# ASSOCIATION BETWEEN MAJOR LIFE EVENTS AND PSYCHIATRIC MORBIDITY AMONG ADULTS AWAITING DISCHARGE AT MATHARI HOSPITAL

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**DECLARATION**

This research study is my original work and has not been presented for a degree in any other University.

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This research study report has been submitted for examination with our approval as University supervisors.

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## ABBREVIATIONS

APA American Psychiatric Association

MLE Major Life Event

SRRS Social Readjustment Rating Scale

DSM Diagnostic and Statistical Manual

SPSS Statistical Package for the Social Sciences

DSM Diagnostic and Statistical Manual of Mental Disorders

AUD Alcohol Use Disorders

D. I. P. Drug Induced Psychosis

GAD General Anxiety Disorder

ICD International Classification of Disease

M. I. N. I Mini International Neuropsychiatric Interview

OCD Obsessive Compulsive Disorder

PTSD Post Traumatic Stress Disorder

WHO World health organization

**DEFINITION OF TERMS**

**Major Life Events** refer to circumstances that occur in a specific moment in time, that have an identifiable onset with varying long-term consequences. The consequences are dependent on the nature of the event and its sequale, mostly in relation to initiating chronic stressors (Mayer.S, 2018).

**Psychiatric Disorders** are mainly health conditions involving changes in emotion, thinking or behavior (APA, 2018) as captured by the M.I.N.I plus for diagnosis of DSM V mental disorders.

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## ABSTRACT

**Background**: Previous studies have shown that an association actually exists between exposure to major life event and occurrence of a mental disorder. Although major life events have been associated with a range of mental health problems, there still exists scarcity of information on the relationship between major life events and psychiatric morbidity more so from developing countries, Kenya included.

**Objective:** This study aimed to determine the association between major life events and psychiatric morbidities among patients admitted at Mathari Teaching and Referral Hospital.

**Study Design:** This was a descriptive cross-sectional study.

**Method:** A total number of 285 respondents awaiting discharge were randomly recruited into the study. The tools used were: (i) Socio-demographic questionnaire, (ii) Social Readjustment Rating Scale for assessing the presence of major life events and lastly (iii) M.I.N.I Plus to confirm diagnosis of psychiatric disorder(s).

Data were analyzed using R, with descriptive analysis done using frequencies, percentages, and median. Prevalence rates of major life events and psychiatric disorders were presented using percentages together with the corresponding 95% confidence intervals. Associations between psychiatric disorders and major events were modelled using multivariable logistic regression.

**CHAPTER ONE:    INTRODUCTION**

**1.0    Background**

Major life events refer to circumstances within our environment that commonly produce significant life changes, thus causing difficulty in returning or adapting to homeostasis. These life events are classified as either early or recent. Early life events refer to those mostly experienced during childhood or adolescence, also considered predisposing factors – making individuals more susceptible to psychiatric conditions. While recent life events are understood to be precipitating factors meaning they trigger or occur shortly before the onset of a disorder (Stegenga, et al., 2012).

These major life events range from job conflicts and security, natural disasters, financial problems, accidents, social relations, exposure to fire, family and personal conflicts, different forms of abuse and stressors related to one's health that can impact negatively on psychological status increasing the risk of depression and anxiety (Lown.C, 2012).

The influence of major life events on mental health has been studied extensively – with the evidence showing people exposed to major life events having a higher likelihood of reporting subsequent psychological problems (Mazurka.R, 2016). To substantiate this argument, a few specific examples are highlighted as follows – including early and recent life events: (i) The experience of major life events in childhood has been found to result in toxic stress, which leads to prolonged exposure to stress hormones which are reported to negatively impact on the brain and impair functions (Bick & Nelson, 2016); (ii) In a study of prevalence of major life adversities in the general population and their relationship with mental disorders, evidence of a strong concentration of major life events prior to onset of a condition that was obtained (C.Faravelli, 2007); (iii) A summary of several research studies indicated that patients encountering first episode psychosis who have experienced trauma as a major life event have a different presentation at an onset of an illness than those with no trauma exposure (Dvir.Y, 2013.) and; (iv) In a Systematic review of the 23 controlled epidemiological studies, 11 prospective cohort studies, 11 cross-sectional studies and  1 case–control study  that reported the risk of depression or depressive symptoms following exposure to a disaster or after military deployment,  it was proven  that a wide range of calamitous events including  acts of terrorism, natural disasters, atrocities during conflicts, fire outbreaks, accidents and military combat increase the risk of depressive disorder (BLonde.J, 2016).

Although life events have been consistently reported as predisposing or precipitating factors for most psychiatric disorders, there is little information, on what proportion of psychiatric disorders is attributable to life events in Kenya, a gap that the study aimed to fill. The study looked at the association between exposure to major life events and occurrence of psychiatric illnesses at Mathari hospital in Nairobi, which is the largest referral mental hospital in Kenya.

## 1.2    Problem Statement

The studies cited above have focused on and demonstrated a strong grade association between major life events and specific psychiatric conditions. Further, a quick systematic search with the terms (*major life event\* and psychiatric\**), through Embase[OvidSP] (1974 to 2019 February 19) and Medline[OvidSP] (1946 to 2019 June 30) databases, resulted in 89 studies in which only 17 were relevant based on the titles and abstracts. All these studies, as the few cited above, focused on particular psychiatric conditions and were not conducted locally in Kenya. This demonstrates the scarcity of local evidence that would provide information on what proportion of psychiatric disorders are attributable to major life events.

A search on the literature for any local study found a study by Vadher &Ndetei that was conducted in 1981 but published in 2018 which mainly examined whether depressed patients had significantly more independent life events in the twelve months prior to assessment for depression at Mathari and Kenyatta Hospitals. Depression was associated with severe life events in the 12 months preceding the illness. Events involving loss and separation were predominant.

By doing this study, using a larger sample size and more than one psychiatric condition, I aimed to update on the evidence previously provided by Vadher &Ndetei (1981) given the time lapses and with a bigger sample size. It also helps fill gaps in comprehensive management of psychiatric patients. Information from this study will hopefully give more insight and overall positive impact with regards to psychosocial management of patients not only in Kenyan setup but also other related contexts.

**CHAPTER TWO: LITERATURE REVIEW**

**2.1    Major Life events and psychiatric illness**

Studies done on the association between major life events and emergence of psychiatric illness in childhood and adulthood have generally reported a positive association. Bick & Nelson (2016), found that a brain dysfunction could result as a consequence of exposure to a major life event. This they noted in children, predicting poor quality of life in adulthood, as they also linked the brain dysfunctions to the occurrence of psychiatric illnesses. Generally, it has been established that traumatic life events that occur in adulthood also act as precursors of mental illness either in a causal or bidirectional relationship (Beards, et al., 2013; Choe, Teplin, & Abram, 2008). Some of the most common disorders that are associated with exposure to major life events are discussed in this chapter.

*2.1.1 Mood disorders and Major life events*

In a study dubbed the "Stress Test" that was conducted by psychologists in the UK through the BBC radio, reported that one of the biggest predictor of anxiety and depression was exposure to traumatic life event (Kinderman, Schwannauer, Pontin, & Tai, 2013). The researchers who were from the University Institute of Psychology, Health and Society included 32,000 adult participants (age 18 to 85yrs) through an online survey. Another study still carried out in the UK also found that major life events were predictors of mood disorders. However, the study also found that developing depression or anxiety entirely relied on how an individual perceives the stressors (Liverpool, 2013).

In a systemic review study that looked at the impact of emotional abuse and mental health, Norman et al (2012), established that emotionally abused individuals were more likely to develop depression. The risk was reportedly three times more than a person that had never been exposed to emotional abuse. The results were more or less the same for individuals that had been exposed to physical abuse or had been abandoned at some point in their lives. That study included 124 studies done globally.

With regards to the effect of early traumatic events on the occurrence of anxiety and depression, Cheong, Sinnott, Dahly, & Kearney (2017), provided evidence that established a causal relationship. Similar findings were reported in a meta-analysis carried out by Lindert et al (2014) in which there was indication of high levels of depressive symptoms, distress and anxiety disorders in adults as a result of early adverse experiences mostly in physical and

sexual abuse forms. Cheong et al (2017), established that social support as a protective factor helps reduce occurrences of symptoms of depression in older adults.

For bipolar disorder, the relationship had been suggested to be bidirectional. Some researchers have suggested that major life events can cause bipolar disorder while some researchers have suggested that bipolar patients are more likely to suffer from major stressful events in the course of their lives. Choe, Teplin, & Abram (2008), found that individuals with bipolar underwent traumatic experiences where they were victims of violence. But there are events that have been found to cause bipolar symptoms to emerge and in some cases worsen the symptoms (Hosang GM, et al., 2010). It is however important to mention that despite the fact that bipolar symptoms can be triggered by events, it will be prudent to appreciate the role of genetics and other factors in the occurrence of the disorder.

Literature on the same in Kenya is scarce, Vadher& Ndetei (2018) looked at whether depressed patients had significantly more independent life events in the twelve months prior to assessment for depression. Findings were that depression was associated with severe life events in the 12 months preceding the illness. Events involving loss and separation were predominant.

This study looks into this relationship between the major life event and different psychiatric conditions among psychiatric patients at Mathari Hospital.

### 2.1.2 Psychosis and Major Life events

Though there is paucity of published studies on the relationship between exposure to major life events in adulthood and psychosis, there is quite a number of studies that have been done on early major life events (experienced during childhood) and psychosis. Agreeably, these studies report that there exists positive causal relationship where exposure to these early life events is more likely than not to cause psychosis (Beards et al., 2013, Varese et al., 2010, Matheson et al., 2012). Beards, et al., (2013), did a systematic review and meta analysis of published studies on the same where they included 16 studies dated back as far as 1968 to 2012. The researchers focused on studies that had looked into adverse life events in adulthood and their overall findings were that the two variables were associated (Beards, et al., 2013). Only two studies found no associations between adult major life events and psychosis. However it is important to note that they also pointed out that these studies were marred with methodological concerns such as indequate sample size and more importantly vague data collection techniques as only a checklist was used for this purpose instead of a more rigorous method that would illicit more information to explain the traumatic events.

However, some researchers have reported contrary findings. Prior to the referenced studies being conducted, Fallon (2008) had conducted a systematic review that yielded contrary results. He found no association between life events and onset of psychosis and in some of the studies that he reviewed, the results were inconclusive. The study reccommended more studies conducted to determine the relationship between life events and psychosis to determine if it is truly causal. With no studies conducted on the same in Kenya, this study sought to fill this gap in literature.

### 2.1.3 Suicide and Major life events

A review of studies that had been carried out on suicidality and exposure to major life events reveal that the probability that an individual who attempts suicide or succeeds in committing suicide having faced a major traumatic life event prior to this is very high. Foster (2018), conducted a meta-analysis of data reported from psychological autopsy studies and found that majority of the suicide cases that were studied had experienced a major life event one year prior to the suicide. It was also established from these studies that life events such as interpersonal conflicts specifically, were drivers of this suicidality (Foster, 2018).

Another study done on the same found that there is evidence of an association between suicide attempts and major life events in both young and older generation (Maniou.M, 2017). In older people predisposing factor was found to be the existence of a physical illness while in younger generation suicide risk was associated with stressful life events such as separation/divorce, unemployment, problems at work, serious injury, financial problems, domestic violence, problems with the law and grief.

In a case control study (Zhang, 2015), of 409 suicide attempters against an equal number of matched controls done between (October2009, and March 2011), the suicide attempters experienced more negative life events within the last year prior to suicide attempt than controls prior to interview (83.1% vs. 33.5%) Financial difficulties, serious illnesses, conflicts with family and friends were main risks 6-12 months prior to suicidal attempts.

Despite this association being empirically evident, the findings beg the question as to whether suicidality can be assessed independently without considering a possibility of a mood disorder like major depressive disorders. A broader study that looked at the relationship between major loss, mood disorders and suicidality among adolescents and young adults, found that major loss increased the chances that one would have suicidal ideation even in the lower levels of the other risk factors. The study actually reported a bi-

causal relationship between major loss and mood disorders assessed (Daniel, Goldston, Erkanli, Heilbron, & Franklin, 2017). What is notable in the finding and conclusion of this study is the fact that the risk factors (mood disorders) are somewhat present in these individuals.

Similarly, suicide rates have been on the rise in Kenya, with WHO reporting a 58% rise between 2007 and 2008 (K.Keziah, 2018) with men said to be more exposed than women and Kenya ranked position 114 out of 175 countries with the highest suicide rates. In other research work to follow, it would be important to find out whether major life events could have contributed to the increasing suicide rates.

### 2.1.4 Substance use disorders and Major Life Events

A number of studies have shown that major life events are associated with substance use disorders (Sinha & Jastreboff, 2013). The researchers established that stress caused by exposure to major life events was a risk factor in initiating and maintaining addiction. A study that looked at alcohol use disorders in relation to exposure to major life events, reported that serious economic problems was a major risk factor in developing alcohol use disorders (Just-Østergaard, Mortensen, & Trine, 2018). However, it was also noted that child adversities were highly significant in predicting alcohol use disorders.

A prospective study done in America reported that accumulation of major life events such as job, conflicts, legal stressors, health and social stressors increased the risk of alcohol dependence in adults, although individuals that reported five or more adult life showed more significant risk (N.Slopen, 2011). Longitudinal birth cohort study in New Zealand of adults between (18-30) years reported two times greater odds of Alcohol Use Disorder in individuals exposed to more life events (J.Borden, 2014) compared to those who had experienced less major life events.

Contrary results have been reported in relation to maintenance of alcohol and substance use after major life events. Jessup, Thekla, Jones, Satre & Weisner(2014), found that individuals that were faced with adversity  and doubled up as caregivers actually reduced their substance use. Individuals initially diagnosed with alcohol use disorders actually had better outcomes. They reduced their drinking and increased abstinence ( Jessup, et al.,2014).

Studies done previously  on major life events and its association with substance use have primarily examined events in single life domain, that is, childhood or adulthood.This study other than finding out the existence of the association in our Kenyan set up, it also aimed to understand the relationship throught the life-course (childhood to adulthood).

## 2.2    Theoretical Framework

### 2.2.1 Diathesis-stress theory

The theoretical underpinning this study used was the diathesis-stress theory developed by (Becks.A, 1967). Model originally developed to explain the complexities of psychiatric disorders such depression and schizophrenia. Individuals are said to develop a psychological illness in response to major life event due to existence of an underlying predisposition to the given condition (Gorfourth.A, 2011).

Specifically, this theory purports that an individual's biological vulnerabilities, or predispositions, to particular psychological disorders can be triggered by stressful life events. If the individual is resilient or has low biological vulnerability for a particular disorder, it would take extremely high levels of stress to trigger symptoms of that disorder.

The diathesis factors or those that make one susceptible include: genetics, that is, family history of a psychiatric condition, biological and childhood experiences. These factors remain dormant until one encounters the major life events or environmental stressors. Similarly, stress factors do range from family conflicts, loss, financial difficulties etc.

According to this model the way an individual reacts to stress depends on their resilience as those considered to be resilient or with low biological susceptibility require exposure to major life events to trigger the symptoms of a psychiatric disorder. However, those highly vulnerable will require low levels of stressful life events for a psychiatric disorder to present (Gorfourth.A, 2011).

Paykel (2003), mentioned that major life events involving separation loss, are likely to trigger an episode of a mood disorder if the incidences occur in a way that devalues or frustrates the individual. Hence diathesis-stress theory simply explains the reciprocal relationship between exposure to a major life event and occurrence of a psychiatric condition where the major life events exacerbate the psychiatric morbidity that in turn make life to be more stressful.
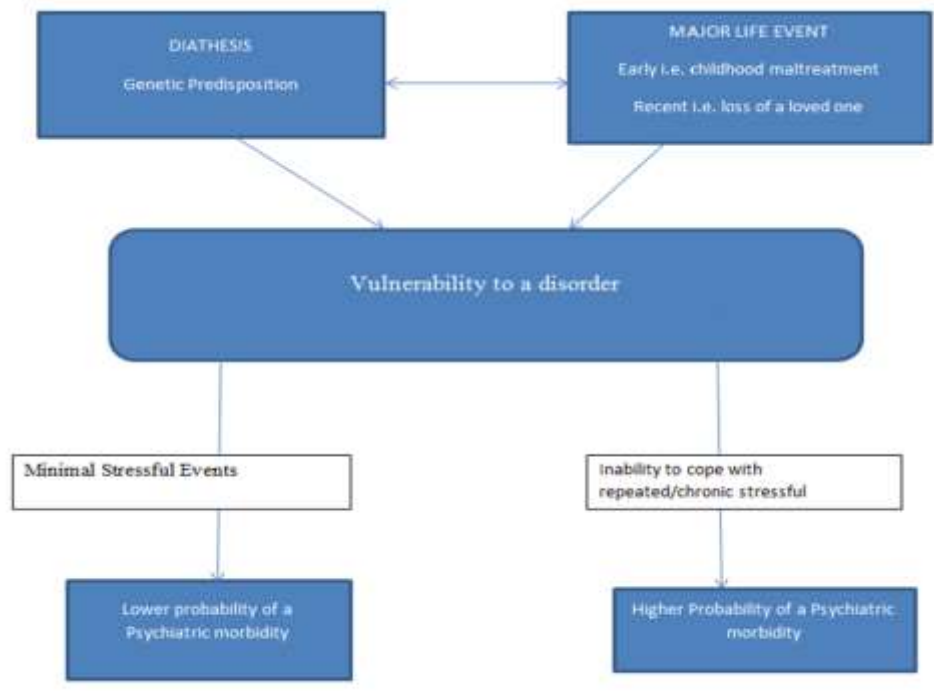
*Figure I:* *Diathesis-Stress Model – Source (Norton 2013)*

As a summary of the diathesis – stress model, explained above and adapted in this study, major life events could make an individual vulnerable to a psychiatric disorder. This study aimed to look into the relationship between major life events and psychiatric morbidity based on the model which demonstrates the existence of the association depending on the availability of the diathesis and one's resilience levels. Specific summary points supporting the relevance of the model to this study include: (a) Major Life Events alongside a predisposing factor (diathesis) could make one vulnerable to a psychiatric disorder; (b) Stressful events could make someone less susceptible to a psychiatric condition depending on the resilience level and; (c) Prolonged or chronic stress for long periods could drain your physical, emotional, and mental resources to the point where your body no longer has strength to fight stress especially where resilience is low.

## 2.3    Rationale for the study

Studies done elsewhere, mostly in the developed countries, have shown that major life events are common and have a graded relationship to various mental disorders. Additionally, major life events may interfere with the course of mental disorder treatment (Salleh.R, 2008). Failure to know whether a patient has undergone major life event means not able to plan for proper treatment such as psychotherapy that is essential alongside the pharmacological point

of view to help in dealing with the given psychiatric conditions. Failure to address or asses for life event also increases the likelihood that the patient will relapse as they will have not developed the right preventive measures.

Comprehensive history intake of psychiatric patients not only helps conceptualize cases and proper diagnosis but it also helps in proper management with regards to psychotherapy that the patients receive. As part of management, it will be critical to attain better mental health, and also to maintain the improvements gained after treatment by identifying possible triggers and coming up with right preventive measures.

As established in the literature reviewed, similar studies have not been done in this area of mental health in Kenya and therefore it is proper to assume that the paucity in empirical or evidence based research has led to gaps in comprehensive management of psychiatric patients. Information from this study will hopefully give more insight and overall positive impact with regards to psychosocial management of patients not only in Kenyan setup but also other places.

This indicates the need for identification of major life events in patients with psychiatric illnesses undergoing treatment as it may have an influence on treatment outcome.

## 2.4 Significance of the study

This study contributes to a growing body of research on the social determinants of mental disorders in Kenya as the psychiatric consequences of these adverse events are of critical public health importance (Petersen.AC, 2015).

Generally, the data obtained will hopefully inform policy makers, and clinicians on major life events and their association with psychiatric disorders to develop and implement policies, programs and strategies designed to address life events.

Similarly, the findings are aimed to contribute to best practice by ensuring that life events are assessed and dealt with in the best way possible.

## 2.5   *Research Question*

1. What are the socio-demographic characteristics of psychiatric patients who have experienced major life events at the Mathari Hospital?
2. What is the prevalence of major life events among adults at Mathari Hospital?
3. What is the psychiatric morbidity among the adults who have been exposed to major life events at Mathari hospital?
4. What is the relationship between exposure to major life events in childhood and occurrence of psychiatric disorders among the adults attending Mathari hospital**?**

## 2.6   **Study Objectives**

### 2.6.1   *Overall Objective:*

To determine if there is an association between exposure to major life events and occurrence of psychiatric disorders.

### 2.6.2   *Specific Objectives*

1. To determine the socio-demographic characteristics of psychiatric patients who have experienced major life events at the Mathari Hospital
2. To characterize the major life events among adults at Mathari Hospital
3. To assess the psychiatric morbidity among the adults who have been exposed to major life events at Mathari hospital
4. To determine if there is relationship between exposure to major life events and occurrence of psychiatric disorders among the adults attending Mathari hospital**.**

## 2.7   **Conceptual Framework**
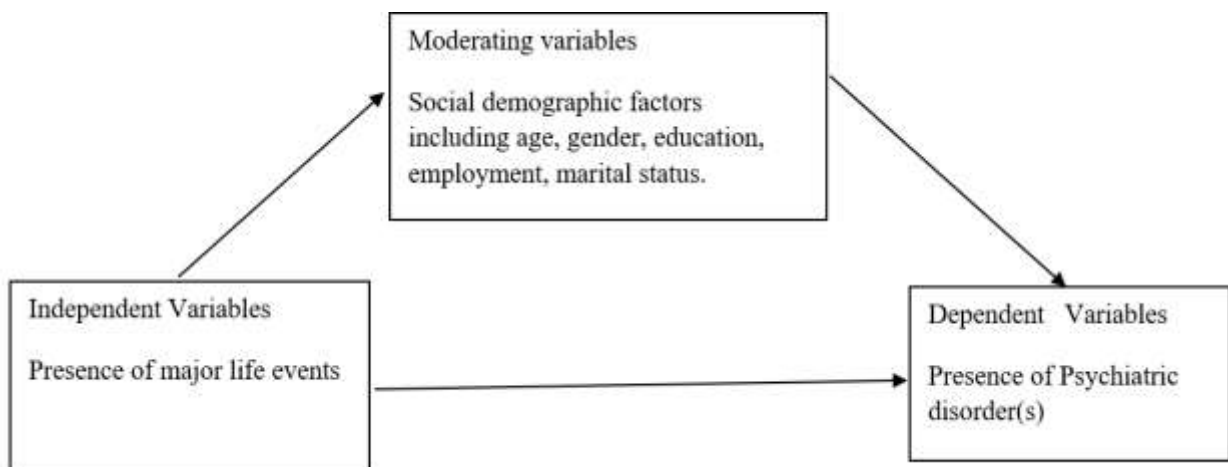


**Figure II:** Conceptual framework – *Source: Otieno, Selfine_ 2019*

# CHAPTER THREE: METHODOLOGY

## 3.1 Study design

This study used a descriptive cross-sectional design in determining the association between major life events and psychiatric morbidities amongst stable patients awaiting discharge at Mathari hospital.

## 3.2 Study Variables

### Independent variables

The independent variables in this study were the major life events outlined in the

The Social Readjustment Rating Scale as presented in **Appendix V.**

In addition to these, this study considered socio – demographic characteristics as confounding variables. Other independent variables used included those related to psychiatric or patient history. These were the history of substance use, personal or family history of mental illness, and history of chronic illness.

### Dependent variables

The dependent variables in this study were psychiatric morbidities. The MINI – plus (**Appendix VI**) was used to screen the patients in order to confirm the actual psychiatric morbidities.

## 3.3 Study area

This study was conducted at Mathari National Teaching and Referral hospital. This is Kenya's main teaching and referral hospital located in Nairobi County and has been in operation since 1910. The hospital functions as a national referral hospital for patients with mental illness. The hospital has an inpatient capacity of 600 beds with two and four female and male general wards respectively. Also, the hospital has two semi-amenities and one amenity wards that cater for private patients. The hospital also houses a rehabilitation unit for patients with substance use disorders. Other services offered at the hospital include: Outpatient services (psychiatric, general and medical clinics), Maternal and Child Health (MCH) clinic, Comprehensive Care Center (CCC), Methadone Clinic and Forensic unit.

## 3.4 Target Population

The study targeted adult psychiatric patients (18yrs and above) discharged during the data collection process at the Mathari Hospital in Nairobi. According to the information obtained from the lead nurses, it was established that a maximum of 20 patients were discharged daily across the different male, female and amenity wards. Over six weeks of data collection, the estimated total discharged patients were approximately 600 (5 days x 20 interviews x 6 weeks). A total of 10 patients were randomly selected from the daily discharges. These

individuals were of different ethnic, economic backgrounds with different beliefs but mostly Kenyans or Africans.

## 3.5    Inclusion and exclusion of study population

The study population were stable patients discharged after receiving inpatient psychiatric treatment at Mathari hospital with inclusion and exclusion criteria outlined as hereunder:

- Inclusion criteria:
    - Patients aged 18 years and above who were receiving inpatient management for all psychiatric disorders.
    - Mentally stable patients at the time of the interview. They were assessed using a mental status examination.
    - Those who were able to give informed consent.
- Exclusion criteria:
    - Patients who did not consent to participate in the study.
    - Patients who had active psychopathology (had delusions, hallucinations and no insight).

## 3.6    Sample size determination

The total sample size (n) was calculated using the formula by Cochran (1977):

$$n = \frac{z^2 \times p\,(1-p)}{d^2}$$

Where:

z – Value for selected alpha level (it indicated the level of risk the researcher was willing to take that true margin of error may exceed the acceptable margin of error) – most researchers have adopted a significance level of 5% which corresponds to a z value of 1.96.

d – Degree of precision (we assume d = 2.5%).

p – Anticipated proportion of psychiatric patients who had experienced at least an instance of major life event. The best local estimate for this parameter was derived from *Kanana (2016)* who found that about 90% of substance abuse patients at Mathari hospital had experienced some form of early major life event.

Therefore;

$$n = \frac{(1.96)^2 \times 0.9 \times (1-0.9)}{(0.025)^2}$$

$$\approx 553.$$

The daily maximum discharge was 20 patients across the different male, female and amenity wards. Over six weeks of data collection, the estimated total discharge was approximately 600 (5 days x 20 interviews x 6 weeks), the sample size of 553 was then adjusted using Fisher's finite sample size correction as follows:

$$m = \frac{n}{1 + \frac{n-1}{600}}$$

$$= \frac{553}{1 + \frac{553-1}{600}}$$

$$= 287.$$

## 3.7 Sampling method

It would have been desirable to randomly and proportionately sample patients across all the psychiatric morbidities. However, this standard and conventional form of sampling would only be feasible at the time of admission. The interview process included all stable patients discharged as at the time when this study was conducted. As the recovery process leading to a stable clinical state naturally randomly differs in patients, it was believed that discharges per day constituted a random sample of patients across all the psychiatric wards and morbidities.

The estimated daily discharges, as per the information given by lead nurses, ranged between 10 and 20. Therefore, the daily interviews were randomly sampled from these patients as provided by the lead nurses having checked the discharge registers in the respective two and four female and male general wards as well as the amenities. The data collection approximately took six weeks.

## 3.8 Data collection instruments

### 3.8.1 Socio-demographic questionnaire

This questionnaire was developed to capture age, marital status, occupation, whether or not they lived with their parents, number of children, and history of substance use. This questionnaire also explored different domains where participants may face difficulties. Some of them include: social support, level of education, employment status, history of mental illness, and socio-economic status.

### 3.8.2 MINI-Plus

The MINI-Plus is a structured and standardized diagnostic interview originally published in 1997 and used to determine the most common psychiatric disorders according to DSM-V and the International Classification of Diseases and Related Health Problems (ICD-10). For this

study, it was used to confirm the diagnoses as well as assess different psychiatric conditions of patients who consented within Mathari hospital.

The MINI-Plus tool has good psychometric properties and has been widely used to support diagnostics in psychiatry. In assessing for reliability and validity, the MINI Plus was compared to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization). MINI was found to have similar reliability and validity properties to both these instruments, but takes shorter period to administer and has been translated to over 70 languages.

### 3.8.3 Social Readjustment Rating Scale

The questionnaire was designed by psychiatrists Thomas Holmes and Richard Rahe (1967) and was intended to investigate whether or not stress contributes to illness. It is a self-report questionnaire that comprises of 43 life events both traumatic and pleasant but requires personal readjustment in dealing with them. The 43 stressful life events have been each awarded a Life Change Unit depending on how traumatic it was felt to be by a large sample of participants.

Reliability of the questionnaire was tested by Gerst et al. (1978), and found consistent rank ordering for both healthy adults (r = 0.96 – 0.89) and patients (r = 0.91 to 0.70). Holmes and Rahe (1967) also found a positive correlation (+0.118) between Life Change scores and the illness scores. The higher the Life Change Unit score the more one is susceptible to a psychiatrist disorder.

Also added open category with five answer sub-categories from the Life Events Checklist to help identify the most stressful life event and timelines of occurrences as well as probe for more details regarding the most stressful life event. It was an improvement of originally developed Life Events Checklist –DSM IV which has demonstrated adequate psychometric properties as a standalone measure of traumatic exposure through high test-retest reliability, strong convergent validity, and satisfactory kappa coefficients (Gray et al, 2004).

### 3.9 Recruitment, consenting and data collection procedures

### 3.9.1 Recruitment Procedure

A list of patients awaiting discharge was obtained from the discharge register at the nursing office every day after ward rounds with permission from the nurse in charge. The researcher then randomly selected patients from the list provided by the nurse to interview while at the hospital.  If the number of patients discharged was more than 10 then raffles were marked

using their inpatient numbers and randomly and repeatedly mixed to ensure equal chance of selection of 10 patients to be interviewed.

If less than10 then all those that met the inclusion criteria were interviewed. Nurses mentioned that patients discharged mostly go home the next day as they had to wait for their family members and therefore the researcher used this duration to conduct the study.

The researcher first of all approached the selected patients with the guidance of the nurse in charge. The nurse then left after introducing the researcher to the patient and only came in when necessary and present during the interview process. Those who were randomly selected were explained to about the study before seeking their consent to participate. The researcher also carried out a general observation on the patient by looking into areas such as appearance, behavior and speech. Mental status examination was obtained with each participant's consent.

### 3.9.2 Consenting Process

Those who agreed to participate and were read to the consent document. Once informed consent had been read to them, they were asked to sign or put a thumb print. Mental status was then done to rule out any active psychopathology. However, those with active psychopathology were thanked, excused or referred for help whenever it was necessary.

They were informed that taking part in the study was voluntary and they had the right to accept, withdraw at any point of the interview or even refuse to participate. The researcher proceeded to administer the socio-demographic, MINI-plus and Social Readjustment Rating Scale to the individuals who had signed the informed consent and were willing to take part in the study as well with no active psychopathology[1].

### 3.10.3 Data Collection Procedure

Data collection took place in a private room provided by the nurses so as to ensure that confidentiality was maintained as well as to avoid any form of distraction during data collection process. Names to the patients were not used but only unique study identification numbers. Questionnaires were then administered by the researcher. If a potential participant refused to participate the researcher went back to the list and randomly sampled others. Pilot study was done prior to onset of the study to provide the exact time estimates. The assessment took approximately 40 minutes with 5 minutes breaks between the assessments. Socio demographic questionnaire took 5 minutes, then MINI PLUS took 20 minutes followed by 5 minutes break and lastly the social readjustment questionnaire took 10 minutes.

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[1] The assessments were researcher administered.

Confidentiality was ensured during the whole period of data collection. The filled questionnaires, consent and assent forms, were put in a box at the end of each day, the box were sealed and transported to the data entry and analysis site. Debriefing was also done for those participants who got overwhelmed by the questions asked. Data was stored in a password protected computer to avoid any form of interferences.

In cases where other secondary diagnosis (comorbidities) cropped up that had not been detected and needed intervention, the researcher informed the nurse in charge to have a discussion with the psychiatrists for these to be included during further treatment and follow ups.

The recruitment, consenting and data collection process is summarized in the **Figure III** below.

**Figure III:** Recruitment process



Patients Already/Awaiting discharge at Mathari Hospital

-Introduce to the study
Conduct an MSE

Thank, exclude and advice where necessary — NO — Meet a Inclusion Criteria — YES — Informed Consent for signing

Assessment-Administer-LEC(5) M.I.N.I Plus — Thank and continue with assessment — YES — Agreed to participate — NO — Thank and excuse them to leave

Terminate and thank for taking part

### 3.10 Pretest

Part of the quality assurance procedures that was carried out was pre survey of the study site to ensure that the study could be conducted in the hospital and how the process would be. A pretest was also done to ensure that the study participants were able to comprehend the questions that were asked by the researcher as the study tools were researcher administered. The pretest involved interviewing 10 respondents from the hospital who fitted the inclusion criteria. Their demographic were not included in the study but their responses were helpful in evaluating where wordings needed to be changed for better understanding and generally reducing limitations that could be due to respondent factors.

### 3.11 Ethical consideration

This study was presented at the Department of Psychiatry before proceeding to the University of Nairobi/ Kenyatta National Hospital ethics research committee for approval to carry out the study. An approval was granted by the ethical committee, and later got a clearance from the medical superintendent at the Mathari Hospital to be able to carry out the study at the facility.

The purpose and objectives of the study were explained to the approached participants and they were given opportunity to ask for clarification whenever it was necessary. They were informed that participation was voluntary, and the information collected was for the study alone. Those who refused to participate or withdrew at any stage were not be penalized and their withdrawal did not in any way influence the services they sought at the institution.

Participants that met the inclusion criteria and were willing to participate were included in the study. The study did not discriminate against any political affiliations, gender, race, sexual orientation or physical disabilities. Proper explanation of the study process and objectives and purpose of the study were given to all patients who were eligible, and they were offered a chance to participate without coercion.

Participants were assured that the data would be kept confidential and would only be used for research purposes. The research study maintained the anonymity of the participants. There were no personal identifiers on the questionnaires and this ensured that no participant could be traced. Secure serial code was used for questionnaires to identify participants as an alternative to names and they were kept in secure password protected locked safe.

### 3.11.1 Compensation for participants

Participants did not receive any compensation for participating in the study.

### 3.11.2 Potential study risks

There was no physical harm expected, however, discussion of potentially sensitive topics made some participants uncomfortable, with reliving traumatic experiences in the past. In case of emotional distress, the researcher provided psychotherapy on site with approval from the nurse in charge for mild and moderate cases while those with severe emotional distress were referred for further psychiatric review within Mathari Hospital.

### 3.11.3 Potential benefits to study participants

This study was anticipated to be of great help to the Mathari Hospital fraternity and relevant mental health practitioners in showing the gap in mental health screening, diagnosis and management as well as an intervention for relapse prevention.

It also provided more current statistics on the relationship between major life events and psychiatric morbidity.

## 3.12   Data analysis

Descriptive analysis of the data was conducted using frequencies and percentages and measures of central tendencies. Prevalence rates of psychiatric disorders and major life events were presented using proportions together with corresponding 95% confidence interval. The results of these prevalence rates were stratified by socio – demographic factors. Significance in variations of major life events and psychiatric morbidities by socio – demographic data were examined by the use of chi square tests. Further, association between psychiatric disorders and major events were examined using multivariable logistic regression with level of significance being 5%. The analysis was extended to examine the validity of the observed associations through the use of Area Under Curve (AUC) analysis.

## 3.13   Data management

The filled questionnaires, consent and assent forms, were put in a box at the end of each day, the box was sealed and transported to the data analysis site where the researcher entered the data each day (into SPSS) awaiting data analysis. Soft copies in the computer devices were password protected. After data entry the data was sealed back in boxes and stored at the University of Nairobi Psychiatry department.

## 3.14   Study Limitations

This study relied on patients' life events, and there could be limitations in reporting of major life experiences especially by the targeted respondents mainly because some people may have

difficulty recalling certain events as a protective mechanism and that present emotional impairment may influence the memory for events.

# CHAPTER 4: RESULTS

This chapter first presents the data overview and socio – demographic characteristics of the recruited patients, with the distributions disaggregated by gender. Then proceeds to describe the prevalence of major life events experienced by the patients at Mathari Hospital, while also describing the variations by socio – demographic characteristics. Lastly, it examines the prevalence of morbidities the patients were primarily treated for, together with their association with the most prevalent major life events.

## 4.1 Description of the patient characteristics

### 4.1.1 Socio – demographic characteristics

A total of 287 interviews were conducted in a period of 20 days. Out of these, 285 patient data met data quality standards and were therefore analysed to generate insights to fully answer the study objectives. Of the total participants, the number of men was twice that of women. The recruited participants were mostly in the lower income category, earning less than Ksh. 10 000, with significantly more women earning less than men (p – value = 0.000). Majority had primary/secondary level education with men having significantly higher education levels than women (p – value = 0.017). A series of chi – square tests showed no significant variation, between men and women, in distribution by age category, marital status, occupation, parenthood (whether they had children or not), and who they lived with. All the p – values as a result of these association tests were more than 0.05 (**Table 1**). Encouragingly, most of the participants reported to have social support.

**Table 1:** Distribution of participants by socio – demographic data

| | Total | Male | Female | chi square (p - value) |
|---|---|---|---|---|
| Total | 285 | 195 (68.4%) | 90 (31.6%) | |
| **Age (years)** | | | | |
| < 25 | 56 (20%) | 36 (18.7%) | 20 (23.0%) | 0.874 |
| 26 – 30 | 61 (21.8%) | 44 (22.8%) | 17 (19.5%) | |
| 31 – 35 | 49 (17.5%) | 35 (18.1%) | 14 (16.1%) | |
| 36 – 40 | 44 (15.7%) | 29 (15.0%) | 15 (17.2%) | |
| > 40 | 70 (25%) | 49 (25.4%) | 21 (24.1%) | |
| **Marital status** | | | | |
| Single | 154 (54.6%) | 106 (54.9%) | 48 (53.9%) | 0.237 |
| Married | 97 (34.4%) | 70 (36.3%) | 27 (30.3%) | |
| divorced/separated | 20 (7.1%) | 12 (6.2%) | 8 (9.0%) | |
| Widowed | 11 (3.9%) | 5 (2.6%) | 6 (6.7%) | |
| **Education** | | | | |
| no formal education | 8 (2.8%) | 4 (2.1%) | 4 (4.5%) | **0.017** |
| Primary | 77 (27.3%) | 50 (25.9%) | 27 (30.3%) | |
| Secondary | 79 (28%) | 47 (24.4%) | 32 (36.0%) | |
| Tertiary | 118 (41.8%) | 92 (47.7%) | 26 (29.2%) | |
| **Occupation** | | | | |
| College student | 34 (12.6%) | 26 (13.8%) | 8 (9.8%) | 0.310 |
| formal employment | 56 (20.7%) | 41 (21.8%) | 15 (18.3%) | |
| informal (casual) | 84 (31.1%) | 52 (27.7%) | 32 (39.0%) | |
| self-employed | 96 (35.6%) | 69 (36.7%) | 27 (32.9%) | |
| **Income (Ksh)** | | | | |
| <10000 | 129 (49.4%) | 80 (44.2%) | 49 (61.3%) | **<0.001** |
| 10000 – 34999 | 79 (30.3%) | 54 (29.8%) | 25 (31.2%) | |
| >35000 | 53 (20.3%) | 47 (26.0%) | 6 (7.5%) | |
| **Living with** | | | | |
| Parents | 102 (36.2%) | 67 (34.9%) | 35 (38.9%) | 0.509 |
| Spouse | 70 (24.8%) | 48 (25.0%) | 22 (24.4%) | |
| Friends | 14 (5%) | 12 (6.2%) | 2 (2.2%) | |
| Alone | 74 (26.2%) | 52 (27.1%) | 22 (24.4%) | |
| Relatives | 22 (7.8%) | 13 (6.8%) | 9 (10.0%) | |
| **Social support** | | | | |
| Yes | 243 (88.7%) | 163 (86.7%) | 80 (93.0%) | 0.152 |
| No | 31 (11.3%) | 25 (13.3%) | 6 (7.0%) | |
| **Having children** | | | | |
| Yes | 154 (54.6%) | 102 (52.6%) | 52 (59.1%) | 0.366 |
| No | 128 (45.4%) | 92 (47.4%) | 36 (40.9%) | |

## 4.1.2 Past medical/psychiatric history of the patients

Significantly more men reported history of substance use (p – value = 0.000). Those with a family history of mental illness were more likely to report a personal history of mental illness (chi square: OR = 6.0, p – value = 0.000). Slightly less than a quarter reported a history of chronic illness (see **Table 2**).

**Table 2:** Distribution by illness related characteristics

| | Total | Males | Females | Chi square (p value) |
|---|---|---|---|---|
| **History of mental illness** | | | | |
| Yes | 130 (49.2%) | 83 (45.9%) | 47 (56.6%) | 0.113 |
| No | 134 (50.8%) | 98 (54.1%) | 36 (43.4%) | |
| **Family mental illness history** | | | | |
| Yes | 74 (28.2%) | 46 (25.6%) | 28 (34.1%) | 0.183 |
| No | 188 (71.8%) | 134 (74.4%) | 54 (65.9%) | |
| **Substance use** | | | | |
| Yes | 190 (68.6%) | 147 (77.8%) | 43 (48.9%) | **<0.001** |
| No | 87 (31.4%) | 42 (22.2%) | 45 (51.1%) | |
| **History of chronic illness** | | | | |
| Yes | 59 (23.0%) | 38 (21.8%) | 21 (25.3%) | 0.531 |
| No | 198 (77.0%) | 136 (78.2%) | 62 (74.7%) | |

## 4.2 Prevalence of major life events

### 4.2.1 Overall prevalence of major life events

The social readjustment scale required the participants to indicate one worst life event they experienced. The most reported worst events, with a prevalence rate of at least ≈5%, were: death of a close family member, major personal injury or illness, detention in jail or other institution, marital separation from mate, death of a close friend and being fired at work. The reported median time in which each of these leading events was experienced were less than or equal to two years. Other major life events reported in **Figure 1** had prevalence rates of less than 5%.

| Major life event | Prevalence (95% C.I) | | Median time (months) | Total | males | females |
|---|---|---|---|---|---|---|
| Death of a close family member | 27.0% [21.8% - 32.2%] | | 18.0 | 77 | 55 | 22 |
| Major personal injury or illness | 18.2% [13.7% - 22.7%] | | 14.5 | 52 | 39 | 13 |
| Detention in jail or other institution | 11.6% [7.9% - 15.3%] | | 5.0 | 33 | 28 | 5 |
| Marital separation from mate | 7.0% [4.0% - 10.0%] | | 24.0 | 20 | 12 | 8 |
| Death of a close friend | 5.6% [2.9% - 8.3%] | | 23.0 | 16 | 11 | 5 |
| Being fired at work | 4.6% [2.2% - 7.0%] | | 9.0 | 13 | 9 | 4 |
| Major change in financial state | 3.5% [1.4% - 5.6%] | | 6.0 | 10 | 4 | 6 |
| Divorce | 3.2% [1.2% - 5.2%] | | 12.0 | 9 | 4 | 5 |
| Major change in living condition | 3.2% [1.2% - 5.2%] | | 7.0 | 9 | 7 | 2 |
| Death of spouse | 2.5% [0.7% - 4.3%] | | 3.0 | 7 | 1 | 6 |
| Major change in the health or behaviour of a family member | 2.1% [0.4% - 3.8%] | | 7.0 | 6 | 5 | 1 |
| Revision of personal habits | 2.1% [0.4% - 3.8%] | | 33.0 | 6 | 5 | 1 |
| Marriage | 1.8% [0.3% - 3.3%] | | 48.0 | 5 | 1 | 4 |
| Taking on a mortgage | 1.4% [0.0% - 2.8%] | | 12.0 | 4 | 1 | 3 |
| Other 1 | 0.7% [0.0% - 1.7%] | | - | 2 | - | - |
| Other 2 | 0.4% [0.0% - 1.1%] | | - | 1 | - | - |

**Figure 1:** Prevalence of major life events[2].

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[2] **Other 1:** marital reconciliation with mate, major business adjustment, major changes in responsibility at work, loan, major changes in sleeping habits each 0.7%. **Other 2:** changing to a different line of work, major changes in number of arguments with spouse, outstanding personal achievement, spouse beginning or ceasing work outside of home, beginning or ceasing schooling, major changes in social activity, major change in family get together, major change in eating habits each 0.4%.

## *4.2.2 Variations of major life events by socio – demographic data*

Detailed prevalence analysis of the leading major life events by socio – demographic data is presented in **Table 3a** and **b**. Chi square tests showed that:

- Death of a close family member was likely to be reported by older patients aged 36 years and above.
- Major personal injury or illness was significantly mentioned by those with lower levels of education, casual workers, and those without children.
- Detention in jail was mostly associated with males, those with lower levels of education, casual workers, and those without children.
- Marital separation from mate was significantly mentioned by those divorced/separated and those with tertiary level of education.
- Mentioning death of a close friend was significantly associated with younger participants and those without a history of family mental illness.

Further tests of association were examined on major events not presented in **Tables 3a** and b, and as would be anticipated:

- Death of a spouse was significantly mentioned by females (6.7% [1.5% - 11.9%], chi square p – value = 0.05) and those widowed (36.4% [11.2% - 61.6%], chi square p – value <0.0001).
- Females (4.4% [0.2% - 8.6%], chi square p – value = 0.036) and those divorced/separated (10.0% [0.0% - 22.3%], chi square p – value = 0.011) reported to have experienced marital issues.

**Table 3a:** Prevalence of major life events (death of a close family member, major personal injury or illness and detention in jail or other institution) by socio – demographic data

| Major life event | | Death of a close family member | Chi square p – value | Major personal injury or illness | Chi square p – value | Detention in jail or other institution | Chi square p – value |
|---|---|---|---|---|---|---|---|
| **Gender** | Male | 28.2% [21.9% - 34.5%] | 0.567 | 20.0% [14.4% - 25.6%] | 0.323 | 14.4% [ 9.5% - 19.3%] | 0.030 |
| | Female | 24.4% [15.5% - 33.3%] | | 14.4% [ 7.1% - 21.7%] | | 5.6% [ 0.8% - 10.4%] | |
| **Age (years)** | < 25 | 21.4% [11.1% - 31.7%] | 0.028 | 17.9% [ 8.3% - 27.5%] | 0.059 | 10.7% [ 2.9% - 18.5%] | 0.271 |
| | 26 – 30 | 18.0% [ 8.7% - 27.3%] | | 23.0% [12.8% - 33.2%] | | 19.7% [10.1% - 29.3%] | |
| | 31 – 35 | 24.5% [13.0% - 36.0%] | | 28.6% [16.5% - 40.7%] | | 10.2% [ 2.1% - 18.3%] | |
| | 36 – 40 | 45.5% [31.6% - 59.4%] | | 11.4% [ 2.5% - 20.3%] | | 9.1% [ 1.0% - 17.2%] | |
| | > 40 | 30.0% [19.6% - 40.4%] | | 10.0% [ 3.2% - 16.8%] | | 7.1% [ 1.3% - 12.9%] | |
| **Marital status** | Single | 27.9% [20.9% - 34.9%] | 0.574 | 17.5% [11.6% - 23.4%] | 0.913 | 14.9% [ 9.3% - 20.5%] | 0.185 |
| | Married | 29.9% [20.9% - 38.9%] | | 18.6% [11.0% - 26.2%] | | 9.3% [ 3.6% - 15.0%] | |
| | divorced/separated | 15.0% [ 0.4% - 29.6%] | | 20.0% [ 3.7% - 36.3%] | | 0.0% [ 0.0% - 0.0%] | |
| | Widowed | 18.2% [0.0% - 38.4%] | | 9.1% [ 0.0% - 24.2%] | | 9.1% [ 0.0% - 24.2%] | |
| **Education** | no formal education | 12.5% [ 0.0% - 32.0%] | 0.863 | 62.5% [33.9% - 91.1%] | 0.026 | 12.5% [ 0.0% - 32.0%] | 0.039 |
| | Primary | 26.0% [16.4% - 35.6%] | | 15.6% [ 7.6% - 23.6%] | | 20.8% [11.9% - 29.7%] | |
| | Secondary | 29.1% [19.3% - 38.9%] | | 15.2% [ 7.4% - 23.0%] | | 8.9% [ 2.7% - 15.1%] | |
| | Tertiary | 27.1% [19.2% - 35.0%] | | 18.6% [11.7% - 25.5%] | | 7.6% [ 2.9% - 12.3%] | |
| **Occupation** | college students | 20.6% [9.3% - 31.9%] | 0.306 | 20.6% [9.3% - 31.9%] | 0.645 | 11.8% [2.8% - 20.8%] | 0.023 |
| | formal employment | 33.9% [22.9% - 44.9%] | | 21.4% [11.9% - 30.9%] | | 7.1% [ 1.1% - 13.1%] | |
| | informal (casual) | 21.4% [13.3% - 29.5%] | | 20.2% [12.3% - 28.1%] | | 21.4% [13.3% - 29.5%] | |
| | self-employed | 29.2% [20.7% - 37.7%] | | 14.6% [ 8.0% - 21.2%] | | 7.3% [ 2.5% - 12.1%] | |
| **Income** | <10000 | 26.4% [19.4% - 33.4%] | 0.246 | 19.4% [13.1% - 25.7%] | 0.205 | 12.4% [ 7.2% - 17.6%] | 0.256 |
| | 10000 – 34999 | 22.8% [14.7% - 30.9%] | | 12.7% [ 6.3% - 19.1%] | | 15.2% [ 8.3% - 22.1%] | |
| | >35000 | 35.8% [25.1% - 46.5%] | | 24.5% [14.9% - 34.1%] | | 5.7% [ 0.5% - 10.9%] | |
| **Living with** | Parents | 28.4% [19.8% - 37.0%] | 0.433 | 18.6% [11.2% - 26.0%] | 0.319 | 9.8% [ 4.1% - 15.5%] | 0.071 |
| | Spouse | 34.3% [23.4% - 45.2%] | | 14.3% [ 6.3% - 22.3%] | | 5.7% [ 0.4% - 11.0%] | |
| | Friends | 21.4% [1.9% - 40.9%] | | 14.3% [0.0% - 30.9%] | | 28.6% [7.1% - 50.1%] | |
| | Alone | 20.3% [11.3% - 29.3%] | | 23.0% [13.6% - 32.4%] | | 16.2% [ 8.0% - 24.4%] | |
| | Relatives | 27.3% [9.8% - 44.8%] | | 4.5% [0.0% - 12.6%] | | 13.6% [0.2% - 27.0%] | |
| **History of chronic illness** | Yes | 23.7% [14.8% - 32.6%] | 0.736 | 18.6% [10.4% - 26.8%] | 0.846 | 5.1% [ 0.5% - 9.7%] | 0.104 |
| | No | 26.8% [21.0% - 32.6%] | | 17.2% [12.3% - 22.1%] | | 13.6% [ 9.1% - 18.1%] | |
| **Social support** | Yes | 27.2% [21.7% - 32.7%] | 1.000 | 16.9% [12.3% - 21.5%] | 0.800 | 10.7% [ 6.9% - 14.5%] | 0.228 |
| | No | 25.8% [12.6% - 39.0%] | | 19.4% [ 7.4% - 31.4%] | | 19.4% [ 7.4% - 31.4%] | |
| **Having children** | Yes | 27.9% [20.9% - 34.9%] | 0.788 | 21.4% [15.0% - 27.8%] | 0.122 | 7.8% [ 3.6% - 12.0%] | 0.039 |
| | No | 25.8% [18.3% - 33.3%] | | 14.1% [ 8.1% - 20.1%] | | 16.4% [10.1% - 22.7%] | |
| **History of substance use** | Yes | 28.9% [22.6% - 35.2%] | 0.244 | 17.9% [12.6% - 23.2%] | 1.000 | 11.6% [ 7.1% - 16.1%] | 0.842 |
| | No | 21.8% [13.5% - 30.1%] | | 18.4% [10.6% - 26.2%] | | 12.6% [ 5.9% - 19.3%] | |
| **History of mental illness** | Yes | 27.7% [20.6% - 34.8%] | 1.000 | 23.1% [16.4% - 29.8%] | 0.036 | 10.8% [ 5.8% - 15.8%] | 0.574 |
| | No | 27.6% [20.6% - 34.6%] | | 12.7% [ 7.5% - 17.9%] | | 13.4% [ 8.0% - 18.8%] | |
| **Family mental illness history** | Yes | 32.4% [23.1% - 41.7%] | 0.164 | 23.0% [14.6% - 31.4%] | 0.145 | 12.2% [ 5.7% - 18.7%] | 1.000 |
| | No | 23.9% [18.1% - 29.7%] | | 14.9% [10.1% - 19.7%] | | 11.7% [ 7.4% - 16.0%] | |

* The highlighted prevalence rates, across the levels of socio – demographic data, were significantly different at a significance level of 0.05

**Table 3b:** Prevalence of major life events (marital separation from mate, death of a close friend, and being fired at work) by socio – demographic data

| Major life event | | Marital separation from mate | Chi square p – value | Death of a close friend | Chi square p – value | Being fired at work | Chi square p – value |
|---|---|---|---|---|---|---|---|
| **Gender** | Male | 6.2% [ 2.8% - 9.6%] | 0.456 | 5.6% [ 2.4% - 8.8%] | 1.000 | 4.6% [ 1.7% - 7.5%] | 1.000 |
| | Female | 8.9% [ 3.0% - 14.8%] | | 5.6% [ 0.8% - 10.4%] | | 4.4% [ 0.2% - 8.6%] | |
| **Age (years)** | < 25 | 1.8% [ 0.0% - 5.1%] | 0.097 | 14.3% [ 5.5% - 23.1%] | 0.003 | 1.8% [ 0.0% - 5.1%] | 0.478 |
| | 26 – 30 | 11.5% [ 3.8% - 19.2%] | | 4.9% [ 0.0% - 10.1%] | | 4.9% [ 0.0% - 10.1%] | |
| | 31 – 35 | 12.2% [ 3.5% - 20.9%] | | 2.0% [ 0.0% - 5.7%] | | 4.1% [ 0.0% - 9.4%] | |
| | 36 – 40 | 2.3% [ 0.0% - 6.5%] | | 9.1% [ 1.0% - 17.2%] | | 2.3% [ 0.0% - 6.5%] | |
| | > 40 | 7.1% [ 1.3% - 12.9%] | | 0.0% [ 0.0% - 0.0%] | | 8.6% [ 2.3% - 14.9%] | |
| **Marital status** | Single | 3.2% [ 0.4% - 6.0%] | 0.001 | 7.8% [ 3.6% - 12.0%] | 0.397 | 3.9% [ 0.9% - 6.9%] | 0.734 |
| | Married | 9.3% [ 3.6% - 15.0%] | | 3.1% [ 0.0% - 6.5%] | | 6.2% [ 1.5% - 10.9%] | |
| | divorced/separated | 30.0% [11.3% - 48.7%] | | 5.0% [ 0.0% - 13.9%] | | 0.0% [ 0.0% - 0.0%] | |
| | Widowed | 0.0% [ 0.0% - 0.0%] | | 0.0% [ 0.0% - 0.0%] | | 0.0% [ 0.0% - 0.0%] | |
| **Education** | no formal education | 0.0% [ 0.0% - 0.0%] | 0.015 | 0.0% [ 0.0% - 0.0%] | 0.936 | 0.0% [ 0.0% - 0.0%] | 0.791 |
| | Primary | 1.3% [ 0.0% - 3.8%] | | 5.2% [ 0.3% - 10.1%] | | 5.2% [ 0.3% - 10.1%] | |
| | Secondary | 5.1% [ 0.3% - 9.9%] | | 5.1% [ 0.3% - 9.9%] | | 2.5% [ 0.0% - 5.9%] | |
| | Tertiary | 12.7% [ 6.8% - 18.6%] | | 6.8% [ 2.3% - 11.3%] | | 5.1% [ 1.2% - 9.0%] | |
| **Occupation** | college students | 2.9% [0.0% - 7.6%] | 0.308 | 14.7% [4.8% - 24.6%] | 0.157 | 0.0% [0.0% - 0.0%] | 0.377 |
| | formal employment | 7.1% [ 1.1% - 13.1%] | | 3.6% [ 0.0% - 7.9%] | | 3.6% [ 0.0% - 7.9%] | |
| | informal (casual) | 4.8% [ 0.6% - 9.0%] | | 4.8% [ 0.6% - 9.0%] | | 3.6% [ 0.0% - 7.3%] | |
| | self-employed | 11.5% [ 5.6% - 17.4%] | | 4.2% [ 0.5% - 7.9%] | | 7.3% [ 2.5% - 12.1%] | |
| **Income** | <10000 | 4.7% [ 1.3% - 8.1%] | 0.306 | 3.9% [ 0.8% - 7.0%] | 0.734 | 4.7% [ 1.3% - 8.1%] | 1.000 |
| | 10000 – 34999 | 8.9% [ 3.4% - 14.4%] | | 6.3% [ 1.6% - 11.0%] | | 3.8% [ 0.1% - 7.5%] | |
| | >35000 | 9.4% [ 2.9% - 15.9%] | | 3.8% [ 0.0% - 8.1%] | | 3.8% [ 0.0% - 8.1%] | |
| **Living with** | Parents | 4.9% [ 0.8% - 9.0%] | 0.682 | 10.8% [ 4.9% - 16.7%] | 0.059 | 4.9% [ 0.8% - 9.0%] | 0.987 |
| | Spouse | 10.0% [ 3.1% - 16.9%] | | 2.9% [ 0.0% - 6.7%] | | 5.7% [ 0.4% - 11.0%] | |
| | Friends | 7.1% [0.0% - 19.3%] | | 7.1% [0.0% - 19.3%] | | 0.0% [0.0% - 0.0%] | |
| | Alone | 6.8% [ 1.2% - 12.4%] | | 1.4% [ 0.0% - 4.0%] | | 4.1% [ 0.0% - 8.5%] | |
| | Relatives | 9.1% [0.0% - 20.4%] | | 4.5% [0.0% - 12.6%] | | 4.5% [0.0% - 12.6%] | |
| **History of chronic illness** | Yes | 8.5% [ 2.6% - 14.4%] | 0.552 | 3.4% [ 0.0% - 7.2%] | 0.538 | 10.2% [ 3.8% - 16.6%] | 0.082 |
| | No | 6.1% [ 3.0% - 9.2%] | | 7.1% [ 3.8% - 10.4%] | | 3.5% [ 1.1% - 5.9%] | |
| **Social support** | Yes | 7.4% [ 4.2% - 10.6%] | 0.706 | 6.6% [ 3.5% - 9.7%] | 0.230 | 4.5% [ 2.0% - 7.0%] | 0.647 |
| | No | 3.2% [ 0.0% - 8.5%] | | 0.0% [ 0.0% - 0.0%] | | 6.5% [ 0.0% - 14.0%] | |
| **Having children** | Yes | 9.7% [ 5.1% - 14.3%] | 0.065 | 5.2% [ 1.7% - 8.7%] | 0.798 | 5.2% [ 1.7% - 8.7%] | 0.777 |
| | No | 3.9% [ 0.6% - 7.2%] | | 6.2% [ 2.1% - 10.3%] | | 3.9% [ 0.6% - 7.2%] | |
| **History of substance use** | Yes | 6.8% [ 3.3% - 10.3%] | 1.000 | 5.3% [ 2.2% - 8.4%] | 0.587 | 4.7% [ 1.8% - 7.6%] | 1.000 |
| | No | 6.9% [ 1.8% - 12.0%] | | 6.9% [ 1.8% - 12.0%] | | 4.6% [ 0.4% - 8.8%] | |
| **History of mental illness** | Yes | 4.6% [ 1.3% - 7.9%] | 0.317 | 3.1% [ 0.3% - 5.9%] | 0.169 | 6.2% [ 2.4% - 10.0%] | 0.133 |
| | No | 8.2% [ 3.9% - 12.5%] | | 7.5% [ 3.4% - 11.6%] | | 2.2% [ 0.0% - 4.5%] | |
| **Family mental illness history** | Yes | 6.8% [ 1.8% - 11.8%] | 1.000 | 1.4% [ 0.0% - 3.7%] | 0.046 | 1.4% [ 0.0% - 3.7%] | 0.189 |
| | No | 6.4% [ 3.1% - 9.7%] | | 8.0% [ 4.3% - 11.7%] | | 5.3% [ 2.3% - 8.3%] | |

* The highlighted prevalence rates, across the levels of socio – demographic data, were significantly different at a significance level of 0.05

## 4.3 Prevalence of psychiatric morbidities

### 4.3.1 Overall prevalence of primary psychiatric morbidity

As described in the methodology, the MINI plus was mainly used to confirm the primary morbidities the patients were diagnosed with. Therefore, an analysis comparing the primary morbidity as captured in the MINI plus and that indicated by the psychiatrists showed an agreement, in diagnosis, of approximately 96%. In the 4% where there were disagreements, these diagnoses were picked by the MINI as being secondary rather than primary as were indicated by the psychiatrists. However, the analysis proceeded with the morbidities as assessed using the MINI plus. There were nine psychiatric morbidities that patients were diagnosed with as primary and hence the reason for their admission at Mathari Hospital. The leading primary morbidity was psychotic disorders and mood disorder with psychotic features. This was followed by manic and hypomanic disorder, alcohol use disorder, major depressive episodes, substance use disorder, suicidality, antisocial personality disorder, posttraumatic stress disorder, and lastly anorexia nervosa (see **Figure 2**).

| Primary morbidity | Prevalence (95% C.I) | | Total | males | females |
|---|---|---|---|---|---|
| Psychotic disorders and mood disorder with psychotic features | 42.8% [37.1% - 48.5%] | | 122 | 91 | 31 |
| Manic hypomanic episodes | 30.2% [24.9% - 35.5%] | | 86 | 54 | 32 |
| Alcohol use disorder | 7.7% [4.6% - 10.8%] | | 22 | 15 | 7 |
| Major depressive episodes | 6.3% [3.5% - 9.1%] | | 18 | 6 | 12 |
| Substance use disorder | 6.0% [3.2% - 8.8%] | | 17 | 15 | 2 |
| Suicidality | 3.2% [1.2% - 5.2%] | | 9 | 6 | 3 |
| Antisocial personality disorder | 2.5% [0.7% - 4.3%] | | 7 | 6 | 1 |
| Posttraumatic stress disorder | 1.1% [0.0% - 2.3%] | | 3 | 3 | 0 |
| Anorexia nervosa | 0.4% [0.0% - 1.1%] | | 1 | 1 | 0 |

**Figure 2:** Prevalence of primary morbidities

### 4.3.2 Variations of primary morbidities by socio – demographic characteristics

Detailed findings on the disaggregated prevalence analysis are presented in **Tables 4a – c** and only where significant variations occurred are explained[3].

- The diagnosis of psychotic disorders and mood disorder with psychotic features was associated with lower levels of education. For instance, the prevalence of psychosis in those who had no formal education was 75.0% [70.0% – 80.0%] and 34.7% [29.2% – 40.2%] in those who had tertiary level of education. This diagnosis was also positively associated with having a history of mental illness.

- Alcohol use disorder was positively associated with higher education, being in formal employment and having a history of substance use.

- The use of substance was siginificantly prevalent in younger participants than in older participants. For instance, the prevalence of substance use in those aged less than 25 years was 14.3% [10.2% – 18.4%], while it was 1.4% [0.0% – 2.8%] in those older than 40 years of age. College students were more likely to be diagnosed with substance use disorder.

- More females (13.3% [9.4% – 17.2%]) were significantly diagnosed with major depressive episodes than males (3.1% [9.4% – 17.2%]).

- Those widowed (18.2% [13.7% – 22.7%]), divorced/separated (10.0% [6.5% – 13.5%]), living alone (9.5% [6.1% – 12.9%]), and those with family mental illness history (6.8% [3.9% – 9.7%]) were significantly more likely to be diagnosed with suicidality.

- Antisocial personality disorder was significantly associated with being young, lack of social support, and personal history of mental illness.

- Those who were widowed more significantly more likely to be diagnosed with posttraumatic stress disorder.

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[3] Variations in morbidity by socio – demographic data were examined using chi – square tests.

**Table 4a:** Prevalence of primary morbidities (psychotic and mood disorder with psychotic features, manic hypomanic episodes, and alcohol use disorder) by socio demographic characteristics

| Variable | Category | psychotic disorders and mood disorder with psychotic features | Chi square p value | Manic hypomanic episodes | Chi square p value | Alcohol use disorder | Chi square p value |
|---|---|---|---|---|---|---|---|
| Gender | Male | 46.7% [40.9% - 52.5%] | 0.055 | 26.7% [21.6% - 31.8%] | 0.071 | 7.7% [ 4.6% - 10.8%] | 1.000 |
| | Female | 34.4% [28.9% - 39.9%] | | 37.8% [32.2% - 43.4%] | | 7.8% [ 4.7% - 10.9%] | |
| Age category (years) | < 25 | 39.3% [33.6% - 45.0%] | 0.521 | 28.6% [23.4% - 33.8%] | 0.473 | 5.4% [ 2.8% - 8.0%] | 0.222 |
| | 26 – 30 | 49.2% [43.4% - 55.0%] | | 21.3% [16.5% - 26.1%] | | 3.3% [ 1.2% - 5.4%] | |
| | 31 – 35 | 49.0% [43.2% - 54.8%] | | 34.7% [29.2% - 40.2%] | | 8.2% [ 5.0% - 11.4%] | |
| | 36 – 40 | 38.6% [32.9% - 44.3%] | | 34.1% [28.6% - 39.6%] | | 6.8% [ 3.9% - 9.7%] | |
| | > 40 | 37.1% [31.5% - 42.7%] | | 32.9% [27.4% - 38.4%] | | 14.3% [10.2% - 18.4%] | |
| Marital status | Single | 45.5% [39.7% - 51.3%] | 0.576 | 30.5% [25.2% - 35.8%] | 0.948 | 6.5% [ 3.6% - 9.4%] | 0.484 |
| | Married | 41.2% [35.5% - 46.9%] | | 28.9% [23.6% - 34.2%] | | 11.3% [ 7.6% - 15.0%] | |
| | divorced/separated | 30.0% [24.7% - 35.3%] | | 30.0% [24.7% - 35.3%] | | 5.0% [ 2.5% - 7.5%] | |
| | Widowed | 36.4% [30.8% - 42.0%] | | 36.4% [30.8% - 42.0%] | | 0.0% [ 0.0% - 0.0%] | |
| Education | no formal education | 75.0% [70.0% - 80.0%] | 0.030 | 25.0% [20.0% - 30.0%] | 0.627 | 0.0% [ 0.0% - 0.0%] | 0.009 |
| | Primary | 51.9% [46.1% - 57.7%] | | 27.3% [22.1% - 32.5%] | | 1.3% [ 0.0% - 2.6%] | |
| | Secondary | 44.3% [38.5% - 50.1%] | | 35.4% [29.8% - 41.0%] | | 5.1% [ 2.5% - 7.7%] | |
| | Tertiary | 34.7% [29.2% - 40.2%] | | 28.0% [22.8% - 33.2%] | | 13.6% [ 9.6% - 17.6%] | |
| Occupation | college student | 38.2% [32.6% - 43.8%] | 0.113 | 26.5% [21.4% - 31.6%] | 0.523 | 5.9% [ 3.2% - 8.6%] | 0.000 |
| | formal employment | 33.9% [28.4% - 39.4%] | | 26.8% [21.7% - 31.9%] | | 23.2% [18.3% - 28.1%] | |
| | informal (casual) | 53.6% [47.8% - 59.4%] | | 26.2% [21.1% - 31.3%] | | 3.6% [ 1.4% - 5.8%] | |
| | self-employed | 42.7% [37.0% - 48.4%] | | 35.4% [29.8% - 41.0%] | | 4.2% [ 1.9% - 6.5%] | |
| Income | <10000 | 49.6% [43.8% - 55.4%] | 0.072 | 30.2% [24.9% - 35.5%] | 0.935 | 4.7% [ 2.2% - 7.2%] | 0.112 |
| | 10000 – 34999 | 36.7% [31.1% - 42.3%] | | 29.1% [23.8% - 34.4%] | | 11.4% [ 7.7% - 15.1%] | |
| | >35000 | 34.0% [28.5% - 39.5%] | | 32.1% [26.7% - 37.5%] | | 11.3% [ 7.6% - 15.0%] | |
| Living with | Parents | 47.1% [41.3% - 52.9%] | 0.521 | 34.3% [28.8% - 39.8%] | 0.515 | 3.9% [ 1.7% - 6.1%] | 0.015 |
| | Spouse | 37.1% [31.5% - 42.7%] | | 27.1% [21.9% - 32.3%] | | 17.1% [12.7% - 21.5%] | |
| | Friends | 57.1% [51.4% - 62.8%] | | 14.3% [10.2% - 18.4%] | | 0.0% [ 0.0% - 0.0%] | |
| | Alone | 39.2% [33.5% - 44.9%] | | 28.4% [23.2% - 33.6%] | | 8.1% [ 4.9% - 11.3%] | |
| | Relatives | 40.9% [35.2% - 46.6%] | | 36.4% [30.8% - 42.0%] | | 0.0% [ 0.0% - 0.0%] | |
| History of chronic illness | Yes | 44.1% [38.3% - 49.9%] | 0.767 | 35.6% [30.0% - 41.2%] | 0.336 | 6.8% [ 3.9% - 9.7%] | 1.000 |
| | No | 41.9% [36.2% - 47.6%] | | 28.8% [23.5% - 34.1%] | | 7.6% [ 4.5% - 10.7%] | |
| Social support | Yes | 44.4% [38.6% - 50.2%] | 0.571 | 28.4% [23.2% - 33.6%] | 0.409 | 7.8% [ 4.7% - 10.9%] | 1.000 |
| | No | 38.7% [33.0% - 44.4%] | | 35.5% [29.9% - 41.1%] | | 6.5% [ 3.6% - 9.4%] | |
| Having children | Yes | 44.2% [38.4% - 50.0%] | 0.717 | 27.9% [22.7% - 33.1%] | 0.514 | 8.4% [ 5.2% - 11.6%] | 0.824 |
| | No | 41.4% [35.7% - 47.1%] | | 32.0% [26.6% - 37.4%] | | 7.0% [ 4.0% - 10.0%] | |
| History of substance use | Yes | 43.2% [37.4% - 49.0%] | 1.000 | 26.3% [21.2% - 31.4%] | 0.199 | 11.1% [ 7.5% - 14.7%] | 0.003 |
| | No | 43.7% [37.9% - 49.5%] | | 34.5% [29.0% - 40.0%] | | 1.1% [ 0.0% - 2.3%] | |
| History of mental illness | Yes | 50.0% [44.2% - 55.8%] | 0.003 | 35.4% [29.8% - 41.0%] | 0.187 | 4.6% [ 2.2% - 7.0%] | 0.044 |
| | No | 31.3% [25.9% - 36.7%] | | 27.6% [22.4% - 32.8%] | | 11.9% [ 8.1% - 15.7%] | |
| Family mental illness history | Yes | 44.6% [38.8% - 50.4%] | 0.678 | 32.4% [27.0% - 37.8%] | 0.547 | 4.1% [ 1.8% - 6.4%] | 0.205 |
| | No | 41.5% [35.8% - 47.2%] | | 28.2% [23.0% - 33.4%] | | 9.6% [ 6.2% - 13.0%] | |

\* The highlighted prevalence rates were significantly different at a significance level of 0.05

**Table 4b:** Prevalence of primary morbidities (major depressive episodes, substance use disorder, and suicidality) by socio demographic characteristics

| Variable | Category | Major depressive episodes | Chi square p value | Substance use disorder | Chi square p value | Suicidality | Chi square p value |
|---|---|---|---|---|---|---|---|
| Gender | Male | 3.1% [ 1.1% - 5.1%] | 0.003 | 7.7% [ 4.6% - 10.8%] | 0.104 | 3.1% [ 1.1% - 5.1%] | 1.000 |
| | Female | 13.3% [ 9.4% - 17.2%] | | 2.2% [ 0.5% - 3.9%] | | 3.3% [ 1.2% - 5.4%] | |
| Age category (years) | < 25 | 3.6% [ 1.4% - 5.8%] | 0.091 | 14.3% [10.2% - 18.4%] | 0.012 | 0.0% [ 0.0% - 0.0%] | 0.502 |
| | 26 – 30 | 9.8% [ 6.3% - 13.3%] | | 9.8% [ 6.3% - 13.3%] | | 4.9% [ 2.4% - 7.4%] | |
| | 31 – 35 | 0.0% [ 0.0% - 0.0%] | | 2.0% [ 0.4% - 3.6%] | | 2.0% [ 0.4% - 3.6%] | |
| | 36 – 40 | 11.4% [ 7.7% - 15.1%] | | 2.3% [ 0.6% - 4.0%] | | 4.5% [ 2.1% - 6.9%] | |
| | > 40 | 7.1% [ 4.1% - 10.1%] | | 1.4% [ 0.0% - 2.8%] | | 4.3% [ 1.9% - 6.7%] | |
| Marital status | Single | 4.5% [ 2.1% - 6.9%] | 0.203 | 7.8% [ 4.7% - 10.9%] | 0.658 | 2.6% [ 0.8% - 4.4%] | 0.016 |
| | Married | 8.2% [ 5.0% - 11.4%] | | 4.1% [ 1.8% - 6.4%] | | 1.0% [ 0.0% - 2.2%] | |
| | divorced/separated | 15.0% [10.9% - 19.1%] | | 5.0% [ 2.5% - 7.5%] | | 10.0% [ 6.5% - 13.5%] | |
| | Widowed | 0.0% [ 0.0% - 0.0%] | | 0.0% [ 0.0% - 0.0%] | | 18.2% [13.7% - 22.7%] | |
| Education | no formal education | 0.0% [ 0.0% - 0.0%] | 0.783 | 0.0% [ 0.0% - 0.0%] | 0.034 | 0.0% [ 0.0% - 0.0%] | 1.000 |
| | Primary | 9.1% [ 5.8% - 12.4%] | | 3.9% [ 1.7% - 6.1%] | | 2.6% [ 0.8% - 4.4%] | |
| | Secondary | 5.1% [ 2.5% - 7.7%] | | 1.3% [ 0.0% - 2.6%] | | 3.8% [ 1.6% - 6.0%] | |
| | Tertiary | 5.9% [ 3.2% - 8.6%] | | 11.0% [ 7.4% - 14.6%] | | 3.4% [ 1.3% - 5.5%] | |
| Occupation | college student | 2.9% [ 1.0% - 4.8%] | 0.774 | 20.6% [15.9% - 25.3%] | 0.006 | 5.9% [ 3.2% - 8.6%] | 0.598 |
| | formal employment | 3.6% [ 1.4% - 5.8%] | | 7.1% [ 4.1% - 10.1%] | | 1.8% [ 0.3% - 3.3%] | |
| | informal (casual) | 4.8% [ 2.3% - 7.3%] | | 2.4% [ 0.6% - 4.2%] | | 3.6% [ 1.4% - 5.8%] | |
| | self-employed | 7.3% [ 4.3% - 10.3%] | | 4.2% [ 1.9% - 6.5%] | | 2.1% [ 0.4% - 3.8%] | |
| Income | <10000 | 7.0% [ 4.0% - 10.0%] | 1.000 | 4.7% [ 2.2% - 7.2%] | 0.183 | 0.8% [ 0.0% - 1.8%] | 0.022 |
| | 10000 – 34999 | 6.3% [ 3.5% - 9.1%] | | 3.8% [ 1.6% - 6.0%] | | 7.6% [ 4.5% - 10.7%] | |
| | >35000 | 5.7% [ 3.0% - 8.4%] | | 11.3% [ 7.6% - 15.0%] | | 1.9% [ 0.3% - 3.5%] | |
| Living with | Parents | 2.9% [ 1.0% - 4.8%] | 0.220 | 8.8% [ 5.5% - 12.1%] | 0.579 | 0.0% [ 0.0% - 0.0%] | 0.001 |
| | Spouse | 8.6% [ 5.3% - 11.9%] | | 4.3% [ 1.9% - 6.7%] | | 0.0% [ 0.0% - 0.0%] | |
| | Friends | 7.1% [ 4.1% - 10.1%] | | 7.1% [ 4.1% - 10.1%] | | 7.1% [ 4.1% - 10.1%] | |
| | Alone | 6.8% [ 3.9% - 9.7%] | | 5.4% [ 2.8% - 8.0%] | | 9.5% [ 6.1% - 12.9%] | |
| | Relatives | 13.6% [ 9.6% - 17.6%] | | 0.0% [ 0.0% - 0.0%] | | 4.5% [ 2.1% - 6.9%] | |
| History of chronic illness | Yes | 5.1% [ 2.5% - 7.7%] | 1.000 | 6.8% [ 3.9% - 9.7%] | 1.000 | 0.0% [ 0.0% - 0.0%] | 0.357 |
| | No | 6.6% [ 3.7% - 9.5%] | | 6.6% [ 3.7% - 9.5%] | | 3.5% [ 1.4% - 5.6%] | |
| Social support | Yes | 7.4% [ 4.4% - 10.4%] | 0.238 | 6.6% [ 3.7% - 9.5%] | 0.703 | 2.5% [ 0.7% - 4.3%] | 0.573 |
| | No | 0.0% [ 0.0% - 0.0%] | | 3.2% [ 1.2% - 5.2%] | | 3.2% [ 1.2% - 5.2%] | |
| Having children | Yes | 8.4% [ 5.2% - 11.6%] | 0.146 | 3.2% [ 1.2% - 5.2%] | 0.043 | 2.6% [ 0.8% - 4.4%] | 0.736 |
| | No | 3.9% [ 1.7% - 6.1%] | | 9.4% [ 6.0% - 12.8%] | | 3.9% [ 1.7% - 6.1%] | |
| History of substance use | Yes | 5.3% [ 2.7% - 7.9%] | 0.292 | 8.4% [ 5.2% - 11.6%] | 0.016 | 2.6% [ 0.8% - 4.4%] | 0.469 |
| | No | 9.2% [ 5.8% - 12.6%] | | 1.1% [ 0.0% - 2.3%] | | 4.6% [ 2.2% - 7.0%] | |
| History of mental illness | Yes | 6.2% [ 3.4% - 9.0%] | 0.808 | 0.8% [ 0.0% - 1.8%] | 0.000 | 1.5% [ 0.1% - 2.9%] | 0.173 |
| | No | 7.5% [ 4.4% - 10.6%] | | 11.2% [ 7.5% - 14.9%] | | 5.2% [ 2.6% - 7.8%] | |
| Family mental illness history | Yes | 5.4% [ 2.8% - 8.0%] | 0.786 | 4.1% [ 1.8% - 6.4%] | 0.411 | 6.8% [ 3.9% - 9.7%] | 0.043 |
| | No | 6.9% [ 4.0% - 9.8%] | | 7.4% [ 4.4% - 10.4%] | | 1.6% [ 0.1% - 3.1%] | |

\* The highlighted prevalence rates were significantly different at a significance level of 0.05

**Table 4c:** Prevalence of primary morbidities (antisocial personality disorder, posttraumatic stress disorder, and anorexia nervosa) by socio demographic characteristics

| Variable | Category | Antisocial personality disorder | Chi square p value | Posttraumatic stress disorder | Chi square p value | Anorexia nervosa | Chi square p value |
|---|---|---|---|---|---|---|---|
| Gender | Male | 3.1% [ 1.1% - 5.1%] | 0.438 | 1.5% [ 0.1% - 2.9%] | 0.554 | 0.5% [ 0.0% - 1.3%] | 1.000 |
|  | Female | 1.1% [ 0.0% - 2.3%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Age category (years) | < 25 | 8.9% [ 5.6% - 12.2%] | 0.004 | 0.0% [ 0.0% - 0.0%] | 0.344 | 0.0% [ 0.0% - 0.0%] | 0.756 |
|  | 26 – 30 | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  | 1.6% [ 0.1% - 3.1%] |  |
|  | 31 – 35 | 4.1% [ 1.8% - 6.4%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | 36 – 40 | 0.0% [ 0.0% - 0.0%] |  | 2.3% [ 0.6% - 4.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | > 40 | 0.0% [ 0.0% - 0.0%] |  | 2.9% [ 1.0% - 4.8%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Marital status | Single | 2.6% [ 0.8% - 4.4%] | 0.748 | 0.0% [ 0.0% - 0.0%] | 0.047 | 0.0% [ 0.0% - 0.0%] | 0.441 |
|  | Married | 2.1% [ 0.4% - 3.8%] |  | 2.1% [ 0.4% - 3.8%] |  | 1.0% [ 0.0% - 2.2%] |  |
|  | divorced/separated | 5.0% [ 2.5% - 7.5%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | Widowed | 0.0% [ 0.0% - 0.0%] |  | 9.1% [ 5.8% - 12.4%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Education | no formal education | 0.0% [ 0.0% - 0.0%] | 0.443 | 0.0% [ 0.0% - 0.0%] | 0.797 | 0.0% [ 0.0% - 0.0%] | 1.000 |
|  | Primary | 3.9% [ 1.7% - 6.1%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | Secondary | 3.8% [ 1.6% - 6.0%] |  | 1.3% [ 0.0% - 2.6%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | Tertiary | 0.8% [ 0.0% - 1.8%] |  | 1.7% [ 0.2% - 3.2%] |  | 0.8% [ 0.0% - 1.8%] |  |
| Occupation | college student | 0.0% [ 0.0% - 0.0%] | 0.642 | 0.0% [ 0.0% - 0.0%] | 0.862 | 0.0% [ 0.0% - 0.0%] | 0.336 |
|  | formal employment | 1.8% [ 0.3% - 3.3%] |  | 0.0% [ 0.0% - 0.0%] |  | 1.8% [ 0.3% - 3.3%] |  |
|  | informal (casual) | 4.8% [ 2.3% - 7.3%] |  | 1.2% [ 0.0% - 2.5%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | self-employed | 2.1% [ 0.4% - 3.8%] |  | 2.1% [ 0.4% - 3.8%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Income | <10000 | 1.6% [ 0.1% - 3.1%] | 0.152 | 1.6% [ 0.1% - 3.1%] | 0.624 | 0.0% [ 0.0% - 0.0%] | 0.181 |
|  | 10000 – 34999 | 5.1% [ 2.5% - 7.7%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | >35000 | 0.0% [ 0.0% - 0.0%] |  | 1.9% [ 0.3% - 3.5%] |  | 1.9% [ 0.3% - 3.5%] |  |
| Living with | Parents | 2.9% [ 1.0% - 4.8%] | 0.410 | 0.0% [ 0.0% - 0.0%] | 0.479 | 0.0% [ 0.0% - 0.0%] | 0.377 |
|  | Spouse | 1.4% [ 0.0% - 2.8%] |  | 2.9% [ 1.0% - 4.8%] |  | 1.4% [ 0.0% - 2.8%] |  |
|  | Friends | 7.1% [ 4.1% - 10.1%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | Alone | 1.4% [ 0.0% - 2.8%] |  | 1.4% [ 0.0% - 2.8%] |  | 0.0% [ 0.0% - 0.0%] |  |
|  | Relatives | 4.5% [ 2.1% - 6.9%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
| History of chronic illness | Yes | 1.7% [ 0.2% - 3.2%] | 1.000 | 0.0% [ 0.0% - 0.0%] | 1.000 | 0.0% [ 0.0% - 0.0%] | 1.000 |
|  | No | 3.0% [ 1.0% - 5.0%] |  | 1.5% [ 0.1% - 2.9%] |  | 0.5% [ 0.0% - 1.3%] |  |
| Social support | Yes | 1.6% [ 0.1% - 3.1%] | 0.034 | 0.8% [ 0.0% - 1.8%] | 0.303 | 0.4% [ 0.0% - 1.1%] | 1.000 |
|  | No | 9.7% [ 6.3% - 13.1%] |  | 3.2% [ 1.2% - 5.2%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Having children | Yes | 2.6% [ 0.8% - 4.4%] | 1.000 | 1.9% [ 0.3% - 3.5%] | 0.254 | 0.6% [ 0.0% - 1.5%] | 1.000 |
|  | No | 2.3% [ 0.6% - 4.0%] |  | 0.0% [ 0.0% - 0.0%] |  | 0.0% [ 0.0% - 0.0%] |  |
| History of substance use | Yes | 1.6% [ 0.1% - 3.1%] | 0.211 | 1.1% [ 0.0% - 2.3%] | 1.000 | 0.5% [ 0.0% - 1.3%] | 1.000 |
|  | No | 4.6% [ 2.2% - 7.0%] |  | 1.1% [ 0.0% - 2.3%] |  | 0.0% [ 0.0% - 0.0%] |  |
| History of mental illness | Yes | 0.0% [ 0.0% - 0.0%] | 0.030 | 0.8% [ 0.0% - 1.8%] | 1.000 | 0.8% [ 0.0% - 1.8%] | 0.492 |
|  | No | 4.5% [ 2.1% - 6.9%] |  | 0.7% [ 0.0% - 1.7%] |  | 0.0% [ 0.0% - 0.0%] |  |
| Family mental illness history | Yes | 0.0% [ 0.0% - 0.0%] | 0.196 | 1.4% [ 0.0% - 2.8%] | 1.000 | 1.4% [ 0.0% - 2.8%] | 0.282 |
|  | No | 3.7% [ 1.5% - 5.9%] |  | 1.1% [ 0.0% - 2.3%] |  | 0.0% [ 0.0% - 0.0%] |  |

### 4.3.3 Comorbidities associated with the top three primary diagnosis

It was desirable to conduct an analysis on comorbidities associated with all the primary diagnoses presented in **Figure 2** above. However, this was limited by the sample sizes and hence the comorbidities associated with the most prevalent primary diagnoses were analysed. Alcohol and substance use were merged to form a primary illness category as they were significantly highly associated as discussed in *sub – section 4.3.2* above. Comorbidities associated with psychotic disorders and mood disorder with psychotic features, manic and hypomanic disorder, and alcohol use disorder/ substance use disorder are therefore highlighted in *sub – sections 4.3.3.1 to 4.3.3.3*.

### 4.3.3.1 Comorbidities associated with psychotic disorders and mood disorder with psychotic features

Substance and alcohol use were the leading comorbidities with approximately equivalent prevalence rates among those primarily diagnosed with psychotic disorders and mood disorder with psychotic features. These were closely followed by major depressive episodes and others (see **Figure 3**).
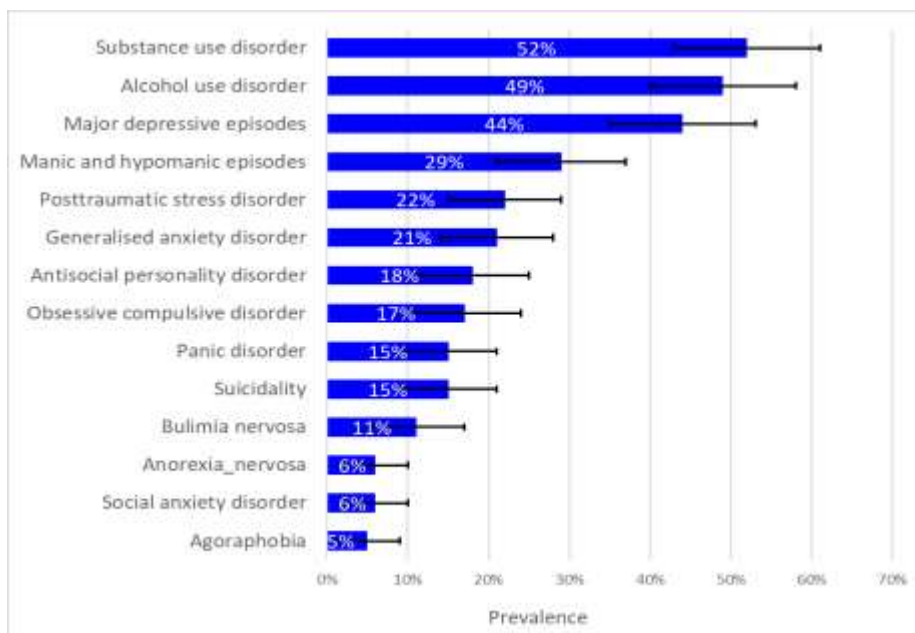


**Figure 3:** The prevalence of comorbidities presenting with psychotic disorder

### 4.3.3.2 Comorbidities associated with manic and hypomanic disorder

Major depressive episodes as secondary diagnosis was the leading comorbidity presenting with manic and hypomanic disorder, then alcohol and substance use disorder and others (see **Figure 4**).
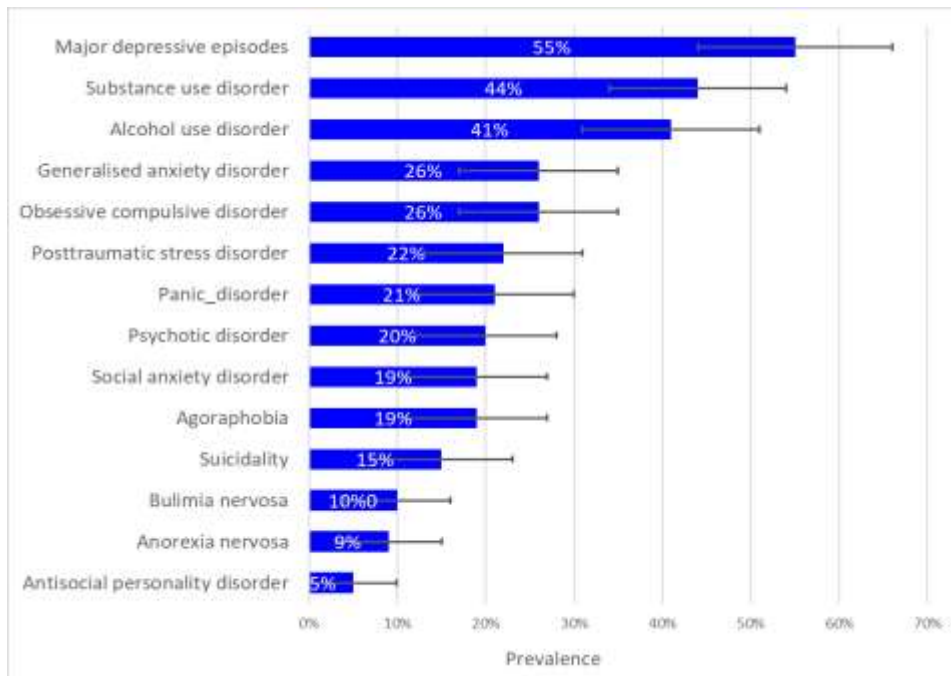


**Figure 4:** The prevalence of comorbidities presenting with manic and hypomanic disorder

### 4.3.3.3 Comorbidities associated with alcohol/substance use disorder

Those primarily diagnosed with alcohol/substance use disorder had major depressive episodes as the dominating comorbidity. This was followed by generalized anxiety, panic, and posttraumatic stress disorders and others (**Figure 5**).
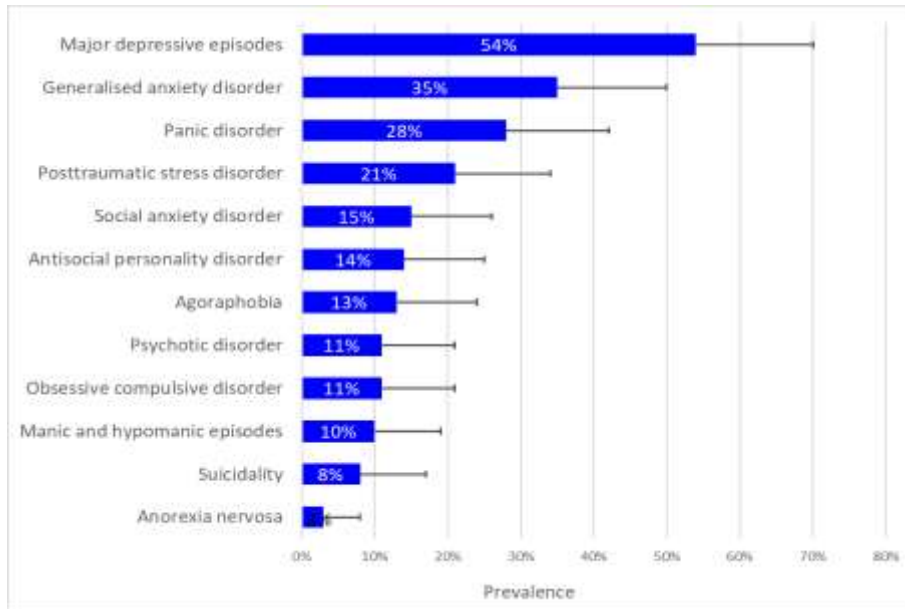
**Figure 5:** The prevalence of comorbidities presenting with alcohol/substance use disorder

## 4.4 Associations between psychotic disorders and mood disorder with psychotic features, manic/hypomanic, alcohol/substance use disorders and major life events

### 4.4.1 Major life events associated with psychotic disorders and mood disorder with psychotic features

The analysis examined the distribution of major life events experienced by those diagnosed with psychotic disorders and mood disorder with psychotic features, and cumulatively, 80% of these patients reported to have experienced: death of a close family member, major personal injury or illness, detention in jail or other institution, death of a close friend, marital separation from mate, and being fired at work. Further analysis examined associations between this diagnosis and each of the major events, while adjusting for the socio – demographic factors that were significant in *subsection 4.3.2[4]*. The findings showed that death of a close family member, major personal injury or illness, death of a close friend were significantly associated with the diagnosis of psychotic disorders and mood disorder with psychotic features (see **Figure 6**).

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[4] Only the odds ratios and p – values associated with each of these events are reported, as the focus was on association with the major life events.

| | Death of a close family member | Major personal injury or illness | Detention in jail or other institution | Death of a close friend | Marital separation from mate | Being fired at work |
|---|---|---|---|---|---|---|
| OR: | 5.1 | 5.9 | 2.4 | 5.9 | 0.8 | 1.6 |
| p value: | 0.000 | 0.000 | 0.987 | 0.000 | 0.060 | 0.803 |
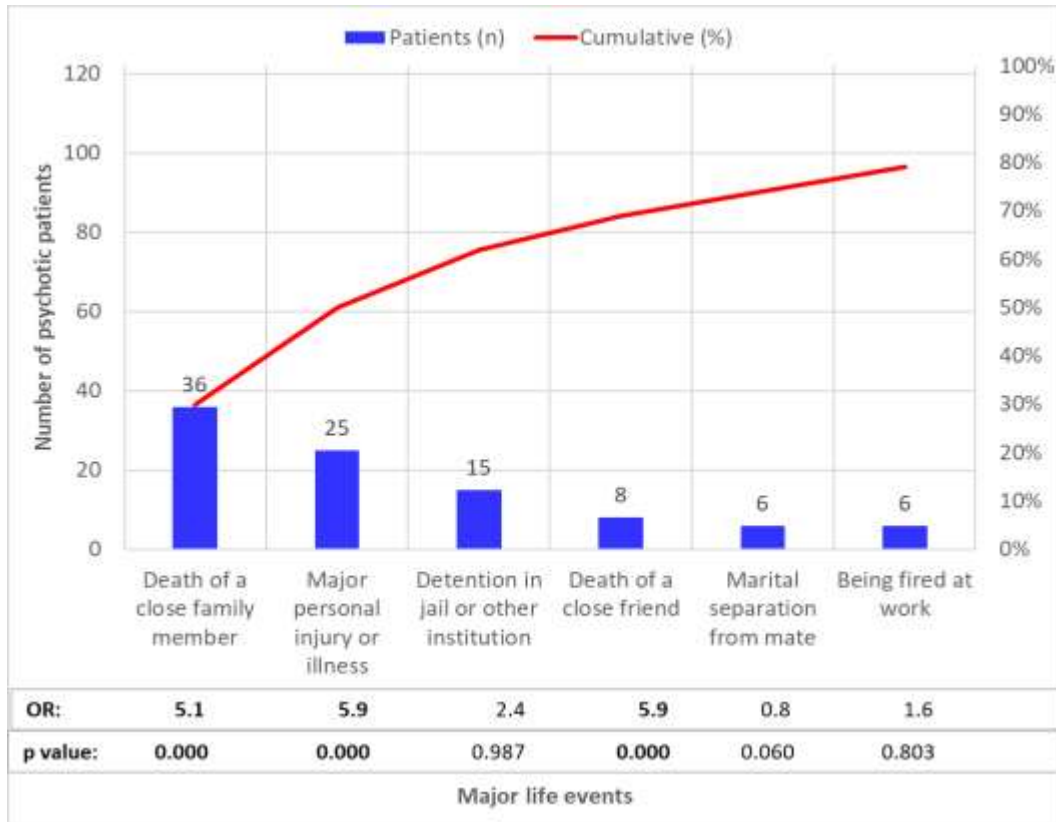
Major life events

**Figure 6:** Cumulative distribution of major life events experienced by those diagnosed with psychotic disorders and mood disorder with psychotic features.

Analysis then proceeded to examine the validity of the observed association through the use of area under curve (AUC) analysis. The estimated AUC was 77.4%, which implies that 77.4% of the time, patients diagnosed with psychotic disorders and mood disorder with psychotic features are highly likely to mention having experienced, in a ranked order (through variable importance analysis), either death of a close family member, major personal injury/illness or death of a close friend (**Figure 7**).
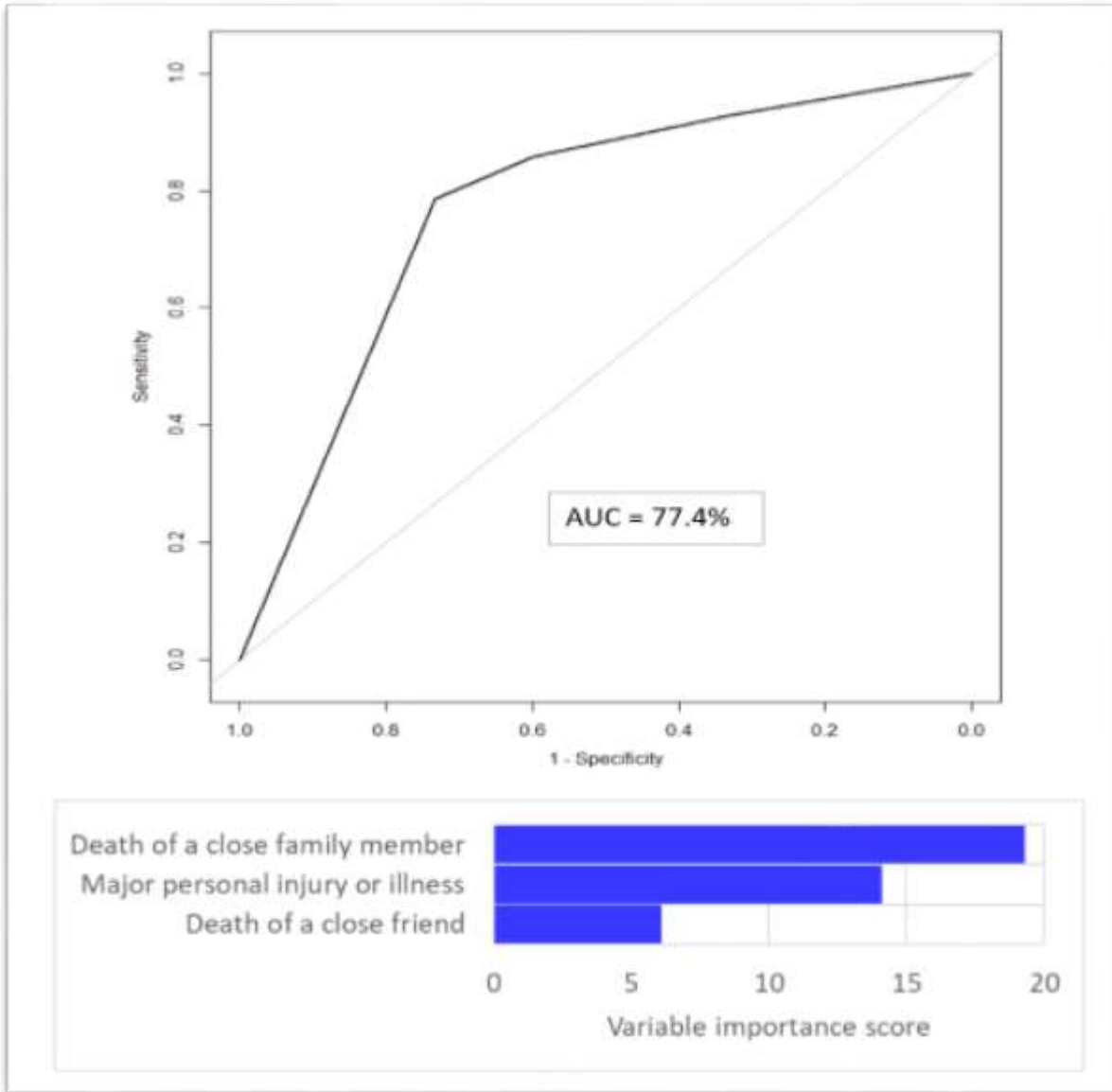
**Figure 7:** Area under curve and variable importance analysis (psychotic disorders and mood disorder with psychotic features).

The association analysis approach used in this section was adopted in the analyses presented in *sub – sections 4.4.2 and 4.4.3*.

### 4.4.2 Major life events associated with manic and hypomanic episodes

Cumulatively, 80% of those diagnosed with manic and hypomanic episodes reported to have experienced: death of a close family member, major personal injury/illness, marital separation from mate, detention in jail or other institution, divorce, major change in financial state, and

being fired at work, each with a prevalence rate of at least 5%. A regression analysis showed significant association between being diagnosed with manic and hypomanic episodes and the following major life events: death of a close family member, major personal injury/illness, marital separation from mate, divorce, and major change in financial state.



| | Death of a close family member | Major personal injury or illness | Marital separation from mate | Detention in jail or other institution | Divorce | Major change in financial state | Being fired at work |
|---|---|---|---|---|---|---|---|
| OR: | 0.8 | 1.5 | 1.3 | 0.5 | 3.0 | 2.4 | 1.03 |
| p value: | 0.516 | 0.037 | 0.011 | 0.117 | 0.000 | 0.000 | 0.962 |
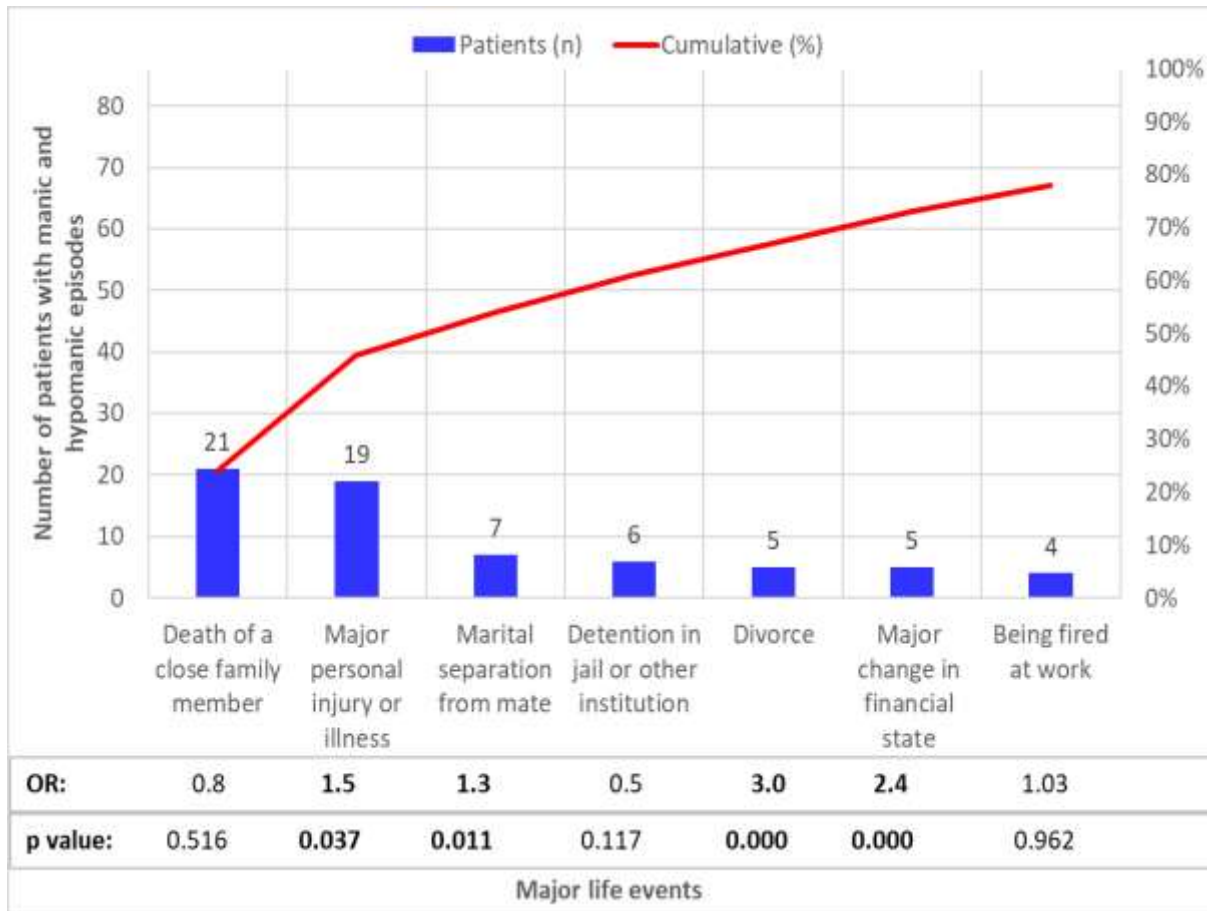
Major life events

**Figure 8:** Cumulative distribution of major life events experienced by those diagnosed with manic and hypomanic episodes.

The estimated AUC was 72.1%, with the implication that 72.1% of the time, patients diagnosed with manic and hypomanic episodes are highly likely to mention having experienced, in a ranked order, either major change in financial state, divorce, being fired at work, death of a close family member, detention in jail or other institution, major personal injury/illness, and marital separation from mate (**Figure 9**).
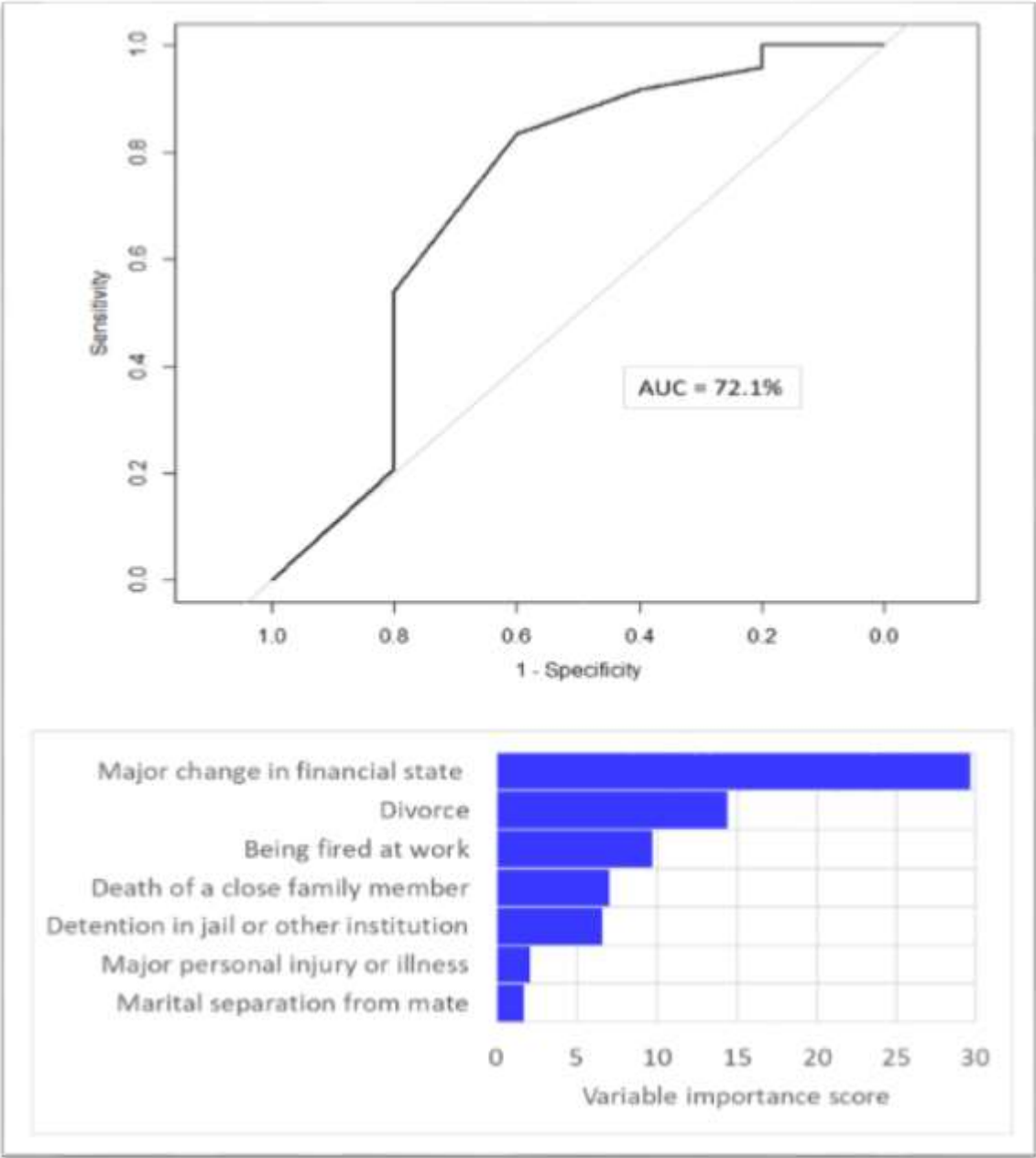
**Figure 9:** Area under curve and variable importance analysis (manic and hypomanic episodes).

*4.4.3 Major life events associated with alcohol and substance use disorder*

Major life events reported by 80% of those diagnosed with alcohol/substance use disorder were death of a close family member, major personal injury/illness, death of a close friend, detention in jail or other institution, revision of personal habits, and major change in financial state. The following major life events were found to have statistically significant associations with alcohol/substance use disorder: death of a close family member, death of a close friend, revision of personal habits, and major change in financial state (**Figure 10**).



| | Death of a close family member | Major personal injury or illness | Death of a close friend | Detention in jail or other institution | Revision of personal habits | Major change in financial state |
|---|---|---|---|---|---|---|
| OR: | 1.6 | 0.8 | 2.2 | 0.6 | 31.3 | 22.8 |
| p value: | 0.021 | 0.349 | 0.021 | 0.412 | 0.000 | 0.000 |
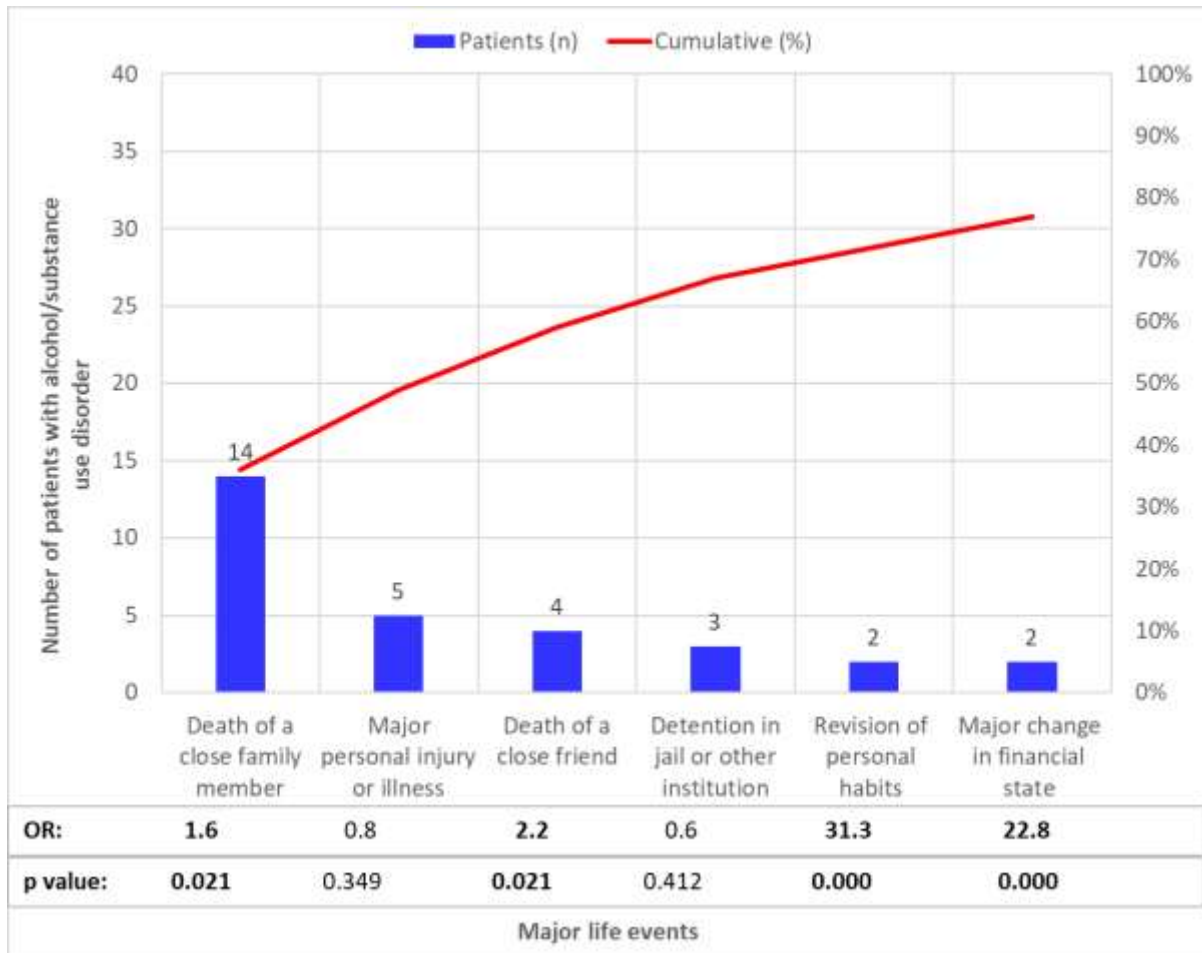
Major life events

**Figure 10:** Cumulative distribution of major life events experienced by those diagnosed with alcohol/substance use disorder.

The estimated AUC was 75.0%, indicating that 75% of the time, those diagnosed with alcohol/substance use disorder are highly likely to report either death of a close family member, death of a close friend, revision of personal habits or major change in financial state.
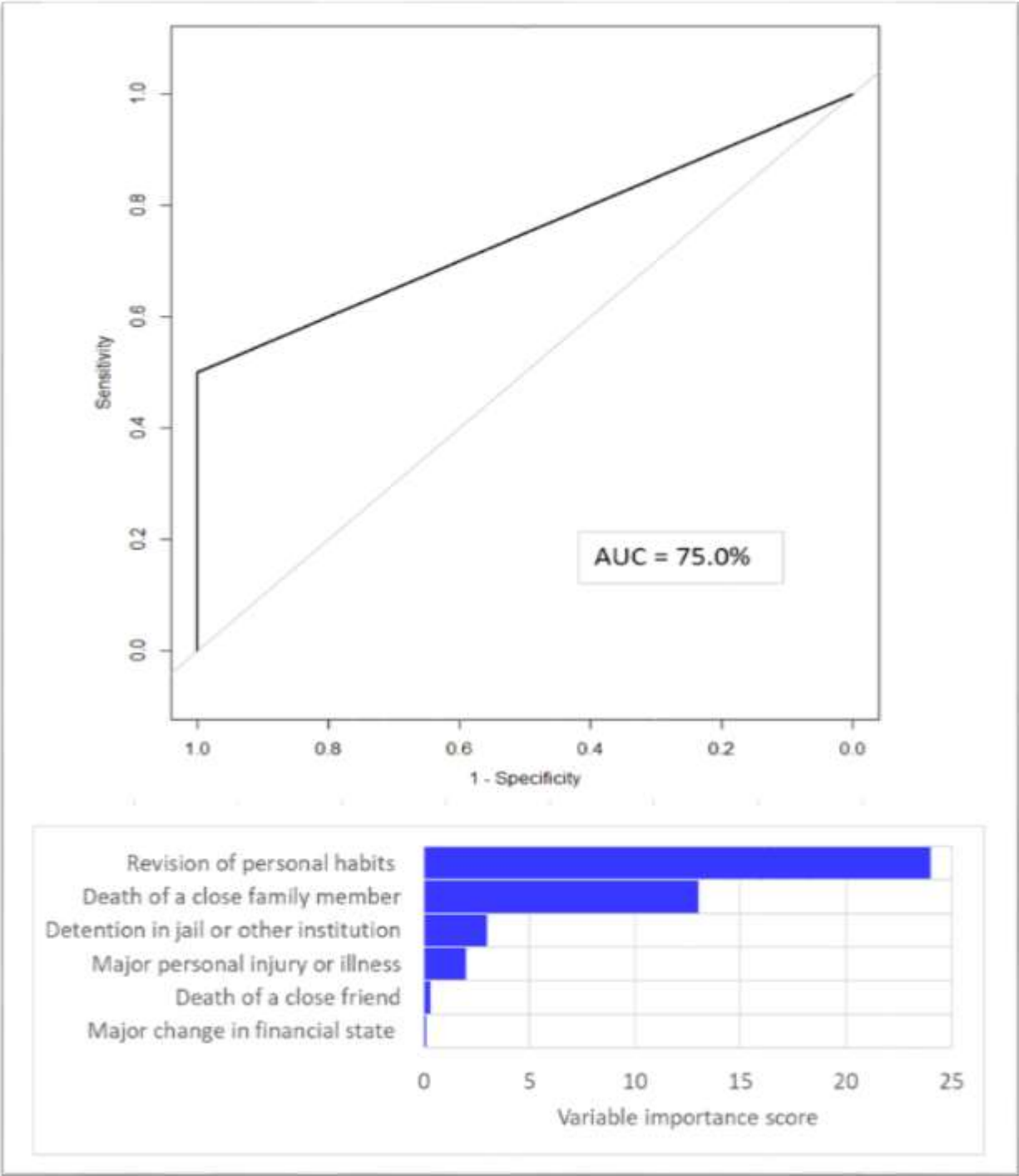
**Figure 11:** Area under curve and variable importance analysis (alcohol/substance use disorder).

# CHAPTER 5: DISCUSSION

This study aimed to determine the association between exposure to major life events and occurrence of psychiatric disorders. First is discusses relevance of the findings per objective to literature, before highlighting limitations and conclusion.

## 5.1 Socio-demographic Characteristics of Psychiatric Patients exposed to major life events.

A structured format interview was used to record the patients' socio-demographic information. According to the findings, 68% were male and 32% female. This distribution by gender is consistent with findings by Gathaiya et al. (2018), a cross-sectional study that assessed for relapse factors associated with schizophrenia at Mathari Hospital, where males were reported to be 66%. Additionally, a cross-sectional study by Ndetei et al. (2008) assessing for clinical epidemiology in patients admitted at Mathari Hospital (691 participants) found 63% of the participants were male. In sum, this variation by gender could be explained by the fact that there are twice the number of male wards as compared to female wards.

Also slightly more than three quarters (78%) of the participants in Ndetei et al. (2008) were aged between 21 and 45 years and majority single. This is in line with the findings in this study where those below 35 years and of single marital status were found to be dominating at Mathari Hospital. Aloba et al. (2013) in his study indicated that mental illness impacts the ability to form and maintain new relationships as well as scare the potential partners as a result of stigma associated with mental illness hence majority are bound to be single.

A systematic review of studies done between 1990 and 2012 assessing for quality of life among psychiatric patients found majority of patients to be in informal employments, single due to inability to form and maintain relationships as well as stigma associated with mental illness (Aloba, 2013).

## 5.2 Prevalence of Major Life Events

Social Readjustment Rating Scale (SRRS) was used to characterize the major life events experienced by participant in receiving treatment for mental health disorders (Holmes & Rahe, 1967). The social readjustment scale required participants to select out of the identified life events which they considered to be major life event they experienced at any time point in their lives. These findings showed that the most reported events were death of a close family member, major personal injury or illness, detention in jail or other institution, marital separation from mate and death of a close friend. These finding were similar to an epidemiological study by

Faravelli et al (2007) in a sample of 2,363 participants which found death (spouse/first-degree relative/close friend), severe personal health problems, severe health problem in family and divorce/separation being most reported events among psychiatric patients. In another study by Anders et al (2012) in a sample of 842 participants most reported events experienced were sudden/unexpected death of a close other and serious injury/illness of a loved one.

An older randomized controlled study (30 patients admitted for psychiatric condition against 40 matched non-psychiatrically disturbed controls intercommunity) by Ndetei and Vadher (1981) assessing life events in psychiatric patients admitted at Mathari Hospital and Kenyatta Hospital found death, marital separation, and divorce to be common among the patients who were being treated for psychiatric condition. These findings suggest to us that individuals experience major adjustment problems when faced with these experiences.

There is a paucity of literature on major life events in sub-Saharan Africa. A lot of focus is on adverse experiences in childhood. In Nigeria, Oladeji et al (2010) assessed family-related early life events as risk factors for psychiatric disorders and found death of a parent, other parental loss, parental mental health, family violence, neglect/abuse were among most experienced by the participants (2143).

Demographic factors associated with major life events (section 4.2.1 add page ref) suggest the importance of understanding the variability among individuals in their responses to a stressful life event. One's response to stress may vary depending on previous life stressors, exposure to specific traumatic event, and personality dimensions; highlighting that these complex interactions need to be considered in both clinical practice and in future research, especially as they mediate cognitive processes and coping strategies during stressful life events (Hardy, 2017).

### 5.3 Prevalence of Psychiatric Morbidity

The prevalence of psychiatric disorders in this cohort is like other studies carried out in Kenya, with psychotic disorders, mood disorder and substance use disorders being the most prevalent. This was similar to another study carried out in the same institution by Ndetei et al (2008) that found schizophrenia, bipolar I disorder, psychosis, substance use disorder and schizo-affective disorder most prevalent among patients.

Gureje et al (2006) found anxiety disorders, mood disorders and substance use disorders being the most prevalent lifetime and 12-month mental health disorders in a Nigerian cohort. These

findings are reflective of the situation of other African and developing countries with similar socio-cultural and economic contexts (Gureje et al, 2006).

## 5.4 Association between major life events and psychiatric morbidity.

Wagner et al. (1988), suggests that life events can be either negative (e.g. death, serious illness/injury) or positive (e.g. getting your own car, finding a part-time job) and the changes that occur suddenly in one's life and might have a severe impact on one's mental health.

Studies done on the association between major life events and emergence of psychiatric illness in childhood and adulthood have generally reported positive associations. Our findings showed major life events such as death, serious injury/illness and detention in jail/institution being highly associated with psychiatric disorders, specifically psychotic disorders, mood disorder and substance use.

Evidence shows that life events have been associated with mood disorders and anxiety, with finding showing that developing the disorder entirely relied on the individual's perception of the event as stressful (Kinderman, Schwannauer, Pontin, & Tai, 2013; Liverpool, 2013; Vadher & Ndetei, 1981). When it comes to substance use disorders, studies have shown that exposure to major life events is a risk factor in initiating and maintaining addiction (Sinha & Jastreboff, 2013).

Alcohol use disorders have been found to be positively associated with and greater in individuals who have experienced major life events than those who had not or had fewer major life events (Slopen, 2011; Borden, 2014; Just-Østergaard, Mortensen, & Trine, 2018). Despite the dearth of literature on the relationship between psychosis and major life events, studies on events experienced in childhood suggest positive causal relationship with psychosis (Beards et al., 2013, Varese et al., 2010, Matheson et al., 2012).

Closer to home, Oladeji et al (2010) found mood, anxiety and substance use disorders most associated experience of adverse events in childhood. The adverse childhood experiences were also significantly associated with current problematic substance use, and these were; emotional abuse, having someone with mental illness in the household, physical abuse and physical neglect (Kabiru et al, 2010; Kiburi et al, 2018). The findings from these studies are similar to the findings in this study, suggesting that adverse experiences are linked to mental health problems.

The limitation in our study is that we have not assessed the degrees of association between an event/s and disorder. This calls for further research to understand the influence of life events (early or current) to precipitating or perpetuating mental disorders.

Stressful life events have been classified according to the degree of their impact on an individual's life, or of the change in the way one feels about his/her health, or his/her relationship with others (Sokratous et al, 2013).

Life events are not only major determinants in the cause of illnesses, but studies demonstrate that the severity or else worsening of the symptoms of the resultant illness, correlates with the experiences of the life changes (Salleh, 2008).

Despite our findings, it is difficult to conclude that the experience of major life events in our cohort directly influenced the development of mental health problems.

The SRRS focused on all major events experienced in their lives as opposed to a specific period i.e. 12 months prior to their recent episode as in the case of Vadher and Ndetei (1981). It is therefore difficult to know which event triggered the disorder if at all.

The diathesis-stress theory presupposes genetic vulnerability prior to exposure to a stressful trigger event, but does not take into account the individuals potential positive growth after exposure to traumatic or stressful events. Moreover, the individual's perception of the same life event can be very different, as variations in personal appraisal are often not taken into account.

This study begins a larger discussion on the influence of major life events to and individual's psychological distress. Further research is needed to understand the underlying factors that act as facilitators or barriers to developing psychiatric disorders, barring in mind that individual perceptions have a role in how one interprets a major event as stressful and processes through which the individual copes with the event.

### 5.5 Limitations

This study had a few limitations. First was the use of just participants from one hospital, though considered the main referral mental health facility in Kenya, which limited generalizability of the findings to wider contexts. Secondly the examination of few and/or uncommon stressors (i.e., parental death, serious accident or illness).

Focus on more prevalent, daily stressors would have influenced the association with current psychiatric illness. This study relied on patients' history, and there could be limitations in reporting of major life experiences especially by the targeted respondents mainly because some people had difficulty recalling certain events as a protective mechanism and that presence of emotional impairment influenced the memory for events.

 Lastly, the study made use of a cross sectional design, which hindered the ability to examine causality is impossible. Future research may use a longitudinal design to explore further.

## 5.6 Conclusion

The findings for this study add literature to a neglected area of research and suggests the need for further research in the area of major life events and their impact on the health and well-being of individuals in the Kenyan context.

Through our study it is impossible to conclude that the experience of major life events directly influenced psychiatric morbidity in our cohort, but literature has shown that perceiving major events as stressful increases one's vulnerability to psychopathology in the context of later stressful life events.

Further research in our context is needed to support this. Our findings suggest the need to provide support for stress sensitization as an etiological model linking experiencing of major life events for a range of psychiatric disorders. The stress-diathesis models conceptualized the diathesis as an innate characteristic of the individual, such as a genetic vulnerability, findings from our study suggest that psychopathology may arise from environmental exposures early in life.

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**APPENDICES**

**Appendix I. RESEARCH WORK PLAN**

| Activity | Time Frame |
|---|---|
| Development of proposal and defense presentation | January–March, 2019 |
| Proposal submission for ethical approval | April 2019 |
| Data collection | July 2019 |
| Data analysis | July, 2019 |
| Report writing | August ,2019 |
| Results presentation | August, 2019 |
| Submission of report | September, 2019 |

**Appendix II. STUDY BUDGET**

| Category | Remarks | Total (Sh.) |
| --- | --- | --- |
| **Proposal** | Ethics Fee | 2000 |
| | Printing and copies of draft | 5000 |
| **Data Collection** | Printing - Consent forms and Questionnaires | 1000 |
| | Photocopying | 20000 |
| | Transport & communication costs | 5000 |
| **Data Analysis** | Statistician | 30000 |
| **Final report** | Printing | 7000 |
| **Contingency Fund** | 10% of total | 7000 |
| **Total** | | **77,000** |

**Appendix III: Consent Information Document (English Version)**

Title:  Association between Major Life Events and Psychiatric Morbidity at Mathari Hospital

Investigator:  Selfine Otieno

Supervisors: Dr Ann Mbwayo

Dr.  Rachael Kangethe

Introduction

My name is Selfine Otieno, a postgraduate student at the University of Nairobi. I wish to conduct a study on association between Major life events and psychiatric morbidity at Mathari Hospital.

I would like to invite you to participate in the study.

Description of the study and study objectives

This research is a cross-sectional descriptive study among stable patients awaiting discharge and those discharged in the course of the study for any psychiatric condition at Mathari National Teaching and Referral hospital, aged 18 years and above and willing to participate in the study.

The objective of this research is to determine association between exposure to major life events and occurrence of psychiatric disorders in adulthood. The total sample size is 287 respondents and intend to take one month collecting data.

Requirements

For one to participate in the study you need to:

1. Be aged 18 years and above
2. Not have active psychopathology
3. Sign an informed consent form

Procedure

If you agree to participate in the study you will

1. Be asked to undertake a mental status examination
2. Be asked to sign a consent form expressing your voluntary participation
3. Be asked questions that relate to your socio-demographic information, psychiatric condition and Major life events. This will be in form of a questionnaire that will take about 60 minutes to complete

Benefits:

There are no direct benefits for participating in this study.

However, results from this study can help patients and clinicians to better understand the association between major life events and psychiatric conditions.

This will help in improving the management of patients with psychiatric illnesses and also in implementation of strategies for relapse prevention of psychiatric conditions.

Risks:

It is possible that you might feel embarrassed or uncomfortable as you give information about psychiatric condition and major life events, which are potentially sensitive topics.

In case there is psychological disturbance, it will be explained to you and you will be offered psychological support.

Voluntary Participation:

Your participation in this research is entirely voluntary and if you decide to participate, you are free to withdraw at any time. You may also choose not to answer specific questions. Your choice not to participate or choice to withdraw will not affect any treatment needs that you may have at Mathari Hospital now and in the future.

Confidentiality:

Your identity will be kept confidential. In addition, your name or any other personal identifier will not be used in any reports or publications arising from this study. Instead, you will be assigned a number to protect your identity.

The questionnaires that you will complete will be stored safely, with nobody having access to them apart from the investigator and the supervisors. The data collected from this study will be entered in computers and kept away from public access.

Compensation:

You will not be paid to participate in this study.

Additional Information:

If you have questions about the study that are not answered in the consent information, please ask them. In addition, if you have questions in the future you may contact the following:

1. Investigator:

    a. Selfine Otieno
     P.O Box 34575 – 00100,
     Nairobi
   Email:oselfine@gmail.com
     Tel: (254) 712110867

2. Supervisor:

    b. Dr Ann Mbwayo
     P.O. Box  – 00100, Nairobi
     Email: annembwayo@gmail.com
   Tel (254)733823896

3. Kenyatta National Hospital/U.O.N/ Ethics & Research committee

    a. Kenyatta National Hospital
     P.O Box 20723-00202 Nairobi
     Tel: (254) 020 726300, Ext 44102, 44355
     Fax: 725272 Telegrams: medsup, Nairobi
     Emai: uonknh_erc@uonbi.ac.ke

    b. University of Nairobi, College of Health Sciences

     P.O. Box 19676 – 00202 Nairobi

     Tel: (254) 020 2726300 Ext: 44355, Telegrams: varsity.

## Appendix III: Informed Consent Form (English Version)

I ..........................................................................................(name of participant) have read/heard
and understood the explanations given to me about this study entitled " Association between major life
events  and psychiatric morbidity in adulthood among Patients  admitted at Mathari Hospital".

I have agreed that my mental stability be assessed before onset of the study by the researcher to ensure
no active psychopathology present?
I have had the opportunity to ask questions that have been clarified to my satisfaction by
consent/researcher in the language that I understand by………………………………(researchers
name)

I understand that my participation in this study is entirely voluntary and I can withdraw my

participation at any time I want to without giving an explanation for doing so. I understand that if

I withdraw my participation, it will not affect my livelihood or management in any way.

I understand that all the information I give, including private information will be kept

confidential. I accept to give information that will help in this study and also that whatever

information is received will be reported and published confidentially.

I agree to participate in this study.

Name of participant:................................................................................

Signature of participant:............................................... Date:..................

Signature of witness:...................................................... Date:..................

Name of person taking consent:...............................................................
Signature:.................................................... Date:................................

You will receive a copy of the signed consent form to take away with you.

If you have questions or would like to seek further clarification about this study, please contact:

    1. Investigator:

        a. Selfine Otieno
          P.O Box 34575 – 00100,
          Nairobi
          Tel: (254) 712110867

2. Supervisor:

    a. Dr Anne Mbwayo
      P.O. Box– 00100, Nairobi
      Email: annembwayo@gmail.com
    Tel:(254)733823896

3. Kenyatta National Hospital/U.O.N/ Ethics & Research committee
   a. Kenyatta National Hospital

      P.O Box 20723-00202 Nairobi

      Tel: (254) 020 726300, Ext 44102, 44355

      Fax: 725272 , Nairobi

      Email: uonknh_erc@uonbi.ac.ke

   b. University of Nairobi, College of Health Sciences

     P.O. Box 19676 – 00202 Nairobi

     Tel: (254) 020 2726300 Ext: 44355,
     Telegrams: varsity.

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<div align="center">FOMU YA RIDHAA</div>

Mimi,...................................................................... (jina la mshiriki) nimesoma/nimeskiza na kuelewa yaliyotolewa kuhusu utafiti huu " Uwiano kati ya Matukio Mabaya

na kuwepo na ugonjwa wa kiakili kwa ukubwa katika hospitali ya Mathari."

Nimekubali kuwa imara ya akili yangu itachunguzwa ilkuhakikisha kwamba niko razini wakati wa hoji…….

Nimekuwa na nafasi ya kuuliza .............................................................(jina la anyechukua ridhaa); maswali katika lugha ninayoelewa na sasa ni wazi na nimeridhika.

Naelewa kwamba kushiriki kwangu katika utafiti huu ni kwa hiari yangu kabisa na naweza

kujiondoa wakati wowote natakapo bila ya kutoa maelezo kwa kufanya hivyo. Mimi naelewa

kwamba kuondoa ushiriki wangu, hukutaadhiri huduma yangu kwa njia yoyote.

Naelewa kwamba taarifa zote nitakazotoa, pamoja na taarifa binafsi itakuwa siri.

Mimi ninakubali kushiriki katika utafiti huu.

Jina la mshiriki: ...............................................................................

Sahihi ya mshiriki:...................................................Tarehe:..................................

Sahihi ya shahidi:....................................................Tarehe:..................................


Jina la anayechukua ridhaa:...........................................................................

Sahihi :................................................................. Tarehe: .................................

<div align="center">Utapokea nakala ya fomu hii.</div>

Iwapo unahitaji ufafanuzi zaidi au una maswali yoyote kuhusu utafiti huu unaweza kuwasiliana na;

   1. Mpelelezi kupitia anwani ifuatayo:

      a. Selfine Otieno

         P.O Box 34575– 00100,

         Nairobi

         Tel: (254) 712110867

2. Msimamazi wa upelelezi kupitia anwani ifuatayo:

    a. Dr Anne Mbwayo

       P.O8. Box  – 00100,

       Nairobi

       Email: annembwayo@gmail.com
       Tel:(254)733823896

3. Kamati ya maadili ya utafiti ya pamoja ya chuo kikuu cha Nairobi na Hospitali kuu ya Kenyatta

    a. Kenyatta National Hospital

       P.O Box 20723-00202 Nairobi

       Tel: (254) 020 726300, Ext 44102, 44355

       Fax: 725272 Telegrams: medsup, Nairobi

       Emai: uonknh_erc@uonbi.ac.ke

    b. University of Nairobi, College of Health Sciences

       P.O. Box 19676 – 00202 Nairobi

       Tel: (254) 020 2726300 Ext: 44355,

       Telegrams: varsity.

**Appendix V : Socio-demographic Questionnaire**

**Circle the option that best applies to you. For example:**

**Gender:  A) Male**

**B) Female**

**You may ask for clarification**

**1. Age in years :**

……………………………

**2**. **Marital status:**

a) Single

b) Married

c) Cohabiting

d) Separated

e) Divorced

f) Widowed

**3. Highest level of education**

a) No formal education

b) Primary school

c) Secondary/High school

d) Tertiary (university/college):

**4. Current Occupation:**

a) Student

 b) Formal employment

c) Informal (casual)

d) Self-employed

**5. Religion**

a) Catholic ☐

b) Protestant ☐

c) Muslim ☐

d) Hindu ☐

e) Other ☐

**6.** Monthly family income:

a)<4,999/= ☐

b) 5000-9999/= ☐

c) 10,000-34,999/= ☐

d) 35,000-99,000/= ☐

e) >100,000/= ☐

**7.** Whom do you currently live with ?

a) Parents ☐

b) Spouse ☐

c) Friends ☐

d) Alone ☐

e)Other  : ☐

**8.** History of chronic illness

(Hypertension; asthma; cardiac dx; diabetes )

a) Yes. ☐

 Specify:..............................

b) No. ☐

**9**. Are you currently on any medication:-

a) Yes ☐

Specify:.....................

b) No. ☐

**10.** How do you feel about your recent diagnosis

a)Positive ☐

  b)Negative ☐

c)Yet to come to terms with it ☐

**11.** Presence of social support

(Partner; mother; friend; church etc.)

a) Yes ☐

b) No ☐

**12.** Do you have children:

a) none ☐

b) YES ☐

Specify number………

**13.** Ever used any Substance?

a) None ☐

b) Yes ☐

Specify:................................

**14.** Use of substance by partner

(Smoking tobacco, Bhang, Heroine or other inhaled)

a) Yes ☐

b) No ☐

**15.** History of Mental illness:

a) No ☐

b) Yes. ☐

 Specify:.......................................

**16**. Family history of mental illness or suicide:

a) Yes ☐

b) No ☐

**17.** Exposure to any form of a Major Life Event

a) Yes ☐

b)No ☐

**Appendix VI: Social Readjustment Rating Scale (SSRI)**
**INSTRUCTIONS: Mark down the point value of each of these life events that has happened to you  at <u>any point in your entire life</u>, including early childhood.**
**PART 1**

**Life Event**

| | |
|---|---|
| 1. Death of spouse | 100 |
| 2. Divorce | 73 |
| 3. Marital Separation from mate | 65 |
| 4. Detention in jail or other institution | 63 |
| 5. Death of a close family member | 63 |
| 6. Major personal injury or illness | 53 |
| 7. Marriage | 50 |
| 8. Being fired at work | 47 |
| 9. Marital reconciliation with mate | 45 |
| 10  Retirement from work | 45 |
| 11  Major change in the health or behavior of a family member | 44 |
| 12  Pregnancy | 40 |
| 13  Sexual Difficulties | 39 |
| 14  Gaining a new family member (i.e. birth, adoption, older adult moving in, .   etc.) | 39 |
| 15  Major business adjustment | 39 |
| 16  Major change in financial state (i.e. a lot worse or better than usual) | 38 |
| 17  Death of a close friend | 37 |
| 18  Changing to a different line of work | 36 |
| 19  Major change in number of arguments with spouse (i.e. a lot more or less) | 35 |
| 20  Taking on a mortgage (for home, business, etc.) | 31 |
| 21  Foreclosure on a mortgage or loan | 30 |
| 22  Major change in responsibilities at work (i.e. promotion, demotion, etc.) | 29 |
| 23  Son or daughter leaving home (marriage, college, military, etc.) | 29 |
| 24  In-law troubles | 29 |
| 25  Outstanding personal achievement | 28 |
| 26  Spouse beginning or ceasing work outside the home | 26 |
| 27  Beginning or ceasing formal schooling | 26 |
| 28  Major change in living condition (i.e. new home, remodeling, .   deterioration, etc.) | 25 |
| 29  Revision of personal habits (i.e. dress, associations, quit smoking, etc.) | 24 |
| 30  Troubles with the boss | 23 |
| 31  Major changes in working hours or conditions | 20 |
| 32  Changes in residence | 20 |
| 33 Changing to a new school | 20 |
| 34  Major change in usual type and/or amount of recreation | 19 |
| 35  Major change in church activity (i.e. a lot more or less) | 19 |
| 36  Major change in social activities (i.e. clubs, movies, visiting, etc.) | 18 |
| 37  Taking on a loan (i.e. car, tv, freezer, etc.) | 17 |
| 38  Major change in sleeping habits (i.e. a lot more or less) | 16 |
| 39  Major change in number of family get-togethers (i.e. a lot more or less) | 15 |
| 40  Major change in eating habits (i.e. a lot more or less, eating hours, .   surroundings, etc) | 15 |
| 41  Vacation | 13 |
| 42  Major holidays | 12 |
| 43  Minor violations of the law (i.e. traffic tickets, jaywalking, etc.) | 11 |

**Now, add up all the points you have to find your score.**
**150pts or less** means a relatively low amount of life change and a low susceptibility to stress-induce health problems.
**150 to 300pts** implies about a 50% chance of a major stress-induced health problem in the next 2 years.
**300pts or more** raises the odds to about 80%, according to the Holmes-Rahe prediction model.


**Part 2:**

A. If you have experienced more than one of the events in PART 1, think about the event you consider the worst event, which for this questionnaire means the event that currently bothers you the most. If you have experienced only one of the events in PART 1, use that one as the worst event. Please answer the following questions about the worst event (check all options that apply):

1.   Briefly describe the worst event (for example, what happened, who was involved, etc.).

_____

_____

2.   How long ago did it happen? _____ (please estimate if you are not sure)

3.   How did you experience it?
_____ It happened to me directly
_____ I witnessed it
_____ I learned about it happening to a close family member or close friend
_____ I was repeatedly exposed to details about it as part of my job (for example, paramedic, police, military, or other irst responder)
_____ Other, please describe: _____

4.   Was someone's life in danger?
_____ Yes, my life
_____ Yes, someone else's life
_____ No

5.   Was someone seriously injured or killed?
_____ Yes, I was seriously injured
_____ Yes, someone else was seriously injured or killed
_____ No

6.   Did it involve sexual violence? _____Yes _____No

7.   If the event involved the death of a close family member or close friend, was it due to some kind of accident or violence, or was it due to natural causes?
_____ Accident or violence
_____ Natural causes
_____ Not applicable (The event did not involve the death of a close family member or close friend)

8.   How many times altogether have you experienced a similar event as stressful or nearly as stressful as the worst event?
_____ Just once
_____ More than once (please specify or estimate the total # of times you have had this experience _____)

# M.I.N.I.

## MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW

**English Version 7.0.0**
**FOR**

**DSM-5**

### DISCLAIMER

Our aim is to assist in the assessment and tracking of patients with greater efficiency and accuracy. Before action is taken on any data collected and processed by this program, it should be reviewed and interpreted by a licensed clinician.

This program is not designed or intended to be used in the place of a full medical and psychiatric evaluation by a qualified licensed physician – psychiatrist. It is intended only as a tool to facilitate accurate data collection and processing of symptoms elicited by trained personnel. It is not a diagnostic test.

| Patient Name: | Patient Number: |
| Date of Birth: | Time Interview Began: |
| Interviewer's Name: | Time Interview Ended: |
| Date of Interview: | Total Time: |

| MODULES | TIME FRAME | MEETS CRITERIA | DSM-5 | ICD-10 | PRIMARY DIAGNOSIS |
|---|---|---|---|---|---|
| A MAJOR DEPRESSIVE EPISODE | Current (2 weeks) | ❐ | | | |
| | Past | ❐ | | | |
| | Recurrent | ❐ | | | |
| MAJOR DEPRESSIVE DISORDER | Current (2 weeks) | ❐ | 296.20-296.26 Single | F32.x | ❐ |
| | Past | ❐ | 296.20-296.26 Single | F32.x | ❐ |
| | Recurrent | ❐ | 296.30-296.36 Recurrent | F33.x | ❐ |
| B SUICIDALITY | Current (Past Month) | ❐ | | | ❐ |
| | Lifetime attempt | ❐ | ❐ Low ❐ Moderate ❐ High | | ❐ |
| SUICIDE BEHAVIOR DISORDER | Current | ❐ | (In Past Year) | | ❐ |
| | In early remission | ❐ | (1 – 2 Years Ago) | | ❐ |
| C MANIC EPISODE | Current | ❐ | | | |
| | Past | ❐ | | | |
| HYPOMANIC EPISODE | Current | ❐ | | | |
| | Past | ❐ | ❐ Not Explored | | |
| BIPOLAR I DISORDER | Current | ❐ | 296.41-296.56 | F31.0–F31.76 | ❐ |
| | Past | ❐ | 296.41-296.56 | F31.0– F31.76 | ❐ |
| BIPOLAR II DISORDER | Current | ❐ | 296.89 | F31.81 | ❐ |
| | Past | ❐ | 296.89 | F31.81 | ❐ |
| BIPOLAR DISORDER UNSPECIFIED | Current | ❐ | 296.40/296.50 | F31.9 | ❐ |
| | Past | ❐ | 296.40/296.50 | F31.9 | ❐ |
| BIPOLAR I DISORDER WITH PSYCHOTIC FEATURES | Current | ❐ | 296.44/296.54 | F31.2/31.5 | ❐ |
| | Past | ❐ | 296.44/296.54 | F31.2/31.5 | ❐ |
| D PANIC DISORDER | Current (Past Month) | ❐ | 300.01 | F41.0 | ❐ |
| | Lifetime | ❐ | 300.01 | F40.0 | ❐ |
| E AGORAPHOBIA | Current | ❐ | 300.22 | F40.00 | ❐ |
| F SOCIAL ANXIETY DISORDER (Social Phobia) | Current (Past Month) | ❐ | 300.23 | F40.10 | ❐ |
| G OBSESSIVE-COMPULSIVE DISORDER | Current (Past Month) | ❐ | 300.3 | F42 | ❐ |
| H POSTTRAUMATIC STRESS DISORDER | Current (Past Month) | ❐ | 309.81 | F43.10 | ❐ |
| I ALCOHOL USE DISORDER | Past 12 Months | ❐ | 303.9 | F10.10-20 | ❐ |
| J SUBSTANCE USE DISORDER (Non-alcohol) | Past 12 Months | ❐ | 304.00-.90/305.20-.90 | F11.1x-F19.288 | ❐ |
| K PSYCHOTIC DISORDERS | Lifetime | ❐ | 297.3/297.9/ 293.81/298.83/298.89 | F20.81-F29 | ❐ |
| | Current | ❐ | 297.3/297.9/ 293.81/298.83/298.89 | I20.81-F29 | ❐ |
| MOOD DISORDER WITH PSYCHOTIC FEATURES | Lifetime | ❐ | 296.24/296.34-296.44 296.54 | F31.2/F32.2/F33.3 | ❐ |
| | Current | ❐ | 296.24/296.34/296.44/296.54 | F31.2/F32.2/F33. 3 | ❐ |
| L ANOREXIA NERVOSA | Current (Past 3 Months) | ❐ | 307.1 | F50.01-02 | ❐ |
| M BULIMIA NERVOSA | Current (Past 3 Months) | ❐ | 307.51 | F50.2 | ❐ |
| MB BINGE-EATING DISORDER | Current (Past 3 Months) | ❐ | 307.51 | F50.8 | ❐ |
| N GENERALIZED ANXIETY DISORDER | Current (Past 6 Months) | ❐ | 300.02 | F41.1 | ❐ |
| O MEDICAL, ORGANIC, DRUG CAUSE RULED OUT | | ❐ No ❐ Yes ❐ Uncertain | | | |
| P ANTISOCIAL PERSONALITY DISORDER | Lifetime | ❐ | 301.7 | F60.2 | ❐ |

IDENTIFY THE PRIMARY DIAGNOSIS BY CHECKING THE APPROPRIATE CHECK BOX.
(Which problem troubles you the most or dominates the others or came first in the natural history?)
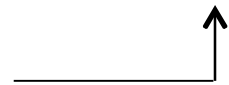
# GENERAL INSTRUCTIONS

The M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-5 and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization). The results of these studies show that the M.I.N.I. has similar reliability and validity properties, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 minutes, median 15 minutes) than the above referenced instruments. Clinicians can use it, after a brief training session. Lay interviewers require more extensive training.

**INTERVIEW:**

In order to keep the interview as brief as possible, inform the patient that you will conduct a clinical interview that is more structured than usual, with very precise questions about psychological problems which require a yes or no answer.

**GENERAL FORMAT:**

The M.I.N.I. is divided into **modules** identified by letters, each corresponding to a diagnostic category.

•At the beginning of each diagnostic module (except for psychotic disorders module), screening question(s) corresponding to the main criteria of the disorder are presented in a **gray box**.

•At the end of each module, diagnostic box(es) permit the clinician to indicate whether diagnostic criteria are met.

**CONVENTIONS:**

*Sentences written in* « normal font » should be read exactly as written to the patient in order to standardize the assessment of diagnostic criteria.

*Sentences written in* « CAPITALS » should not be read to the patient. They are instructions for the interviewer to assist in the scoring of the diagnostic algorithms.

*Sentences written in* « **bold** » indicate the time frame being investigated. The interviewer should read them as often as necessary. Only symptoms occurring during the time frame indicated should be considered in scoring the responses.

*Answers with an arrow above them* ( ➡ ) indicate that one of the criteria necessary for the diagnosis or diagnoses is not met. In this case, the interviewer should go to the end of the module, circle « **NO** » in all the diagnostic boxes and move to the next module.

When terms are separated by a *slash (/)* the interviewer should read only those symptoms known to be present in the patient (for example, questions J2b or K6b).

*Phrases in (parentheses)* are clinical examples of the symptom. These may be read to the patient to clarify the question.

**RATING INSTRUCTIONS:**

All questions must be rated. The rating is done at the right of each question by circling either Yes or No. Clinical judgment by the rater should be used in coding the responses. Interviewers need to be sensitive to the diversity of cultural beliefs in their administration of questions and rating of responses. The rater should ask for examples when necessary, to ensure accurate coding. The patient should be encouraged to ask for clarification on any question that is not absolutely clear. The clinician should be sure that each dimension of the question is taken into account by the patient (for example, time frame, frequency, severity, and/or alternatives).

Symptoms better accounted for by an organic cause or by the use of alcohol or drugs should not be coded positive in the M.I.N.I. The M.I.N.I. has questions that investigate these issues.

r  any questions, suggestions, need for a  training session or information about updates of the  M.I.N.I.,
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# A. MAJOR DEPRESSIVE EPISODE

(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE **NO** IN THE DIAGNOSTIC BOX, AND MOVE TO THE NEXT MODULE)

| | | | | |
|---|---|---|---|---|
| A1 | a | Were you <u>ever</u> depressed or down, or felt sad, empty or hopeless most of the day, nearly every day, for two weeks?<br>IF NO, CODE NO TO **A1b**; IF YES ASK: | NO | YES |
| | b | <u>For the past two weeks,</u> were you depressed or down, or felt sad, empty or hopeless most of the day, nearly every day? | NO | YES |
| A2 | a | Were you <u>ever</u> much less interested in most things or much less able to enjoy the things you used to enjoy most of the time, for two weeks?<br><br>IF NO, CODE NO TO **A2b**; IF YES ASK: | NO | YES |
| | b | In the <u>past two weeks</u>, were you much less interested in most things or much less able to enjoy the things you used to enjoy, most of the time? | NO | YES |
| | | | ➡ | |
| | | IS **A1a** OR **A2a** CODED **YES**? | NO | YES |

A3    IF **A1b** OR **A2b** = **YES**: EXPLORE THE **CURRENT** AND THE MOST SYMPTOMATIC **PAST** EPISODE, OTHERWISE
       IF **A1b** AND **A2b** = **NO**: EXPLORE ONLY THE MOST SYMPTOMATIC **PAST** EPISODE

**Over that two week period, when you felt depressed or uninterested:**

| | | Past 2 Weeks | | Past Episode | |
|---|---|---|---|---|---|
| a | Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ±5% of body weight or ±8 lb or ± 3.5 kg, for a 160 lb/70 kg person in a month)?<br>IF **YES** TO EITHER, CODE **YES**. | NO | YES | NO | YES |
| b | Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)? | NO | YES | NO | YES |
| c | Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day? Did anyone notice this? | NO | YES | NO | YES |
| d | Did you feel tired or without energy almost every day? | NO | YES | NO | YES |
| e | Did you feel worthless or guilty almost every day?<br><br>IF **YES**, ASK FOR EXAMPLES. LOOK FOR DELUSIONS OF FAILURE, OF INADEQUACY, OF RUIN OR OF GUILT, OR OF NEEDING PUNISHMENT OR DELUSIONS OF DISEASE OR DEATH OR NIHILISTIC OR SOMATIC DELUSIONS. THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. Current Episode ☐ No ☐ Yes<br>Past Episode ☐ No ☐ Yes | NO | YES | NO | YES |
| f | Did you have difficulty concentrating, thinking or making decisions almost every day? | NO | YES | NO | YES |
| g | Did you repeatedly think about death (**FEAR OF DYING DOES NOT COUNT HERE**), or have any thoughts of killing yourself, or have any intent or plan to kill yourself? Did you attempt suicide? IF YES TO EITHER, CODE YES. | NO | YES | NO | YES |
| A4 | Did these symptoms cause significant distress or problems at home, at work, at school, socially, in your relationships, or in some other important way, and are they a change from your previous functioning? | NO | YES | NO | YES |

A5    In between 2 episodes of depression, did you ever have an interval of at least 2
      months, without any significant depression or any significant loss of interest?          N/A    NO    YES


           ARE 5 OR MORE ANSWERS (**A1–A3**) CODED **YES** AND IS **A4** CODED YES
           FOR THAT TIME FRAME?

                AND

           IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?

           SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

           IF **A5** IS CODED **YES,** CODE YES FOR RECURRENT.

| NO | YES |
|----|-----|
| *MAJOR DEPRESSIVE EPISODE* | |
| CURRENT | ☐ |
| PAST | ☐ |
| RECURRENT | ☐ |


A6    a   How many episodes of depression did you have in your lifetime?        _____

          Between each episode there must be at least 2 months without any significant depression.

# B.  SUICIDALITY

**In the past month did you:**

| | | | | |
|---|---|---|---|---|
| B1 | Have any accident? This includes taking too much of your medication accidentally.<br>IF NO TO B1, SKIP TO B2; IF YES, ASK B1a: | NO | YES | 0 |
| B1a | Plan or intend to hurt yourself in any accident, either by not avoiding a risk or<br>by causing the accident on purpose?<br><br>IF NO TO B1a, SKIP TO B2: IF YES, ASK B1b: | NO | YES | 0 |
| B1b | Intend to die as a result of any accident? | NO | YES | 0 |
| B2 | Think (even momentarily) that you would be better off dead or wish you were dead or<br>needed to be dead? | NO | YES | 1 |
| B3 | Think (even momentarily) about harming or of hurting or of injuring yourself<br>-- with at least some intent or awareness that you might die as a result<br>-- or think about suicide (i.e. about killing yourself)? | NO | YES | 6 |

IF NO TO B2 + B3, SKIP TO B4.  OTHERWISE ASK:

Frequency                              Intensity

| Occasionally ☐ | Mild ☐ |
|---|---|
| Often ☐ | Moderate ☐ |
| Very often ☐ | Severe ☐ |

| | | | | |
|---|---|---|---|---|
| B4 | Hear a voice or voices telling you to kill yourself or have dreams with any suicidal content?<br>f YES, was it either or both: ☐ was it a voice or voices?      ☐ was it a dream? | NO | YES | 4 I |
| B5 | Have a suicide method in mind (i.e. how)? | NO | YES | 8 |
| B6 | Have a suicide means in mind (i.e. with what)? | NO | YES | 8 |
| B7 | Have any place in mind to attempt suicide (i.e. where)? | NO | YES | 8 |
| B8 | Have any date/timeframe in mind to attempt suicide (i.e. when)? | NO | YES | 8 |
| B9 | Think about any task you would like to complete before trying to kill yourself?<br>(e.g. writing a suicide note) | NO | YES | 8 |
| B10 | Intend to act on thoughts of killing yourself?<br>If YES, mark either or both: ☐ did you intend to act at the time?<br>                                                       ☐ did you intend to act at some time in the future? | NO | YES | 8 |
| B11 | Intend to die as a result of a suicidal act?<br>If YES, mark either or both: ☐ did you intend to die by suicide at the time?<br>                                                       ☐ did you intend to die by suicide at some time in the future? | NO | YES | 8 |
| B12 | Feel the need or impulse to kill yourself or to plan to kill yourself sooner rather than later?<br>If YES, mark either or both: ☐ was this to kill yourself?        ☐ was this to plan to kill yourself?<br>If YES, mark either or both: ☐ was this largely unprovoked? ☐ was this provoked? | NO | YES | 8 |

IN ASSESSING WHETHER THIS WAS LARGELY UNPROVOKED ASK: "5 minutes before
this Impulse, could you have predicted it would occur at that time?"

| | | | | | |
|---|---|---|---|---|---|
| B13 | Have difficulty resisting these impulses? | | NO | YES | 8 |

B14 Take any active steps to prepare for a suicide attempt in which you expected
or intended to die (include anything done or purposely not done that put you closer
to making a suicide attempt)? This includes times when you were going to kill yourself,
but were interrupted or stopped yourself, before harming yourself.        NO    YES
IF NO TO B14, SKIP TO B15.

| | | | | |
|---|---|---|---|---|
| B14a | Take active steps to prepare to kill yourself, but you **did not start** the suicide attempt? | NO | YES | 9 |
| B14b | Take active steps to prepare to kill yourself, but then **you stopped yourself just before** harming yourself ("aborted"). | NO | YES | 10 |
| B14c | Take active steps to prepare to kill yourself, but then **someone or something stopped you just before** harming yourself ("interrupted")? | NO | YES | 11 |
| B15 | Injure yourself on purpose without intending to kill yourself? | NO | YES | 0 |

B16     Attempt suicide (to kill yourself)?            NO     YES
IF NO TO B16, SKIP TO B17.

| | | | | |
|---|---|---|---|---|
| B16a | Start a suicide attempt (to kill yourself), but then **you decided to stop** and did not finish the attempt? | NO | YES | 12 |
| B16b | Start a suicide attempt (to kill yourself), but then **you were interrupted** and did not finish the attempt? | NO | YES | 13 |
| B16c | Went through with a suicide attempt (to kill yourself), **completely** as you meant to? A suicide attempt means you did something where you could possibly be injured, with at least a slight intent to die. IF NO, SKIP TO B17: | NO | YES | 14 |

Hope to be rescued / survive     ☐
Expected / intended to die     ☐

B17    **TIME SPENT PER DAY WITH ANY SUICIDAL IMPULSES, THOUGHTS OR ACTIONS:**
Usual time spent per day:       ____ hours ____ minutes. Le
ast amount of time spent per day: ____ hours ____ minutes.    M
ost amount of time spent per day: ____ hours ____ minutes.

**In your lifetime:**

B18    Did you ever make a suicide attempt (try to kill yourself)?        NO    YES    4
If YES, how many times? _____
If YES, when was the last suicide attempt?
Current: within the past 12 months            ☐
In early remission: between 12 and 24 months ago     ☐
In remission: more than 24 months ago          ☐

"A suicide attempt is any self injurious behavior, with at least some intent (> 0) to die as a result of the act. Evidence that the individual intended to kill him-
or herself, at least to some degree, can be explicit or inferred from the behavior or circumstance. For example, it is defined as a suicide attempt if it is clearly not an accident or if the individual thinks      the act could be lethal, even though denying intent." (FDA Guidance for Industry Suicidal Ideation and Behavior
Document 2012 and C-CASA definition). Posner K et al. Am J Psychiatry 2007; 164 (7): 1035-1043 &
http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/default.htm/

B19    How likely are you to try to kill yourself within the next 3 months on a scale of 0-100% _____%
ANY LIKELIHOOD > 0% ON B19 SHOULD BE CODED YES          NO    YES    13

9

IS AT LEAST **1** OF THE ABOVE (EXCEPT B1) CODED **YES**?

IF YES, ADD THE TOTAL POINTS FOR THE ANSWERS (B1–B19) CHECKED 'YES' AND
SPECIFY THE SUICIDALITY SCORE CATEGORY AS INDICATED IN THE DIAGNOSTIC BOX:

INDICATE WHETHER THE SUICIDALITY IS CURRENT (PAST MONTH) OR A LIFETIME SUICIDE ATTEMPT OR BO
TH BY MARKING THE APPROPRIATE BOXES OR BY LEAVING EITHER OR BOTH OF THEM UNMARKED.     CU
RRENT = ANY POSITIVE RESPONSE IN B1a THROUGH B16c OR ANY TIME SPENT IN B17. LIFETIME ATTEM
PT = B18 CODED YES.
LIKELY IN THE NEAR FUTURE = B19 CODED YES.

MAKE ANY ADDITIONAL COMMENTS ABOUT YOUR ASSESSMENT OF THIS PATIENT'S CURRENT
AND NEAR FUTURE SUICIDALITY IN THE SPACE BELOW:

| NO | YES |
|---|---|
| *SUICIDALITY* | |
| 1–8 points   Low | ☐ |
| 9–16 points  Moderate | ☐ |
| ≥ 17 points  High | ☐ |
| CURRENT | ☐ |
| LIFETIME ATTEMPT | ☐ |
| LIKELY IN NEAR FUTURE | ☐ |

IS **B18** CODED YES?

**AND A YES RESPONSE TO**

Was the suicidal act started when the subject not in a state of confusion or
delirium?

**AND A YES RESPONSE TO**

Was the suicidal act done without a political or religious purpose?
IF YES, SPECIFY WHETHER THE DISORDER IS CURRENT, IN EARLY REMISSION OR IN REMISSION
.

| NO | YES |
|---|---|
| *SUICIDAL BEHAVIOR DISORDER* | |
| *CURRENT* Current | ☐ |
| In early remission | ☐ |
| In remission | ☐ |

# C. MANIC AND HYPOMANIC EPISODES

(➡ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE **NO** IN MANIC AND HYPOMANIC DIAGNOSTIC BOXES, AND MOVE TO NEXT MODULE)

Do you have any family history of manic-depressive illness or bipolar disorder, or any family member who had mood swings treated with a medication like lithium, sodium valproate (Depakote) or lamotrigine (Lamictal)?           NO       YES
THIS QUESTION IS NOT A CRITERION FOR BIPOLAR DISORDER, BUT IS ASKED TO INCREASE
THE CLINICIAN'S VIGILANCE ABOUT THE RISK FOR BIPOLAR DISORDER.
IF YES, PLEASE SPECIFY WHO:_____

---

| | | | |
|---|---|---|---|
| C1 | a | Have you **ever** had a period of time when you were feeling 'up' or 'high' or 'hyper' and so active or 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.) | NO    YES |

IF PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN
BY 'UP' OR 'HIGH' OR 'HYPER', CLARIFY AS FOLLOWS: By 'up' or 'high' or 'hyper'
I mean: having elated mood; increased energy or increased activity; needing less sleep;
having rapid thoughts; being full of ideas; having an increase in productivity, motivation,
creativity, or impulsive behavior; phoning or working excessively or spending more money.

IF NO, CODE NO TO **C1b**: IF YES ASK:

    b   Are you currently feeling 'up' or 'high' or 'hyper' or full of energy?      NO    YES

C2   a   Have you **ever** been persistently irritable, for several days, so that you      NO    YES
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 people, even in situations that you felt
were justified?

IF NO, CODE NO TO **C2b**: IF YES ASK:

    b   Are you currently feeling persistently irritable?      NO    YES
                                             ➡

       IS **C1a** OR **C2a** CODED **YES**?      NO    YES

---

C3       IF **C1b** OR **C2b** = **YES**: EXPLORE THE **CURRENT** EPISODE FIRST AND THEN THE MOST SYMPTOMATIC **PAST** EPISODE, OTHERWISE
            IF **C1b** AND **C2b** = **NO**: EXPLORE ONLY THE MOST SYMPTOMATIC **PAST** EPISODE

WHEN EXPLORING THE CURRENT EPISODE, PREFACE EACH QUESTION AS FOLLOWS:
**Over the past few days including today, w**hen you felt high and full of energy or irritable, did you:

WHEN EXPLORING THE PAST EPISODE, PREFACE EACH QUESTION AS FOLLOWS:
**Over a period of a few days in the past, when you felt most high and most full of energy or most 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**.** | NO | YES | NO | YES |
| | THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA.    Current Episode ☐ No ☐ Yes    Past Episode ☐ No ☐ Yes | | | | |
| b | Need less sleep (for example, feel rested after only a few hours sleep)? | NO | YES | NO | YES |

| | | Current Episode | | Past Episode | |
|---|---|---|---|---|---|
| c | Talk too much without stopping, or felt a pressure to keep talking? | NO | YES | NO | YES |
| d | Notice your thoughts going very fast or running together or racing or moving very quickly from one subject to another? | NO | YES | NO | YES |
| e | Become easily distracted so that any little interruption could distract you? | NO | YES | NO | YES |
| f | Have a significant increase in your activity or drive, at work, at school, socially or sexually or did you become physically or mentally restless? This increase in activity may be with or without a purpose. | NO | YES | NO | 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 indiscretions)? | NO | YES | NO | YES |

C3 SUMMARY: WHEN RATING CURRENT EPISODE:      NO   YES   NO   YES

IF C1b IS NO, ARE 4 OR MORE C3 ANSWERS INCLUDING C3f CODED YES?

IF C1b IS YES, ARE 3 OR MORE C3 ANSWERS INCLUDING C3f CODED YES?

WHEN RATING PAST EPISODE:

IF C1a IS NO, ARE 4 OR MORE C3 ANSWERS INCLUDING C3f CODED YES?

IF C1a IS YES, ARE 3 OR MORE C3 ANSWERS INCLUDING C3f CODED YES?

CODE YES ONLY IF THE ABOVE 3 OR 4 SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD.

RULE: ELATION/EXPANSIVENESS REQUIRES ONLY THREE C3 SYMPTOMS, WHILE IRRITABLE MOOD ALONE REQUIRES 4 OF THE C3 SYMPTOMS.

C4    What is the longest time these symptoms lasted (most of the day nearly every day)?

ASSESS THIS DURATION FROM THE VERY START TO THE VERY END OF SYMPTOMS, NOT JUST THE PEAK.

| | | Current | Past |
|---|---|---|---|
| a) | 3 days or less | ☐ | ☐ |
| b) | 4 days or more | ☐ | ☐ |
| c) | 7 days or more | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| C5 | Were you hospitalized for these problems? | NO | YES | NO | YES |

IF YES, CIRCLE YES IN MANIC EPISODE FOR THAT TIME FRAME AND GO TO C7.

| | | | | | |
|---|---|---|---|---|---|
| C6 | Did these symptoms cause significant problems at home, at work, socially, in your relationships, at school or in some other important way? | NO | YES | NO | YES |
| C7 | Were these symptoms associated with a clear change in the way that you previously functioned and that was different from the way that you usually are? | NO | YES | NO | YES |

ARE C3 SUMMARY AND C7 AND (C4c OR C5 OR C6 OR ANY PSYCHOTIC FEATURE IN K1 THROUGH K8) CODED YES

AND

IS "RULE OUT ORGANIC CAUSE (O2 SUMMARY)" CODED YES?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

| NO | YES |
|---|---|
| **MANIC EPISODE** | |
| CURRENT | ☐ |
| PAST | ☐ |

IS **C3** SUMMARY CODED **YES** AND ARE **C5** AND **C6** CODED **NO** AND **C7** CODED **YES**, AND IS EITHER **C4b** OR **C4c** CODED **YES?**
AND
IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?
AND
ARE ALL PSYCHOTIC FEATURES IN K1 THROUGH K8 CODED **NO**?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

IF **YES** TO CURRENT MANIC EPISODE, THEN CODE CURRENT HYPOMANIC EPISODE AS **NO.**

IF **YES** TO PAST MANIC EPISODE, THEN CODE PAST HYPOMANIC EPISODE AS **NOT EXPLORED.**

---

### *HYPOMANIC EPISODE*

CURRENT   ☐ **NO**
          ☐ **YES**

PAST      ☐ **NO**
          ☐ **YE**
             **S**
          ☐ **NOT EXPLORED**

---

ARE **C3** SUMMARY AND **C4a** CODED YES AND IS **C5** CODED **NO**?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

IF **YES** TO CURRENT MANIC EPISODE OR HYPOMANIC EPISODE, THEN CODE CURRENT HYPOMANIC SYMPTOMS AS **NO.**

IF **YES** TO PAST MANIC EPISODE OR YES TO PAST HYPOMANIC EPISODE, THEN CODE PAST HYPOMANIC SYMPTOMS AS **NOT EXPLORED.**

---

### *HYPOMANIC SYMPTOMS*

CURRENT   ☐ **NO**
          ☐ **YES**

PAST      ☐ **NO**
          ☐ **YES**
          ☐ **NOT EXPLORED**

---

C8    a) IF MANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
         Did you have 2 or more of these (manic) episodes lasting 7 days or more (**C4c**) in your
         lifetime (including the current episode if present)?                              NO    YES

      b) IF MANIC OR HYPOMANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
         Did you have 2 or more of these (hypomanic) <u>episodes</u> lasting 4 days or more (**C4b**)
         in your lifetime (including the current episode)?                                 NO    YES

      c) IF THE PAST "HYPOMANIC SYMPTOMS" CATEGORY IS CODED POSITIVE ASK:
         Did you have these hypomanic <u>symptoms</u> lasting only 1 to 3 days (**C4a**) 2 or more times
         in your lifetime, (including the current episode if present)?                     NO    YES

# D. PANIC DISORDER

(➡ **MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE**)

| | | | | |
|---|---|---|---|---|
| D1 | a | Have you, on more than one occasion, had spells or attacks when you **suddenly** felt anxious, very frightened, uncomfortable or uneasy, even in situations where most people would not feel that way? | ➡ NO | YES |
| | b | Did the spells surge to a peak within 10 minutes of starting? | ➡ NO | YES |

| | | | | |
|---|---|---|---|---|
| D2 | | At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner? | ➡ NO | YES |
| D3 | | 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 attack – or did you make any significant change in your behavior because of the attacks (e.g., avoiding unfamiliar situations, or avoiding leaving your house or shopping alone, or doing things to avoid having a panic attack or visiting your doctor or the emergency room more frequently)? | NO | YES |
| D4 | | **During the worst attack that you can remember:** | | |
| | a | Did you have skipping, racing or pounding of your heart? | NO | YES |
| | b | Did you have sweating or clammy hands? | NO | YES |
| | c | Were you trembling or shaking? | NO | YES |
| | d | Did you have shortness of breath or difficulty breathing or a smothering sensation? | NO | YES |
| | e | Did you have a choking sensation or a lump in your throat? | NO | YES |
| | f | Did you have chest pain, pressure or discomfort? | NO | YES |
| | g | Did you have nausea, stomach problems or sudden diarrhea? | NO | YES |
| | h | Did you feel dizzy, unsteady, lightheaded or feel faint? | NO | YES |
| | i | Did you have hot flushes or chills? | NO | YES |
| | j | Did you have tingling or numbness in parts of your body? | NO | YES |
| | k | 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? | NO | YES |
| | l | Did you fear that you were losing control or going crazy? | NO | YES |
| | m | Did you fear that you were dying? | NO | YES |
| D5 | | ARE BOTH **D3,** AND **4** OR MORE **D4** ANSWERS, CODED **YES**? | ➡ NO | YES *PANIC DISORDER LIFETIME* |
| D6 | | In the past month did you have persistent concern about having another attack, or worry about the consequences of the attacks, or did you change your behavior in any way because of the attacks? | NO | YES *PANIC DISORDER CURRENT* |

IS EITHER **D5** OR **D6** CODED **YES**,

AND

IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?

SPECIFY IF THE EPISODE IS CURRENT AND / OR LIFETIME.

| NO | YES |
| --- | --- |
| *PANIC DISORDER* | |
| LIFETIME | ☐ |
| CURRENT | ☐ |

# E. AGORAPHOBIA

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)**

E1  Do you feel anxious or uneasy in places or situations where help might not be available
or escape might be difficult if you had a panic attack or panic-like or embarrassing symptoms, like:
being in a crowd, or standing in a line (queue),
being in an open space or when crossing a bridge,
being in an enclosed space,
when you are alone away from home, or alone at home,                    ➡
or traveling in a bus, train or car or using public transportation?      NO    YES

          ARE 2 OR MORE **E1** SITUATIONS CODED YES?                ➡
                                                                      NO    YES

E2  Do these situations almost always bring on fear or anxiety?       ➡
                                                                      NO    YES

E3  Do you fear these situations so much that you avoid them, or suffer      NO    YES
through them, or need a companion to face them?

                                                                      ➡

E4  Is this fear or anxiety excessive or out of proportion to the real danger in the situation?    NO    YES

                                                                      ➡

E5  Did this avoidance, fear or anxiety persist for at least 6 months?       NO    YES

                                                                      ➡

E6  Did these symptoms cause significant distress or problems at home,      NO    YES
at work, socially, at school or in some other important way?

IS **E6** CODED **YES?**

| NO | YES |
| --- | --- |
| *AGORAPHOBIA* | |
| *CURRENT* | |

# F.  SOCIAL  ANXIETY  DISORDER  (Social  Phobia)

(➡ MEANS:  GO TO THE DIAGNOSTIC BOX, CIRCLE **NO** AND MOVE TO THE NEXT MODULE)

| | | |
|---|---|---|
| F1 | In the past month, did you have persistent fear and significant anxiety at being watched, being the focus of attention, or of being humiliated or embarrassed or rejected? This includes things like speaking in public, eating in public or with others, writing while someone watches, performing in front of others or being in social situations. | ➡ NO    YES |

EXAMPLES OF SUCH SOCIAL SITUATIONS TYPICALLY INCLUDE
- INITIATING OR MAINTAINING A CONVERSATION,
- PARTICIPATING IN SMALL GROUPS,
- DATING,
- SPEAKING TO AUTHORITY FIGURES,
- ATTENDING PARTIES,
- PUBLIC SPEAKING,
- EATING IN FRONT OF OTHERS,
- PERFORMING IN FRONT OF OTHERS,
- URINATING IN A PUBLIC WASHROOM, ETC.

| | | |
|---|---|---|
| F2 | Do these social situations almost always bring on fear or anxiety? | ➡ NO    YES |
| F3 | Do you fear these social situations so much that you avoid them, or suffer through them, or need a companion to face them? | ➡ NO    YES |
| F4 | Is this social fear or anxiety excessive or unreasonable in these social situations? | ➡ NO    YES |
| F5 | Did this social avoidance, fear or anxiety persist for at least 6 months? | ➡ NO    YES |
| F6 | Did these social fears cause significant distress or interfere with your ability to function at work, at school or socially or in your relationships or in some other important way? | ➡ NO    YES |

IS **F6** CODED **YES**

and

IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?

NOTE TO INTERVIEWER: PLEASE SPECIFY IF THE SUBJECT'S FEARS ARE RESTRICTED TO SPEAKING OR PERFORMING IN PUBLIC.

| NO                     YES |
|---|
| *SOCIAL ANXIETY DISORDER (Social Phobia)* **CURRENT** |
| RESTRICTED TO PERFORMANCE SAD ONLY    ☐ |

# G.  OBSESSIVE-COMPULSIVE DISORDER

**(➡ MEANS:  GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)**

G1a    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  it  disturbs  or  distresses you,  or  fear  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** religious  obsessions.)

NO    YES
↓
SKIP  TO **G3a**

G1b    In  the  past  month,  did  you  try  to  suppress  these  thoughts,  impulses,  or images  or  to  neutralize  or  to  reduce  them  with  some  other  thought  or  action? --

NO    YES
↓
SKIP  TO **G3a**

(DO  NOT  INCLUDE  SIMPLY  EXCESSIVE  WORRIES  ABOUT  REAL  LIFE  PROBLEMS.  DO  NOT INCLUDE  OBSESSIONS  DIRECTLY  RELATED  TO  HOARDING,  HAIR  PULLING,  SKIN  PICKING, BODY  DYSMORPHIC  DISORDER,  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.)

G2    Did  they  keep  coming  back  into  your  mind  even  when  you  tried  to  ignore  or get  rid  of  them?

NO    YES

obsessions

G3a    In  the  past  month,  did  you  feel  driven  to  do  something  repeatedly  in  response  to  an obsession  or  in  response  to  a  rigid  rule,  like  washing  or  cleaning  excessively,  counting  or checking  things  over  and  over,  or  repeating  or  arranging  things, or  other  superstitious  rituals?

NO    YES

G3b    Are  these  rituals  done  to  prevent  or  reduce  anxiety  or  distress  or  to  prevent  something bad  from  happening  and  are  they  excessive  or  unreasonable?

NO    YES

compulsions

ARE  (**G1**a  AND  **G1**b  AND  G2)  OR  (**G3**a  AND  **G3**b)  CODED  **YES**?

➡
NO    YES

G4    In  the  past  month,  did  these  obsessive  thoughts  and/or  compulsive  behaviors cause  significant  distress,  or  interfere  with  your  ability  to  function  at  home,  at  work,  at school  or  socially  or  in  your  relationships  or  in  some  other  important  way  or  did  they  take  more  than  one  hour  a  day?

and

IS  "RULE  OUT  ORGANIC  CAUSE  (**O2** SUMMARY)"  CODED  **YES**?
(CHECK  FOR  ANY  OC  SYMPTOMS  STARTING  WITHIN  3  WEEKS  OF  AN  INFECTION)

SPECIFY  THE  LEVEL  OF  INSIGHT  AND  IF  THE  EPISODE  IS  TIC-RELATED.

| | |
|---|---|
| **NO** | YES |
| *O.C.D.* | |
| *CURRENT* | |
| **INSIGHT:** | |
| GOOD  OR  FAIR | ☐ |
| POOR | ☐ |
| ABSENT | ☐ |
| DELUSIONAL | ☐ |
| TIC-RELATED | ☐ |

# H. POSTTRAUMATIC STRESS DISORDER

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

| | | | | |
|---|---|---|---|---|
| H1 | Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury or sexual violence to you or someone else? | ➡ NO | YES |
| | EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE, DISCOVERING A BODY, WAR, OR NATURAL DISASTER, WITNESSING THE VIOLENT OR SUDDEN DEATH OF SOMEONE CLOSE TO YOU, OR A LIFE THREATENING ILLNESS. | | |
| H2 | Starting after the traumatic event, did you repeatedly re-experience the event in an unwanted mentally distressing way, (such as in recurrent dreams related to the event, intense recollections or memories, or flashbacks or as if the event was recurring) or did you have intense physical or psychological reactions when you were reminded about the event or exposed to a similar event? | ➡ NO | YES |

H3 **In the past month:**

a. Did you persistently try to avoid thinking about or remembering distressing details or feelings related to the event? — NO   YES

b. Did you persistently try to avoid people, conversations, places, situations, activities or things that bring back distressing recollections of the event? — NO   YES

ARE **1** OR MORE **H3** ANSWERS CODED **YES**? — ➡ NO   YES

H4 **In the past month:**

a. Did you have trouble recalling some important part of the trauma? (but not because of or related to head trauma, alcohol or drugs). — NO   YES

b. Were you constantly and unreasonably negative about yourself or others or the world? — NO   YES

c. Did you constantly blame yourself or others in unreasonable ways for the trauma? — NO   YES

d. Were your feelings always negative (such as fear, horror, anger, guilt or shame)? — NO   YES

e. Have you become much less interested in participating in activities that were meaningful to you before? — NO   YES

f. Did you feel detached or estranged from others? — NO   YES

g. Were you unable to experience any good feelings (such as happiness, satisfaction or loving feelings)? — NO   YES

ARE **2** OR MORE **H4** ANSWERS CODED **YES**? — ➡ NO   YES

H5 **In the past month:**

a. Were you especially irritable or did you have outbursts of anger with little or no provocation? — NO   YES

b. Were you more reckless or more self destructive? — NO   YES

c. Were you more nervous or constantly on your guard? — NO   YES

|   |   |   |   |
|---|---|---|---|
| d | Were you more easily startled? | NO | YES |
| e | Did you have more difficulty concentrating? | NO | YES |
| f | Did you have more difficulty sleeping? | NO | YES |

ARE **2** OR MORE **H5** ANSWERS CODED **YES**? ➡ NO YES

H6 Did all these problems start after the traumatic event and last for more than one month? ➡ NO YES

H7 During the past month, did these problems cause significant distress, or interfere with your ability to function at home, at work, at school or socially or in your relationships or in some other important way?

and

IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?

SPECIFY IF THE CONDITION IS ASSOCIATED WITH DEPERSONALIZATION, DEREALIZATION OR WITH DELAYED EXPRESSION.

| NO | YES |
|---|---|

*POSTTRAUMATIC STRESS DISORDER CURRENT*

WITH DEPERSONALIZATION ☐

DEREALIZATION ☐

DELAYED EXPRESSION ☐

# I.  ALCOHOL  USE DISORDER

(➡ **MEANS:  GO TO DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE**)

|  |  | ➡ |  |
|---|---|---|---|
| I1 | **In the past 12 months**, have you had 3 or more alcoholic drinks, ̃ within a 3 hour period, ̃ on  3 or more occasions? | NO | YES |

I2      **In the past 12 months**:

| | | | |
|---|---|---|---|
| a. | During  the times when you drank alcohol, did you end up  drinking more than you  planned when you started? | NO | YES |
| b. | Did  you repeatedly want to reduce or control your  alcohol use? <br> Did  you try to cut  down or control your  alcohol use, but  failed? <br> IF **YES** TO EITHER, CODE **YES**. | NO | YES |
| c. | On  the days that you drank, did you spend substantial time obtaining alcohol,  drinking, or recovering  from the  effects of alcohol? | NO | YES |
| d. | Did you crave or have a strong desire or urge to use alcohol? | NO | YES |
| e. | Did  you spend less time meeting your responsibilities at  work, at  school, or at home, because of your repeated  drinking? | NO | YES |
| f. | If your  drinking caused  problems  with  your family  or other  people, did  you  still keep  on  drinking? | NO | YES |
| g. | Were  you intoxicated more than once in any situation where you or others  were physically at  risk, for example, driving  a  car, riding  a  motorbike, using  machinery, boating, etc.? | NO | YES |
| h. | Did  you continue to use alcohol, even though it was clear that the alcohol had  caused  or worsened  psychological or physical problems? | NO | YES |
| i. | Did  you reduce or give up important work, social or recreational activities because  of your drinking? | NO | YES |
| j. | Did  you need to drink a lot more in order to get the same effect that you got when you first started  drinking or did you get much less  effect with continued use of the same amount? | NO | YES |
| k1. | When you cut down on heavy or prolonged  drinking did  you  have any of the  following: | NO | YES |

        1. increased  sweating  or increased heart rate,      ☐
        2. hand tremor  or "the shakes"      ☐
        3. trouble sleeping      ☐
        4. nausea  or vomiting      ☐
        5. hearing or seeing things other people could not see or hear
          or having sensations in  your skin for  no apparent  reason      ☐
        6. agitation      ☐
        7. anxiety      ☐
        8. seizures      ☐

        IF **YES** TO 2 OR MORE OF THE ABOVE 8, CODE  k1 AS  **YES**.

| | | | |
|---|---|---|---|
| k2. | Did  you drink alcohol to reduce or  avoid withdrawal symptoms or to avoid being hung-over? | NO | YES |

ARE **2** OR MORE **I2** ANSWERS FROM **I2a** THROUGH **12J** AND **12K SUSUMMARY** CODED **YES**?

| NO | YES |
|---|---|
| | |
| *ALCOHOL USE DISORDER* | |
| | |
| *PAST 12 MONTHS* | |

SPECIFIERS FOR ALCOHOL USE DISORDER:

MILD = 2--
3 OF THE I2 SYMPTOMS MODERATE = 4--
5 OF THE I2 SYMPTOMS SEVERE = 6 OR MOR
E OF THE I2 SYMPTOMS

IN EARLY REMISSION = CRITERIA NOT MET FOR BETWEEN 3 & 12 MONTHS I
N SUSTAINED REMISSION = CRITERIA NOT MET FOR 12 MONTHS OR MORE (
BOTH WITH THE EXCEPTION OF CRITERION d. – (CRAVING) ABOVE).

IN A CONTROLLED ENVIRONMENT = WHERE ALCOHOL ACCESS IS RESTRICTED

**SPECIFY IF:**

MILD ☐
MODERATE ☐
SEVERE ☐

IN EARLY REMISSION ☐
IN SUSTAINED REMISSION ☐

IN A CONTROLLED ENVIRONMENT ☐

# J. SUBSTANCE USE DISORDER (NON-ALCOHOL)

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)**

---

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

|  | | ➡ | |
|---|---|---|---|
| J1 a | **In the past 12 months**, did you take any of these drugs more than once, to get high, to feel elated, to get "a buzz" or to change your mood? | NO | YES |

---

CIRCLE EACH DRUG TAKEN:

**Stimulants:** amphetamines, "speed", crystal meth, "crank", Dexedrine, Ritalin, diet pills.

**Cocaine:** snorting, IV, freebase, crack, "speedball".

**Opiates:** heroin, morphine, Dilaudid, opium, Demerol, methadone, Darvon, codeine, Percodan, Vicodin, OxyContin.

**Hallucinogens:** LSD ("acid"), mescaline, peyote, psilocybin, STP, "mushrooms", "ecstasy", MDA, MDMA.

**Dissociative Drugs:** PCP (Phencyclidine ,"Angel Dust", "Peace Pill", "Hog"), or ketamine ("Special K").

**Inhalants:** "glue", ethyl chloride, "rush", nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

**Cannabis:** marijuana, hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

**Tranquilizers:** Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown, GHB, Roofinol, "Roofies".

**Miscellaneous:** steroids, nonprescription sleep or diet pills. Cough Medicine? Any others?

SPECIFY THE MOST USED DRUG(S): _____

WHICH DRUG(S) CAUSE THE BIGGEST PROBLEMS? _____

FIRST EXPLORE THE CRITERIA BELOW FOR THE DRUG CLASS CAUSING THE BIGGEST PROBLEMS AND THE ONE MOST LIKELY TO MEET CRITERIA

FOR SUBSTANCE USE DISORDER. IF SEVERAL DRUG CLASSES HAVE BEEN MISUSED, EXPLORE AS MANY OR AS FEW AS REQUIRED BY THE PROTOCOL.

J2      **Considering your use of (NAME OF DRUG / DRUG CLASS SELECTED), in the past 12 months:**

| | | | |
|---|---|---|---|
| a. | During the times when you used the drug, did you end up using more (NAME OF DRUG / DRUG CLASS SELECTED) than you planned when you started? | NO | YES |
| b. | Did you repeatedly want to reduce or control your (NAME OF DRUG / DRUG CLASS SELECTED) use? Did you try to cut down or control your (NAME OF DRUG / DRUG CLASS SELECTED) use, but failed? IF **YES** TO EITHER, CODE **YES**. | NO | YES |
| c. | On the days that you used more (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time obtaining (NAME OF DRUG / DRUG CLASS SELECTED), using it, or recovering from the its effects? | NO | YES |
| d. | Did you crave or have a strong desire or urge to use (NAME OF DRUG / DRUG CLASS SELECTED)? | NO | YES |
| e. | Did you spend less time meeting your responsibilities at work, at school, or at home, because of your repeated (NAME OF DRUG / DRUG CLASS SELECTED) use? | NO | YES |
| f. | If your (NAME OF DRUG / DRUG CLASS SELECTED) use caused problems with your family or other people, did you still keep on using it? | NO | YES |
| g. | Did you use the drug more than once in any situation where you or others were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.? | NO | YES |
| h. | Did you continue to use (NAME OF DRUG / DRUG CLASS SELECTED), even though it was clear that the (NAME OF DRUG / DRUG CLASS SELECTED) had caused or worsened psychological or physical problems? | NO | YES |

i. Did you reduce or give up important work, social or recreational activities    NO    YES
because of your (NAME OF DRUG / DRUG CLASS SELECTED) use?

j. Did you need to use (NAME OF DRUG / DRUG CLASS SELECTED) a lot more in order to get the    NO    YES
same effect that you got when you first started using it or did you get much less effect
with continued use of the same amount?
THIS CRITERION IS CODED NO IF THE MEDICATION IS PRESCRIBED AND USED UNDER MEDICAL SUPERVISION.

k1. When you cut down on heavy or prolonged use of the drug did you have any of the    NO    YES
following withdrawal symptoms:
IF **YES** TO THE REQUIRED NUMBER OF WITHDRAWAL SYMPTOMS FOR EACH CLASS, CODE J2k1 AS **YES**.
THIS CRITERION IS CODED NO IF THE MEDICATION IS PRESCRIBED AND USED UNDER MEDICAL SUPERVISION.

**Sedative, Hypnotic or Anxiolytic (2 or more)**
1. increased sweating or increased heart rate    ☐
2. hand tremor or "the shakes"    ☐
3. trouble sleeping    ☐
4. nausea or vomiting    ☐
5. hearing or seeing things other people could not see or hear
or having sensations in your skin for no apparent reason    ☐
6. agitation    ☐
7. anxiety    ☐
8. seizures    ☐

**Opiates (3 or more)**
1. feeling depressed    ☐
2. nausea or vomiting    ☐
3. muscle aches    ☐
4. runny nose or teary eyes    ☐
5. dilated pupils, goose bumps or hair standing on end
or sweating    ☐
6. diarrhea    ☐
7. yawning    ☐
8. hot flashes    ☐
9. trouble sleeping    ☐

**Stimulants (2 or more)**
1. fatigue    ☐
2. vivid or unpleasant dreams    ☐
3. difficulty sleeping or sleeping too much    ☐
4. increased appetite    ☐
5. feeling or looking physically or mentally slowed down    ☐

**Cannabis (3 or more)**
1. irritability, anger or aggression    ☐
2. nervousness or anxiety    ☐
3. trouble sleeping    ☐
4. appetite or weight loss    ☐
5. restlessness    ☐
6. feeling depressed    ☐
7. significant discomfort from one of the following:
"stomach pain", tremors or "shakes", sweating, hot flashes,
chills, headaches.    ☐

k2. Did you use (NAME OF DRUG / DRUG CLASS SELECTED) to reduce or avoid withdrawal symptoms?    NO    YES

J2k **SUMMARY**: IF **YES** TO J2k1 <u>OR</u> J2k2, CODE **YES**    NO    YES

ARE **2** OR MORE **J2** ANSWERS FROM **J2a** THROUGH **J2k SUMMARY** CODED **YES**?
(**J2**k1 AND **J2**k2 TOGETHER COUNT AS ONE AMONG THESE CHOICES)

| NO | YES |
|---|---|
| | *SUBSTANCE* |
| | *(Drug or Drug Class Name)* |
| | *USE DISORDER* |
| | |
| | *PAST 12 MONTHS* |

SPECIFIERS FOR SUBSTANCE USE DISORDER:

MILD = 2–
3 OF THE J2 SYMPTOMS MODERATE = 4–
5 OF THE J2 SYMPTOMS SEVERE = 6 OR MOR
E OF THE J2 SYMPTOMS

IN EARLY REMISSION = CRITERIA NOT MET FOR BETWEEN 3 & 12 MONTHS I
N SUSTAINED REMISSION = CRITERIA NOT MET FOR 12 MONTHS OR MORE (
BOTH WITH THE EXCEPTION OF CRITERION d. – (CRAVING) ABOVE).

IN A CONTROLLED ENVIRONMENT = WHERE SUBSTANCE / DRUG ACCESS IS
RESTRICTED

**SPECIFY IF:**

MILD ☐
MODERATE ☐
SEVERE ☐

IN EARLY REMISSION ☐
IN SUSTAINED REMISSION ☐

IN A CONTROLLED ENVIRONMENT ☐

# K. PSYCHOTIC DISORDERS AND MOOD DISORDER WITH PSYCHOTIC FEATURES

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. THE PURPOSE OF THIS MODULE IS TO EXCLUDE PATIENTS WITH PSYCHOTIC DISORDERS. THIS MODULE NEEDS EXPERIENCE.

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

K1   a   Have you ever believed that people were spying on you, or that someone    NO    YES
was plotting against you, or trying to hurt you?
**NOTE**: ASK FOR EXAMPLES TO RULE OUT ACTUAL STALKING.

    b   **IF YES:** do you currently believe these things?    NO    YES

K2   a   Have you ever believed that someone was reading your mind or could hear    NO    YES
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?    NO    YES

K3   a   Have you ever believed that someone or some force outside of yourself    NO    YES
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?    NO    YES

K4   a   Have you ever believed that you were being sent special messages through    NO    YES
the TV, radio, internet, newspapers, books, or magazines or that a person
you did not personally know was particularly interested in you?

    b   **IF YES:** do you currently believe these things?    NO    YES

K5   a   Have your relatives or friends ever considered any of your beliefs odd    NO    YES
or unusual?
INTERVIEWER: ASK FOR EXAMPLES. ONLY CODE YES IF THE EXAMPLES ARE CLEARLY
DELUSIONAL IDEAS NOT EXPLORED IN QUESTIONS K1 TO K4, FOR EXAMPLE, RELIGIOUS, DEATH,
DISEASE OR SOMATIC DELUSIONS, DELUSIONS OF GRANDIOSITY, JEALOUSY OR GUILT, OR OF
FAILURE, INADEQUACY, RUIN, OR DESTITUTION, OR NIHILISTIC DELUSIONS.

    b   **IF YES:** do they currently consider your beliefs strange or unusual?    NO    YES

K6   a   Have you ever heard things other people couldn't hear, such as voices?    NO    YES

     **IF YES TO VOICE HALLUCINATION:** Was the voice commenting on your thoughts    NO    YES
or behavior or did you hear two or more voices talking to each other?

    b   **IF YES TO K6a:** have you heard sounds / voices in the past month?    NO    YES

     **IF YES TO VOICE HALLUCINATION:** Was the voice commenting on your thoughts    NO    YES
or behavior or did you hear two or more voices talking to each other?

| | | | | NO | YES |
|---|---|---|---|---|---|

K7 a  Have you ever had visions when you were awake or have you ever seen things other people couldn't see?              NO    YES

CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE.

b  **IF YES:** have you seen these things in the past month?             NO    YES

**CLINICIAN'S JUDGMENT**

K8 a  DID THE PATIENT EVER IN THE PAST EXHIBIT DISORGANIZED, INCOHERENT OR DERAILED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS?           NO    YES

K8 b  IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED OR DERAILED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS?           NO    YES

K9 a  DID THE PATIENT EVER IN THE PAST EXHIBIT DISORGANIZED OR CATATONIC BEHAVIOR?           NO    YES

K9 b  IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR?           NO    YES

K10 a  DID THE PATIENT EVER IN THE PAST HAVE NEGATIVE SYMPTOMS, E.G. SIGNIFICANT REDUCTION OF EMOTIONAL EXPRESSION OR AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION)?           NO    YES

K10 b  ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT REDUCTION OF EMOTIONAL EXPRESSION OR AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW?           NO    YES

K11 a  ARE 1 OR MORE « a » QUESTIONS FROM K1a TO K7a, CODED **YES**?

ARE AND IS EITHER:

MAJOR DEPRESSIVE EPISODE, (CURRENT, RECURRENT OR PAST)
**OR**
MANIC OR HYPOMANIC EPISODE, (CURRENT OR PAST) CODED **YES**?           NO    YES
                                       ↳ **K13**

HOW LONG HAS THE MOOD EPISODE LASTED? _____
HOW LONG HAS THE PSYCHOTIC EPISODE LASTED? _____
IF SUCH A MOOD EPISODE IS PRESENT, IT MUST BE PRESENT FOR THE MAJORITY OF THE TOTAL DURATION OF THE ACTIVE AND RESIDUAL PERIODS OF THE PSYCHOTIC SYMPTOMS. OTHERWISE CODE NO TO K11a.

IF NO TO K11a, CIRCLE NO IN BOTH 'MOOD DISORDER WITH PSYCHOTIC FEATURES' DIAGNOSTIC BOXES AND MOVE TO K13.

b   You  told  me earlier that you  had  period(s) when  you  felt (depressed/high/persistently irritable).

Were  the beliefs and experiences you just described (SYMPTOMS CODED **YES** FROM **K1**a TO **K7**a) restricted  exclusively to times when you were feeling depressed/high/irritable?

IF THE PATIENT EVER HAD  A PERIOD OF AT LEAST  2 WEEKS OF HAVING THESE BELIEFS  OR EXPERIENCES (PSYCHOTIC SYMPTOMS) WHEN THEY WERE NOT DEPRESSED/HIGH/IRRITABLE, CODE NO TO THIS DISORDER.

IF THE ANSWER IS NO TO THIS  DISORDER GROUPING, ALSO CIRCLE NO TO K12 AND MOVE TO K13

| NO | YES |
|---|---|
| ***MOOD  DISORDER WITH PSYCHOTIC FEATURES*** **LIFETIME** | |

K12  a    ARE 1 OR MORE « b » QUESTIONS FROM K1b TO K7b CODED **YES**  AND IS EITHER:

       MAJOR  DEPRESSIVE EPISODE (CURRENT)
      **OR**
      MANIC  OR HYPOMANIC EPISODE (CURRENT) CODED **YES**?

IF THE ANSWER IS YES TO THIS DISORDER  (LIFETIME OR CURRENT), CIRCLE NO TO K13 AND K14 AND MOVE TO THE NEXT MODULE.

| NO | YES |
|---|---|
| ***MOOD  DISORDER WITH PSYCHOTIC FEATURES*** **CURRENT** | |

K13    ARE  1 OR MORE « b » QUESTIONS FROM K1b TO K8b, CODED **YES**?

  **AND**

ARE  2 OR MORE « b » QUESTIONS FROM K1b TO K10b, CODED **YES**?

AND DID AT  LEAST TWO OF THE PSYCHOTIC  SYMPTOMS OCCUR  DURING THE SAME 1-MONTH PERIOD?

  **AND**

IS "RULE OUT ORGANIC CAUSE  (**O2** SUMMARY)" CODED **YES**?

| NO | YES |
|---|---|
| ***PSYCHOTIC  DISORDER*** **CURRENT** | |

K14    IS **K13** CODED **YES**

OR

(ARE   1 OR MORE « a » QUESTIONS FROM K1a TO K8a, CODED **YES**?

AND

ARE   2 OR MORE « a » QUESTIONS FROM K1a TO K10a, CODED **YES**

AND DID AT  LEAST  TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1–MONTH PERIOD?)

AND

IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES**?

| NO | YES |
|---|---|
| | |
| *PSYCHOTIC DISORDER* **LIFETIME** | |

# L. ANOREXIA NERVOSA

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

| | | |
|---|---|---|
| L1 a | How tall are you? | ☐ft ☐ ☐in. |
| | | ☐ ☐ ☐cm |
| b. | What was your lowest weight in the past 3 months? | ☐ ☐ ☐lb |
| | | ☐ ☐ ☐kg |
| c | IS PATIENT'S WEIGHT EQUAL TO OR BELOW THE THRESHOLD CORRESPONDING TO HIS / HER HEIGHT? (SEE TABLE BELOW) | ➡ NO    YES |

**In the past 3 months:**

| | | |
|---|---|---|
| L2 | In spite of this low weight, have you tried not to gain weight or to restrict your food intake? | ➡ NO    YES |
| L3 | Have you intensely feared gaining weight or becoming fat, even though you were underweight? | ➡ NO    YES |
| L4 a | Have you considered yourself too big / fat or that part of your body was too big / fat? | NO    YES |
| b | Has your body weight or shape greatly influenced how you felt about yourself? | NO    YES |
| c | Have you thought that your current low body weight was normal or excessive? | NO    YES |
| L5 | ARE 1 OR MORE ITEMS FROM **L4** CODED **YES**? | ➡ NO    YES |

IS **L5** CODED **YES**?

| | |
|---|---|
| **NO** | YES |
| *ANOREXIA NERVOSA* **CURRENT** | |

**HEIGHT / WEIGHT TABLE** CORRESPONDING TO A **BMI THRESHOLD** OF **17.0 KG/M$^2$**

| 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 |
| lb | 79 | 82 | 84 | 87 | 90 | 93 | 96 | 99 | 102 | 106 | 109 | 112 | 115 | 119 |
| cm | 145 | 147 | 150 | 152 | 155 | 158 | 160 | 163 | 165 | 168 | 170 | 173 | 175 | 178 |
| kg | 36 | 37 | 38.5 | 39.5 | 41 | 42.5 | 43.5 | 45.5 | 46.5 | 48 | 49 | 51 | 52 | 54 |

| Height/Weight | | | | |
|---|---|---|---|---|
| ft/in | 5'11 | 6'0 | 6'1 | 6'2 | 6'3 |
| lb | 122 | 125 | 129 | 133 | 13 |
| cm | 180 | 183 | 185 | 188 | 191 |
| kg | 55 | 57 | 58.5 | 60 | 62 |

The weight thresholds above are calculated using a body mass index (BMI) equal to or below 17.0 kg/m$^2$ for the patient's height using the Center of Disease Control & Prevention BMI Calculator. This is the threshold guideline below which a person is deemed underweight by the DSM-5 for Anorexia Nervosa.

# M. BULIMIA NERVOSA

**(➡ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)**

| | | | |
|---|---|---|---|
| M1 | 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? | NO ↳ **M3** | YES |
| M2 | During these binges, did you feel that your eating was out of control? | NO | YES |

| | | | |
|---|---|---|---|
| M3 | Did you do anything to compensate for, or to prevent a weight gain, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications? Did you do this as often as once a week? | ➡ NO | YES |

CODE YES TO M3 ONLY IF THE ANSWER TO BOTH THESE M3 QUESTIONS IS YES.

M3a    Number of Episodes of Inappropriate Compensatory Behaviors per Week? _____

Number of Days of Inappropriate Compensatory Behaviors per Week? _____

| | | | |
|---|---|---|---|
| M4 | In the last 3 months, did you have eating binges as often as once a week? | ➡ NO | YES |
| M5 | Does your body weight or shape greatly influence how you feel about yourself? | ➡ NO | YES |
| M6 | DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA? | NO ↓ Skip to M8 | YES |
| M7 | Do these binges occur only when you are under (_____lb/kg)? INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE. | NO | YES |

M8    IS **M5** CODED **YES** AND IS EITHER **M6** OR **M7** CODED **NO**?

```
┌─────────────────────────────────┐
│ NO                      YES      │
│                                  │
│      BULIMIA NERVOSA             │
│        CURRENT                   │
└─────────────────────────────────┘
```

IS **M7** CODED **YES**?

```
┌─────────────────────────────────┐
│ NO                      YES      │
│                                  │
│ ANOREXIA NERVOSA Binge E         │
│ ating/Purging Type CURRE         │
│          NT                      │
└─────────────────────────────────┘
```

DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA?

AND

ARE M2 AND M3 CODED NO?

<table>
<tr><td>NO</td><td>YES</td></tr>
<tr><td colspan="2">*ANOREXIA NERVOSA*<br>*Restricting Type* **CU<br>RRENT**</td></tr>
</table>

SPECIFIERS OF EATING DISORDER:

MILD = 1–
3 EPISODES OF INAPPROPRIATE COMPENSATORY BEHAVIORS  MODERATE = 4–
7 EPISODES OF INAPPROPRIATE COMPENSATORY BEHAVIORS SEVERE = 8–
13 EPISODES OF INAPPROPRIATE COMPENSATORY BEHAVIORS
EXTREME  = 14 OR MORE EPISODES OF INAPPROPRIATE COMPENSATORY BEHAVIORS

<table>
<tr><td>SPECIFY IF:</td><td></td></tr>
<tr><td>MILD</td><td>☐</td></tr>
<tr><td>MODERATE</td><td>☐</td></tr>
<tr><td>SEVERE</td><td>☐</td></tr>
<tr><td>EXTREME</td><td>☐</td></tr>
</table>

# MB. BINGE EATING DISORDER

(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO IN THE DIAGNOSTIC BOX, AND MOVE TO THE NEXT MODULE)

| | | | |
|---|---|---|---|
| MB1 | DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA? | NO | ➡ YES |
| MB2 | DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR BULIMIA NERVOSA? | NO | ➡ YES |
| MB3 | M2 IS CODED YES | ➡ NO | YES |
| MB4 | M3 IS CODED YES | NO | ➡ YES |
| MB5 | M4 IS CODED YES | ➡ NO | YES |

In the last 3 months during the binging did you:

| | | | |
|---|---|---|---|
| MB6a | Eat more rapidly than normal? | NO | YES |
| MB6b | Eat until you felt uncomfortably full? | NO | YES |
| MB6c | Eat large amounts of food when you were not hungry? | NO | YES |
| MB6d | Eat alone because you felt embarrassed about how much you were eating? | NO | YES |
| MB6e | Feel guilty, depressed or disgusted with yourself after binging? | NO | YES |
| | ARE 3 OR MORE **MB6** QUESTIONS CODED YES? | ➡ NO | YES |

MB7     Does your binging distress you a lot?                    ➡
                                                     NO      YES

MB8     Number of Binge Eating Episodes per Week? _____

         Number of Binge Eating Days per Week? _____

IS MB7 CODED YES?

| NO | YES |
|----|-----|
| ***BINGE-EATING DISORDER*** | |
| **CURRENT** | |

SPECIFIERS OF EATING DISORDER:

MILD = 1-
3 EPISODES OF BINGE EATING PER WEEK  MODERATE = 4-
7 EPISODES OF BINGE EATING PER WEEK SEVERE = 8-
13 EPISODES OF BINGE EATING PER WEEK
EXTREME = 14 OR MORE EPISODES OF BINGE EATING PER WEEK

| **SPECIFY IF:** | |
|-----------------|---|
| MILD | ☐ |
| MODERATE | ☐ |
| SEVERE | ☐ |
| EXTREME | ☐ |

# N. GENERALIZED ANXIETY DISORDER

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

| | | | | |
|---|---|---|---|---|
| N1 | a | Were you excessively anxious or worried about several routine things, over the past 6 months? IN ENGLISH, IF THE PATIENT IS UNCLEAR ABOUT WHAT YOU MEAN, PROBE BY ASKING (Do others think that you are a worrier or a "worry wart"?) AND GET EXAMPLES. | ➡ NO | YES |
| | b | Are these anxieties and worries present most days? | ➡ NO | YES |
| | | ARE THE PATIENT'S ANXIETY AND WORRIES RESTRICTED EXCLUSIVELY TO, OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT? | ➡ NO | YES |
| N2 | | Do you find it difficult to control the worries? | ➡ NO | YES |

N3    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, did you, most of the time:**

| | | | | |
|---|---|---|---|---|
| | a | Feel restless, keyed up or on edge? | NO | YES |
| | b | Have muscle tension? | NO | YES |
| | c | Feel tired, weak or exhausted easily? | NO | YES |
| | d | Have difficulty concentrating or find your mind going blank? | NO | YES |
| | e | Feel irritable? | NO | YES |
| | f | Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)? | NO | YES |
| | | ARE **3** OR MORE **N3** ANSWERS CODED **YES?** | ➡ NO | YES |

N4    Do these anxieties and worries significantly disrupt your ability to work,
to function socially or in your relationships or in other important areas of
your life or cause you significant distress?

AND IS "RULE OUT ORGANIC CAUSE (**O2** SUMMARY)" CODED **YES?**

> | NO | YES |
> |---|---|
> | **GENERALIZED ANXIETY DISORDER** **CURRENT** | |

## O. RULE OUT MEDICAL, ORGANIC OR DRUG CAUSES FOR ALL DISORDERS

IF THE PATIENT CODES POSITIVE FOR ANY CURRENT DISORDER ASK:

**Just before these symptoms began:**

| | | | | |
|---|---|---|---|---|
| O1a | Were you taking any drugs or medicines or in withdrawal from any of these? | ❐ No | ❐ Yes | ❐ Uncertain |
| O1b | Did you have any medical illness? | ❐ No | ❐ Yes | ❐ Uncertain |
| O2 | IF O1a OR O1b IS CODED YES, IN THE CLINICIAN'S JUDGMENT IS EITHER LIKELY TO BE A DIRECT CAUSE OF THE PATIENT'S DISORDER? IF NECESSARY, ASK ADDITIONAL OPEN-ENDED QUESTIONS. | ❐ No | ❐ Yes | ❐ Uncertain |
| **O2 SUMMARY**: AN "ORGANIC" / MEDICAL / DRUG RELATED CAUSE BEEN RULED OUT | | ❐ No | ❐ Yes | ❐ Uncertain |

IF **O2** IS YES, THEN **O2** SUMMARY IS NO. IF **O2** IS NO, THEN **O2** SUMMARY IS YES. OHTERWISE IT IS UNCERTAIN.

# P.  ANTISOCIAL PERSONALITY DISORDER

**(➡ MEANS: GO TO THE DIAGNOSTIC BOX AND CIRCLE NO)**

P1     **Before you were 15 years old, did you:**

| | | | |
|---|---|---|---|
| a | repeatedly skip school or run away from home overnight or stayed out at night against your parent's rules? | NO | YES |
| b | repeatedly lie, cheat, "con" others, or steal or break into someone's house or car? | NO | YES |
| c | start fights or bully, threaten, or intimidate others? | NO | YES |
| d | deliberately destroy things or start fires? | NO | YES |
| e | deliberately hurt animals or people? | NO | YES |
| f | force someone into sexual activity? | NO | YES |
| | | ➡ | |
| | ARE **2** OR MORE **P1** ANSWERS CODED **YES**? | NO | YES |

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

P2     **Since you were 15 years old, have you:**

| | | | |
|---|---|---|---|
| a | done things that are illegal or would be grounds to get arrested, even if you didn't get caught (for example destroying property, shoplifting, stealing, selling drugs, or committing a felony)? | NO | YES |
| b | often lied or "conned" other people to get money or pleasure, or lied just for fun? | NO | YES |
| c | been impulsive and didn't care about planning ahead? | NO | YES |
| d | been in physical fights repeatedly or assaulted others (including physical fights with your spouse or children)? | NO | YES |
| e | exposed others or yourself to danger without caring? | NO | YES |
| f | 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? | NO | YES |
| g | felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property? | NO | YES |

ARE **3** OR MORE **P2** QUESTIONS CODED **YES**?

| NO | YES |
|---|---|
| *ANTISOCIAL PERSONALITY DISORDER* **LIFETIME** | |

( THIS CONCLUDES THE INTERVIEW )

# MOOD  DISORDERS: DIAGNOSTIC ALGORITHM

Consult  Modules:        A        Major  Depressive Episode
                         C        (Hypo)manic  Episode
                         K        Psychotic  Disorders

---

**MODULE  K:**

| | | | |
|---|---|---|---|
| 1a | IS **K11b** CODED YES? | NO | YES |
| 1b | IS **K12a** CODED YES? | NO | YES |

---

**MODULES  A and C:**                                    Current      Past

2    a    CIRCLE  YES IF A  DELUSIONAL IDEA  IS IDENTIFIED IN **A3e**        YES        YES
          OR ANY PSYCHOTIC FEATURE  IN **K1** THROUGH **K7**

     b    CIRCLE YES IF A  DELUSIONAL IDEA  IS IDENTIFIED IN **C3a**        YES        YES
          OR  ANY PSYCHOTIC FEATURE  IN **K1** THROUGH **K7**

     c    Is  Major  Depressive  Episode coded  YES (current  or  past)?
               **and**
          is Manic Episode coded NO (current and past)?
               **and**
          is Hypomanic Episode coded NO (current and past)?
               **and**
          is "Rule out Organic Cause (O2 Summary)" coded  YES?

          **Specify:**
          • If  the depressive episode is **current** or **past** or both

          •
               **With  Psychotic Features** Current: If 1b  or 2a (current) = YES
               With Psychotic Features Past: If 1a   or 2a  (past) = YES

<table>
<tr><td colspan="3"><em><strong>MAJOR  DEPRESSIVE<br>DISORDER</strong></em></td></tr>
<tr><td></td><td>current</td><td>past</td></tr>
<tr><td><strong>MDD</strong></td><td>❏</td><td>❏</td></tr>
<tr><td colspan="3"><em><strong>With  Psychotic Features</strong></em></td></tr>
<tr><td>Current</td><td colspan="2">❏</td></tr>
<tr><td>Past</td><td colspan="2">❏</td></tr>
</table>

d    Is a Manic Episode coded YES (current or past)?

    **Specify:**

    • If the Bipolar I Disorder is **current** or **past** or both

    • With **Single Manic Episode**: If Manic episode (current or past) = YES
      and MDE (current and past) = NO

    •
      **With Psychotic Features** Current: If 1b or 2a (current) or 2b (current) = YES
      With Psychotic Features Past: If 1a or 2a (past) or 2b (past) = YES

    • If the **most recent episode** is manic, depressed,
      or hypomanic or unspecified (all mutually exclusive)

    • **Most Recent Episode Unspecified** if the Past Manic Episode is coded YES
                         AND

    (If any current C3 symptoms are coded YES and current C3 Summary is coded NO)
                         OR

    (If current C3 Summary is coded YES
    AND
    If current Manic Episode diagnostic box is coded NO current)

| BIPOLAR I DISORDER | | |
|---|---|---|
| | current | past |
| **Bipolar I Disorder** | ❏ | ❏ |
| Single Manic Episode | ❏ | ❏ |
| *With Psychotic Features* | | |
| Current | ❏ | |
| Past | ❏ | |
| *Most Recent Episode* | | |
| Manic | ❏ | |
| Depressed | ❏ | |
| Hypomanic | ❏ | |
| Unspecified | ❏ | |
| *Most Recent Episode* | | |
| Mild | ❏ | |
| Moderate | ❏ | |
| Severe | ❏ | |

e    Is Major Depressive Episode coded YES (current or past)
    **and**
  Is Hypomanic Episode coded YES (current or past)
    **and**
  Is Manic Episode coded NO (current and past)?

    **Specify:**

    • If the Bipolar Disorder is **current** or **past** or both

    • If the most recent mood episode is **hypomanic** or **depressed** (mutually exclusive)

    • **Most Recent Episode Unspecified** if the Past Manic / Hypomanic Episode is
      coded YES
                         AND

    (If any current C3 symptoms are coded YES and current C3 Summary is coded NO)

                         OR

    (If current C3 Summary is coded YES
    AND
    If current Hypomanic Episode diagnostic box is coded NO current)

| BIPOLAR II DISORDER | | |
|---|---|---|
| | current | past |
| **Bipolar II Disorder** | ❏ | ❏ |
| *Most Recent Episode* | | |
| Hypomanic | ❏ | |
| Depressed | ❏ | |
| Hypomanic | ❏ | |
| Unspecified | ❏ | |
| *Most Recent Episode* | | |
| Mild | ❏ | |
| Moderate | ❏ | |
| Severe | ❏ | |

f   Is MDE coded NO (current and past)
         **and**
    Is Manic Episode coded NO (current and past)
         **and**
    Is C4b coded YES for the appropriate time frame
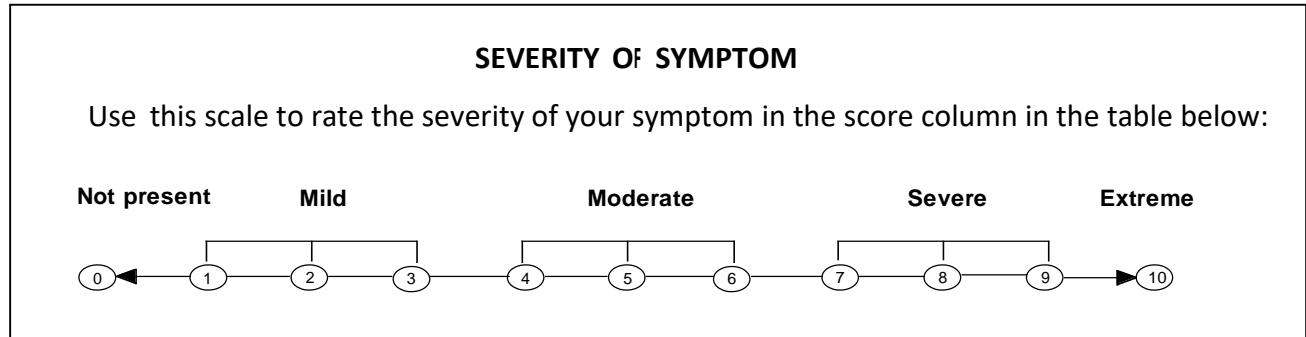         **and**
    Is C8b coded YES?

_____

                              **or**

_____

    Is Manic Episode coded NO (current and past)
         **and**
    Is Hypomanic Episode coded NO (current and past)
         **and**
    Is C4a coded YES for the appropriate time frame
         **and**
    Is C8c coded YES?

    Specify if the Bipolar Disorder Unspecified is **current** or **past** or both.

| | *BIPOLAR* *DISORDER UNSPECIFIED* | |
|---|---|---|
| | current | past |
| Bipolar Disorder Unspecified | ❏ | ❏ |

# OPTIONAL ASSESSMENT MEASURES T0 TRACK CHANGES OVER TIME

## A: CROSS CUTTING MEASURES

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### SEVERITY OF SYMPTOM

Use this scale to rate the severity of your symptom in the score column in the table below:

| Not present | Mild | | Moderate | | | Severe | | Extreme |

0 — 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

---

## Assessment of Symptoms That Cut Across Disorders

| | Symptom Name | Score |
|---|---|---|
| 1 | Depression | |
| 2 | Anger | |
| 3 | Mania (feeling up or high or hyper or full of energy with racing thoughts) | |
| 4 | Anxiety | |
| 5 | Physical (somatic) symptoms | |
| 6 | Suicidal thoughts (having ANY thoughts of killing yourself) | |
| 7 | Hearing sounds or voices others can't hear or fearing someone can hear or read your thoughts or believing things others don't accept as true e.g. that people are spying on you or plotting against you or talking about you (Psychosis) | |
| 8 | Sleep problems | |
| 9 | Memory problems | |
| 10 | Repetitive thoughts or behaviors | |
| 11 | Feeling things around you are strange, unreal, detached or unfamiliar, or feeling outside or detached from part or all of your body (Dissociation) | |
| 12 | Ability to function at work, at home, in your life, or in your relationships (Personality functioning) | |
| 13 | Overusing alcohol or drugs | |

# B: DISABILITY / FUNCTIONAL IMPAIRMENT

## SEVERITY OF DISABILITY / IMPAIRMENT

Use this scale to rate in the score column of the table below, how much your symptoms have disrupted your ability to function in the following areas of your life:

Not present    Mild              Moderate              Severe        Extreme

0 ← 1   2   3      4   5   6      7   8   9 → 10

## Assessment of Impairment of Functioning /Disability

|   | Domain Name | Score |
|---|---|---|
| 1 | Work or school work | |
| 2 | Social life or leisure activities (like hobbies or things you do for enjoyment) | |
| 3 | Family life and / or home responsibilities | |
| 4 | Ability to get along with people | |
| 5 | Personal and social relationships | |
| 6 | Ability to understand and to communicate with others | |
| 7 | Ability to take care of yourself (washing, showering, bathing, dressing properly, brushing teeth, laundry, combing / brushing hair, eating regularly) | |
| 8 | Made you disruptive or aggressive towards others | |
| 9 | Financially (ability to manage your money) | |
| 10 | Ability to get around physically | |
| 11 | Spiritual or religious life | |
| 12 | How much did your condition have an impact on other people in your family? | |

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7. A validation study of this instrument was made possible, in part, by grants from SmithKlineBeecham and the European Commission.

# M.I.N.I. PLUS

The shaded modules below are additional modules available in the MINI PLUS beyond what is available in the standard MINI. The un-shaded modules below are in the standard MINI.

These MINI PLUS modules can be inserted into or used in place of the standard MINI modules, as dictated by the specific needs of any study.

| MODULES | TIME FRAME |
|---|---|
| **A** MAJOR DEPRESSIVE EPISODE | Current (2 weeks)<br>Past<br>Recurrent |
| MAJOR DEPRESSIVE DISORDER | Current (2 weeks)<br>Past<br>Recurrent |
| MDE WITH MELANCHOLIC FEATURES<br>MDE WITH CATATONIC FEATURES<br>MDE WITH ATYPICAL FEATURES | Current (2 weeks)<br>Current (2 weeks)<br>Current (2 weeks) |
| MAJOR DEPRESSIVE DISORDER WITH PSYCHOTIC FEATURES | Current<br>Past |
| MINOR DEPRESSIVE DISORDER<br>(DEPRESSIVE DISORDER UNSPECIFIED) | Current (2 weeks)<br>Past<br>Recurrent |
| MOOD DISORDER DUE TO A GENERAL MEDICAL CONDITION | Current (2 weeks)<br>Past |
| SUBSTANCE INDUCED MOOD DISORDER | Current (2 weeks)<br>Past |
| **AY** DYSTHYMIA | Current |

| MODULES | TIME FRAME | | |
|---|---|---|---|
| **B** SUICIDALITY | Current (Past Month) ❑ | | |
| | Lifetime attempt ❑ | ❑ Low ❑ Moderate ❑ High | |
| SUICIDE BEHAVIOR DISORDER | Current ❑ | (In Past Year) | |
| | In early remission ❑ | (1 – 2 Years Ago) | |

| MODULES | TIME FRAME |
|---|---|
| **C** MANIC EPISODE | Current<br>Past |
| HYPOMANIC EPISODE | Current<br>Past |
| BIPOLAR I DISORDER | Current<br>Past |
| BIPOLAR II DISORDER | Current<br>Past |
| BIPOLAR DISORDER UNSPECIFIED | Current<br>Past |
| BIPOLAR I DISORDER WITH PSYCHOTIC FEATURES | Current<br>Past |
| MANIC EPISODE DUE TO A GENERAL MEDICAL CONDITION | Current (2 weeks)<br>Past |
| HYPOMANIC EPISODE DUE TO A GENERAL MEDICAL CONDITION | Current (2 weeks)<br>Past |
| SUBSTANCE INDUCED MANIC EPISODE | Current (2 weeks) |

| | | |
|---|---|---|
| | SUBSTANCE INDUCED HYPOMANIC EPISODE | Past |
| | | Current (2 weeks) |
| | | Past |
| | MOOD DISORDER UNSPECIFIED | Lifetime |
| D | PANIC DISORDER | Current (Past Month) |
| | | Lifetime |
| | ANXIETY DISORDER WITH PANIC ATTACKS DUE TO A GENERAL MEDICAL CONDITION | Current |
| | SUBSTANCE INDUCED ANXIETY DISORDER WITH PANIC ATTACKS | Current |
| E | AGORAPHOBIA | Current |
| F | SOCIAL ANXIETY DISORDER (Social Phobia) | Current (Past Month) |
| | | Generalized |
| | | Non-Generalized |
| FA | SPECIFIC PHOBIA | Current |
| G | OBSESSIVE-COMPULSIVE DISORDER (OCD) | Current (Past Month) |
| | OCD DUE TO A GENERAL MEDICAL CONDITION | Current |
| | SUBSTANCE INDUCED OCD | Current |
| H | POSTTRAUMATIC STRESS DISORDER | Current (Past Month) |
| HL | POSTTRAUMATIC STRESS DISORDER | Lifetime |
| I | ALCOHOL USE DISORDER | Past 12 Months |
| IL | ALCOHOL USE DISORDER | Lifetime |
| J | SUBSTANCE DEPENDENCE (Non-alcohol) | Past 12 Months |
| | SUBSTANCE ABUSE (Non-alcohol) | Past 12 Months |
| JL | SUBSTANCE USE DISORDER (Non-alcohol) | Lifetime |
| K | PSYCHOTIC DISORDERS | Lifetime |
| | | Current |
| | MOOD DISORDER WITH PSYCHOTIC FEATURES | Lifetime |
| | MOOD DISORDER WITH PSYCHOTIC FEATURES | Current |
| | SCHIZOPHRENIA | Current |
| | | Lifetime |
| | SCHIZOAFFECTIVE DISORDER | Current |
| | | Lifetime |
| | SCHIZOPHRENIFORM DISORDER | Current |
| | | Lifetime |
| | BRIEF PSYCHOTIC DISORDER | Current |
| | | Lifetime |
| | DELUSIONAL DISORDER | Current |
| | | Lifetime |
| | PSYCHOTIC DISORDER DUE TO A GENERAL MEDICAL CONDITION | Current |
| | | Lifetime |
| | SUBSTANCE INDUCED PSYCHOTIC DISORDER | Current |
| | | Lifetime |

| | | |
|---|---|---|
| | PSYCHOTIC DISORDER UNSPECIFIED | Current<br>Lifetime |
| L | ANOREXIA NERVOSA | Current (Past 3 Months) |
| | ANOREXIA NERVOSA, BINGE EATING/PURGING TYPE | Current |
| | ANOREXIA NERVOSA, RESTRICTING TYPE | Current |
| M | BULIMIA NERVOSA | Current (Past 3 Months) |
| | BULMIA NERVOSA, PURGING TYPE | Current |
| | BULMIA NERVOSA, NON-PURGING TYPE | Current |
| MB | BINGE-EATING DISORDER | Current (Past 3 Months) |
| N | GENERALIZED ANXIETY DISORDER (GAD) | Current (Past 6 Months) |
| | GAD DUE TO A GENERAL MEDICAL CONDITION<br>SUBSTANCE INDUCED GAD | Current<br>Current |
| O | SOMATIZATION DISORDER | Current<br>Lifetime |
| P | HYPOCHONDRIASIS | Current |
| Q | BODY DYSMORPHIC DISORDER | Current |
| R | PAIN DISORDER | Current |
| S | CONDUCT DISORDER | Current (past 12 months) |
| T | ATTENTION DEFICIT/ HYPERACTIVITY DISORDER | Current (Past 6 months) (Children /Adolescents) |
| | ADHD COMBINED | |
| | ADHD INATTENTIVE | |
| | ADHD HYPERACTIVE / IMPULSIVE | |
| TA | ATTENTION DEFICIT/ HYPERACTIVITY DISORDER | Current (Past 6 months) (Adults) |
| | ADHD COMBINED | |
| | ADHD INATTENTIVE | |
| | ADHD HYPERACTIVE / IMPULSIVE | |
| U | PREMENSTRUAL DYSPHORIC DISORDER | Current |
| V | MIXED ANXIETY DEPRESSIVE DISORDER | Current |
| W | ADJUSTMENT DISORDERS | Current |
| X | MEDICAL, ORGANIC, DRUG CAUSE RULED OUT | |
| Y | ANTISOCIAL PERSONALITY DISORDER | Lifetime |

For Schizophrenia and psychotic disorder studies and for psychotic disorder subtyping in clinical settings, use the MINI for Psychotic Disorders instead of the standard MINI. For many clinical settings this level of psychotic disorder sub typing detail is not necessary.

For children and adolescents, use the MINI Kid or the MINI Kid Parent of the MIN Kid for Psychotic Disorders.

A computerized version of the MINI is available from Medical Outcomes Systems https://www.medical-outcomes.com