climbs excessively in situations when remaining seated is expected 0 1 2 3
13. Has difficulty playing or engaging in leisure/play activities quietly 0 1 2 3
14. Is "on the go" or often acts as if "drive by a motor" 0 1 2 3
15. Talks too much 0 1 2 3
16. Blurts out answers before questions have been completed 0 1 2 3
17. Has difficulty waiting his/her turn 0 1 2 3
18. Interrupts or intrudes on others (e.g., butts into conversations or games) 0 1 2 3
19. Argues with adults 0 1 2 3
20. Loses temper 0 1 2 3
21. Actively defies or refuses to comply with adults' requests or rules 0 1 2 3
22. Deliberately annoys people 0 1 2 3
23. Blames others for his or her mistakes or misbehaviors 0 1 2 3
24. Is touchy or easily annoyed by others 0 1 2 3

25. Is angry or resentful 0 1 2 3

26. Is spiteful and vindictive 0 1 2 3

27. Bullies, threatens, or intimidates others 0 1 2 3

28. Initiates physical fights 0 1 2 3

29. Lies to obtain goods for favors or to avoid obligations (i.e., “cons” others) 0 1 2 3

30. Is truant from school (skips school) without permission 0 1 2 3

31. Is physically cruel to people 0 1 2 3

32. Has stolen items of nontrivial value 0 1 2 3

33. Deliberately destroys others’ property 0 1 2 3

34. Has used a weapon that can cause serious harm (bat, knife, brick, gun) 0 1 2 3

35. Is physically cruel to animals 0 1 2 3

36. Has deliberately set fires to cause damage 0 1 2 3

37. Has broken into someone else’s home, business, or car 0 1 2 3

38. Has stayed out at night without permission 0 1 2 3

39. Has run away from home overnight 0 1 2 3

40. Has forced someone into sexual activity 0 1 2 3

41. Is fearful, anxious, or worried 0 1 2 3

42. Is afraid to try new things for fear of making mistakes 0 1 2 3

43. Feels worthless or inferior 0 1 2 3

44. Blames self for problems, feels guilty 0 1 2 3

45. Feels lonely, unwanted, or unloved: complains that “no one loves him/her” 0 1 2 3

46. Is sad, unhappy, or depressed 0 1 2 3

47. Is self-conscious or easily embarrassed 0 1 2 3

PERFORMANCE

	Problematic		Average	Above Average	
1. Overall Academic Performance	1	2	3	4	5
a. Reading	1	2	3	4	5
b. Mathematics	1	2	3	4	5
c. Written Expression	1	2	3	4	5

PERFORMANCE

	Problematic		Average	Above Average	
2. Overall Classroom Behavior	1	2	3	4	5
a. Relationship with peers	1	2	3	4	5
b. Following Directions/Rules	1	2	3	4	5
c. Disrupting Class	1	2	3	4	5
d. Assignment Completion	1	2	3	4	5
e. Organizational Skills	1	2	3	4	5

Scoring Instructions for the ADTRS

***Predominately inattentive subtype** requires 6 or 9 behaviors, (scores of 2 or 3 are positive) on items 1 through 9, and a performance problem (scores of 1 or 2) in any of the items on the performance section.

***Predominately hyperactive/Impulsive subtype** requires 6 or 9 behaviors (scores of 2 or 3 are positive) on items 10 through 18 and a problem (scores of 1 or 2) in any of the items on the performance section.

***The Combined Subtype** requires the above criteria on both inattention and hyperactivity/impulsivity.

***Oppositional-defiant disorder** is screened by 4 of 8 behaviors, (scores of 2 or 3 are positive) (19 through 26).

***Conduct disorder** is screened by 3 of 15 behaviors, (scores of 2 or 3 are positive) (27 through 40).

***Anxiety or depression** are screened by behaviors 41 through 47, scores of 3 of 7 are required, (scores of 2 or 3 are positive).

WHO/MSA/MNH/PSF/97.4
English only
Distr.: Limited

WHOQOL-BREF

PROGRAMME ON MENTAL HEALTH
WORLD HEALTH ORGANIZATION
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For office use only

	Equations for computing domain scores	Raw score	Transformed scores*	
Domain 1	(6-Q3) + (6-Q4) + Q10 + Q15 + Q16 + Q17 + Q18 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=	**4-20**	**0-100**
Domain 2	Q5 + Q6 + Q7 + Q11 + Q19 + (6-Q26) ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=		
Domain 3	Q20 + Q21 + Q22 ☐ + ☐ + ☐	=		
Domain 4	Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=		

* Please see Table 4 on page 10 of the manual, for converting raw scores to transformed scores.

I.D. number

ABOUT YOU

Before you begin we would like to ask you to answer a few general questions about yourself: by circling the correct answer or by filling in the space provided.

What is your **gender**? Male Female

What is you **date of birth**? _____ / _____ / _____
Day / Month / Year

What is the highest **education** you received?
None at all
Primary school
Secondary school
Tertiary

What is your **marital status**?
Single Separated
Married Divorced
Living as married Widowed

Are you currently **ill**? Yes No

If something is wrong with your health what do you think it is?_____illness/ problem

Instructions

This assessment asks how you feel about your quality of life, health, or other areas of your life. **Please answer all the questions.** If you are unsure about which response to give to a question, **please choose the one** that appears most appropriate. This can often be your first response.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last two weeks.** For example, thinking about the last two weeks, a question might ask:

		Not at all	Not much	Moderately	A great deal	Completely
	Do you get the kind of support from others that you need?	1	2	3	4	5

You should circle the number that best fits how much support you got from others over the last two weeks. So you would circle the number 4 if you got a great deal of support from others as follows.

		Not at all	Not much	Moderately	A great deal	Completely
	Do you get the kind of support from others that you need?	1	2	3	4	5

You would circle number 1 if you did not get any of the support that you needed from others in the last two weeks.

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

		Very poor	Poor	Neither poor nor good	Good	Very good
1(G1)	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2 (G4)	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3 (F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4(F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5(F4.1)	How much do you enjoy life?	1	2	3	4	5
6(F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7(F5.3)	How well are you able to concentrate?	1	2	3	4	5
8 (F16.1)	How safe do you feel in your daily life?	1	2	3	4	5
9 (F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
10 (F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
11 (F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
12 (F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
13 (F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14 (F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither	Good	Very good

				poor nor good		
15 (F9.1)	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16 (F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
17 (F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18(F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
19 (F6.3)	How satisfied are you with yourself?	1	2	3	4	5
20(F13.3)	How satisfied are you with your personal relationships?	1	2	3	4	5
21(F15.3)	How satisfied are you with your sex life?	1	2	3	4	5
22(F14.4)	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23(F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24(F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
25(F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
26 (F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this form?.....

How long did it take to fill this form out?.....

Do you have any comments about the assessment?

.....

.....

THANK YOU FOR YOUR HELP

CASES

NAME	AGE	SEX	EDUCATION	OCCUPATION	PLACE	SOCIO ECONOMIC STATUS	MARITIAL STATUS	RELIGION	LANGUAGE	FAMILY H/O	AGE OF ONSET	NO OF EPISODES	NO OF MANIC EPISODES	NO OF DEPRESSIVE EPISODE	DURATION OF ILLNESSS (EPISODIC)	SUICIDE ATTEMPTS	PSYCHOTIC EPISODES	AGGRESSION	IN ATTENTION SYMPTOMS	HYPERACTIVITY	ODD FEATURES	CONDUCT FEATURES	ANXIETY	PERFORMANCE	PHYSICAL HEALTH	PSYCHOLOGICAL	SOCIAL RELATIONSHIPS	ENVIRONMENT
D	25	F	MBA	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	23 YEARS	3	2	1	2	YES	YES	NO	0	0	0	0	0	0	63	63	25	56
S	44	F	6TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	37 YEARS	10	8	2	7	NO	YES	YES	0	3	0	0	0	0	56	44	50	44
A	30	F	12TH STD	HOUSE WIFE	URBAN	MIDDLE	MARRIED	CHRISTIAN	TAMIL	NIL	21 YEARS	7	2	5	9	YES	YES	YES	1	2	0	0	2	0	50	44	56	50
G	26	F	7TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	20 YEARS	3	3	0	6	YES	YES	NO	4	1	0	0	2	0	44	44	44	38
S	40	F	8TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	25 YEARS	3	3	0	15	YES	YES	YES	0	0	0	0	0	0	31	50	44	56
S	35	F	12TH STD	BPO	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	29 YEARS	2	2	0	6	YES	YES	YES	3	6	2	0	0	0	44	44	31	38
S	23	F	11TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	16 YEARS	4	3	1	7	NO	NO	NO	3	0	0	0	2	2	63	63	56	44
M	38	F	UN EDUCATED	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	27 YEARS	3	3	0	11	NO	YES	NO	1	0	0	0	1	2	63	63	31	56
S	30	M	12TH STD	MECHANIC	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	20 YEARS	3	3	0	10	NO	NO	YES	0	0	0	0	0	2	69	50	75	31
S	31	M	BE	ENGINEER	RURAL	MIDDLE	UNMARRIED	CHRISTIAN	TAMIL	YES	24 YEARS	4	4	0	7	NO	NO	YES	0	0	0	0	2	0	63	50	44	50
M	30	M	5TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	23 YEARS	6	4	2	7	NO	YES	YES	2	0	0	0	2	0	38	44	31	31
I	31	M	ITI	UNEMPLOYED	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	24 YEARS	7	7	0	7	NO	NO	YES	2	3	2	0	2	1	38	44	44	31
S	42	M	5TH STD	COOLY	RURAL	LOW	MARRIED	CHRISTIAN	TAMIL	YES	25 YEARS	7	7	0	17	YES	NO	YES	2	0	1	0	0	0	50	50	69	38
M	17	M	12 STD	STUDENT	RURAL	LOW	UNMARRIED	HINDU	TAMIL	YES	16 YEARS	2	2	0	1	NO	YES	YES	3	6	2	2	2	0	56	44	31	31
R	37	M	9TH STD	FARMER	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	26 YEARS	4	4	0	11	NO	YES	YES	2	3	2	0	2	0	38	44	50	31
M	28	F	12TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	21 YEARS	4	3	1	6	YES	YES	YES	6	0	0	0	0	0	38	44	25	38
K	44	F	9TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	20 YEARS	11	10	1	24	YES	YES	YES	6	0	2	0	0	0	50	50	31	56
R	39	M	10TH STD	DRIVER	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	25 YEARS	3	3	0	14	NO	YES	YES	3	7	5	0	0	0	63	50	69	44
S	44	M	MCA	BUSINESS	URBAN	MIDDLE	MARRIED	HINDU	TAMIL	YES	22 YEARS	3	3	0	17	NO	YES	YES	1	6	0	0	0	0	63	63	50	63
R	35	M	5TH STD	LABOUR	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	23 YEARS	2	1	1	12	NO	YES	YES	0	6	0	1	0	3	63	50	44	50
S	40	F	8TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	19 YEARS	9	8	1	21	YES	YES	YES	1	6	0	0	0	1	38	31	6	19
Y	24	F	BSC	CLERK	URBAN	LOW	UNMARRIED	CHRISTIAN	TAMIL	YES	19 YEARS	4	4	0	5	NO	NO	YES	1	0	0	0	1	0	69	63	25	63
K	45	F	UN EDUCATED	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	44 YEARS	3	3	0	2	NO	NO	YES	1	6	0	0	0	2	69	69	6	69
K	31	F	7TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	24 YEARS	2	2	0	7	YES	NO	YES	0	0	0	0	0	0	63	50	44	38
J	31	M	ITI	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	13 YEARS	13	4	1	18	NO	YES	YES	2	3	1	0	2	1	44	50	50	31
S	28	M	9TH STD	DRIVER	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	23 YEARS	4	4	0	3	NO	NO	YES	0	2	2	1	1	4	69	63	56	75

J	45	M	8TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	40 YEARS	4	4	0	5	NO	YES	YES	0	1	0	0	2	1	56	44	50	44
S	44	M	B LIT	MANAGER	RURAL	MIDDLE	MARRIED	CHRISTIAN	TAMIL	NIL	20 YEARS	5	5	0	24	NO	NO	YES	0	3	0	0	1	0	56	88	75	56
R	44	M	6TH STD	LABOUR	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	28 YEARS	4	4	0	16	NO	YES	YES	0	3	0	0	0	2	44	38	44	38
V	26	M	BSC	LABOUR	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	23 YEARS	3	3	0	3	YES	NO	YES	0	3	0	0	1	3	63	56	25	50
P	41	M	5TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	17 YEARS	3	3	0	12	NO	YES	YES	0	0	0	0	2	1	50	44	31	44
S	29	M	BCA	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	24 YEARS	3	3	0	5	NO	YES	YES	2	0	0	0	1	1	38	56	50	44
I	36	F	10TH STD	TAILOR	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	20 YEARS	8	8	0	16	YES	NO	YES	3	6	1	0	0	1	69	44	56	50
D	42	F	2ND STD	HOUSE WIFE	URBAN	LOW	MARRIED	CHRISTIAN	TAMIL	YES	20 YEARS	12	12	0	2	NO	YES	YES	2	6	0	0	1	0	63	63	19	50
J	19	F	12TH STD	LABOUR	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	16 YEARS	3	2	1	3	NO	NO	YES	0	0	0	0	0	2	69	56	25	63
K	23	F	9TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	17 YEARS	2	1	1	6	NO	NO	NO	0	0	0	0	1	2	69	56	56	63
S	40	M	10TH STD	DRIVER	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	35 YEARS	5	5	0	4	YES	YES	YES	0	0	0	1	0	0	56	44	25	50
A	22	M	BBA	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	15 YEARS	3	3	0	7	NO	YES	YES	0	0	0	0	0	1	81	69	44	56
K	36	M	8TH STD	FARMER	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	24 YEARS	3	3	0	12	NO	YES	YES	0	0	0	0	0	1	63	44	50	50
A	40	F	5TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	33 YEARS	6	6	0	7	NO	YES	YES	0	0	0	0	0	3	63	50	31	56
E	34	F	BA	HOUSE WIFE	URBAN	LOW	MARRIED	CHRISTIAN	TAMIL	YES	22 YEARS	4	4	0	12	NO	NO	NO	0	0	0	0	2	0	69	56	69	50
G	36	M	ITI	LABOUR	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	33 YEARS	4	4	0	3	NO	YES	YES	0	0	0	0	0	1	63	69	19	44
R	23	M	8TH STD	LABOUR	RURAL	LOW	UNMARRIED	HINDU	TAMIL	YES	23 YEARS	1	1	0	1	NO	NO	YES	0	4	0	0	0	2	69	69	44	56
V	44	M	8TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	42 YEARS	2	2	0	2	YES	YES	YES	0	0	0	0	0	0	63	44	69	56
S	33	M	11TH STD	LABOUR	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	26 YEARS	2	2	0	7	NO	YES	YES	2	1	0	0	0	1	63	44	56	50
M	30	M	12TH STD	LABOUR	URBAN	LOW	MARRIED	ISLAM	TAMIL	YES	24 YEARS	5	5	0	6	NO	YES	YES	6	0	2	0	0	3	63	56	50	63
M	35	M	8TH STD	DRIVER	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	26 YEARS	7	5	2	9	YES	YES	YES	6	0	0	0	1	2	56	44	19	38
M	29	M	10TH STD	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	18 YEARS	5	5	0	11	NO	YES	YES	0	0	0	0	0	0	63	63	31	56
G	32	M	9TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	17 YEARS	10	10	0	15	YES	YES	YES	0	2	0	0	2	0	44	50	19	25
S	39	F	8TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	18 YEARS	4	3	1	21	NO	NO	NO	0	0	0	0	2	0	44	56	44	63
P	33	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	30 YEARS	2	2	0	3	NO	YES	YES	0	0	0	0	2	0	56	56	31	50
R	43	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	18 YEARS	7	7	0	25	NO	YES	YES	0	0	0	0	2	0	63	56	50	50
A	18	F	8TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	CHRISTIAN	TAMIL	YES	17 YEARS	2	2	0	1	NO	YES	YES	0	0	3	2	0	2	56	56	25	56
D	26	F	BA	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	21 YEARS	4	4	0	5	NO	YES	YES	0	6	1	1	0	0	63	56	31	50
K	38	M	9TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	20 YEARS	6	4	2	18	YES	YES	YES	6	0	5	5	0	3	50	56	44	56
M	37	M	ITI	LABOUR	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	26 YEARS	5	5	0	11	NO	YES	YES	0	2	2	0	0	0	63	56	19	50
M	44	M	10TH STD	LABOUR	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	19 YEARS	7	6	1	25	NO	YES	YES	0	0	0	3	0	0	63	56	44	50
S	23	M	10TH STD	ELECTRICIAN	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	19 YEARS	3	3	0	4	NO	YES	YES	0	0	0	0	0	2	63	56	25	63
R	30	M	10TH STD	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	25 YEARS	3	3	0	5	NO	YES	YES	0	2	0	0	2	0	63	56	19	56

C	23	F	8TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	21 YEARS	2	1	1	1	NO	YES	YES	0	0	0	0	2	0	56	50	56	50
N	29	M	12TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	19 YEARS	6	6	0	11	NO	YES	YES	0	2	0	2	0	0	56	63	25	44
A	24	M	12TH STD	ELECTRICIAN	RURAL	LOW	UNMARRIED	HINDU	TAMIL	YES	18 YEARS	2	2	0	5	NO	YES	YES	0	0	0	0	2	0	56	63	31	44
A	30	M	BCOM	UNEMPLOYED	RURAL	LOW	UNMARRIED	HINDU	TAMIL	YES	27 YEARS	2	2	0	2	NO	YES	YES	0	0	0	0	2	0	63	69	44	50
K	26	F	MCA	UNEMPLOYED	URBAN	LOW	UNMARRIED	CHRISTIAN	TAMIL	YES	24 YEARS	3	1	2	2	YES	YES	YES	0	0	0	0	3	0	56	63	25	44
P	24	F	12TH STD	LABOUR	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	19 YEARS	5	4	1	6	NO	YES	YES	0	4	0	0	0	0	56	63	25	38
M	24	M	12TH STD	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	17 YEARS	2	2	0	5	NO	YES	YES	0	0	0	0	3	0	63	50	25	50
S	29	M	4TH STD	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	27 YEARS	2	2	0	2	NO	YES	YES	0	0	0	0	2	0	56	50	19	50
N	20	M	9TH STD	COOLY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	14 YEARS	3	3	0	6	NO	YES	YES	0	0	0	6	0	0	56	56	25	56
R	27	M	7TH STD	COOLY	RURAL	LOW	UNMARRIED	HINDU	TAMIL	YES	24 YEARS	4	4	0	3	NO	YES	YES	0	0	0	0	0	0	50	44	25	44
V	27	M	9TH STD	FISHER	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	25 YEARS	3	3	0	2	NO	YES	YES	0	0	0	0	0	0	56	56	25	50
A	27	M	9TH STD	DRIVER	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	18 YEARS	5	4	1	9	NO	YES	YES	0	0	0	0	0	0	56	63	44	50
L	33	F	9TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	26 YEARS	2	2	0	7	YES	YES	YES	0	0	0	0	0	0	56	63	44	44
D	32	F	8TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	CHRISTIAN	TAMIL	NIL	21 YEARS	2	2	0	11	NO	NO	NO	0	0	0	0	0	0	56	63	44	50
A	22	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	20 YEARS	1	1	0	1	NO	YES	YES	0	3	0	0	0	0	56	63	44	50
N	21	F	BA	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	16 YEARS	6	2	4	5	NO	YES	YES	0	0	0	0	0	0	56	56	31	38
V	41	M	BSC	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	17 YEARS	10	9	1	24	NO	YES	YES	0	0	0	0	3	0	56	50	44	44
P	31	F	10TH STD	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	20 YEARS	1	1	0	1	NO	YES	YES	0	0	0	0	0	0	56	63	50	50
R	28	M	9TH STD	DRIVER	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	27 YEARS	2	2	0	2	NO	NO	NO	0	0	0	0	0	0	63	56	31	50
S	21	F	10TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	17 YEARS	2	2	0	4	NO	YES	NO	0	0	0	0	0	0	50	44	31	44
L	38	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	17 YEARS	9	7	2	18	YES	YES	YES	0	0	0	0	3	0	44	44	31	44
K	39	M	4TH STD	PAINTER	URBAN	LOW	SEPERATED	HINDU	TAMIL	NIL	22 YEARS	2	2	0	15	NO	YES	YES	0	0	0	0	0	0	56	63	44	50
B	25	M	7TH STD	LABOUR	URBAN	LOW	UNMARRIED	ISLAM	TAMIL	NIL	23 YEARS	2	2	0	2	NO	NO	YES	0	0	0	3	0	0	56	63	31	44
R	30	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	29 YEARS	2	2	0	2	NO	YES	YES	0	0	0	0	0	0	56	69	31	44
S	30	M	UN EDUCATED	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	27 YEARS	3	3	0	3	NO	YES	YES	0	0	0	2	0	0	56	63	44	56
B	41	F	TEACHER TRAINING	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	18 YEARS	11	10	1	23	YES	YES	YES	0	0	0	0	0	0	50	56	50	56
N	33	M	9TH STD	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	30 YEARS	1	1	0	1	NO	NO	NO	0	0	0	0	0	0	63	63	44	50
D	21	M	12TH STD	ELECTRICIAN	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	15 YEARS	4	2	2	6	NO	NO	NO	0	0	0	0	2	0	56	44	19	50
S	40	F	UN EDUCATED	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	24 YEARS	11	10	1	16	YES	YES	YES	0	3	0	0	3	0	38	56	31	50
A	29	F	6TH STD	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	26 YEARS	2	2	0	3	YES	YES	YES	0	0	0	0	2	0	56	63	44	44
P	43	M	9TH STD	FARMER	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	26 YEARS	2	2	0	14	NO	YES	YES	0	0	0	0	0	0	56	56	25	44
M	19	F	10TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	CHRISTIAN	TAMIL	YES	14 YEARS	3	3	0	3	NO	NO	NO	0	0	0	0	0	0	50	56	25	50
M	24	F	8TH STD	COOLY	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	15YEARS	5	2	3	9	YES	YES	YES	3	0	0	0	0	0	38	44	19	50

J	28	F	8TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	CHRISTIAN	TAMIL	YES	18YEARS	2	2	0	10	NO	NO	YES	0	0	0	0	0	0	63	50	44	56
G	39	F	3RDSTD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	29YEARS	5	5	0	10	YES	YES	YES	0	0	0	0	0	0	44	38	44	44
M	40	F	B.A	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	YES	23YEARS	4	3	1	17	YES	YES	YES	0	0	0	0	0	0	56	44	31	38
H	41	F	9TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	CHRISTIAN	TAMIL	NIL	39YEARS	2	2	0	2	NO	YES	NO	0	0	0	0	0	0	56	38	44	44
L	30	F	7TH STD	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	15YEARS	6	5	1	15	NO	YES	YES	0	0	0	0	0	0	50	38	19	38
D	26	F	B.A	H0USEWIFE	URBAN	LOW	UNMARRIED	HINDU	TAMIL	YES	24YEARS	2	2	0	2	NO	YES	YES	0	6	0	0	0	0	63	38	31	38
V	36	M	9TH STD	COOLY	RURAL	LOW	MARRIED	HINDU	TAMIL	YES	28YEARS	5	5	0	8	YES	YES	YES	0	0	0	0	0	0	56	56	31	44
V	20	M	DEEE	COOLY	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	14YEARS	4	2	0	6	NO	YES	YES	0	0	0	0	2	0	69	56	31	50
V	29	M	M.E	ENGINEER	URBAN	MIDDLE	UNMARRIED	HINDU	TAMIL	YES	27YEARS	2	2	0	2	NO	NO	NO	0	0	0	0	2	0	63	69	25	56
V	32	M	5TH STD	C00LY	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	26YEARS	5	5	0	6	NO	YES	YES	0	0	0	0	0	0	63	44	6	38
K	23	M	10TH STD	COOLY	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	16YEARS	5	4	1	7	NO	YES	YES	0	0	0	0	0	0	56	44	25	50
A	32	M	5TH STD	COOLY	URBAN	LOW	MARRIED	ISLAM	TAMIL	NIL	32YEARS	1	1	0	1	NO	YES	YES	0	0	0	0	0	0	63	56	44	56
A	21	M	BE	UNEMPLOYED	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	17YEARS	3	3	0	4	NO	NO	YES	0	0	0	0	0	0	63	50	31	44
I	45	F	5TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	38YEARS	2	1	1	7	NO	NO	NO	0	0	0	0	0	0	56	44	44	38
D	39	F	12TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	ISLAM	TAMIL	NIL	19YEARS	6	4	2	19	NO	NO	NO	0	0	0	0	0	0	56	44	31	38
R	23	M	8TH STD	LABOUR	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	23YEARS	1	1	0	1	NO	NO	NO	0	0	0	0	0	0	69	69	44	56
J	18	F	12TH STD	LABOUR	URBAN	LOW	UNMARRIED	HINDU	TAMIL	NIL	16YEARS	3	1	2	3	NO	NO	NO	0	0	0	0	0	0	69	56	25	63
K	30	F	7TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	24YEARS	2	2	0	7	YES	NO	YES	0	0	0	0	0	0	63	50	44	38
M	28	F	12TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	21YEARS	4	3	1	6	YES	YES	NO	0	0	0	0	0	0	38	44	25	38
A	22	M	BBA	COOLY	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	15YEARS	3	3	0	7	NO	NO	NO	0	0	0	0	0	0	81	69	44	56
D	25	F	MSC	UNEMPLOYED	RURAL	LOW	UNMARRIED	HINDU	TAMIL	NIL	23YEARS	3	2	1	2	YES	YES	NO	0	0	0	0	0	0	63	63	25	56
K	35	M	8TH STD	FARMER	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	24YEARS	3	3	0	12	NO	YES	NO	0	0	0	0	0	0	63	44	50	50
S	40	F	10TH STD	HOUSE WIFE	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	25YEARS	3	3	0	15	YES	NO	NO	0	0	0	0	0	0	31	50	44	56
R	33	M	11TH STD	LABOUR	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	26YEARS	2	2	0	7	NO	NO	NO	0	0	0	0	0	0	63	44	56	50
S	35	F	12TH STD	LABOUR	URBAN	MIDDLE	MARRIED	HINDU	TAMIL	NIL	29YEARS	2	2	0	6	YES	NO	YES	0	0	0	0	0	0	44	44	31	38
M	30	M	12TH STD	LABOUR	URBAN	LOW	MARRIED	ISLAM	TAMIL	NIL	24YEARS	5	4	1	6	NO	YES	NO	0	0	0	0	0	0	63	56	50	63
S	23	F	11TH STD	HOUSE WIFE	RURAL	LOW	MARRIED	HINDU	TAMIL	NIL	16YEARS	3	1	2	7	NO	NO	NO	0	0	0	0	0	0	63	63	56	44
S	35	M	8TH STD	DRIVER	URBAN	LOW	MARRIED	HINDU	TAMIL	NIL	26YEARS	6	3	3	9	NO	NO	NO	0	0	0	0	0	0	56	44	19	38

CONTROL

NAME	AGE	SEX	EDUCATION	OCCUPATION	MARRITAL STATUS	SOCIO ECONOMIC CLASS	RELIGION	LANGUAGE	RESIDENCE	FAMILY H/O	INATTENTION	HYPERACTIVITY	ODD	CONDUCT	ANXIETY	PERFORMANCE
S	44	F	6THSTD	HOUSEWIFE	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
D	30	F	12THSTD	HOUSEWIFE	MARRIED	LOW	CHRISTIAN	TAMIL	URBAN	NIL	0	0	0	0	0	0
G	26	F	7THSTD	LABOUR	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
L	31	M	ITI	UNEMPLOYED	MARRIED	LOW	HINDU	TAMIL	RURAL	NIL	0	0	0	0	0	0
S	35	F	12THSTD	LABOUR	MARRIED	MIDDLE	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
M	18	M	12THSTD	UNEMPLOYED	UNMARRIED	LOW	HINDU	TAMIL	RURAL	NIL	0	0	0	0	2	0
R	37	M	9THSTD	FARMER	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
R	39	M	10THSTD	DRIVER	MARRIED	LOW	HINDU	TAMIL	RURAL	NIL	0	0	0	0	0	0
S	44	M	MCA	BUSINESS	MARRIED	MIDDLE	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
R	35	M	5THSTD	COOLY	MARRIED	LOW	HINDU	TAMIL	RURAL	NIL	0	0	0	0	0	0
S	40	F	8THSTD	HOUSEWIFE	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
Y	24	F	BSC	CLERK	UNMARRIED	LOW	CHRISTIAN	TAMIL	RURAL	YES	0	0	0	0	0	0
J	31	F	ITI	LABOUR	MARRIED	LOW	HINDU	TAMIL	RURAL	NIL	0	0	0	0	0	0
S	28	F	9THSTD	DRIVER	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
J	45	M	8THSTD	LABOUR	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
S	44	M	DTED	ASST MANAGER	MARRIED	MIDDLE	CHRISTIAN	TAMIL	URBAN	NIL	0	0	0	0	0	0
R	43	M	6THSTD	LABOUR	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
V	26	M	BSC	OPERATOR	UNMARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
D	42	F	2NDSTD	HOUSEWIFE	MARRIED	LOW	CHRISTIAN	TAMIL	URBAN	NIL	0	0	0	0	0	0
J	17	F	12THSTD	UNEMPLOYED	UNMARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	2	0	0	0	0
H	41	M	10THSTD	COOLY	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
S	37	F	7THSTD	HOUSEWIFE	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
K	36	M	10THSTD	LABOUR	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
M	42	M	10THSTD	LABOUR	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
C	24	F	8THSTD	HOUSEWIFE	MARRIED	LOW	HINDU	TAMIL	RURAL	YES	0	0	0	0	0	0
A	23	M	12THSTD	ELECTRICIAN	UNMARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
L	24	M	12THSTD	COOLY	UNMARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
N	21	F	BA	UNEMPLOYED	UNMARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
A	29	F	6THSTD	COOLY	MARRIED	LOW	HINDU	TAMIL	URBAN	NIL	0	0	0	0	0	0
D	26	F	BA	HOUSEWIFE	MARRIED	LOW	ISLAM	TAMIL	URBAN	NIL	0	0	0	0	0	0