THE ASSOCIATION BETWEEN SUBSTANCE USE DISORDER AND SCHIZOPHRENIA AMONG PATIENTS ATTENDING OUT PATIENT SERVICES IN MATHARI TEACHING AND REFERRAL HOSPITAL

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DECLARATION

I declare that this thesis proposal is my original work and has not been presented for the award of a degree in any other university.

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DEDICATION

This work is dedicated to mentally ill people in low income countries.

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Abbreviations

MINI: Mini International Neuropsychiatric Interview

ASSIST: Alcohol and Substance Involvement Screening Test

SUD: Substance use disorder

MTRH= Mathari Teaching and Referral Hospital

Definitions of terms

Schizophrenia: is a mental disorder often characterized by abnormal social behavior and failure to recognize what is real. Common symptoms include false beliefs, unclear or confused thinking, auditory hallucinations, reduced social engagement and emotional expression, and inactivity. Diagnosis is based on observed behavior and the person's reported experiences.

Mental Illness: Mental illness refers to a wide range of mental health conditions disorders that affect your mood, thinking and behaviour. Examples of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviors. For the purpose of this present study mental illness include all the disorders screened for in the MINI plus

Psychiatric Disorders: A mental disorder, also called a mental illness or psychiatric disorder, is a mental or behavioral pattern or anomaly that causes either suffering or an impaired ability to function in ordinary life (disability), and which is not a developmental or social norm

Substance Use Disorder: The disorder is characterized by a pattern of continued pathological use of a medication, non-medically indicated drug or toxin, which results in repeated adverse social consequences related to drug use, such as failure to meet work, family, or school obligations, interpersonal conflicts, or legal problems

Abstract

Substance use disorderis the most prevalent co-morbidity in schizophrenia. The rates of substance use disorder in schizophrenia patients has been estimated to be 4 to 5 times that in the general population, and contributes to an unfavourable prognosis. Other research findings differ, suggesting that the prevalence of substance use disorder in schizophrenia is comparable to that in the general population. Thus; the aim of this study is to determine the association between substance abuse and schizophrenia among patients receiving services at Mathari Teaching and Referral Hospital (MTRH). This study employed a case control design (60 cases and 60 controls). A Researcher designed socio-demographic questionnaire, Alcohol and Substance Involvement Screening Test (ASSIST) and the Mini International Neuropsychiatric Tool (MINI plus) was used as study instruments.

Data analysis was done using SPSS version 17.0 The mean age of participants 33.55 for cases versus 33.45 for controls, there is an association between schizophrenia and Substance Use (OR=3.237; C.I. 1.529-6.853,p=0.002), miraa (OR=1.053; C.I. 1.024-1.104, p=0.001) and tobacco use (OR=1.08; C.I. = 1.028-1.134, 0.002). Schizophenia was not significantly associated with Alcohol use (OR= 1.027, C.I. 0.995-1.060, p=0.105) and Cannabis (OR=1.053; C.I. 0.980-1.132, p=0.16). Male gender (A.O.R. = 9.27; C.I 3.45-24.86, p=0.00001), family history of substance use disorder (A.O.R. = 0.32; C.I 0.12-0.85, p=0.021), secondary school education (A.O.R. =4.51; C.I. 1.48-13.76, p=0.008) are found to be strong predictors of substance use.

Introduction.

The management of schizophrenia in patients with co-morbid substance use disorder is a major global public health challenge (Kelly, Daley, & Douaihy, 2012a).   Substance use disorder has become the most prevalent co-morbid psychiatric condition associated with schizophrenia. The rates of substance use disorder in schizophrenia patients is 4 to 5 times that in the general population and it contributes to an unfavorable prognosis(Cantor-Graae, Nordström, & McNeil, 2001a; Kelly, Daley, & Douaihy, 2012b). The Epidemiologic Catchment Area study revealed a lifetime prevalence of 47% for substance misuse in patients with schizophrenia, of which 33.7% met criteria for an alcohol disorder and 27.5% for other drug misuse disorders (Saddichha, Prakash, Sinha, & Khess, 2010).

The controversy between substance abuse and schizophrenia is powered by other findings that suggests that the prevalence of substance abuse in schizophrenia is comparable to that in the general population, with the possible exceptions of stimulant and hallucinogen abuse, which may be greater in patients with schizophrenia(K. T. Mueser et al., 1990). There are many reports that the abuse of cannabis, amphetamines or cocaine pre-date the onset of psychotic symptoms (Smith, Thirthalli, Abdallah, Murray, & Cottler, 2009). Several hypotheses have been put forward to explain this relationship.

The first hypothesizes that substance abuse may increase the risk of schizophrenia, at least in vulnerable individuals; the second, self-medication hypothesis, suggests that patients use drugs to alleviate the symptoms of psychosis or the debilitating side effects caused by antipsychotic medications, such as extra pyramidal side effects; and third, others believe that the association could be merely coincidental, with reasons comparable to those of the general population(Saddichha et al., 2010).

Co-morbid substance abuse in schizophrenia is associated with more frequent and longer periods of hospitalization, higher relapse rates even in first-episode patients, elevated rates of extra-pyramidal motor symptoms (EPS), non-adherence to treatment, higher rates of unemployment, violence, criminality and an increased risk of committing suicide(Cantor-Graae et al., 2001a; Kelly et al., 2012b).

Alcohol, cannabis, and to a lesser extent, cocaine and amphetamine are the most frequently abused substances in people with schizophrenia, with regional variation on use patterns(Koola et al., 2012). In a case study of Bugando Medical Centre, Mwanza (Northern Tanzania), the most frequently used substances among psychiatric patients were alcohol (59.3%), tobacco

(38.6%),and cannabis (29.3%), while heroin (2.1%) and cocaine(1.6%) were least used(Hauli, Ndetei, Jande, & Kabangila, 2011a).

Similar studies across 10 medical non psychiatric facilities in Kenya found the overall alcohol user rate among patients using Alcohol Smoking and Substance Abuse Screening Test was 25.5%. Apart from alcohol, other abused substances included tobacco, cannabis, cocaine, amphetamines/khat, and sedatives(Ndetei et al., 2009). Another study in Kenya found a much higher prevalence across three medical outpatient facilities in Kenya with a lifetime prevalence rates of alcohol use in the range of 50% and 60% and that alcohol, tobacco, khat and cannabis were most frequently misused. (Othieno, Kathuku, & Ndetei, 2000).

Khat is recently gaining attention as a possible drug with abusive potential and a probable link to mental illness. Khat main psychoactive substance is cathinone and produces effects similar to amphetamine. Little is known about khat induced psychotic disorders, however, some findings are suggesting an association between khat consumption and psychotic symtoms(Odenwald et al., 2005a, 2007). Research in Kenya found evidence of high prevalence of hazardous use patterns of khat use comorbid with psychiatric symptoms among Somali refugees and that khat is used as a self-medication for trauma among male Somali refugees in urban Kenyan refugee settlements.(Widmann et al., 2014)

The dearth of research in mental health, specifically on schizophrenia and substance abuse in Kenya reflects a knowledge gap that should be addressed to lay a framework for sound mental health policies and clinical management of patients with schizophrenia. The few studies related to this subject suffer from methodological limitations, including the lack of diagnostic rigor, adequate sample sizes, and concurrent assessment of different types of substance abuse (Mueser et al., 1990). Findings from other studies continue to produce controversial results about the association between substance abuse and schizophrenia. Thus, this present study aims to use a case control design to determine whether there is an association between substance abuse and schizophrenia among patients attending Mathari Teaching and Referal Hospital (MTRH) in Kenya.

Literature Review.

Substance use disorder has reached alarming proportions in patients with schizophrenia at an estimated prevalence around 50% or higher (Bellack & DiClemente, 1999). Patients with schizophrenia have similar adverse social, health, economic, and psychiatric consequences as other individuals. At the neurochemical level, substance use increases dopaminergic activity, thereby increasing the risk of symptom exacerbation and relapse, compromising the efficacy of neuroleptic medication. In addition, Substance abuse undermines compliance with treatment and is a source of conflict in families, a malignant circumstance for patients with schizophrenia who are highly vulnerable to stress.(Bellack & DiClemente, 1999). Various hypotheses have been proposed on the link between substance abuse and schizophrenia.

Self medication hypothesis

Self-medication hypothesis argues that patients with schizophrenia use psychoactive substances to counteract the neurochemical imbalance brought about by depression, anxiety and negative symptoms, or the adverse side effects produced by antipsychotics(Chambers, Krystal, & Self, 2001). Alcohol moderates discomfort of hallucinations; cannabis and stimulants ease subjective discomfort of antipsychotic side effects as well as negative symptoms; and nicotine lessens cognitive deficits. Nevertheless, these speculative benefits of substance abuse in schizophrenia patients are counteracted by increase in positive symptoms, depression, frequently reported medication noncompliance, and poor prognosis of schizophrenia patients with comorbid substance use disorder. For example, alcohol abuse often precedes schizophrenia; specific drugs of abuse are not selected in relation to specific symptoms; and various substances of abuse produce a range of different effects but generally exacerbate rather than relieve symptoms of schizophrenia. Cannabis use is associated with an elevated risk of developing psychosis, an earlier age of onset of schizophrenia and a higher relapse rate after remission of acute psychotic symptoms in the first episode(Chakraborty, Chatterjee, & Chaudhury, 2014a).

Primary addiction hypothesis

Contrary to self-medication hypothesis which asserts vulnerability to substance abuse is secondary to schizophrenia symptoms; a growing body of evidence suggests that the neuropathology of schizophrenia may contribute to the vulnerability to addiction by facilitating neural substrates that mediate positive reinforcement. This primary addiction hypothesis is based on research findings supporting that the putative neuropathology underlying schizophrenia

involves alterations in neuroanatomic circuitry that regulate positive reinforcement, incentive, motivation, behavioral inhibition and addictive behavior. A common neurological basis for schizophrenia and for the reinforcing effects of substance use may predispose people to both conditions.

Increased vulnerability hypothesis

The third hypothesis suggests that people with schizophrenia are especially vulnerable to the negative psychosocial effects of substance use because the schizophrenia syndrome produces impaired thinking and social judgment and poor impulse control. Thus, even when using relatively small amounts of psychoactive substances, these people are prone to develop significant substance-related behavioural problems that qualify them for a diagnosis of substance use disorder(Kim T Mueser, Drake, & Wallach, 1998).

Substance use disorder and schizophrenia are caused by similar psychosocial variables

Psychological and socio-environmental factors also appear to contribute to the co-occurrence of schizophrenia and substance use disorder. People with schizophrenia and substance abuse often report that they use drugs to relieve the general dysphoria of mental illness, poverty, limited opportunities, and boredom. They also report that substance use facilitates the development of an identity and a social network(Dixon, Haas, Weiden, Sweeney, & Frances, 1990). Thus the finding is of high prevalence of substance use probems in patients with schizophrenia may be due to a shared psychosocial predisposition rather than a biological one.

A growing consensus in the research community is that substance abuse has deleterious effect on schizophrenia. A 15-year longitudinal study found that patients with dual diagnosis of schizophrenia and substance-use disorders, including alcohol-use disorders, had higher rates of hospitalization, poor insight, homelessness, violent offending, and increased risk of death(Schmidt, Hesse, & Lykke, 2011).

Substance Use Disorder and Schizophrenia model.
The model below depicts the relationship between substance use disorder and schizophrenia.

Primary reward/motivation circuit defect, behavioural inhibition and addiction. (Primary addiction model-Dual vulnerability)

Schizophrenia

Substance Use Disorder

1. Self-medication hypothesis
2. Increase vulnerability to the psychosocial effect of substance in Schizophrenia

Substances precipitate psychopathology in vulnerable

Psychosocial factors that predispose to substance use and Schizophrenia. (confounders)

The substances of abuse in the ASSIST tool are reviewed below with an aim to reveal research findings between different substances and schizophrenia.

Nicotine and Schizophrenia.

Nicotine interacts with dopaminergic and the glutamatergic pathways in the mesolimbic areas, these pathways are also known to play a role in schizophrenia. More than 70% of patients with chronic schizophrenia are nicotine dependent (Winklbaur, Ebner, Sachs, Thau, & Fischer, 2006). Research shows that smokers were significantly more likely to be men, and to have had an earlier age of onset and a greater number of previous hospitalizations. In addition, smokers received significantly higher doses of anti-psychotics medications than non-smokers(Goff, Henderson, & Amico, 1992).

In a cohort study over a period of 4 to 16 years, it was found that in a sample of 14,248 adolescents; those who smoked more than 10 cigarettes per day at initial evaluation were significantly more likely to be hospitalized for schizophrenia during the follow-up period(Weiser et al., 2004). Thus, either smoking might be used as self-medication of symptoms(Dalack, Healy, & Meador-Woodruff, 1998), or dysregulation in nicotinic transmission might be involved in the pathophysiology of schizophrenia(Weiser et al., 2004). Further research is needed in order to determine the role of nicotine dependence in schizophrenic patients(Winklbaur et al., 2006).

Cannabis and Schizophrenia

Cannabis is the most widely used illicit substance in the world, and the number of users has increased by 10% over the last decade worldwide(Rodrigo & Rajapakse, 2009a). The median lifetime rate of cannabis use disorder in 10 studies revealed 27.1% (IQR=12.2–38.5) and that cannabis use disorder was common in younger and first episodes samples as well as samples with a high proportion of males. (Koskinen, Lohonen, Koponen, Isohanni, & Miettunen, 2010) Various lines of evidence point to associations between cannabinoids and psychosis. These associations may be classified according to temporal sequence of the onset of psychosis to exposure, duration of psychosis, and clinical relevance of psychosis. (Radhakrishnan, Wilkinson, & Dâ€™Souza, 2014).

Firstly, converging lines of evidence suggest that early and heavy exposure to cannabis is associated with a higher risk for psychotic outcomes, including schizophrenia in later life(Arseneault et al., 2002; Radhakrishnan R, 2012) . Secondly, cannabinoids can induce immediate-onset psychotomimetic symptoms that do not persist beyond the period of intoxication. Finally, less well-characterized but perhaps clinically important, cannabinoids are also associated with acute episodes of psychosis that: (1) manifest immediately following

exposure, (2) last beyond the period of intoxication, and (3) require clinical intervention (Radhakrishnan et al., 2014).

A Swedish population based study found that cannabis abuse was strongly associated with later schizophrenia [odds ratio (OR) 10.44, 95% confidence interval (CI) 8.99-12.11]. After controlling for familial confounding and time interval between initiation of cannabis use and schizophrenia; this reduced the association between cannabis use and later schizophrenia to more modest levels (ORs of approximately 3.3 and 1.6 with 3- and 7-year temporal delays respectively). (Giordano, Ohlsson, Sundquist, Sundquist, & Kendler, 2014)

The Netherlands Mental Health Survey and Incidence Study (NEMESIS) revealed that, compared with persons not reporting cannabis use at baseline, persons using cannabis at baseline were 2.8 times more likely to manifest psychotic symptoms at follow-up, after controlling for age, gender, ethnic group, education, unemployment, single marital status, urbanity, and discrimination. A dose-response relationship was present, with the highest risk (adjusted OR=6.8) for the highest level of cannabis use.(Weiser & Noy, 2005a)

A number of cohort studies have now established a temporal relationship between cannabis exposure in adolescence or early adulthood, and later schizophrenia, with an odds ratio of over 2.0 (confidence intervals; 1.54–2.84) (Moore et al., 2007) Thus, emerging evidence suggests the crucial role of age of exposure to cannabis and the period of adolescence being identified as a period of exquisite vulnerability.(Radhakrishnan et al., 2014)

Cocaine and Schizophrenia.

Psycho stimulants use among patients with schizophrenia spectrum disorder is in the range 22.6% to 33.6%. The negative symptoms of schizophrenia and the sedating effects of antipsychotics may incline patients to use stimulant drugs with mood boost been cited as the drive for cocaine use(Dermatis, Galanter, Egelko, & Westreich, 1998). Unfortunately, schizophrenia patients who abuse cocaine have an increased risk of suicide, are less compliant with treatment, and have a higher hospitalization rate than patients without cocaine abuse(Sayers et al., 2005).

The increased risk of cocaine abuse in schizophrenia, can possibly be due to dysfunctional dopamine-dependent mechanisms that are common to both schizophrenia and cocaine use disorder. Based on the self-medication hypothesis, schizophrenia patients may use cocaine to counteract extrapyramidal side effects occurring as a result of antipsychotic drug treatment. Furthermore, cocaine may be used in order to overcome a defect in dopamine-mediated reward circuits(Sayers et al., 2005).

Alcohol and Schizophrenia.

Up to 60% of chronic schizophrenic patients are reported to abuse alcohol or drugs. This comorbidity raises the question whether one disorder is a consequence of the other. There are evidences that support the various hypothesis of substance use disorder in schizophrenia. The self-medication hypothesis is supported by research evidence that alcohol abuse more often followed than preceded the first symptom of schizophrenia. Hambrecht et al (1996) found that drug abuse preceded the first symptom in 27.5%, followed it in 37.9%, and emerged within the same month in 34.6% of the cases. Research has demonstrated an association between first-episode schizophrenia and substance use disorder, but a unidirectional causality is not supported(Hambrecht & Häfner, 1996a). However, there is no consistent beneficial effect demonstrated by alcohol use and evidence of deleterious effects is outstanding including increased propensity for crime(Rasanen et al., 1998).

Research further suggests that schizophrenia patients showed increased euphoric and stimulatory responses to alcohol. (D'Souza et al., 2006) These exaggerated responses to alcohol doses may contribute to the increased risk of diagnosis with Alcohol Use Disorder associated with schizophrenia.(D'Souza et al., 2006)

Solvent and Schizophrenia.

Solvent-induced psychosis has been clinically identified among patients suffering from dependence on volatile solvents and those in psychotic state due to chronic solvent use(Wada et al., 2005). Clinical observations suggest that "amotivational syndrome" may be a characteristic feature of patients suffering from solvent-induced psychosis. And that "solvent psychosis" is a discernible syndrome, and is distinctive from psychotic symptoms of typical schizophrenia(Wada et al., 2005).

Schneiderian first rank symptoms and maintenance of emotional contact are important for diagnosis of volatile solvent psychosis.(T, N, H, K, & T, 1997).

Subjects reporting any solvent use also had significantly increased risk of suicidal ideation and suicide attempt compared to non-users, with half of the solvent users reporting suicidal ideation and 30% reporting a history of suicide attempt. However, risk for suicidal ideation and suicide attempt among solvent users appeared to covary with presence of antisocial personality disorder, alcoholism, and secondary depression rather than being specifically associated with solvent use(Dinwiddie, Reich, & Cloninger, 1990).

There is an abundant literature on the adverse effects of solvents on the neurobehavioral performance, higher brain functions, and chronic solvent-induced encephalopathy. However, the occurrence of solvent-related schizophrenia is rare, with few reports on the link between solvent exposure and schizophrenia.

Hallucinogens.

Hallucinogens are a group of chemically heterogeneous compounds, that can induce altered states of consciousness characterized by intense alterations in mood, thought processes, perception, and experience of the self and environment otherwise seldom experienced except in dreams, meditative and religious exaltation, and acute psychoses(Vollenweider, 2001).

Hallucinogens appear to exert their psychedelic effects through their agonist or partial agonist activity at the serotonergic 5-HT$_{2A}$ receptor and other metabotropic serotonin receptors. Hallucinogen binding affects a wide range of intracellular signalling pathways, which are yet to be fully understood. They alter the serotonergic tone of brainstem raphe nuclei that project through the brain; they interact with receptors in the prefrontal cortex altering connectivity patterns and intracellular functioning; and they disrupt inhibitory control of sensory input via the thalamus to the cortex(Baumeister, Barnes, Giaroli, & Tracy, 2014).

The Transmethylation Hypothesis proposed that endogenous psychomimetics (methylated amines with hallucinogenic properties) produced by some inborn error of metabolism, were involved in the pathophysiology of schizophrenia. Evidence to support this theory include increased urinary excretion of Dimethyltryptamine (DMT) that is correlated to the presence of psychotic symptoms, especially in schizophrenia. And the enzyme responsible for the production of 2-phenylethylamine (aromatic L-amino acid decarboxylase), has been found to increase in activity following administration of LSD (Reynolds & Fletcher-Janzen, 2007).

However, hallucinogens share common features with dream like states and schizophrenia (Fischman, 1983). Studies on schizophrenia patients' shows relative 'hypofrontality' compared to normal. The hallucinogen mescaline has been found to produce a more 'hyper frontal' pattern, which, although different from chronic schizophrenia typical brain activity, it is similar to those of chronic schizophrenics in acute psychotic episodes. It seems from various comparisons that the closest similarities lie between hallucinogen-induced effects and the acute, early phases of schizophrenia, while the greatest contrasts are in chronic schizophrenics. Kleinman et al (1977) found that although there was considerable overlap in symptomatology between hallucinogens and schizophrenia, there was no single hallucinogen that corresponded well with schizophrenia. (Kleinman, Gillin, & Wyatt, 1977).

Khat and Schizophrenia.

Catha edulis (khat) is a plant grown commonly in the horn of Africa. The leaves of khat are chewed in order to attain a state of euphoria and stimulation. Many different compounds are found in khat including alkaloids, terpenoids, flavonoids, sterols, glycosides, tannins, amino acids, vitamins and minerals. The phenylalkylamines and the cathedulins are the major alkaloids which are structurally related to amphetamine(Wabe, 2011).

Khat chewing can induce two kinds of psychotic reactions. First, a manic illness with grandiose delusions and second, a paranoid or schizophreniform psychosis with persecutory delusions associated with mainly auditory hallucinations, fear and anxiety, resembling amphetamine psychosis(Kalix, 1988; Odenwald et al., 2005a; Wabe, 2011). Both of these psychotic reactions are exceptional and associated with chewing large amounts of khat (Wabe, 2011).

Research in Kenya found evidence of high prevalence of severely hazardous use patterns, comorbid psychiatric symptoms, and khat use as a self-medication of trauma-consequences among male Somali refugees in urban Kenyan refugee settlements.(Widmann et al., 2014)

Opiates and Schizophrenia.

A survey evaluated current and lifetime rates of psychiatric disorders in 533 opiate addicts in treatment. The most common diagnoses were major depressive disorder, alcoholism, and antisocial personality, and rates of chronic minor mood disorders and anxiety disorders were also found to be elevated in comparison with those found in a community population. In contrast, rates of schizophrenia and mania were very low and did not exceed those reported for the general population (Rounsaville BJ, Weissman MM, Kleber H, & Wilber C, 1982).

Research has shown that β-endorphin administration was associated with a statistically significant but not clinically obvious improvement in schizophrenic symptoms(Berger PA, Watson SJ, Akil H, & et al, 1980). Opioid antagonist have been shown to improve hallucination symptoms in schizophrenia(Mielke & Gallant, 1977; Watson, Berger, Akil, Mills, & Barchas, 1978).

Benzodiazepines and Schizophrenia.

In the last two decades, benzodiazepines they have been investigated as adjunctive agents to conventional antipsychotic drugs in the treatment of schizophrenia. Benzodiazepines may be effective in schizophrenia because stress is one mediator of relapse in these patients. In addition, inhibition of dopamine neurotransmission through γ-aminobutyric acid-enhancing activity may provide a direct antipsychotic effect. As monotherapy or adjuncts to antipsychotic agents, benzodiazepines produced antipsychotic effects in schizophrenia in approximately 50% of

controlled trials(Stimmel, 1996). A review of clinical trials concluded that the benzodiazepines doses used in schizophrenia were probably too small and inadequate to induce an ameliorating effect and that benzodiazepines may be promising candidates for antipsychotic drugs since, by facilitating GABAergic neurotransmission, they diminish dopaminergic neurotransmission(Jn, 1979). On the other hand, some research suggests that benzodiazepines are frequently used in the long-term in patients with schizophrenia despite a lack of open acknowledgement of this practice and a paucity of objective data to support its efficacy(Brunette, Noordsy, Xie, & Drake, 2003; Paton, Banham, & Whitmore, 2000).

Statement of the problem

Substance use disorder is a major public health concern worldwide. Few studies are available in the East Africa sub region on substance use in psychiatric patients. Research in Tanzania found the most frequently used substances among mentally ill patients were alcohol (59.3%), tobacco (38.6%), and cannabis (29.3%), while heroin and cocaine were least used (2.1% and 1.6%, respectively)(Hauli, Ndetei, Jande, & Kabangila, 2011b). In Kenya, CJ Othieno et al (2000) found substances commonly used in descending order of frequency were alcohol, tobacco, khat and cannabis(Othieno et al., 2000). Research literature has consistently shown substance abuse as a poor prognostic factor in schizophrenia patients associated with higher frequency of relapse, poor drug compliance, suicidality, violence and other comorbid medical conditions(Bühler, 2002; Cantor-Graae, Nordström, & McNeil, 2001b; Green, Noordsy, Brunette, & O'Keefe, 2008; Kovasznay et al., 1997; Wobrock et al., 2007). The dearth of research literature on this subject locally in Kenya reveals a need for further research. Therefore, this study will determine the association between substance abuse and schizophrenia among patients receiving out patient services at MTRH.

Study Rationale.

The dearth of research literature on substance abuse in schizophrenia patients specific to Kenya reflects an important knowledge gap that needs attention. Substance abuse is recognized as a major public health concern in Kenya(Hauli et al., 2011a; Mugisha, Arinaitwe-Mugisha, & Hagembe, 2003; Othieno et al., 2000). It is crucial to determine the association between substance use disorder and schizophrenia amongst patients in MTRH in order to inform management in the short and long term. The paucity of data on substance use among schizophrenia patients in Kenya is a knowledge gap crucial to policy formation and public education about substances of abuse.

Broad Objective

To determine the association between substance abuse and schizophrenia among patients receiving services at Mathari Teaching and Referral Hospital.

Specific Objectives

1. To determine the association between substance use disorder and schizophrenia.

2. To determine the association between cannabis use and schizophrenia

3. To determine the association between khat use and schizophrenia

4. To determine the association between alcohol use and schizophrenia

Research question.

What is the relationship between substance use disorder and schizophrenia?

Hypothesis

H1: There is an association between substance use disorder and schizophrenia.

H2: There is an association between cannabis use and schizophrenia.

H3: There is an association between Khat use and schizophrenia.

H4: There is an association between alcohol use and schizophrenia.

Chapter Three

Methods.

Study Design.

This is a case control study. Case-control studies identify subjects by outcome status at the outset of the research. Outcomes of interest in this case are whether the patient is diagnosed with schizophrenia (Cases) or patient does not have mental illness (Controls) and both cases and controls are coming from the same source population. Once outcome status is established, data about exposure to a risk factor or several risk factors will be collected retrospectively by interview. Case-control studies are well suited to investigate rare outcomes or outcomes with a long latency period like schizophrenia because subjects are selected from the outset by their outcome status. Case-control studies are quick, relatively inexpensive to implement, require comparatively fewer subjects, and allow for multiple exposures or risk factors to be assessed for one outcome(Song & Chung, 2010)

Study area description

The study will be conducted in Kenya's main Psychiatric referral hospital referred to as Mathari Teaching and Referral Hospital (MTRH). MTRH is lacated in Nairobi, the capital city of Kenya which occupies 696 km (270 sq miles). It is a multicultural urban area and the most populous city in East Africa, with a current estimated population of about 3 million (Central Bureau of Statistics, Population projections by province). 40% of the population of Nairobi are adults and the male female ratio of the adults is approximately 1:1.1. MTRH has existed since 1910, operating under various titles. Initially, it served the pressing needs of the colonial armed forces by admitting soldiers with mental illness during the first and second world wars. Currently MTRH is a 600 bed capacity facility with a high patient load. It provides treatment to over 1000 patients a month most of whom have severe mental illness. MTRH also provide health services to patients without a psychiatric disorders.

Study population

The study population is schizophrenia patients (cases) receiving outpatient services at MTRH and general medical patients without mental illness(controls) that are also receiving outpatient services at MTRH.

Target population

The target population is patients diagnosed with Schizophrenia that are currently mentally stable with insight and patients with physical disease but without a comorbid psychiatric illness.

Inclusion criteria

Study participants should be patients of age 18 years or older who suffer from schizophrenia, and similar patients who do not suffer from a psychiatric condition. The patient with a diagnosis of

schizophrenia must be mentally stable at the time of interview. The study participants must be receiving outpatient services at MTRH and must sign an informed consent form.

Exclusion criteria

These include patients below the age of 18yrs, unwillingness to participate or failure to sign a written consent, the existence of psychiatric conditions in controls and serious medical illness in cases. Inability to give informed consent due to active psychosis, lack of insight or mental retardation.

Sampling method.

In this case control study, cases and controls are selected by non-probabilistic method. A sample size 59 cases and 59 controls matched by age and gender will be selected in a 1:1 ratio.

Definition of Cases.

Schizophrenia patients who are mentally stable and receiving outpatient services at MTRH.

Definition of Controls.

Physical ill patients without psychiatric disorder who are receiving outpatient services at the general clinic at MTRH.

Sample size determination.

The prevalence of substance abuse among patients is 25.0%(Ndetei et al., 2009)and among schizophrenia patients is about 50%(Hauli et al., 2011a; K. T. Mueser et al., 1990).

$$n = \frac{r+1}{r} \frac{p'(1-p')(Z\beta + Z\alpha)^2}{(p1-p2)^2}$$

$n = sample\ size.$

$r = ratio\ of\ cases\ to\ controls = 1$

$p'(1-p') = variance$

$Z\beta = desired\ power = 0.84$

$Z\alpha = level\ of\ satistical\ significance = 1.96$

$p1-p2 = the\ difference\ in\ proportion$

$$p1 = proportion\ of\ schizophrenia\ that\ abuse\ substance = 50\%$$

$$p2 = proportion\ of\ medical\ patients\ that\ abuse\ substance = 25\%$$

$$p' = \frac{p1 + p2}{2} = \frac{0.5 + 0.25}{2} = 0.375$$

$$n = 2 \times 0.375\ (1\text{-}0.375)(0.84+1.96)^2 \div (0.50\text{-}0.25)^2$$

$$n = 59$$

Thus, 59 cases and 59 controls.

Data collection instruments.

Researcher designed sociodemographic questionnaire.

This questionnaire will capture data on socio-demographic variables which include age, sex, education, nationality, income, duration of illness and previous medical and psychiatric history.

The ASSIST

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.0) will be used in this study to screen for substance abuse among patients with schizophrenia. This instrument aims to screen for problematic or risky substance use (available versions:http://www.who.int/substance_abuse/activities/assist/en/index.html). It consists of eight questions that cover tobacco, alcohol, cannabis, cocaine, amphetamine type stimulants, inhalants, sedatives, hallucinogens, and opiates.

In several validation studies ASSIST has shown good internal consistency (αs=.68-.88), good concurrent validity (r=.41-.76; ps<.001) and discriminatory ability(Group, 2002; Gryczynski et al., 2014; Humeniuk et al., 2008; "WHO | The ASSIST project - Alcohol, Smoking and Substance Involvement Screening Test," n.d.). ASSIST accurately identified the above substances. Receiver operating characteristic (ROC) analysis was used to establish cut-off scores with suitable specificities (50-96%) and sensitivities (54-97%) for most substances.(Humeniuk et al., 2008)In a validation study among adolescents Gryczynski et al (2014) found high validity with (sensitivities=95%-100%; specificities=79%-93%; area under the curve [AUC]=.90-.94)(Gryczynski et al., 2014)

Mini International Neuropsychiatric Interview (MINI).

The Mini International Neuropsychiatric Interview (MINI) is a short diagnostic structured interview (DSI) developed in Europe and the United States to explore 17 disorders according to

Diagnostic and Statistical Manual (DSM)-III-R diagnostic criteria and the ICD10(Sheehan et al., 1997; Pinninti, Madison, Musser, & Rissmiller, 2003; Lecrubier et al., 1997). It is fully structured to allow administration in about 15 to 20mins even by non-specialized interviewers(Pinninti et al., 2003; Sheehan et al., 1997). It screens for Major Depressive Disorder, Dysthymic disorder, suicidality, Mania, Panic Disorder, Agoraphobia, Social phobia, specific phobia, Obsessive Compulsive Disorder, Generalize anxiety disorder, alcohol dependence, alcohol abuse, Drug dependence, drug abuse, Psychotic disorders, Anorexia Nervosa, Bulimia, Post Traumatic Stress Disorder, Antisocial personality disorder.

The MINI plus is an adaptation and expansion of the MINI that can capture up to 23 psychiatric diagnoses. It features questions of disorder sub-typing and chronology. In addition to the above the MINI plus captures somatization disorder, conduct disorder, attention deficit / hyperactivity disorder, adjustment disorder, premenstrual psychosis and mixed anxiety depressive disorder.

In order to keep it short it focuses on the existence of current disorders. For each disorder, one or two screening questions rule out the diagnosis when answered negatively. The mini plus demonstrates good sensitivity, specificity, validity and reliability in the assessment of psychiatric disorders(Lecrubier et al., 1997; Muramatsu, 2007; Pinninti et al., 2003; Sheehan et al., 1997)

Reruitment procedures.

The study participants will be recruited from two different population; Cases and Controls. Cases will be recruited from patients with a diagnosis of Schizophrenia who are mentally stable and receiving outpatient services at MTRH. Controls will be physically ill patients who do not meet criteria for a psychiatric diagnoses and who are receiving outpatient services at MTRH. Study participants will be recruited from MTRH during normal outpatient clinic by means of a convenient sampling method based on sequence of arrival. Those who arrive at the clinic first will be approached first and so on. Potential participants will be recruited through the following steps:

Invitation and Screening for exclusion criteria in order to determine suitability for the study: This will include informed consent in the presence of a care giver and a social worker provided by MTRH to supervise research conducted by students. Mental state examination will be conducted prior to signing informed consent. This is to further ensure patients are not abused or taken advantage of due to their vulnerability as people with psychiatric disorder.

Mental state examination will be conducted on potential participants. The presence of any psychopathology may undermine the capacity to give informed consent and this present study is focusing on schizophrenia patients with normal mental state examination and not those with

active psychopathology. Therefore, those with abnormal mental state will be counseled and their psychopathology treated at MTRH through the normal clinic for which the patient is visiting.

Study participants with a normal mental state examination will be allowed to proceed to sign inform consent. Those who sign the informed consent will be asked to volunteer to undergo screening with MINI plus and ASSIST and answer a researcher designed socio-demographic questionnaire.

Using MINI plus, participants who meet criteria for a previous diagnosis of schizophrenia will be recruited as cases; and those participants who do not meet criteria for diagnosis of psychiatric disorder but who have physical illness will be recruited as controls. ASSIST will be applied to both the cases and controls to determine their substance use pattern.

Data collection procedures.

Data for this present study will be collected at Mathari Teaching and Referral Hospital (MTRH) by the principal investigator during the period of May to June and during normal clinic hours between 8:00 am and 5:00 pm week days. Study participants who meet inclusion criteria will be recruited into the study. Initially a mental state examination will be done to establish mental status and fitness to give informed consent. Study participants who show a normal mental state will be asked to sign an informed consent and subsequently absorbed into the study. Cases and Controls will be ask to undertake screening with the MINI plus tool in order to confirm or rule out the presence of schizophrenia and any other mental disorders. Subsequently the cases, which are, those that meet criteria for diagnosis of schizophrenia but are mentally stable; and controls which are those that do not meet MINI plus criteria for psychiatric disorder/mental illness but are physically ill, will be asked to complete a researcher designed socio-demographic questionnaire and ASSIST. The cases and the controls will be matched by age and sex. The research tools will be serially numbered and coded such that study participants do not have to write their names on questionnaire in order to ensure confidentiality. Debriefing sessions will be carried out with each study participant.

Patients that need intervention of substance use disorder will benefit from brief intervention and any other treatment. On completion of interview and upon establishment of diagonosis of substance use disorder, patients will be referred to the psychotherapy clinic in MTRH where brief intervention is routinely done by psychologist on duty. Brief intervention is an intervention for alcohol use disorder recommended by WHO. It focuses on real or potential substance use problem and motivates behavior change. Brief interventions have become increasingly valuable

in the management of individuals with alcohol-related problems("WHO | Screening and brief intervention for alcohol problems in primary health care," n.d.) and it has been shown to be effective for substance use disorder.(Moyer, Finney, Swearingen, & Vergun, 2002; Poikolainen, 1999; "Screening and Behavioral Counseling Interventions in Primary Care To Reduce Alcohol Misuse," 2004).

Flow chart

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┌─────────────────────────────┐
│ MEET PATIENT AT CLINIC      │
└─────────────────────────────┘
         │
         ▼                    ┌──────────┐
┌─────────────────────┐  ──▶ │ Applies  │ ──▶ ┌─────────────────────────┐
│ EXCLUSION CRITERIA  │      └──────────┘     │ THANK AND EXCLUDE.      │
│                     │                       │ Ensure they receive     │
│                     │                       │ treatment through the   │
│                     │                       │ MTRH outpatient clinic  │
│                     │                       │ without prejudice.      │
└─────────────────────┘                       └─────────────────────────┘
         │
         ▼
┌──────────────────┐
│ Do not apply     │
└──────────────────┘
         │
         ▼                   ┌──────────┐
┌─────────────────────────┐ │ Declines │
│ EXPLAIN AND OBTAIN      │ └──────────┘    ┌─────────────────────────┐
│ CONSENT                 │                 │ EXCLUDE and ensure      │
│                         │                 │ patient receives        │
│                         │                 │ treatment for which     │
│                         │                 │ they have come          │
│                         │                 │ without prejudice       │
└─────────────────────────┘                 └─────────────────────────┘
         │
         ▼
┌──────────────────┐
│ Sign consent     │
└──────────────────┘
         │
         ▼
┌─────────────────────────────┐
│ BRIEFING OF PARTICIPANT     │
└─────────────────────────────┘
         │
         ▼
┌─────────────────────────────┐
│ ADMINISTER STUDY INSTRUMENTS│
└─────────────────────────────┘
         │
         ▼                              ┌─────────────────────────────┐
┌─────────────────────────────┐        │ BOOK CLINIC DATE FOR PATIENT│
│ TERMINATE THE INTERVIEW AND │ ─────▶ │ FOLLOWUP WHERE APPLICABLE   │
│ DEBRIEF THE PARTICIPANT     │        └─────────────────────────────┘
└─────────────────────────────┘                      │
         │                                            │
         ▼                                            │
┌─────────────────────────────┐                       │
│ THANK THE PARTICIPANT       │                       │
└─────────────────────────────┘                       │
         │                                            │
         ▼                                            │
┌─────────────────────────────┐ ◀────────────────────┘
│     DATA ENTRY              │
└─────────────────────────────┘
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Quality assurance procedures

The researcher is trained on human subject research ethics and the application of all research tools used in this study by supervisors. Emphasis will be placed on ensuring study participants fully understand the questions being asked and questionaires will be accurately completed. There will be no audio taping or photographing of the patients. Mental state examination will be performed to ensure participants have insight and to rule out possible delusions that may alter the quality of results. Data entry will follow a double entry procedure in order to minimize error.

At the end of each interview session the principal investigator will inspect the the filled questionnaire for completeness and validity of responses prior to storing them safely in preparation for analysis.

Data management

Data entry and analysis will be done using SPSS for windows version 17.0 and stored into a password protected database. The questionaires use for data collection will be locked in a cabinet with access controlled by the principal investigator. Data entered in SPSS will be procted with password to which only the principal investigator is privy. Each questionnaire will have a clinic code number of the participant. The sole purpose of the code will be to enable the researcher only to provide necessary intervention like referral if need be while confidentiality is ensured.

There will be no use of secondary data without further ethical approval by the Research and Ethics Committee.

Data Analysis.

Descriptive statistics will be carried out for discrete variables. Continuous variables will be summarized using measures of central tendency and dispersion with 95% confidence interval. The association between substance abuse and schizophrenia will be determined using adjusted odds ratio at 95% confidence level. Logistics regression model will be developed with substance abuse as the dependent variable and age, sex, marital status, income, family history of psychiatric disorder and family history of substance use disorder as independent variable.

Ethical Considerations

Ethical approval to conduct this study is requested from Ethics and Research Committee of University of Nairobi, Kenyatta National Hospital. A written authority and clearance to conduct this study has been obtained from MTRH. MTRH also monitors human subject research conducted within the facility to ensure the patients' rights are not violated. The researcher will consult with staff of MTRH to ensure high ethical standards are maintained and to generate the necessary support required for the smooth conduct of the research. Informed written consent will be requested from each patient before absorption into the study and participants are at liberty to

opt out of the study at any time during the process without consequences. All information obtained from participants will be confidential and only used for the purpose of this study. Names will not be recorded and filled questionaires will be kept in locked cabinet with access controlled by the principal investigator. Data inputed into computer will be protected with a password that only the principal investigator is privy to.

Potential Benefits to Study Participants.

Study participants will benefit from the diagnostic service and those found positive for psychiatric disorders will be managed accordingly. Counseling service before, during and after interview will also be offered to participants in the event they need it. Counseling will be provided by the principal investigator as well as any pharmacological intervention required. Results from this study can help patients, caregiver, psychologists and clinicians to better understand the association between substance use disorder and schizophrenia. Patients found to have a diagnosis of Substance Use Disorder will be managed with Brief Intervention techniques, which is, effective in substance use disorder(Moyer et al., 2002; Poikolainen, 1999; "Screening and Behavioral Counseling Interventions in Primary Care To Reduce Alcohol Misuse," 2004). This intervention has potential to help research participants improve on their substance use problems and in case of schizophrenia patients, it can also improve prognosis.

Potential harmful effects to study participants.

The researcher has not identified any harmful effect of this research. However, it is possible that the study participants might feel embarrassed or uncomfortable as they give out information about substance use disorder and mental illness or they may experience embarrassment if some information is accidentally released. However, confidentiality measures will aim to prevent this. In case information is inappropriately released or there is psychological disturbance the situation will be explained, psychological support and reassurance on confidentiality will be offered.

Confidentiality

Research participants' identity will be kept confidential. In addition, participants will be assigned codes and their names or any other personal identifier will not be used in any reports or publications arising from this study. The completed questionnaires will be stored safely and access will be control by the principal investigator. The data collected from this study will be entered in computers and protected with antivirus and pass word in order to provent unauthorized access, loss or modification.

Compensation

Research participants will not be paid to participate in this study. However, treatment received for any condition diagnosed as a result of this study will be free.

Study Limitations.
1. Selection bias due to the sampling method.

2. The sample is selected by non-probabilistic means which restricts generalizability.
3. Recall bias is highly likely due to nature of design.

Time Frame

Activity	Time line
Proposal development	October 2014 to January 2015
Approval by Department of Psychiatry	Feburuary, 2015
Send Proposals to Ethics Committee	Febuary, 2015
Data Collection	May, 2015
Data Analysis and write up	June, 2015
Complete Research Document and submission.	June 2015

Budget

No	Item	Cost (KSH)
1.	Proposal writing, printing and photocopying * 2	10,000
2.	Data collection	5,000
3.	Data entry and analysis	33,600
4.	Final dissertation	7,500
5.		
Total cost		**56,100**

Budjet justification

Item 1-Proposal writing, printing and photocopying (This will be done twice, before and after correction from ethics).
   a. Proposal writing was done by the principal investigator and not costed.
   b. Printing of 100 pages @ 10 ksh= 1000 ksh
   c. Photo copy of proposal, 200 pages @ 5ksh=1000ksh
   d. Binding 3 proposal =3000 ksh
Item 2- Data collection. This will be done by principal investigator
   a. Transportation and lunch for 10 days= 5,000ksh
Item 3- Data entry and analysis. This will be done by data entry clerk.
   a. 108 data set @ 200 ksh per set=21,600ksh
   b. Data analysis=12,000 ksh
Item 4- Printing and Binding of final dissertation
   a. Printing of about 150 pages @ 10 ksh = 1500 * 3=4,500
   b. Binding of 3 dissertation at 1000 per copy= 3000 ksh

RESULTS

Table 1: Age characteristics of the study participants

AGE

	N	Mean	SD	S.E	95% C.I
Schizophrenia	60	33.55	9.86	1.27	31.00-36.10
General medical condition	60	33.43	9.33	1.20	31.02-35.84

The mean age of patients with a diagnosis of schizophrenia was 33.55 and for patients with general medical condition was 33.43 years. There was no statistically significant difference in the mean age between the cases and controls.

Figure 1: Box plot of age of the participants
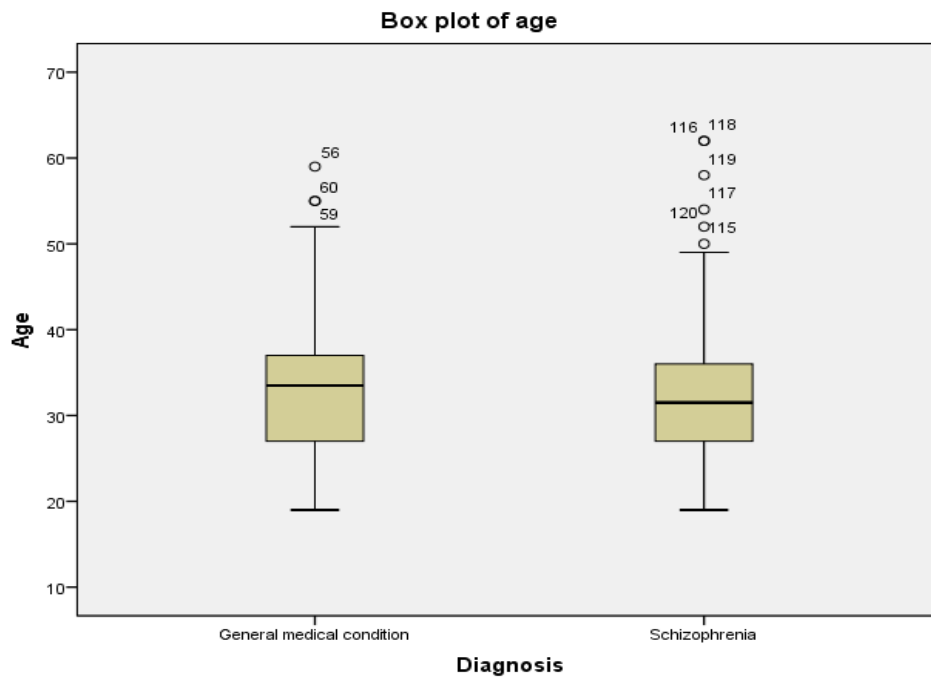
The box plot revealed the age distribution was balanced among the two groups of study participants.

Figure 2: Chart showing the Age range and diagnosis of the respondents
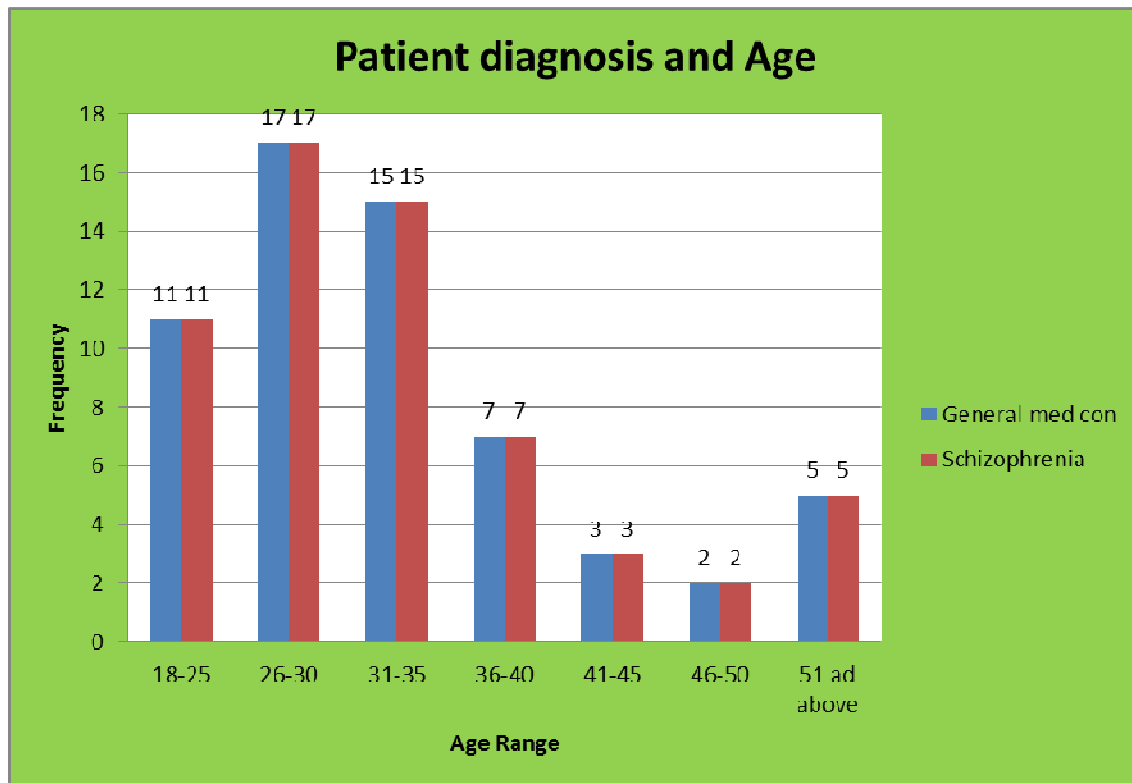
71.67% of the participants were aged between 18 and 35 years in both groups.

Figure 3: Chart showing the gender and diagnosis of the respondents
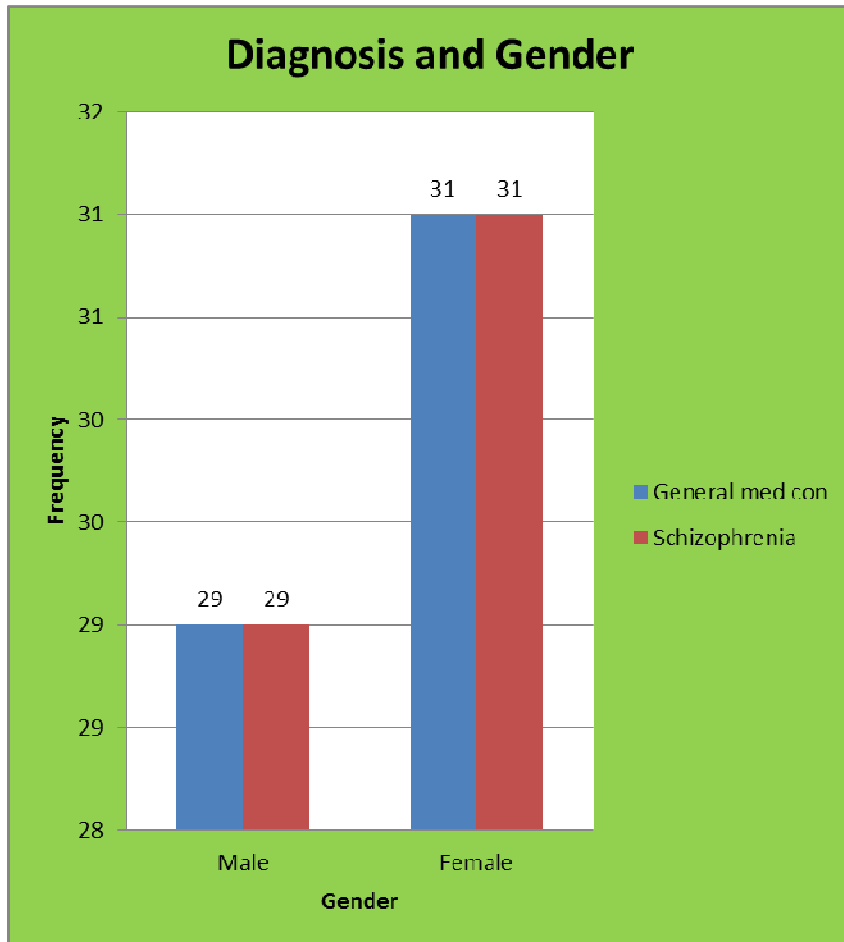
There was a balance of gender of males (48.3%) and Females (51.7%).

Figure 4: Chart showing the income and diagnosis of the respondents
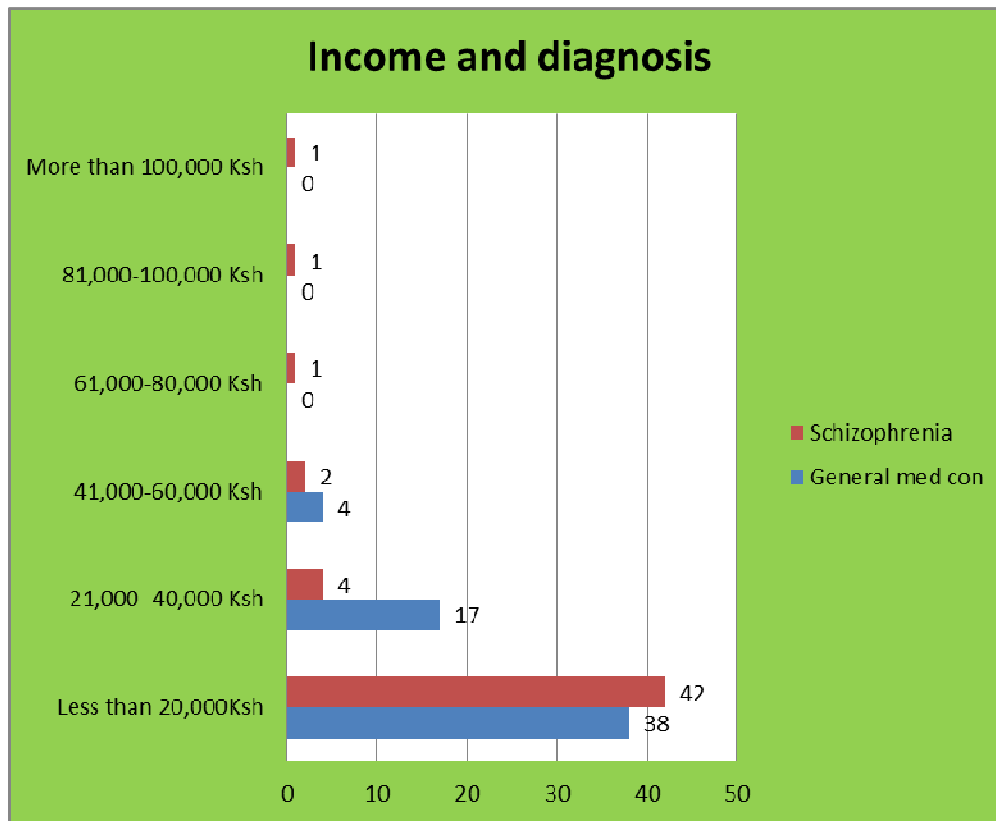
2/3 rd (66.67%) of participants earned less than 20,000 Ksh a month. Majority of study participants earning 61000 and above were schizophrenic patients.

Figure 5: Chart showing the marital status and diagnosis of the respondents
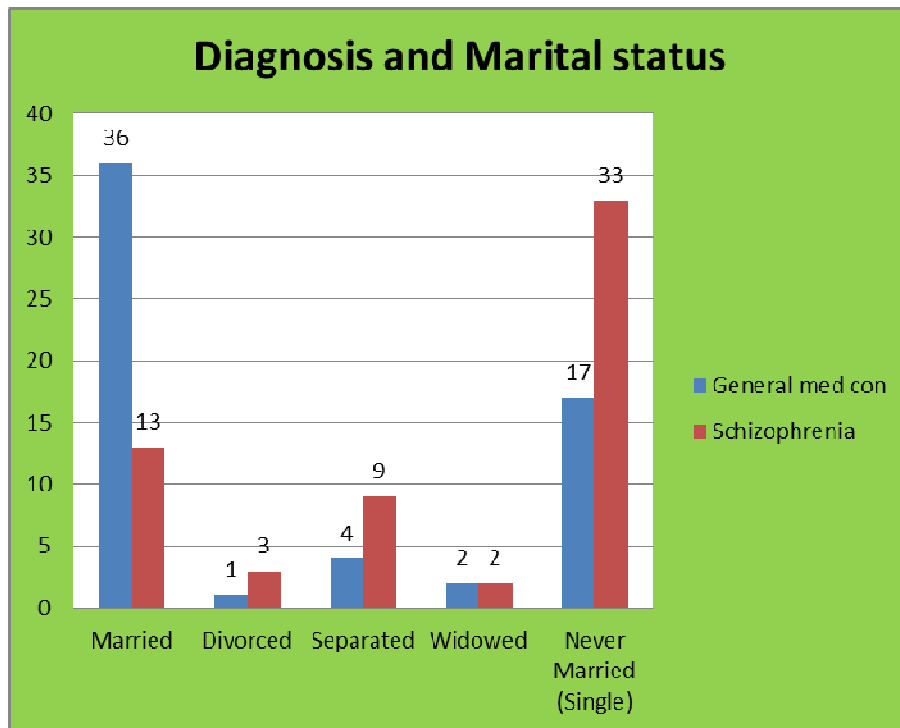
Majority of the participants who were married were the general medical patients and majority of those who were never married were the schizophrenic patients. There was a balance among the widowed in both cases and controls and schizophrenia patients were slightly more in the divorced and separated category.

Figure 5: Chart showing the family history of psychiatric disorder and diagnosis of the respondents
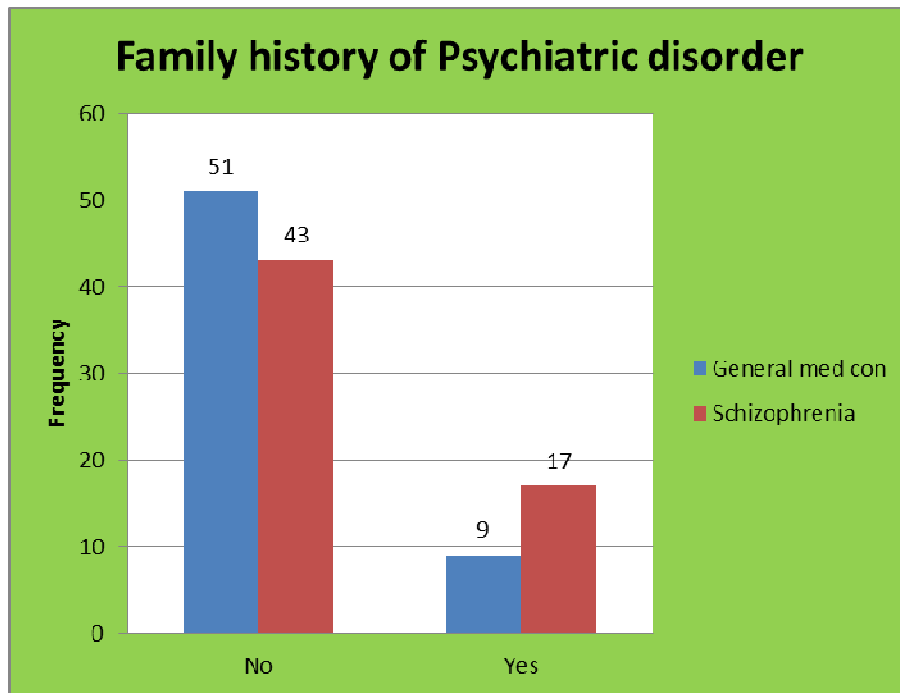
65% of those who reported having had family history of psychiatric condition were the schizophrenic patients.

Figure 6: Chart showing the family history of substance use and diagnosis of the respondents.
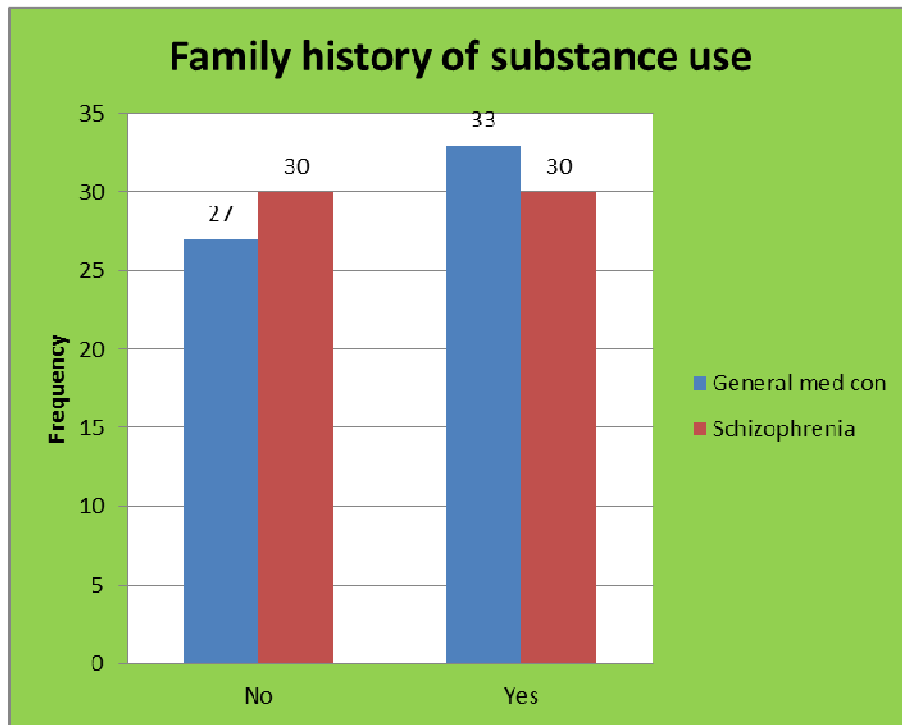
The controls had higher proportion of family history of substance use compared to the schizophrenia patients.

Table 2: Correlation between schizophrenia and Substance use

	1	2	3	4	5	6
1) **Schizophrenia**	1					
2) **Tobacco**	.303**					
3) **ALCOHOL**	.180*					
4) **Cannabis**	.134					
5) **Miraa**	.314**					
6) **SUD**	.284**					

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The relationship between Schizophrenia and Tobacco, Alcohol, Cannabis, Miraa and substance use in general was investigated using Pearson's product moment correlation coefficient (Table 2). There was a statistically significant positive correlation with tobacco, alcohol, miraa and substance use r=0.303, 0.180, 0.314 and 0.284 respectively with high levels of drug use associated with Schizophrenic patients. There was also a positive correlation between cannabis use and schizophrenia; however, it was not statistically significant.

Table 3: Association of selected variables with the patient diagnosis

Selected variables	Diagnosis		Total	Chi- square	*p*-value
	General medical condition (n=60)	Schizophrenia (n=60)			
Tobacco					
0-3 No intervention	47(78.3)	34(56.7)	81(67.5)	8.401	0.015
4-26 Receive brief intervention	13(21.7)	22(36.7)	35(39.2)		
27+ More intensive treatment	0(0)	4(6.7)	4(3.3)		
Alcohol					
0-3 No intervention	44(73.3)	37(61.7)	81(67.5)	5.216	0.074
4-26 Receive brief intervention	13(21.7)	12(20)	25(20.8)		
27+ More intensive treatment	3(5)	11(18.3)	14(11.7)		
Cannabis					
0-3 No intervention	55(91.7)	51(85.0)	106(88.3)	1.302	0.521
4-26 Receive brief intervention	4(6.7)	7(11.7)	11(9.2)		
27+ More intensive treatment	1(1.7)	2(3.3)	3(2.5)		
Miraa					
0-3 No intervention	52(86.7)	35(58.3)	87(72.5)	12.084	0.002
4-26 Receive brief intervention	5(8.3)	16(26.7)	21(17.5)		
27+ More intensive treatment	3(5)	9(15.0)	12(10.0)		
SUD					
Yes	24(40)	19(68.3)	65(54.2)	9.701	0.002
No	36(60)	19(31.7)	55(45.8)		

Association between selected variables was investigated using chi square at 95% confidence level. 78.3% (n=47) of controls and 56.7% (n=34) of cases reported no tobacco use. 36.7% (n=22) of cases and 21.7% (n=13) of the controls qualified for brief intervention for tobacco use. All the patients who qualified for intensive treatment were schizophrenia patients. There was a statistically significant association between the patient diagnosis and tobacco use ($\chi2=8.401$, p=0.015)

73.3% (n=44) of controls and 61.7% (N=37) of the cases reported no alcohol use. 21.7% (n=13) of controls and 20% (n=12) of cases qualified for brief intervention for alcohol use. Majority of the patients (78.6%) that qualified for more intensive treatment on alcohol were schizophrenic patients. There was no significant association between alcohol use and patient diagnosis $\chi2=5.216$, p=0.074).

91.7% (n=55) of the controls and 85% (n=51) of cases reported no cannabis use. 6.7% (n=4) of controls and 11.7% (n=7) of cases qualified for brief intervention for cannabis use. 1.7% (n=1) of controls and 3.3% (n=2) of cases qualified for more intense treatment on cannabis related problems. There was no significant association between cannabis and patient diagnosis ($\chi2=1.302$, p=0.521).

86.7% (n=52) of controls and 58.3% (n=35) of cases reported no miraa use. 8.3% (n=5) of controls and 26.7% (n=16) of cases qualified for brief intervention for miraa; while, 5.3% (n=3) of controls and 15% (n=9) of cases qualified for more intensive treatment for miraa. There was a statistically significant association between miraa use and patient diagnosis ($\chi^2=12.08$, p=0.002).

On assessment of substance use in general, 68.3% of cases and 40% of controls were substance users. There was a statistically significant association between substance use and patient diagnosis ($\chi^2=9.70$, p=0.002).

Table 4: Bi-variate logistic regression reporting odds ratio and confidence interval

	P-value	O.R	95% C.I
Tobacco	0.002	1.08	1.028-1.134
Alcohol	0.105	1.027	0.995-1.060
Cannabis	0.16	1.053	0.980-1.132
Mirraa	0.001	1.063	1.024-1.104
SUD	0.002	3.237	1.529-6.853

Schizophrenic patients had statistically significant grater odds to use tobacco (OR=1.08; C.I. = 1.028-1.134), miraa (OR=1.053; C.I. 1.024-1.104) and substances in general (OR=3.237; C.I. 1.529-6.853) as compared to controls.

The odds of using alcohol (OR=1.027; C.I. 0.995-1.060) and cannabis (OR=1.053; C.I. 0.980-1.132) were not statistically significant.

Table 5: Multivariate logistic regression reporting adjusted odds ratio and confidence interval

Variable	β	S.E	P-Value	A. O.R	95% C.I. Lower	Upper
Gender						
Male	2.23	0.50	0.00001	9.27	3.45	24.86
Female R.C				1		
History of psychiatric disorder						
No	-0.85	0.58	0.141	0.43	0.14	1.32
Yes R.C				1		
History of SUD						
No	-1.12	0.49	0.021	0.32	0.12	0.85
Yes R.C				1		
Diagnosis						
General medical condition	-1.42	0.51	0.005	0.24	0.09	0.66
Schizophrenia R.C				1		
Age	-0.05	0.03	0.062	0.95	0.91	1.00
Education						
Less than primary	0.03	1.36	0.982	1.03	0.07	14.76
Primary	1.12	0.71	0.114	3.06	0.76	12.25
Secondary	1.51	0.57	0.008	4.51	1.48	13.76
Tertiary R.C				1		

Table 5 shows the regression results examining the association between hypothesized factors and substance use in the patients at MTRH.

Being male is associated with substance use (A.O.R. = 9.27; C.I 3.45-24.86) the odds of using substance is 9.27 times higher than the odds for an individual who is female once all controls are included in the model. Patients with family history of substance use had 3.1 times greater odds to use substances than individuals who has no history of substance use (A.O.R. = 0.32; C.I 0.12-0.85).

A diagnosis with schizophrenia increases the odds of being a substance user 4.2 times compared to an individual who is suffering from general medical condition. Highly educated and less educated patients are less likely to use substances compared to those who have middle level education. Those with secondary education were 4.5 times (A.O.R. =4.51; C.I. 1.48-13.76), Primary education (A.O.R. =3.06; C.I 0.76-12.25), less than primary education (A.O.R. =1.03; C.I 0.07-14.76) more likely to use substance than those with tertiary education.

Discussion

Our study is the first case control study to analyses substance use disorder among schizophrenia patients and general medical patients in MTRH. We determined the association between substance use disorders in general and schizophrenia using the WHO ASSIST. In addition, we specifically analyse the association between alcohol, cannabis, miraa and schizophrenia.

The case and ontrols were matched by age and sex. The mean age of 33.55years of schizophrenia patients is consistent with other studies among schizophrenia patients(Chakraborty, Chatterjee, & Chaudhury, 2014b) Our study had slightly higher proportion of females than males. Previous epidemiologic studies in mathari by Ndetei et al found a higher proportion of males than females as in patients (Ndetei et al., 2008). This change could be due to the fact that this present study concentrated on out patients. The demographics found at the general out patient were predominantly females.

Two-third of the study participants earned less than 20,000 ksh a month. Thus, most of our study participants were from low socioeconomic status. All those who earned more than 60,000 ksh are schizophrenia patients. Contrary to the social class hypothesis of schizophrenia that suggest schizophrenia is associated with low socioeconomic status our finding is more inclined to a social drift theory since all the paticipants in the high income bracket were schizophrenia patients (Goldberg & Morrison, 1963). However, our sample size was too small to draw a conclusion. Goodman et al reported in 1983 that low socioeconomic status was not related to the prevalence of schizophrenia among those living in households or among first-admission patients living in households.(Goodman, Siegel, Craig, & Lin, 1983). Our results also indicate that schizophrenia patients with insight can engage in economically productive activities.

The grater proportions of schizophrenia patients were never married or single. This suggests the effect of the symptoms of schizophrenia on the individual's ability to retain marital relationship. Farina et al similarly found Schizophrenia patients are less likely to be married than people of the same sex and age in the US population.(Farina, Garmezy, & Barry, 1963)

We also found about two-third of those who reported family history of mental illness are schizophrenia patients under pining the genetic basis of mental disorders. (Reus, 1987) However, despite the fact that greater proportions of schizophrenia patients were positive for substance use disorder compared to controls, they had lower proportion of substance use in their families. The may suggest that genetic and environmental alone may not explain the higher levels of substance use in schizophrenia. (Reus, 1987)

Substance use in general

On assessment of substance use in general, 68.3% of cases and 40% of controls were substance users. There was a statistically significant association between substance use and patient diagnosis (χ^2=9.70, p=0.002). Our findings is consistent with other research findings that suggest a prevalence of around 50% or higher (Bellack & DiClemente, 1999). Other research findings have demonstrated an association between first-episode schizophrenia and substance abuse, but a unidirectional causality is not supported, nor is a specific psychotic disorder in comorbid cases.(Hambrecht & Häfner, 1996b)

Our finding continues to inform the question whether one disorder is the consequence of the other or it is a conincidence because of shared environmental factors. Hambrecht et al (1996) found that drug abuse preceded the first symptom in 27.5%, followed it in 37.9%, and emerged within the same month in 34.6% of the cases. Owing to sample size and design limitation, we cannot

draw conclusion of the direction and causality, however, our findings lend credence to the debate that substance use is an important consideration in the management of schizophrenia.

Tobacco

43.3 % of schizophrenia patients were positive for tobacco use vs 21.7% of controls. All the patients who qualified for intensive treatment were schizophrenia patients. There was a statistically significant association between the patient diagnosis and tobacco use ($\chi2=8.401$, p=0.015). This finding is consistent with several reported findings on the association between tobacco use and schizophrenia. ("Prevalence of smoking among psychiatric outpatients," 1986) In a case control study to determine the use of drugs, alcohol and tobacco by people with schizophrenia drawn from rural, suburban and urban settings, and to compare use by general population control subjects; Mccreadie et al (2002) found that problem use of drugs and alcohol by people with schizophrenia is greater than in the general population, but absolute numbers are small and that tobacco use is the greatest problem. (McCREADIE, 2002) Research has further shown that more than 70% of patients with chronic schizophrenia are nicotine dependent (Winklbaur et al., 2006). In a cohort study over a period of 4 to 16 years, it was found that in a sample of 14,248 adolescents; those who smoked more than 10 cigarettes per day at initial evaluation were significantly more likely to be hospitalized for schizophrenia during the follow-up period(Weiser et al., 2004). Similarly, de Leon et al (2005) in a world wide meta analysis concluded people who are going to develop schizophrenia have risk factors that make them more vulnerable to start smoking.(de Leon & Diaz, 2005) Thus, either smoking might be used as self-medication of symptoms(Dalack et al., 1998), or dysregulation in nicotinic transmission might be involved in the pathophysiology of schizophrenia(Weiser et al., 2004).

Alcohol

38.3% of schizophrenia patients and 26.7 % of controls use alcohol. Among those who qualify for more intensive treatment for alcohol use, 78.6% were schizophrenic patients. However, there was no significant association between alcohol use and patient diagnosis ($\chi2=5.216$, p=0.074).

Despite the higher prevalence of alcohol use in schizophrenia patients, there is no consistent beneficial effect demonstrated by alcohol use and evidence of deleterious effects is outstanding including increased propensity for crime(Rasanen et al., 1998). Research further suggests that schizophrenia patients showed increased euphoric and stimulatory responses to alcohol and that these exaggerated responses to alcohol doses may contribute to the increased risk of diagnosis with Alcohol Use Disorder associated with schizophrenia.(D'Souza et al., 2006)

Cannabis

15% of schizophrenia patients and 8.3 % of controls were positive for cannabis use; and there was no significant association between cannabis use and patient diagnosis (χ2=1.302, p=0.521). Reports on the association between cannabis use and schizophrenia are conflicting.

Contrary to our findings, studies with more robust design have found that cannabis abuse was associated with schizophrenia with odds in the range of 1.5 to 12.0 (Arseneault, Cannon, Witton, & Murray, 2004; Giordano, Ohlsson, Sundquist, Sundquist, & Kendler, 2015; Weiser & Noy, 2005b). On the other hand, equally robust longitudinal studies and metaanalysis report that there is no association or there is lack of sufficient evidence to support or refute an association between cannabis use and schizophrenia.(Rathbone, Variend, & Mehta, 2008)

Rodrigo et al (2009) concluded that despite new evidence, the exact relationship between cannabis and Schizophrenia spectrum disorder is unclear. There is no firm evidence that cannabis causes SSD. The evidence for the argument that schizophrenic patients are attracted to cannabis is also not strong. Thus, the likely explanation is that cannabis use and psychosis proneness may have synergistic effects in a vulnerable minority (Rodrigo & Rajapakse, 2009b). In addition, there are indications that age of cannabis expose has a critical role to play and the period of adolescence may be a period of heightened vulnerability.(Radhakrishnan et al., 2014)

Miraa/ Khat

13.3 % of controls and 41.7 % of schizophrenia patients reported khat use. There was a statistically significant association between miraa use and patient diagnosis (χ^2=12.08, p=0.002).

A study conducted in Somalia also indicated a possible association between khat use and psychosis. It was found that 83% participants with mental disability were positive for khat use and psychotic symptoms were the most prominent manifestations of their psychiatric illness. On average, cases with psychotic symptoms had started to use khat earlier in life than matched controls. There was significant evidence of a relationship between khat use and psychotic symptoms (Odenwald et al., 2005b). Similarly, in an analysis to determine *Catha edulis* chewing effects on treatment of paranoid schizophrenic patients, Kotb El-Sayed et al (2015) concluded that Khat chewing in schizophrenic patients is contraindicated because it aggravates the disease symptoms, attenuates all used treatment medications, and deteriorates all biochemical markers of the patients.(Kotb El-Sayed & Amin, 2015). Our present study is the first case control study among patients in MTRH to determine the association between khat use and schizophrenia and our findings are consistent with other findings in the east Africa subregion which suggest a significant association between the two condition.

Predictors of substance use in MTRH

Multivariate analysis revealed age, gender, family history of substance abuse, family history of psychiatric disorder, level of education were statistically significant determinants of substance use among patients receiving services in MTRH. Our findings are in tandem with several other research findings on predictors of substance use(Galea, Nandi, & Vlahov, 2004) Goff et al showed that patients diagnosed with schizophrenia who smoke were significantly more likely to be men, and to have had an earlier age of onset of illness.(Goff et al., 1992) Kim T et al (1990) showed demographic characteristics that are strong predictors of substance use include gender, age, race, and socioeconomic. (Kim T. Mueser et al., 1990)

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x

Appendix A1

SOCIO-DEMOGRAPHIC QUESTIONNAIRE (English version).

Topic: 'THE ASSOCIATION BETWEEN SUBSTANCE USE DISORDER AND SCHIZOPHRENIA AMONG PATIENTS ATTENDING OUT PATIENT SERVICES IN MATHARI TEACHING AND REFERRAL HOSPITAL'

Version 1.0

Date

Serial/reference number

1. What is your sex?
   ☐ Female

   ☐ Male

2. How old were you at your last birthday? _____

3. What is your marital status?

   ☐ Married

   ☐ Divorced

   ☐ Separated

   ☐ Widowed

   ☐ Never Married (skip to question 5)

4. What is the highest level of education you have completed?

   ☐ Less than Primary

   ☐ Primary

   ☐ Secondary

   ☐ Tertiary

5. Employment status?

   ☐ Employed

☐ Self employed

☐ Unemployed

6. How much money (Income) do you earn a in one month?

☐ Less than 20,000Ksh

☐ 21,000- 40,000 Ksh

☐ 41,000-60,000 Ksh

☐ 61,000-80,000 Ksh

☐ 81,000-100,000 Ksh

☐ More than 100,000 Ksh

7. Do you have any immediate family member that has been diagnosed in a hospital with mental illness? (depression, 'madness', behaviour problems)

☐ Yes

☐ No

8. Do you have any immediate family member that abuse substance (first degree relatives)?

☐ Yes

☐ No

Appendix A2

SOCIO-DEMOGRAPHIC QUESTIONNAIRE (Swahili version).

UHISIANO BAINA YA UTUMIZI WA MADAWA YA KULEVYA NA UGONJWA WA SCHIZOPHRENIA KATI YA WAGONJWA WANOA PATA MATIBABU YA NJE KATIKA HOSPITALI YA MATHARI

Version 1.0

Tarehe

Nambari yako

1. Je wewe ni Mke/ Mume?

   ☐ Mke

   ☐ Mume

2. Ulikuwa na umri gani mwisho kuzaliwa? _____

3. Hali yako ya Ndoa : Taja kama

   ☐ Umeoa/olewa

   ☐ Taliki/talikiwa

   ☐ Umetangena

   ☐ Mjane

   ☐ hujaolewa

4. Je ni kiwango cha juu cha elimu una kukamilika?

   ☐ Chini shule ya msingi

   ☐ Shule ya msingi

   ☐ Shule ya sekondari

   ☐ Msingi

5. Hali ya ajira?

☐ Kuajiriwa

☐ Kujiajiri

☐ Sina ajira

6. Mshahara wako kutoka ajira ni ngapi kwa mwezi ?

☐ Chini ya 20,000 shilingi ya kenya

☐ 21,000- 40,000 shilingi ya kenya

☐ 41,000-60,000 shilingi ya kenya

☐ 61,000-80,000 shilingi ya kenya

☐ 81,000-100,000 shilingi ya kenya

☐ Zaidi ya 100,000 shilingi ya kenya

7. Je, kuna moja wa jamii yako amekutwa na ugonjwa wa kichwa kutoka hospitali ? (unyogovu, wazimu, matatizo ya tabia?)

☐ Ndio

☐ Hapana

8. Je kuna mti kutoka jamii yako anayetumia madawa ya kulevya ? (Familia ya karibu)?

☐ Ndio

☐ Hapana

Appendix B1

A. WHO - ASSIST V3.0 (English version)

INTERVIEWER ID CLINIC								COUNTRY	

PATIENT ID					DATE				

INTRODUCTION   *(Please read to patient)*

Thank you for agreeing to take part in this brief interview about alcohol, tobacco products and other drugs. I am going to ask you some questions about your experience of using these substances across your lifetime and in the past three months.   These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications).   For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know.   While we are also interested in knowing about your use of various illicit   drugs, please be assured that information on such use will be treated as strictly confidential.

> *NOTE: BEFORE ASKING QUESTIONS, GIVE ASSIST RESPONSE CARD TO PATIENT*

Question 1*(if completing follow-up please cross check the patient's answers with the answers given for Q1 at baseline. Any differences on this question should be queried)*

In your life, which of the following substances have you ever used? *(NON-MEDICAL USE ONLY)*	No	Yes
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)		
b. Alcoholic beverages (beer, wine, spirits, etc.)		
c. Cannabis (marijuana, pot, grass, hash, etc.)		
d. Cocaine (coke, crack, etc.)		

e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)		
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)		
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)		
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)		
i. Opioids (heroin, morphine, methadone, codeine, etc.)		
j. Other - specify:		

If "No" to all items, stop interview.

Probe if all answers are negative:

"Not even when you were in school?" *If "Yes" to any of these items, ask Question 2 for each substance ever used.*

In the past three months, how often have you used the substances you mentioned *(FIRST DRUG, SECOND DRUG, ETC)*?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	2	3	4	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	2	3	4	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	2	3	4	6
d. Cocaine (coke, crack, etc.)	0	2	3	4	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	2	3	4	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	2	3	4	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	2	3	4	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	2	3	4	6

j. Other - specify:	0	2	3	4	6

If "Never" to all items in Question 2, skip to Question 6.

If any substances in Question 2 were used in the previous three months, continue with

Questions 3, 4 & 5 for each substance used.

Question 3

During the past three months, how often have you had a strong desire or urge to use *(FIRST DRUG, SECOND DRUG, ETC)*?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3	4	5	6
d. Cocaine (coke, crack, etc.)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
j. Other - specify:	0	3	4	5	6

During the past three months, how often has your use of *(FIRST DRUG, SECOND DRUG, ETC)* led to health, social, legal or financial problems?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily

	0	4	5	6	7
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4	5	6	7
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	4	5	6	7
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	4	5	6	7
d. Cocaine (coke, crack, etc.)	0	4	5	6	7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	4	5	6	7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	4	5	6	7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4	5	6	7
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	4	5	6	7
j. Other - specify:	0	4	5	6	7

Question 5

During the past three months, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG, ETC)?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products	0	5	6	7	8
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	5	6	7	8
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	5	6	7	8
d. Cocaine (coke, crack, etc.)	0	5	6	7	8
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	5	6	7	8
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8

g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	5	6	7	8
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	5	6	7	8
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	5	6	7	8
j. Other - specify:	0	5	6	7	8

Question 6

Has a friend or relative or anyone else <u>ever</u> expressed concern about your use of *(FIRST DRUG, SECOND DRUG, ETC.)?*	No Never	Yes, in the past 3 months	Yes, but not in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 7

Have you <u>ever</u> tried and failed to control, cut down or stop using *(FIRST DRUG, SECOND DRUG, ETC.)?*	No Never	Yes, in the past 3 months	Yes, but not in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3

g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 8

	No Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Have you <u>ever</u> used any drug by injection? *(NON-MEDICAL USE ONLY)*	0	2	1

IMPORTANT NOTE:

Patients who have injected drugs in the last 3 months should be asked about their pattern of   injecting during this period, to determine their risk levels and the best course of intervention.

PATTERN   OF   INJECTING
INTERVENTION   GUIDELINES

| Once weekly or less   or   Fewer than 3 days in a row | → | Brief Intervention including "risks associated with injecting" card |

| More than one per week   or 3 or more days in a row | → | Further assessment and more intensive treatment* |

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For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q8 in this score. For example, a score for cannabis would be calculated as: Q2c + Q3c + Q4c + Q5c + Q6c + Q7c

Note that Q5 for tobacco is not coded, and is calculated as: Q2a + Q3a + Q4a + Q6a + Q7a

THE TYPE OF INTERVENTION IS DETERMINED BY THE PATIENT'S SPECIFIC SUBSTANCE INVOLVEMENT SCORE

	Record specific substance score	no intervention	receive brief intervention	more intensive treatment *
a. tobacco		0 – 3	4 – 26	27+
b. alcohol		0 – 10	11 – 26	27+
c. cannabis		0 – 3	4 – 26	27+
d. cocaine		0 – 3	4 – 26	27+
e. amphetamine		0 – 3	4 – 26	27+
f. inhalants		0 – 3	4 – 26	27+
g. sedatives		0 – 3	4 – 26	27+
h. hallucinogens		0 – 3	4 – 26	27+
i. opioids		0 – 3	4 – 26	27+
j. other drugs		0 – 3	4 – 26	27+

NOTE: *FURTHER ASSESSMENT AND MORE INTENSIVE TREATMENT may be provided by the health professional(s)

within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

B. WHO ASSIST V3.0 RESPONSE CARD FOR PATIENTS
Response Card - substances

| |
|---|
| a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.) |
| b. Alcoholic beverages (beer, wine, spirits, etc.) |
| c. Cannabis (marijuana, pot, grass, hash, etc.) |
| d. Cocaine (coke, crack, etc.) |
| e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.) |
| f. Inhalants (nitrous, glue, petrol, paint thinner, etc.) |
| g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.) |
| h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.) |
| i. Opioids (heroin, morphine, methadone, codeine, etc.) |
| j. Other - specify: |

Response Card (ASSIST Questions 2 – 5)

Never: not used in the last 3 months

Once or twice: 1 to 2 times in the last

3 months. Monthly: 1 to 3 times in one

month.

Weekly: 1 to 4 times per week.

Daily or almost daily: 5 to 7 days per week.

Response Card (ASSIST Questions 6 to 8)

No, Never

Yes, but not in the past 3 months

Yes,   in   the   past   3   months

Appendix B2

MODIFIED ASSIST (SWAHILI VERSION)
> **The Alcohol, Smoking and Substance Involvement Screening and Test (ASSIST)**

These set of questions comes from a brief interview about alcohol, tobacco products and other drugs. These questions ask about your experience of using these substances across your lifetime and in the past two months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills.

Maswali yafuatayo yanatokana na mahojiano mafupi kuhusu unywaji wa pombe, utumiaji wa bidhaa mbalimbali za tumbako na madawa mengine ya kulevya. Nitaanza kukuuliza maswali yanayohusiana na maono yako kuhusu utumizi wa pombe, tumbako na madawa ya kulevya katika maisha yako au kwa muda wa miezi miwili iliyopita. Pombe, tumbako na madawa ya kulevya yanaweza kutumika kwa njia zifuatavyo: Kuvuta, kumeza, kunusa, au kutumika kama tembe.

1.	**In your life have you used any of the following substances?** **Je katika maisha yako umewahi kutumia bidha ifuatayo ?**	NO (La)	YES (Ndiyo)
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko)	0	3
b.	Beer Products (Tusker,Tusker malt,Guiness,Senator,White cap)	0	3
c.	Wines(Fighter ,Kenya cane(KC))	0	3
d.	Changaa'	0	3
e.	Karubu ,Muratina	0	3
f.	Miraa/irungi, Khat, kangeta, \Mugoka, kuber,	0	3
g.	Other - specify:	0	3

If "No" to all items, stop interview.

(Kama hutumii madawa haya ya kulevya basi usiendelee kuuliza maswali.)

If "Yes" to any of these items, ask Question 2 for each substance ever used.

(Kama anatumia madawa haya basi uliza swali la pili kuhusu madawa

2.	**In the past two months, how often have you used the substances you mentioned above** **Kwa muda wa miezi miwili iliopita umetumia bidha ifuatayo mara ngapi?**	Never (Sijawahi)	Once or twice (Mara mojo au mara mbili hivi)	Monthly (Mwezi mmoja)	Weekly (Kwa wiki)	Daily or almost daily (Karibu kila siku)
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko)	0	2	3	4	6
b.	Beer Products (Tusker,Tusker malt, Guiness,Senator,White cap)	0	2	3	4	6
c.	Wines(Fighter ,Kenya cane(KC))	0	2	3	4	6
d.	Changaa'	0	2	3	4	6
e.	Karubu ,Muratina	0	2	3	4	6
f.	Miraa/irungi, khat, kangeta, Mugoka, Kuber,	0	2	3	4	6
g.	Other - specify:	0	2	3	4	6

yaliyotumika.)

"Never" to all items in Question 2, skip to Question 6. If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5.

Ikiwa hujawahi kutumia madawa haya katika swali la pili, basi nenda moja kwa moja hadi swali la sita. Kama umeshawahi kutumia madawa ya kulevya katika swali la pili kwa muda wa miezi mawili basi endelea na swali la 3, 4, & 5.

		(Sijawahi)	(Mara mojo au mara mbili hiyi)	(Mwezi mmoja) weekly	(Kwa wiki) Daily or almost daily	(Karibu kila siku)
3.	**During the past two months, how often have you had a strong desire or urge to use the following drugs** **Kwa muda wa miezi miwili, ni mara ngapi ambapo umekuwa na hamu kubwa sana ya kutumia? MADAWA YAFUATAYO**					
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko	0	3	4	5	6
b.	Beer Products Tusker,Tusker malt,Guiness,Senator,White cap)	0	3	4	5	6
c.	Wines(Fighter ,Kenya cane(KC))	0	3	4	5	6
d.	Changaa'	0	3	4	5	6
e.	Karubu ,Muratina	0	3	4	5	6
f.	Miraa/irungi, khat, kangeta, Mugoka, Kuber,	0	3	4	5	6
g.	Other - specify:	0	3	4	5	6

		(Sijawahi)	(Mara mojo au mara mbili hiyi)	(Mwezi mmoja) weekly	(Kwa wiki) Daily or almost daily	(Karibu kila siku)
4.	**During the <u>past two</u>, how often has your use of (FIRST DRUG, SECOND DRUG, ETC) led to health, social, legal or financial problems?** **Kwa muda wa miezi miwili, ni mara ngapi au ni vipi, ambavyo (DAWA YA KULEVYA YA FUATAYO imeweza kuathiri shida au matatizo yako kuhusu afya yako, uhusiano**					

	wako na watu, hali ya kuvunja sheria na hali yako ya kifedha?					
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko	0	4	5	6	7
b.	Beer Products Tusker,Tusker malt,Guiness,Senator,White cap)	0	4	5	6	7
c.	Wines(Fighter ,Kenya cane(KC))	0	4	5	6	7
d.	Changaa'	0	4	5	6	7
e.	Karubu ,Muratina	0	4	5	6	7
f.	Miraa/irungi, Khat, Kangeta, Mugoka, Kuber,	0	4	5	6	7
g.	Other-Specify	0	4	5	6	7

	In the past two months, how often have you failed to do what was normally expected of you because of your use of the following drugs? **Kwa muda wa miezi miwili, ni mara ngapi ambapo umeshindwa kufanya yale ulitakiwa kufanya kwa sababu ya kutumia MADAWA YAFUATAYO?**	(Sijawahi)	Once or twice (Mara mojo au mara mbili hivi)	(Mwezi mmoja)	(Kwa wiki)	Daily or almost daily (Karibu kila siku)
5.						
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko	0	5	6	7	8
b.	Beer Products Tusker,Tusker malt,Guiness,Senator,White cap)	0	5	6	7	8
c.	Wines (Fighter ,Kenya cane(KC))	0	5	6	7	8

d.	Changaa'	0	5	6	7	8
e.	Karubu ,Muratina	0	5	6	7	8
f.	Miraa/irungi, khat, kangeta, mugoka, kuber,	0	5	6	7	8
g.	Others-Specify	0	5	6	7	8

Answer Questions 6 and 7 for all substances ever used (i.e. those endorsed in Question 1)

(Jibu maswali 6 na 7 ikiwa umetumia madawa yote katika Swali la 1)

6.	**Has a friend or relative or Care giver/group members been of help in trying to help you control,reduce and stop the use of the following products in the past two months.** **Je, kuna rafiki au mtu wa jamii yako au mtu mwingine yeyote ,mhudumu wako au kundi lako amabao amejitokeleza kukusaidia kudhibiti,Kupunguza ama kuwacha utumiaji wa bidha hizi**	(La, Sijawahi)	Yes, In the past 2 months Ndiyo, Kwa muda wa miezi miwili iliopita	Yes, but not in the past 2 months Ndiyo, lakini siyo kwa muda wa miezi miwili iliopita
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko	0	6	3
b.	Beer Products Tusker, Tusker malt, Guiness, Senator, White cap)	0	6	3
c.	Wines(Fighter ,Kenya cane(KC))	0	6	3
d.	Changaa'	0	6	3
e.	Karubu ,Muratina	0	6	3
f.	miraa/irungi, khat, kangeta, mugoka, kuber,	0	6	3
g.	Other - specify:	0	6	3

7.	During the past 2 months Have you **ever** tried to control, cut down or stop using the drugs mentioned below Kwa miezi miwili iliopita umeshawahi kujaribu au kujizuia au kupunguza ama kuwacha kutumia dawa za kulevya zilizo tajwa hapa chini	No, Never (La, Sijawahi)	Yes, In the past 2 months Ndiyo, Kwa muda wa miezi miwili iliopita	Yes, but not in the past 2 months Ndiyo, la kini siyo kwa muda wa miezi miwili iliopita
a.	Tobacco products (cigarettes, chewing tobacco, Cigara ,Kiraiko	0	6	3
b.	Beer Products Tusker, Tusker malt, Guiness, Senator, White cap)	0	6	3
c.	Wines(Fighter ,Kenya cane(KC))	0	6	3
d.	Changaa'	0	6	3
e.	Karubu ,Muratina	0	6	3
f.	miraa/irungi, khat, kangeta, mugoka, kuber,	0	6	3
g.	Other - specify:	0	6	3

Appendix C

MINI PLUS (English and Swahili translation)

Mini International Neuropsychiatric Interview

English Version 5.0.0

DSM-IV

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Powers for her advice on the modules on Anorexia nervosa and Bulimia. Printed, 24 November, 2015

PATIENT'S NAME :	_____	PROTOCOL NUMBER :	_____
JINA LA MGONJWA:	_____	NAMBA YA PROTOKALI:	_____
DATE OF BIRTH :	_____	Time Interview Began :	_____
TAREHE YA KUZALIWA:	_____	Muda wa Kuanza Usaili :	_____
INTERVIEWER'S NAME :	_____	Time Interview Ended :	_____
JINA LA MSAILI :	_____	Muda wa Kumaliza Usaili :	_____

DATE OF INTERVIEW :	_____	*TOTAL TIME :*	_____
TAREHE YA USAILI :	_____	*MUDA ULIOTUMIKA :*	_____

| MODULES | TIME FRAME |
VIHUNZI HURU	MUDA
A. MAJOR DEPRESSIVE EPISODE A. TUKIO LA SONONA	Current (past 2 weeks) + Lifetime Kwa sasa(wiki 2) +siku za nyuma
A'. MDE with melancholic features TUKIO LA SONONA lenye uzito wa moyo(hiari)	Current (past 2 weeks) Optional
B. DYSTHYMIA B. DISTHIMIA	Current (past 2 years)
C. SUICIDALITY C. HALI YA KUTAKA KUJIUA	Current (past month)
D. (HYPO) MANIC EPISODE D. TUKIO LA MANIA(MANIA NDOGO)	Current + Lifetime
E. PANIC DISORDER E. UGONJWA WA HOFU KUBWA	Lifetime + current (past month)
F. AGORAPHOBIA F. WOGA WA NAFASI ZA WAZI	Current
G. SOCIAL PHOBIA G. WOGA WA MKUSANYIKO WA WATU	Current (past month)
H. OBSESSIVE-COMPULSIVE DISORDER H. UGONJWA WA SHAUKU LAZIMISHO	Current (past month)
I. POSTTRAUMATIC STRESS DISORDER I. UGONJWA WA MSONGO BAADA YA MATUKIO MABAYA	Current (past month) Optional
J. ALCOHOL DEPENDENCE / ABUSE J. KUTAWALIWA NA POMBE / MATUMIZI	Current (past 12 months)

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MABAYA YA POMBE

K. DRUG DEPENDENCE / ABUSE (Non-alcohol)

Current (past 12 months)

K. KUTAWALIWA / MATUMIZI MABAYA YA MADAWA YA KULEVYA (isiyo pombe)

L. PSYCHOTIC DISODERS
L. MAGONJWA YA SAIKOSIS

Lifetime + Current

M. ANOREXIA NERVOSA
M. UGONJWA WA TAFSIRI YA MAUMBILE

Current (past 3 months)

BINAFSI UNAOHUSIANA NA KUTOKULA

N. BULIMIA NERVOSA
N. UGONJWA WA TAFSIRI YA MAUMBILE

Current (past 3 months)

BINAFSI UNAOHUSIANA NA KULA MNO

O. GENERALIZED ANXIETY DISORDER
O. UGONJWA WA WASIWASI MKUBWA

Current (past 3 months)

P. ANTISOCIAL PERSONALITY DISORDER

Lifetime   Optional

P. UGONJWA WA MAKUZI YA HULKA NA

TABIA ZINAZOPINGANA NA JAMII

GENERAL INSTRUCTIONS

The M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. Validation and reliability studies have been done comparing

the M.I.N.I. to the SCID-P and the CIDI. The results of these studies show that the M.I.N.I. has acceptably high validation and reliability scores, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 min., median 15 min.) than the above referenced instruments. It can be used by <u>clinicians</u>, <u>after a brief training session</u>. 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 requires 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 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(s) the clinician to indicate whether the 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 to 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.

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

Answers with an arrow above them (➜) indicate that one of the criteria necessary for the diagnosis (es) is not met. In this case, the interviewer should go to the end of the module, to 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, question A3).

- **Rating instructions:**

All questions read must be rated. The rating is done at the right of each question by circling either YES or NO.

The clinician should be sure that each dimension of the question is taken into account by the patient (i.e.: 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. Plus has questions that investigate these issues.

For any questions, suggestions, need for a training session or information about updates of the M.I.N.I., please contact:

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A. MAJOR DEPRESSIVE EPISODE
   TUKIO LA SONONA

| A1 | Have you been consistently depressed or down, most of the day, nearly every day, for the past two weeks?

Je, ulishawahi kukosa raha muda mwingi wa siku, karibu kila siku, kwa muda wa wiki mbili zilizopita? | NO | YES | 1 |
| | | HAPANA | NDIYO | 1 |

A2	In the past two weeks, have you been less interested in most things or less able to enjoy the things you used to enjoy most of the time ?	NO	YES	2
	Katika wiki mbili zilizopita, je, umekosa hamu/ari katika vitu vingi au kukosa raha kwa muda mwingi katika vitu vilivyokuwa vikikufurahisha?	HAPANA	NDIYO	2
		➔		
	IS **A1** <u>OR</u> **A2** CODED **YES**?	NO	YES	
	JE, KIPENGELE **A1** AU **A2** KIMEJIBIWA NDIYO?	HAPANA	NDIYO	

A3 **Over the past two weeks, when you felt depressed and/or uninterested :**

Katika kipindi cha wiki mbili zilizopita, ulipojisikia kukosa raha na / au kutokuwa na ari:

a Was your appetite decreased or increased nearly every day <u>or</u> did your weight decrease or increase without trying intentionally? (i.e., $\pm$ 5 % of body weight or $\pm$ 3,5 kg or $\pm$ 8 lbs., for a 70 kg / 120 lbs. person in a month)

Je, hamu yako ya kula ilipungua au kuongezeka, karibu kila siku? Uzito wako ulipungua au uliongezeka bila wewe kukusudia? (yaani $\pm$ 5 % ya uzito wako au kg. 3.5 katika mwezi)

NO   YES 3

IF **YES** TO EITHER, CODE **YES**

IWAPO **J**IBU NI **N**DIYO KWA **L**OLOTE, **J**AZA **N**DIYO

HAPANA   NDIYO 3

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)?

Je, ulipata shida ya usingizi karibu kila siku? (tabu ya kupata usingizi, kukatika usingizi katikati ya usiku, kuamka mapema sana, au kulala mno)

NO   YES 4

HAPANA   NDIYO 4

Did you talk or move more slowly than normal or were you fidgety,

c restless or having trouble sitting still, almost every day?

Je, ulikuwa ukiongea au kutembea taratibu zaidi kuliko kawaida yako, au ulikuwa na hali ya kuhangaika, kutotulia, au kuwa na tatizo la kukaa kwa utulivu karibu kila siku?

NO	YES	5
HAPANA	NDIYO	5

d

Did you feel tired or without energy, almost every day?

Je, ulijisikia mchovu au kutokuwa na nguvu karibu kila siku?

NO	YES	6
HAPANA	NDIYO	6

e Did you feel worthless or guilty, almost every day?

Je, ulijisikia huna thamani au kuwa na hali ya kujilaumu karibu kila siku?

NO	YES	7
HAPANA	NDIYO	7

f Did you have difficulty concentrating or making decisions, almost every day?

Je, ulikuwa na matatizo ya kuwa makini au kufanya maamuzi karibu kila siku?

NO	YES	8
HAPANA	NDIYO	8

g Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?

Je, mara kwa mara ulifikiria kuhusu kujiumiza, au kutaka kujiua, au bora ufe?

NO	YES	9
HAPANA	NDIYO	9

A4   ARE **3** OR MORE **A3** ANSWERS CODED **YES** ?

 (OR **4 A3** ANSWERS IF **A1** OR **A2** ARE CODED **NO**)

JE, VIPENGELE **3** AU ZAIDI VYA **A3** VIMEJIBIWA **NDIYO**?

 (AU MAJIBU **4 YA** **A3** IKIWA **AI** AU **A2** VIMEJIBIWA

NO
YES
HAPANA
NDIYO
MAJOR DEPRESSIVE

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HAPANA)

IF PATIENT MEETS CRITERIA FOR MAJOR DEPRESSIVE EPISODE CURRENT :

IKIWA MGONJWA ATAFIKIA VIGEZO VYA TUKIO LA SONONA KWA SASA:

A5a During your lifetime, did you have other periods of two weeks or more when you felt depressed or uninterested in most things, and had most of the problems we just talked about?

Katika maisha yako, uliwahi kuwa na kipindi kingine cha wiki mbili au zaidi ambapo ulikosa raha au kukosa ari katika mambo mengi na kwamba umekuwa na shida kama zile tulizokwishazizungumza?

→ NO   YES   1
        0

→   NDIYO   1
HAPANA   0

b Was there an interval of at least 2 months without depression and/or lost of interest between your current episode and your last episode of depression?

Je, kulikuwa na kipindi cha angalau miezi 2 bila hali ya kukosa raha na /au kupoteza ari kati ya wakati huu na ulipokuwa na hali hii siku za nyuma?

NO   YES
        1
        1
HAPANA   HAPANA
        1
        1

IS **A5b** CODED **YES** ?

JE, KIPENGELE **A5b** KIMEJIBIWA **NDIYO**?

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A'. MAJOR DEPRESSIVE EPISODE WITH MELANCHOLIC FEATURES (optional)

A. TUKIO LA SONONA LILILOAMBATANA NA UZITO WA MOYO (HIARI)

IF THE PATIENT CODES POSITIVE FOR A MAJOR DEPRESSIVE EPISODE (**A4 = YES**), EXPLORE THE FOLLOWING :

KAMA MGONJWA ATADHIHIRISHA KUWA NA SONONA KWA SASA (**A4 = NDIYO**), CHUNGUZA YAFUATAYO:

A6 a	IS **A2** CODED **YES**?	NO	YES	1 2
	JE KIPENGELE **A2** KIMEJIBIWA NDIYO?	HAPANA	NDIYO	1 2
b	During the most severe period of the current depressive episode, did you lose your ability to respond to things that previously gave you pleasure, or cheered you up?			
	Wakati wa hali mbaya zaidi ya sonona ya sasa, uliwahi kupoteza uwezo wa kufanya vitu ambavyo mwanzoni vilikuwa vikikupa furaha au kukuchangamsha?	NO	YES	1 3
	IF NO: When something good happens does it fail to make you feel better, even temporarily?			
	KAMA JIBU NI HAPANA: Wakati jambo zuri linatokea, je, jambo	HAPANA	NDIYO	1 3
		→		
	IS EITHER **A6a** OR **A6b** CODED **YES**?	NO	YES	
		→		
	JE, KIPENGELE **A6a** AU **A6b** KIMEJIBIWA NDIYO?	HAPANA	NDIYO	

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Over the past two weeks period, when you felt depressed and uninterested :

Katika kipindi cha wiki mbili zilizopita, ulipojisikia kukosa raha au kukosa ari:

A7 a	Did you feel depressed in a way that is different from the kind of feeling you experience when someone close to you dies?	NO	YES	1 4
	Je, ulikosa raha tofauti na vile unavyojisikia wakati unapofiwa na mtu wako wa karibu?	HAPANA	NDIYO	1 4
b	Did you feel regularly worse in the morning, almost every day?	NO	YES	1 5
	Je, ulijisikia kuwa na hali mbaya zaidi kwa kila asubuhi karibu kila siku?	HAPANA	NDIYO	1 5
c	Did you wake up at least 2 hours before the usual time of awakening and have difficulty getting back to sleep, almost every day?	NO	YES	1 6
	Je, ulikuwa ukiamka angalau masaa mawili kabla ya muda wako wa kawaida wa kuamka na kupata tabu ya kulala tena karibu kila siku?	HAPANA	NDIYO	1 6
e	IS **A3c** CODED **YES**?	NO	YES	1 7
	JE, KIPENGELE **A3c** KIMEJIBIWA NDIYO?	HAPANA	NDIYO	1 7
d	IS **A3a** CODED **YES** (ANOREXIA OR WEIGHT LOSS ONLY)?	NO	YES	1 8
	JE, KIPENGELE **A3a** KIMEJIBIWA NDIYO (KUKOSA HAMU YA CHAKULA AU KUPUNGUA MWILI)?	HAPANA	NDIYO	1 8
f	Did you feel excessive guilt or out of proportion to the reality of the situation?	NO	YES	1 9
	JE, **A3e** IMEJIBIWA NDIYO (KUJILAUMU KUPITA KIASI, AU KUJILAUMU KUSIVYOSTAHILI)?	HAPANA	NDIYO	1

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ARE **3** OR MORE **A7** ANSWERS CODED **YES**?

JE, VIPENGELE **VITATU** AU ZAIDI VYA **A7** VIMEJIBIWA **NDIYO**?

NO
YES
HAPANA
NDIYO
MAJOR DEPRESSIVE EPISODE
With Melancholic Features
CURRENT
TUKIO LA SONONA lililoambatana na uzito wa moyo KWA SASA

B. DYSTHYMIA
DISTHIMIA

IF PATIENT'S SYMPTOMS CURRENTLY MEET CRITERIA FOR MAJOR DEPRESSIVE EPISODE, DO NOT EXPLORE THIS MODULE

KAMA DALILI ZA MGONJWA KWA SASA ZINAFIKIA KIGEZO CHA TUKIO LA SONONA, USICHUNGUZE KIHUNZI HURU HIKI

		➔		
B1	Have you felt sad, low or depressed most of the time for the	NO	YES	20

	last two years?	→		
	Je, ulijisikia huzuni, mnyonge au kukosa raha muda mwingi kwa kipindi cha miaka miwili iliyopita?	HAPANA	NDIYO	20

			→	
B2	Was this period interrupted by your feeling OK for two months or more?	NO	YES	21
			→	
	Je, kipindi hiki kilikatizwa na hali ya kujisikia safi kwa muda wa miezi miwili au zaidi?	HAPANA	NDIYO	21

B3   **During this period of feeling depressed most of the time :**

Wakati wa kipindi hiki cha kujisikia kukosa raha muda mwingi:

a	Did your appetite change significantly?	NO	YES	22
	Je, hamu yako ya kula ilibadilika kwa kiasi kikubwa?	HAPANA	NDIYO	22

b	Did you have trouble sleeping or sleep excessively?	NO	YES	23
	Je, ulipata tabu ya kupata usingizi au kulala mno?	HAPANA	NDIYO	23

c	Did you feel tired or without energy?	NO	YES	24
	Je, ulijisikia kuchoka au kukosa nguvu?	HAPANA	NDIYO	24

d	Did you lose your self-confidence?	NO	YES	25
	Je, ulipoteza uwezo wa kujiamini?	HAPANA	NDIY	25

	A	O

e Did you have trouble concentrating or making decisions? NO   YES   26

Je, ulikuwa na tabu ya kuwa makini au ya kutoa maamuzi? HAPANA   NDIYO   26

f Did you feel hopeless? NO   YES   27

Je, ulijisikia kukosa matumaini? HAPANA   NDIYO   27

➔

ARE **2** OR MORE **B3** ANSWERS CODED **YES**? NO   YES

➔

JE, VIPENGELE **2** AU ZAIDI VYA **B3** VIMEJIBIWA NDIYO? HAPANA   NDIYO

B4 Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way?

➔

NO   YES   28

Je, dalili za kukosa raha zilikupa shida nyingi au kudhoofisha ufanisi wako kazini, kijamii, au katika njia nyingine muhimu?

➔

HAPANA   NDIYO   28

IS **B4** CODED **YES**?

JE KIPENGELE **B4** KIMEJIBIWA **NDIYO**?

NO	**YES**
HAPANA	**NDIYO**

C. SUICIDALITY
   ### HALI YA KUTAKA KUJIUA

In the past month did you :

Katika mwezi uliopita, je:

C1	Think that you would be better off dead or wish you were dead?	NO	YES	1
	Ulifikiria kwamba ni bora ungekufa?	HAPANA	NDIYO	1
C2	Want to harm yourself?	NO	YES	2
	Ulitaka kujidhuru?	HAPANA	NDIYO	2
C3	Think about suicide?	NO	YES	3
	Ulifikiria juu ya kutaka kujiua?	HAPANA	NDIYO	3
C4	Have a suicide plan?	NO	YES	4
	Ulikuwa na mipango ya kujiua?	HAPANA	NDIYO	4
C5	Attempt suicide?	NO	YES	5
	Ulijaribu kujiua?	HAPANA	NDIYO	5

In your lifetime

Katika maisha yako

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C6

Did you ever make a suicide attempt?	NO	YES	6
Ulishawahi, wakati wowote, kujaribu kujiua?	HAPAN A	NDIY O	6

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

JE, ANGALAU KIPENGELE **KIMOJA** KATI YA VYA HAPO JUU, KIMEJIBIWA **NDIYO**?

NO	YES
HAPANA NDIYO	

SUICIDE RISK

CURRENT

HATARI YA KUJIUA

KWA SASA

IF YES, **SPECIFY** THE LEVEL OF SUICIDE RISK AS FOLLOWS :

KAMA NDIYO, **ELEZA** KIWANGO CHA HATARI YA KUJIUA KAMA IFUATAVYO:

      C1 or C2 or C6 = YES : LOW

      C1 au C2 au C3 = NDIYO : HATARI NDOGO

LOW

HATARI NDOGO

      C3 or (C2 +C6) = YES : MODERATE

      C3 au (C2 +C6) = NDIYO : HATARI YA KATI

MODERATE

HATARI YA KATI

      C4 or C5 or (C3 + C6) = YES : HIGH

      C4 au C5 au (C3 + C6) = NDIYO : HATARI KUBWA

HIGH

HATARI KUBWA

D. (HYPO) MANIC EPISODE
TUKIO LA MANIA (MANIA NDOGO)

D1 a	Have you **ever** had a period of time when you were feeling "up" or "high" or so full of energy or full of yourself that you got into trouble, or that other people thought you were not your usual self? (Do not consider times when you were intoxicated on drugs or alcohol)	NO	YES	1
	IF PATIENT IS PUZZLED OR UNCLEAR ABOUT WHAT YOU MEAN BY "UP" OR "HIGH", CLARIFY AS FOLLOW : By "up" or "high" I mean : having elated mood, increased energy, needing less sleep, having rapid thoughts, being full of ideas, having an increase in productivity, creativity, motivation or impulsive behavior.			
	Je, ulishawahi kwa kipindi Fulani kujisikia una hali ya juu, au umejawa na nguvu au umesongwa kiasi cha kupatashida, au kwamba watu kukudhania kuwa sio mtu wa kawaida? (usichukulie muda ambao ulikuwa umedhurika kwa madawa au pombe)			
	KAMA MGONJWA ANAONEKANA KUTOELEWA MAANA YA "HALI YA JUU", FAFANUA KAMA IFUATAVYO : Hali ya juu ina maana ya kuwa na hali ya furaha; kuhitaji usingizi mchache;kuwa na fikra za haraka; kusongwa na mawazo; kuongezeka katika tija, ubunifu, motisha au tabia ya kuamua ghafla	HAPANA	NDIYO	1
	IF YES :			
	KAMA JIBU NI NDIYO :			
b	Are you currently feeling "up" or "high" or full of energy?	NO	YES	2
	Je, sasa hivi unajisikia kuwa na hali ya juu au kujawa na nguvu?	HAPANA	NDIYO	2

D2 a	Have you ever been persistently irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to other people, even in situations that you felt were justified? (Do not consider times when you were intoxicated on drugs or alcohol) Je, umeshawahi kuwa mwenye kuudhika upesi kwa muda mrefu, kwa siku nyingi, kiasi kwamba ukawa na mabishano, au mapigano kwa maneno au vitendo, au kuwapigia kelele watu wasiokuwa wa familia yako? IF YES : KAMA JIBU NI NDIYO :	NO	YES	3
b	Are you currently feeling persistently irritable?	NO	YES	4
	Je, kwa sasa unajisikia kuwa mwepesi wa kuudhika kwa muda mrefu?	HAPANA	NDIYO	4
		➔		
	ARE **D1a** OR **D2a** CODED **YES**?	NO	YES	
		➔		
	JE, KIPENGELE **D1a** AU **D2a** KIMEJIBIWA **NDIYO?**	HAPANA	NDIYO	

D3   IF D1b OR D2b = YES : EXPLORE ONLY **CURRENT** EPISODE

IF D1b AND D2b = NO : EXPLORE **THE MOST SYMPTOMATIC** PAST EPISODE

KAMA D1B AU D2B = NDIYO: CHUNGUZA TUKIO **LA SASA** TU

KAMAD1B NA D2B = HAPANA: CHUNGUZA TUKIO LILILOPITA AMBALO LILIKUWA NA **DALILI NYINGI ZAIDI**

<u>During the time(s) when you felt "high", full of energy and/or irritable did you :</u>
<u>Kwa muda ambao ulijisikia hali ya juu, kujawa na nguvu, au mwenyekuudhika upesi, je :</u>

a Feel that you could do things others couldn't do, or that you were an especially important person?

NO   YES   5

Ulijisikiakuweza kufanya vitu ambavyo wengine hawawezi au kujiona kuwa mtu pekee muhimu

HAPANA   NDIYO 5

b Need less sleep (e.g., feel rested after only a few hours sleep)?

NO   YES   6

Ulihitaji usingizi mchache (kwa mfano, kujisikisa mapumziko baada ya muda mdogo tu wa kulala)?

HAPANA   NDIYO 6

c Talk too much without stopping, or so fast that people had difficulty understanding?

NO   YES   7

Uliongea sana bila kunyamaza, au kwa haraka zaidi kiasi kwamba watu wakapata tabu ya kukuelewa?

HAPANA   NDIYO 7

d Have thoughts racing?

NO   YES   8

Umekuwa na mawazo ya harakaharaka

HAPANA   NDIYO 8

e Become easily distracted so that any little interruption could distract you?

NO   YES   9

Ulikuwa mwepesi wa kuvurugwa kiasi kwamba hata kukatizwa kidogo kunakuvuruga?

HAPANA   NDIYO 9

Become so active or physically restless that others

f	were worried about you?	NO YES 10
	Ulikuwa mashuhuri au kutotulia kiasi kwamba watu wengine wakapata wasiwasi juu yako?	HAPANA NDIYO 10
g	Want so much to engage in pleasurable activities that you ignored the risks or consequences (e.g., spending sprees, reckless driving, or sexual indiscretions)?	NO YES 11
	Ulitaka sana kujiingiza katika shughuli za starehe na kutojali hatari zake au matokeo yake (mfano, kufanya shamrashamra, udereva wa kizembe, au ngono bila kujihadhari)?	HAPANA NDIYO 11

ARE **3** OR MORE **D3** ANSWERS CODED **YES**

OR **4** IF **D1a = NO** (PAST EPISODE) OR **D1b = NO** (CURRENT EPISODE)?

➔

NO YES

JE, VIPENGELE **3** AU ZAIDI VYA **D3** VIMEJIBIWA **NDIYO**

➔

AU VIPENGELE **4**, IKIWA **D1a** = **HAPANA** (TUKIO LILILOPITA) AU **D1b** = **HAPANA** (TUKIO LA SASA)

HAPANA NDIYO

D4	Did these symptoms last at least a week **and** cause significant problems at home, at work, or at school,	
	or were you hospitalized for these problems?	NO YES 12
	Je, dalili hizi zilidumu kwa muda wa angalau wiki moja na kusababisha matatizo makubwa nyumbani, kazini, kijamii, au shuleni, au alilazwa hospitalini kwa ajili ya matatizo haya?	HAPANA NDIYO 12
	IF YES TO EITHER, CODE YES	
	KAMA JIBU NI NDIYO KWA LOLOTE, JAZA NDIYO	

IS **D4** CODED **NO?**

JE, KIPENGELE **D4** KIMEJIBIWA **HAPANA**?

NO	YES
HAPANA	NDIYO

HYPOMANIC EPISODE

TUKIO LA MANIA NDOGO

CURRENT

KWA SASA

PAST

LILILOPITA

IF YES, SPECIFY IF THE EPISODE EXPLORED IS CURRENT OR PAST

KAMA NDIYO, ELEZA NI TUKIO LA SASA AU LILILOPITA

IS **D4** CODED **YES**?

JE, KIPENGELE **D4** KIMEJIBIWA **NDIYO**?

NO	YES
HAPANA	NDIYO

MANIC EPISODE

TUKIO LA MANIA

CURRENT

KWA SASA

PAST

LILILOPITA

IF YES, SPECIFY IF THE EPISODE EXPLORED IS CURRENT OR PAST

KAMA NDIYO, ELEZA NI TUKIO LA SASA AU LILILOPITA

E. PANIC DISORDER
UGONJWA WA HOFU KUBWA

E1	Have you, on more than one occasion, had spells or attacks when you suddenly felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way? Did the spells peak within 10 minutes?	NO	YES	1
	Je, kwa mara zaidi ya moja, umekuwa na vipindi vya kujisikia au kupatwa na wasiwasi wa ghafla, hofu, kutotulia au mashaka, hata katika mazingira ambayo watu wengi hawajisikii hivyo? Je, mshituko huo uliisha ndani ya dakika kumi?	HAPANA	NDIYO	1
	CODE YES ONLY IF THE SPELLS PEAK WITHIN 10 MINUTES			
	JAZA NDIYO IKIWA TU MSHITUKO HUO ULIISHA NDANI YA DAKIKA KUMI			

IF **E1 = NO**, CIRCLE NO IN E5 AND SKIP TO F1

KAMA **E1 = HAPANA**, JAZA HAPANA KATIKA **E5** NA NENDA KIPENGELE **F1**

E2	At any time in the past, did any of those spells or attacks come on unexpectedly or spontaneously, or occur in an unpredictable or unprovoked manner?	NO	YES	2
	Katika wakati wowote uliopita, je, vipindi hivi au mishituko hiyo ilikuja bila kutegemea au kutokea katika namna isiyobashirika au kuchochewa?	HAPANA	NDIYO	2

IF **E2 = NO**, CIRCLE NO IN E5 AND SKIP TO F1

KAMA **E2 = HAPANA**, JAZA HAPANA KATIKA **E5** NA NENDA KIPENGELE **F1**

E3	Have you ever had one such attack followed by a month or more of persistent fear of having another attack, or worries	NO	YES	3

about the consequences of the attack?

Je, ulishawahi kupata tukio moja kama hilo lililofuatiwa na kipindi cha mwezi mmoja au zaidi cha kujisikia hofu ya tukio jingine au woga wa madhara ya tukio hilo?	HAPANA	NDIYO	3

IF **E3 = NO**, CIRCLE NO IN E5 AND SKIP TO F1

KAMA **E3 = HAPANA**, ZUNGUSHIA HAPANA NA NENDA KIPENGELE **F1**

E4 **During the worst spell that you can remember :**

Katika kipindi kibaya zaidi ambacho unakumbuka :

a	Did you have skipping, racing or pounding of your heart?	NO	YES	4
	Je, moyo wako ulidundadunda, kwenda mbio, au kupiga kwa kasi?	HAPANA	NDIYO	4
b	Did you have sweating or clammy hands?	NO	YES	5
	Je, ulitokwa na majasho au mikono kuwa ya baridi?	HAPANA	NDIYO	5
c	Were you trembling or shaking?	NO	YES	6
	Je, ulitetemeka au kutikisika?	HAPANA	NDIYO	6
d	Did you have shortness of breath or difficulty breathing?	NO	YES	7
	Je, ulipata kutapia hewa au tabu ya kupumua?	HAPANA	NDIYO	7
e	Did you have a choking sensation or a lump in your throat?	NO	YES	8
	Je, ulihisi kupaliwa au donge kifuani kwako?	HAPANA	NDIYO	8
f	Did you have chest pain, pressure or discomfort?	NO	YES	9
	Je, ulipata maumivu ya kifua, shinikizo au usumbufu?	HAPANA	NDIYO	9
g	Did you have nausea, stomach problems or sudden diarrhea?	NO	YES	1

	Je, ulipata kichefuchefu, matatizo ya tumbo au kuharisha kwa ghafla ?	HAPANA	NDIYO	0 1 0
h	Did you feel dizzy, unsteady, lightheaded or faint?	NO	YES	1 1
	Je, ulijisikia kizunguzungu, kutetereka, kichwa chepesi, au kuzirai ?	HAPANA	NDIYO	1 1
i	Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body?	NO	YES	1 2
	Je, vitu vilivyokuzunguka uliviona ni vya ajabu, sio halisi, upweke au vya kigeni, au je, ulijisikia upo kando ya, au kujitenga kutoka katika sehemu au mwili wako wote?	HAPANA	NDIYO	1 2
j	Did you fear that you were losing control or going crazy?	NO	YES	1 3
	Je, ulihofia kwamba umeshindwa kujizuia au umepata wazimu ?	HAPANA	NDIYO	1 3
k	Did you fear that you were dying?	NO	YES	1 4
	Je, ulihofia kwamba unakufa?	HAPANA	NDIYO	1 4
l	Did you have tingling or numbness in parts of your body?	NO	YES	1 5
	Je, ulipatwa na msisimko au ganzi katika sehemu za mwili wako ?	HAPANA	NDIYO	1 5
m	Did you have hot flashes or chills?	NO	YES	1 6
	Je, ulipatwa na wekundu usoni(kuiva uso) u mzizimo wa baridi ?	HAPANA	NDIYO	1 6

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E5 ARE **4** OR MORE **E4** ANSWERS CODED **YES**?	NO	YES
JE, VIPENGELE **4** AU ZAIDI VYA **E4** VIMEJIBIWA **NDIYO** ?	HAPANA	NDIYO
IF **E5** = **NO**, SKIP TO E7	*Panic Disorder*	
KAMA **E5** = **HAPANA**, NENDA KIPENGELE E7	*Life time*	
	Hofu kubwa	
	Maisha yote	

E6 In the past month, did you have such attacks repeatedly (2 or more) followed by persistant fear of having another attack?

Katika mwezi mmoja uliopita, ulipatwa na matukio hayo kwa kujirudiarudia (mara 2 au zaidi) kufuatiwa na hofu ya kupata tukio jingine?

NO	YES	17
HAPANA	NDIYO	17

IF **E6** = **YES**, SKIP TO F1

KAMA **E6** = **NDIYO**, NENDA **F1**

Panic Disorder

Current

Hofu kubwa

kwa sasa

E7 ARE **1**, **2** OR **3 E4** ANSWERS CODED **YES**?	NO	YES	18

Limited Symptom Attacks

Lifetime

F.

G. AGORAPHOBIA
   WOGA WA NAFASI ZA WAZI

F1	Do you feel anxious or particularly uneasy in places or situations from which escape might be difficult, and where help might not be available in case of panic attack, like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, traveling in a bus, train or car?	NO	YES	19
	Je, unajisikia wasiwasi au mashaka katika sehemu au mazingira ambapo unaweza kupata mshituko wa hofu kubwa au dalili zinazofanana na hofu kubwa tulizozizungumza hivi punde, na ambapo msaada unaweza usiwepo, au ambapo kukwepa kunaweza kuwa kugumu: kama kuwa kwenye kundi la watu wengi, kusimama kwenye foleni, ukiwa peke yako mbali na nyumbani, au upo nyumbani peke yako, au ukiwa unavuka daraja, kusafiri ndani ya basi, treni, au gari?	HAPANA	NDIYO	19

IF **F1** = **NO**, CIRCLE NO IN F2

KAMA **F1** = **HAPANA**, ZUNGUSHIA HAPANA KATIKA F2

F2	Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them?	NO	YES
	Je, unahofia sana mazingira haya kiasi cha kujitenga nayo, au kuteseka kwa ajili ya mazingira hayo auunahitaji mwenzi kukabiliana nayo?	HAPANA	NDIYO

Agoraphobia

Current

Woga wa nafasi za wazi kwa sasa

IS **F2** (CURRENT AGORAPHOBIA) CODED **NO**

and

IS **E6** (CURRENT PANIC DISORDER) CODED **YES**?

NO	**YES**
PANIC DISORDER	

JE **F2** (WOGA WA NAFASI ZA WAZI KWA SASA)

> *without   Agoraphobia*
> *CURRENT*

IS **F2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **E6** (CURRENT PANIC DISORDER) CODED **YES**?

> **NO**   **YES**
>
> *PANIC DISORDER*
>
> *with Agoraphobia*
>
> *CURRENT*

IS **F2** (CURRENT AGORAPHOBIA) CODED **YES**

and

IS **E5** (PANIC DISORDER LIFETIME) CODED **NO**?

> **NO**   **YES**
>
> *AGORAPHOBIA*
>
> *without history of*
>
> *Panic Disorder*
>
> *CURRENT*

G. SOCIAL PHOBIA

G. WOGA WA MKUSANYIKO WA WATU

G1	In the past month, were you fearful or embarrassed being watched, being the focus of attention, or fearful of being humiliated? This includes situations like speaking in public, eating in public or with others, writing while someone watches, or being in social situations.	→		
G1	Katika mwezi uliopita, je ulipata hofu au shida ukiwa uanaangaliwa, ukiwa mlengwa, au hofu ya kufedheheshwa? Hii ni pamoja na mambo kama kuongea hadharani; kula hadharani au kula na watu, kuandika wakati mtu anakuangalia au kuwa katika mikusanyiko ya watu.	NO	YES	1

G2	Is this fear excessive or unreasonable?	→		
G2	Je hofu hii ni kubwa mno au yenye kuzidi?	NO	YES	2

G3	Do you fear these situations so much that you avoid them or suffer through them?	→		
		NO	YES	3
G3	Je unahofia sana mazingira haya kiasi cha kujitenga nayo au kuteseka kwa ajili ya mazingira hayo.			

G4	Does this fear disrupt your normal work or social functioning or cause you significant distress?	NO	YES	
				4
G4	Je hofu hizi zinavuruga shughuli zako za kawaida au shughuli za kijamii au zinakusababishia shida kubwa.			

IS **G4** CODED **YES**?	**NO**	**YES**

Je kipengele G4 kimejibiwa ndiyo?

H. OBSESSIVE-COMPULSIVE DISORDER

H. SHAUKU LAZIMISHO

H1	In the past month, have you been bothered by recurrent thoughts, impulses or images that were unwanted, distasteful, inappropriate, intrusive or distressing? (e.g., the idea that you were dirty, contaminated or had germs, **or** fear of contaminating others, **or** fear of harming someone even though you didn't want to, **or** fearing you would act on some impulse, **or** fear or superstitions that you would be responsible for things going wrong, **or** obsessions with sexual thoughts, images or impulses, **or** hoarding, collecting, **or** religious obsessions.)			
	DO NOT INCLUDE SIMPLY EXCESSIVE WORRIES ABOUT REAL LIFE PROBLEMS. DO NOT INCLUDE OBSESSIONS DIRECTLY RELATED TO EATING DISORDERS, SEXUAL DEVIATIONS, PATHOLOGICAL GAMBLING, OR ALCOHOL OR DRUG ABUSE BECAUSE THE PATIENT MAY DERIVE PLEASURE FROM THE ACTIVITY AND MAY WANT TO RESIST IT ONLY BECAUSE OF ITS NEGATIVE CONSEQUENCES.	NO	YES	1
H1	Katika mwezi ulioputa, je ulishawahi kukerwa na mawazo yenye kujirudiarudia, misukumo, au fikra ambazo hazihitajiki, za maudhi, zisizostahili, zenye kuingilia, au zenye kuleta shida? (mf: mawazo ya kwamba umchafu, umechafuliwa na vijidudu, au hofu ya kuwachafua wengine, au hofu ya kumdhuru mtu hata kama hukutaka kufanya hivyo, au kuhofia kutenda kwa msukumo, au hofu au imani za kichawi kwamba			

ungewajibika kwa mambo mabaya, au shauku yenye mawazo ya ngono, fikra au misukumo,au shauku ya kuhodhi, kukusanya au ya kidini).

(Usichanganye na wasiwasi juu ya matatizo halisi ya maisha, usichanganye na shauku zinazoendana moja kwa moja na magonjwa ya kula chakula, tabia za uasherati, kamari, au pombe au madawa ya kulevya kwa sababu, mgonjwa anaweza kupata starehe kutokana na tendo hilo na kutaka kujizuia kwa sababu tu ya matokeo hasi ya jambo hilo.

IF **H1 = NO**, SKIP TO H4

H2	Did they keep coming back into your mind even when you tried to ignore or get rid of them? IF **H2 = NO**, SKIP TO H4	NO YES 2
H2	JE, yanaendelea kukurudia ndani ya mawazo yako hata wakati unapojaribu kuyadharau au kujaondoa?	
H3	Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside?	NO YES 3
H3	Je, unadhani kwamba shauku hizi zinatokana na mawazo yako mwenyewe na kwamba hazijalazimishwa kutoka nje?	

H4	In the past month, did you do something repeatedly without being able to resist doing it, like washing or	

	cleaning excessively, counting or checking things over and over, or repeating, collecting, arranging things, or other superstitious rituals ?	NO	YES	4
H4	Katika mwezi uliopita, je ulifanya kitu kwa kurudiarudia bila kuwa na uwezo wa kujizuia kufanya hivyo, kama vile kuosha au kusafisha sana, kuhesabu, kukagua vitu mara kwa mara, au kurudia, kukusanya, kupanga vitu, au matambiko mangine ya kishirikina.			

ARE **H3** <u>OR</u> **H4** CODED **YES**? ➔

JE KIPENDELE **H3** AU **H4** KIMEJIBIWA **NDIYO?** NO   YES

H5 Did you recognize that either these obsessive thoughts and / or these compulsive behaviors you can not resist doing them, were excessive or unreasonable? ➔

NO   YES   5

H5 Je ulitambua kwamba kujiwa na mawazo haya au hizi tabia zisizodhibitika zimekuwa ni nyingi mno au zimezidi?

H6 Did these obsessive thoughts and / or compulsive behaviors significantly interfere with your normal routine, occupational functioning, usual social activities, or relationships, or did they take more than one hour a day?

NO   YES   6

H6 Je kujawa na mawazo haya na/au tabia zisizodhibitika kwa kiasi kikubwa kunaingilia zako za kawaida, shughuli za kikazi, kazi za kawaida za kijamii, au mahusiano, au yamechukua zaidi ya saa nzima kwa siku?

IS **H6** CODED **YES**?

NO	**YES**

I. POSTTRAUMATIC STRESS DISORDER (optional)

I. UGONGWA WA MSONGO BAADA YA MATUKIO MABAYA (Hiari)

I1	Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else?	➜ NO YES 1
I1	Je, umewahi kupata au kushuhudia au kushughulika na matukio mabaya ikiwepo kifo au tishio la kifo au ajali mbaya kwako au mtu mwingine?	
	EX OF TRAUMATIC EVENTS: SERIOUS ACCIDENT, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, HOLD-UP, FIRE, DISCOVERNG A BODY, UNEXPECTED DEATH, WAR, NATURAL DISASTER…	
I2	During the past month, have you re-experienced the event in a distressing way (i.e., dreams, intense recollections, flashbacks or physical reactions)?	➜ NO YES 2
I2	Kwa mwezi uliopita je umewahi kupata tena tukio hilo katika namna ya mashaka (Kama vile, ndoto, mkusanyiko mkali, kumbukumbu za ghafla, au kujibu kwa matendo)?	

I3   **In the past month :**

I3   **Katika mwezi uliopita:**

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a	a	Have you avoided thinking about the event, or have you avoided things that remind you of the event? Je, umewahi kujizuia kufikiria juu ya tukio hilo, au kujiepusha na vitu vinavyokukumbusha tukio hilo?	NO	YES	3
b	b	Have you had trouble recalling some important part of what happened? Je, umepata tabu ya kukumbuka baadhi ya sehemu muhimu juu ya kilichotokea?	NO	YES	4
c	c	Have you become less interested in hobbies or social activities? Je umekuwa na mvuto hafifu kwa mambo uyapendayo au kazi za kijamii?	NO	YES	5
d	d	Have you felt detached or estranged from others? Je, ulijisikia umejitenga au kutenganisha na wengine?	NO	YES	6
e	e	Have you noticed that your feelings are numbed? Je, ulitambua kwamba mawazo yako ni mazito?	NO	YES	7
f	f	Have you felt that your life would be shortened because of this trauma? Je, ulijisikia kwamba maisha yako yangekuwa mafupi kutokana na tukio hili?	NO	YES	8

➔

ARE **3** OR MORE **I3** ANSWERS CODED **YES**? JE, VIPENGELE **VITATU** AU ZAIDI VYA **I3** VIMEJIBIWA NDIYO?	NO	YES

I4 **In the past month :**

14 **Katika mwezi uliopita:**

a	a	Have you had difficulty sleeping? Je ulipata tabu ya usingizi?	NO	YES	9
b	b	Were you especially irritable or did you have outbursts of anger? Je ulikuwa mwenye kuudhika upesi, au ulipatwa na	NO	YES	10

milipuko ya hasira?

c	Have you had difficulty concentrating? Je, umepata tabu ya kuwa makini?	NO	YES	11
c				
d	Were you nervous or constantly on your guard? Je, ulikuwa na wahaka/wasiwasi au muda wote kujilinda?	NO	YES	12
d				
e	Were you easily startled? Je, ulikuwa mwepesi wa kushtushwa?	NO	YES	13
e				

→

ARE **2** OR MORE **I4** ANSWERS CODED **YES**?   NO   YES

JE VIPENGELE **2** AU ZAIDI YA **I4** VIMEJIBIWA **NDIYO**?

I5   During the past month, have these problems significantly interfered with your work or social activities, or caused significant distress?   NO   YES   14

I5   Katika mwezi uliopita, je matatizo haya kwa kiasi kikubwa yalivuruga utendaji wa kazi yako au shughuli za kijamii au kusababisha mashaka makubwa?

IS **I5** CODED **YES**?

JE I5 IMEJIBIWA NDIYO?

NO	YES
POSTTRAUMATIC STRESS DISORDER	
CURRENT	

J. ALCOHOL ABUSE AND DEPENDENCE

J. MATUMIZI MABAYA NA KUTAWALIWA NA POMBE

J1	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 1
J1	Katika miezi 12 iliyopita, ulishawahi kuwa na vinywaji vitatu au zaidi vya pombe ndani ya kipindi cha masaa matatu katika matukio m atatu au zaidi/	

J2 **In the past 12 months :**

Did you need to drink more in order to get the same effect that you did when you first started drinking?

J2 **Katika miezi 12 iliyopita:**   NO   YES   2

Je, ulihitaji kunywa zaidi ili upate matokeo sawa
a   nay ale uliyokunywa mara ya kwanza?

b   When you cut down on drinking did your hands shake, did you sweat, or feel agitated?

Or, did you drink to avoid these symptoms or to avoid being hangover, e.g., "the shakes", sweating or agitation?   NO   YES   3

b

Je, wakati ulipoacha kunywa mikono yako ilitetemeka ulitokwa na majasho, au kujisikia wasiwasi?

Je, ulikunywa ili kuondoa dalili hizi au kuepuka kuwa mchovu, mfano mtetemeko, kutokwa majasho au wasiwasi?

IF YES TO EITHER, CODE YES

KAMA NI NDIYO KWA CHOCHOTE, JIBU NDIYO

c   During the times when you drank alcohol, did you end up drinking more than you planned when you started?

                                      NO   YES   4

c   Wakati ambapo umelewa pombe, je uliishia kunywa zaidi kuliko ulivyopanga mwanzoni?

d   Have you tried to reduce or stop drinking alcohol but failed?

                                        NO   YES   5

d   Je ulijaribu kupunguza au kuacha ulevi ikashindikana?

e   On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol?

                                        NO   YES   6

e   Katika siku ambazo umelewa, je ulipoteza muda mwingi kupata pombe, kunywa au kupata nafuu kutoka katika athari za pombe?

f   Did you spend less time working, enjoying hobbies, or being with others because of your drinking?

                                        NO   YES   7

f   Je ulitumia muda mchache kufanya kazi kufurahia uvipendavyo au kuwa na wenzako kwa sababu ya ulevi wako?

g

Have you continued to drink even though you knew that the drinking caused you health or mental problems?

                                        NO   YES   8

g   Je uliendelea kulewa japo kuwa ulifahamu kuwa ulevi ulikusababishia matatizo ya kiafya na kiakili?

ARE **3** OR MORE **J2** ANSWERS CODED **YES**?

JE VIPENGELE **VITATU** AU ZAIDI VYA **J2** VIMEJIBIWA NDIYO?

NO	**YES**
ALCOHOL DEPENDENCE	
CURRENT	

→

DOES THE PATIENT CODES POSITIVES FOR ALCOHOL DEPENDENCE?

NO   YES

J3   **In the past 12 months :**

J3   **Katika miezi 12 iliyopita:**

a   Have you been intoxicated, high or hangover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems?

a

NO   YES   9

Je, umewahi kurukwa akili, kuwa na hali ya juu, au kuwa na uchovu wa pombe zaidi ya mara moja wakati ambapo ulikuwa na majukumu mengine shuleni, kazini au nyumbani? Je hili litaleta matatizo yeyote?

CODE YES ONLY IF THIS CAUSED PROBLEMS

(JIBU NDIYO IKIWA TU HILI LILILETA MATATIZO)

b   Were you intoxicated in any situation where you were physically at risk, e.g., driving a car, riding a motor bike, using machinery, boating, etc?

b

NO   YES   10

Je, ulirukwa akili katika mazingira yeyote ambapo ulikuwa hatarini mf. Kuendesha gari, kuendesha pikipiki, kutumia mashine, kusafiri kwa mashua, etc.

c Did you have any legal problems because of your drinking, e.g., an arrest or disorderly conduct?

NO   YES   11

c Je ulipata matatizo yeyote ya kisheria kwa sababu ya ulevi wakomfa. Kutiwa mbaroni au kufanya vurugu?

d Did you continue to drink even though your drinking caused problems with your family or other people?

NO   YES   12

d Je, uliendelea kulewa japokuwa ulevi wako ulisababisha matatizo kwa familia yako au watu wengine?

ARE **1** OR MORE **J3** ANSWERS CODED **YES**?

JE KIPENGELE **KIMOJA** AU ZAIDI CHA **J3** KIMEJIBIWA NDIYO?

NO
ALCOHOL ABUSE
CURRENT

CARD OF SUBSTANCES

AMPHETAMINE	**GASOLINE**	**MORPHINE**
CANNABIS	**GLUE**	**OPIUM**
COCAINE	**GRASS**	**PALFIUM**
CODEINE	**HASHISH**	**PCP**
CRACK	**HEROIN**	**RITALIN**

DICONAL	LSD	TEMGESIC
ECSTASY	MARIJUANA	THC
ETHER	MESCALINE	TOLUENE
FREEBASE	METHADONE	TRICHLORETHYLENE

K. NON-ALCOHOL PSYCHOACTIVE SUBSTANCE USE DISORDERS

UGONJWA WA MATUMIZI YA MADAWA YA KULEVYA AMBAYO SI POMBE

K1 a	Now, I am going to show you (SHOW THE CARD OF SUBSTANCES) / to read to you, a list (READ THE LIST BELOW) of street drugs or medicines. In the past 12 months, did you take any of these drugs, more than once, to get high, to feel better or to change your mood? Sasa ninakuonyesha (ONYESHA KADI YA MADAWA) / ninakusomea orodha ya madawa ya mitaani. Katika miezi 12 iliyopita, je ulitumia dawa yeyote katika hizi zaidi ya mara moja, ili uwe na hali ya juu, kujisikia mbora zaidi, au kubadilisha hali yako?	➔ NO YES

CIRCLE EACH DRUG TAKEN :

Stimulants: amphetamines, « speed », crystal meth, « rush », Dexedrine, Ritalin, diet pills.

Cocaine: snorting, IV, freebase, crack, « speedball ».

Narcotics: heroin, morphine, dilaudid, opium, demerol, methadone, codeine, percodan, darvon.

Hallucinogens: LSD (« acid »), mescaline, peyote, PCP (« angel dust », « peace pill »), psilocybin, STP, « mushrooms », ecstasy, MDA, or MDMA.

Inhalants: « glue », ethyl chloride, nitrous oxide, (« laughing gas »), amyl

or butyl nitrate (« poppers »).

Marijuana: hashish (« hash »), THC, « pot », « grass », « weed », « reefer ».

Tranquilizers: quaalude, Seconal (« reds »), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown.

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

SPECIFY MOST USED DRUG(S) :
_____

ZUNGUSHIA KILA DAWA ULIYOTUMIA:

Vichangamsho:Amphetamini

Cokein:

Nakotiks:

Hallucinogens:

Inhalants:

Marijuana:

Tranquilizers:

Nyinginezo:

ELEZA DAWA / MADAWA UTUMIAYO ZAIDI:_____

b SPECIFY WHICH WILL BE EXPLORED IN CRITERIA BELOW :

- IF CONCURRENT OR SEQUENTIAL POLYSUBSTANCE USE :
  EACH DRUG (OR DRUG CLASS) USED INDIVIDUALLY

     MOST USED DRUG (OR DRUG CLASS) ONLY

- IF ONE DRUG (OR DRUG CLASS) USED :

b.

ELEZA NI DAWA IPI IPO NDANI YA VIGEZO HAPA CHINI:

KAMA NI MATUMIZI YA PAMOJA AU YENYE KUFUATANA YA DAWA ZAIDI YA MOJA:

- KILA KUNDI LA DAWA KUTUMIKA PEKE YAKE

- KUNDI LA DAWA LINALOTUMIKA ZAIDI TU

- NI DAWA MOJA TU / KUNDI LA DAWA IMETUMIKA

K2	**Considering your use of [NAME THE SELECTED DRUG / DRUG CLASS] in the past 12 months :**		

Fikiria matumizi yako ya madawa (TAJA JINA LA DAWA / KUNDI LA DAWA LILILOCHAGULIWA), katika miezi 12 iliyopita:

a. Have you found that you needed to use more of [NAME OF SELECTED DRUG /

DRUG CLASS] to get the same effect that you did when you first started taking it?

Je, uliona kwamba unahitaji kutumia zaidi (Jina la dawa au kundi la dawa lililochaguliwa) ili kupata athari sawa na ile ulipotumia mara ya kwanza?

NO   YES   1

B. When you reduced or stopped using [NAME OF SELECTED DRUG / DRUG CLASS] did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable or depressed) ?

Or did you use any drug(s) to keep yourself from getting sick (WITHDRAWAL SYMPTOMS) or so that you would feel better?

IF **YES** TO EITHER, CODE **YES**

NO   YES   2

Wakati ulipopunguza au kutotumia (JINA LA DAWA / KUNDI LA DAWA LILILOCHAGULIWA) Je, ulipatwa na dalili zinazotokana na kuacha madawa? (Maumivu, kutetemeka, homa, udhaifu, kuharisha, kichefuchefu, kutokwa jacho, moyo kudunda, tabu ya usingizi, kujisikia wasiwasi, dukuduku, mwenye kuudhika upesi, au mwenye huzuni). Je ulitumia dawa/madawa yeyote ili kukufanya usiumwe (dalili za kuacha dawa) au kukufanya ujisikie vizuri zaidi?

IKIWA JIBU NI **NDIYO** KWA SWALI LOLOTE, JAZA **NDIYO**

c   Have you often found that when you used [NAME OF SELECTED DRUG / DRUG CLASS], you ended up taking more than you thought you would?

NO   YES   3

Je, mara kwa mara ulijiona kwamba wakati unatumia (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA), uliishia kutumia nyingi zaidi kuliko uwezo wako?

d   Have you tried to reduce or stop taking [NAME OF SELECTED DRUG / DRUG CLASS] but failed?

NO   YES   4

Je, ulijaribu kupunguza/kuacha kutumia (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA) lakini ukashindwa?

e   On the days that you used [NAME OF SELECTED DRUG / DRUG CLASS], did you spend substantial time (>2 hours), obtaining, using or recovering from the effects, or thinking about it?

NO   YES   5

Katika siku ambazo ulitumia (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA) Je, ulipoteza muda mwingi (> masaa 2) kupata, kutumia au kupata nafuu kutoka katika madawa au kufikiria juu ya madawa?

f   Did you spend less time working, enjoying hobbies, or being with family or friends, because of your drug use?

NO   YES   6

Je, ulitumia muda mchache kufanya kazi, kufurahia uvipendavyo, au kuwa na familia yako au marafiki kwa sababu ya kutumia kwako madawa?

g   Have you continued to use [NAME OF SELECTED DRUG / DRUG CLASS] even though it caused you health or mental problems?

NO   YES   7

Je, uliendelea kutumia (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA), japokuwa ilikusababishia matatizo ya kiafya na kiakili?

ARE **3** OR MORE **K2** ANSWERS CODED **YES**?

SPECIFY   DRUG(S)   :
_____
___

JE VIPENGELE **3** AU ZAIDI VYA **K2** VIMEJIBIWA **NDIYO?**

TAJA   DAWA   /
MADAWA:_____
_____

NO	YES
DRUG(S) DEPENDENCE CURRENT	

➔

DOES PATIENT CODES POSITIVE FOR DRUG DEPENDENCE?   NO   YES

K3 **In the past 12 months :**

Fikiria matumizi yako ya madawa (Jina la kundi la dawa lililochaguliwa)

Katika kipindi cha miezi 12 iliyopita:

a Have you been intoxicated, high, or hangover from [NAME OF SELECTED DRUG / DRUG CLASS], more than once when you had other responsibilities at school, at work, or at home? Did this cause any problem? (CODE YES ONLY IF THIS CAUSED PROBLEMS)   NO   YES   8

Je, umewahi kurukwa akili, kuwa na hali ya juu, au kuwa na uchovu wa dawa (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA), zaidi ya mara moja, wakati ambapo ulikuwa na majukumu mengine shuleni, kazini au nyumbani? Je hili lilileta matatizo yeyote?

(JAZA NDIYO IKIWA TU HILI LILILETA MATATIZO)

b Have you been high or intoxicated from [NAME OF SELECTED DRUG / DRUG CLASS] in any situation where you were physically at risk (e.g., driving a car, or a motorbike, using machinery, boating, etc.)?   NO   YES   9

Je, umewahi kujisikia na hali ya juu au kurukwa akili kutokana na (JINA LA DAWA/ KUNDI LA DAWA LILILOCHAGULIWA) katika mazingira yeyote ambapo ulikuwa hatarini (mfano, kuendesha gari, kuendesha pikipiki, kutumia machine, kusafiri kwa mashua, nk).

c Did you have any legal problems because of your [NAME OF SELECTED DRUG / DRUG CLASS] use, e.g., an arrest or disorderly conduct?   NO   YES   10

Je, ulipata matatizo yeyote ya kisheria kwa sababu ya matumizi ya madawa mf. Kutiwa mbaroni au kufanya vurugu.

d Did you continue to use [NAME OF SELECTED DRUG / DRUG CLASS] even though it caused problems with your family or other people?   NO   YES   11

Je uliendelea kutumia (JINA LA DAWA/ KUNDI LA

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DAWA LILILOCHAGULIWA), japokuwa ilisababisha matatizo kwa familia yako au watu wengine

	NO	YES
DRUG(S) ABUSE		
CURRENT		
NDIYO		
HAPANA		
MATUMIZI YA MADAWA KWA SASA		

ARE **1** OR MORE **K3** ANSWERS CODED **YES**?

SPECIFY   DRUG(S)   :
_____
—

JE, KIPENGELE **KIMOJA** AU ZAIDI CHA **K3** KIMEJIBIWA **NDIYO?**

TAJA   DAWA/MADAWA
:_____

L. PSYCHOTIC DISORDERS
L. MAGONJWA YA SAIKOSIS

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE YES ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE.

BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS « BIZARRE ».

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

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

OMBA MFANO KWA KILA SWALI LINAJIBIWA NDIYO. JAZA NDIO IWAPO TU MIFANO INAONYESHA WAZI MABADILIKO YA MAWAZO AU UTAMBUZI AU KAMA HAIHUSIANI NA MILA NA DESTURI KABLA YA KUJAZA CHUNGUZA IWAPO IMANI ZA UWONGO ZINA SIFA ZA KUWA SI ZA KAWAIDA.

IMANI POTOFU AMBAZO "SI ZA KAWAIDA" KAMA: ISIYOWEZEKANA KUWA KWELI, UPUUZI, ISIYOELEWEKA, NA ISIYOTOKANA NA MAISHA YA KAWAIDA.

HISIA POTOFU AMBAZO "SI ZA KAWAIDA" NI KAMA: SAUTI KUELEZEA JUU YA MAWAZO YA MTU AU TABIA, AU WAKATI SAUTI 2 AU ZAIDI ZINAZUNGUMZA ZENYEWE.

Now I'm going to ask you about unusual experiences that some individuals may experience.

Sasa ninakuuliza kuhusu matukio yasiyo ya kawaida ambayo watu wanapata.

					BIZARRE YES	
L1a	Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you?		NO	YES		1
	Je, umewahi kuamini kwamba watu wanakupeleleza, au kwamba mtu anapanga njama juu yako, au kujaribu kukudhuru?					
	KUMBUKA: Ulizia mifano ili kupata uhalisia.					
b	**IF YES**: Do you currently believe these things?	NO	YES	YES	2	
	KAMA NDIYO: Je kwa sasa unaamini mambo haya?			➔ L6a		
L2a	Have you ever believed that someone was reading your mind or could hear your thoughts or that you could actually read or hear what another person was thinking?	NO		YES	3	
	Je, umewahi kuamini kwamba mtu alikuwa anasoma mawazo yako au kuweza kusikia mawazo yako, au kwamba wewe kuweza kusoma mawazo ya mtumwingine au kusikia kile anachowaza mtu mwingine?					
b	**IF YES**: Do you currently believe these things?	NO		YES	4	
	KAMA NDIYO: Je kwa sasa unaamini mambo haya?			➔ L6a		

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L3 a	Have you ever believed that someone or some force outside of yourself put thoughts in your mind that were not your own, or made you act in a way that was not your usual self ? Have you ever felt that you were possessed? Je, umewahi kuamini kwamba mtu au nguvu Fulani kutoka nje zimeweka mawazo ndani yako na kwamba umekuwa siyo wewe mwenyewe, au imekufanya utende matendo ambapo haikuwa kawaida yako? Je, umewahi kujisikia kama kwamba umemilikiwa? *TABIBU*: ULIZIA MIFANO NA UONDOE YEYOTE ISIYOHUSIANA NA KURUKWA AKILI	NO	YES 5
b	**IF YES**: Do you currently believe these things? **KAMA NDIYO:** Je, kwa sasa unaamini mambo haya?	NO	YES 6 ➔ **L6a**
L4 a	**Have you ever believed that you were being sent special messages through the TV, radio or newspaper, or that a person you did not personally know was particularly interested in you?** **Je, umewahi kuamini kwamba umekuwa ukipokea ujumbe maalum kupitia TV, redio, au magazeti, au kwamba mtu usiyemjua akawa amevutiwa na wewe?**	NO YES	YES 7
b	**IF YES**: Do you currently believe these things? **KAMA NDIYO:** Je, kwa sasa unaamini mambo haya?	NO YES	YES 8 ➔ **L6a**
L5 a	Have your relatives or friends ever considered any of your beliefs strange or out of reality? ANY DELUSIONAL IDEAS NOT EXPLORED IN QUESTIONS L1 TO L4, E.G., OF GRANDIOSITY, RUIN, GUILT, HYPOCONDRIASIS. Je, ndugu zako au marafiki walishawahi kuona kwamba imani zako ni za ajabu au si za kawaida? Tafadhali, naomba mifano. *MSAILI:* Jaza ndiyo ikiwa tu mifano inaonyesha wazi kuwa ni imani za uwongo ambazo hazikuelezwa katika	NO YES	YES 9

maswali L1 mpaka L4, mfano, za kujifaharisha, za unyong'onyevu, za maangamizi, kuwa na hatia, n.k.

b	**IF YES**: Do they currently consider your beliefs strange? **KAMA NDIYO:** Je, kwa sasa wanaona imani zako ni za ajabu?	NO YES	YES	10
L6a	Have you ever heard things other people couldn't hear, such as voices? HALLUCINATIONS ARE CODED « BIZARRE » ONLY IF PATIENT ANSWERS YES TO THE FOLLOWING : Did you hear a voice commenting on your thoughts or behavior, or did you hear two or more voices talking to each other? Je umewahi kusikia mambo ambayo wengine hawasikii, kama vile sauti? HISIA POTOFU ZINAKUWA "SI ZA KAWAIDA" IKIWA TU MGONJWA ANAJIBU NDIYO KATIKA SWALI LIFUATALO: Je ulisikia sauti ikielezea mawazo yako au tabia au kusikia sauti mbili au zaidi zikizungumza zenyewe?	NO YES	YES	11
b	**IF YES**: Have you heard these things in the past month? **KAMA NDIYO:** Je, umesikia vitu hivi ndani ya mwezi 1 uliopita?	NO YES	YES ➔ **L8b**	12
L7a	Have you ever had visions when you were awake or have you ever seen things other people couldn't see? CODE YES ONLY IF THE VISIONS ARE CULTURALLY INAPPROPRIATE. Je, umewahi kuwa na ndoto wakati yu macho au kuona vitu ambapo watu wengine hawavioni? **TABIBU:** chunguza ili kujua kama havihusiani na mambo ya kimila na desturi?	NO YES	13	
B	**IF YES**: Have you seen these things in the past month? : INTERVIEWER'S JUDGMENT :	NO YES	14	

KAMA NDIYO: Je umeviona vitu hivi katika mwezi mmoja uliopita?

UAMUZI WA TABIBU

L8 b

IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED SPEECH, OR MARKED LOOSENING OF

L8 b ASSOCIATIONS?

JE MGONJWA KWA SASA ANAONYESHA MAMBO YASIYOELEWEKA, MANENO YASIYO NA MPANGILIO, AU MAMBO YASIYOUNGANIKA.

NO   YES   `115

L9 b IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR?

L9 b JE KWA SASA MGONJWA ANAONYESHA TABIA ISIYOELEWEKA AU KUZUBAA?

NO   YES   16

L10 b

ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW?

L10 b

JE, DALILI HASI ZA SKIZOFRENIA, MFANO KUTODHIHIRISHA HISIA, UPUNGUFU WA MANENO YA KUSEMA (KUTOSEMA) AU KUTOWEZA KUANZISHA AU KUDUMU KATIKA SHUGHULI MAALUM, ZINAONEKANA WAKATI WA USAILI?

NO   YES   17

L11   FROM **L1 TO L10** :

• ARE **1 OR MORE** « **b** » QUESTIONS CODED **YES BIZARRE?**
  OR

• ARE **2** OR MORE « **b** » QUESTIONS CODED **YES** (RATHER THAN YES BIZARRE)?

NO	YES
PSYCHOTIC SYNDROME CURRENT	

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L11
- JE KIPENDELE **KIMOJA** AU ZAIDI VYA MASWALI **(b)** KIMEJIBIWA **NDIYO SI YA KAWAIDA**?

AU

- JE, VIPENGELE **2** AU ZAIDI VYA MASWALI **(b)** VIMEJIBIWA **NDIYO** (BADALA YA NDIYO SI YA KAWAIDA).

L12 FROM **L1 TO L7** :

- ARE **1** OR MORE « **a** » QUESTIONS CODED **YES BIZARRE?**

OR

- ARE **2** OR MORE « **a** » QUESTIONS CODED **YES** (RATHER THAN YES BIZARRE)?

(CHECK THAT THE 2 SYMPTOMS OCCURRED DURING THE SAME TIME PERIOD)

OR

- IS **L11** CODED **YES**?

NO	YES

PSYCHOTIC SYNDROME LIFETIME

L12
- JE, KIPENGELE **1** AU ZAIDI YA MASWALI **(a)** VIMEPITIWA **NDIYO SI YA KAWAIDA**?

AU

- JE, VIPENGELE **2** AU ZAIDI VYA MASWALI **(a)** VIMEJIBIWA **NDIYO** (BADALA YA NDIYO SI YA KAWAIDA)

UAMUZI WA TABIBU

CHUNGUZA KAMA DALILI 2 ZILITOKEA WA KATI MMOJA

AU

- JE, KIPENGELE **L11** KIMEJIBIWA **NDIYO**?

L13a IF L12 IS CODED YES OR AT LEAST ONE YES FROM L1 TO L7 :

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DOES THE PATIENT CODE POSITIVE FOR EITHER ➔

      MAJOR DEPRESSIVE EPISODE (CURRENT   NO   YES
OR PAST)

OR   MANIC EPISODE (CURRENT OR PAST)?

L13a

KAMA L12 IMEJIBIWA NDIYO   NA ANGALAU
NDIYO MOJA KUTOKA L1 MPAKA L7:

JE DALILI HIZO ZIMEJIBIWA NDIYO KWA AIDHA

      TUKIO LA SONONA, (KWA SASA)

AU   TUKIO LA MANIA, (KWA SASA AU MUDA
ULIOPITA)?

b   You told me earlier that you had period(s) when you felt
depressed/ high/ persistently irritable.   NO   YES 18

Were the beliefs and experiences you just described
(SYMPTOMS CODED YES FROM L1 TO L7) restricted

b   exclusively to times when you were feeling depressed /
high / irritable?

Kama L13 imejibiwa ndiyo:

Uliniambia mwanzoni kwamba kulikuwa na vipindi
ambavyo ulijisikia (huzuni/hali ya juu/mwepesi wa
kuudhika mara zote).

Je, imani na matukio uliyoyaeleza hivi punde (dalili
zimejibiwa ndiyo kutoka L1 mpaka L7).vimekuwepo pale
tu ulipojisikia huzuni/hali ya juu/mwenyekuudhika?

IS **L13b** CODED **YES**?   **NO**   **YES**

JE, **L13b** IMEJIBIWA **NDIYO**?

                             MOOD DISORDER WITH

M. ANOREXIA NERVOSA

M. UGONJWA WA TAFSIRI YA MAUMBILE BINAFSI UNAOHUSIANA NA KUTOKULA

M1 a	How tall are you?	|__|__|__|	Ft Ins
a	Una urefu kiasi gani?		Cm
b	What was your lowest weight in the past 3 months?	|__|__|__|	Lbs. Kg
b	Ni uzito upi mdogo kuliko wote katika miezi mitatu iliyopita.		
c	IS PATIENT'S WEIGHT LOWER THAN THE THRESHOLD CORRESPONDING TO HIS / HER HEIGHT? SEE TABLE BELOW	➔ NO YES 1	
c	JE, UZITO WA MGONJWA NI MDOGO KULIKO KIWANGO KINACHOLINGANA NA UREFU WAKE? (ANGALIA JEDWALI CHINI)		

In the past 3 months :

Katika miezi 3 iliyopita: ➔

M2	In spite of this low weight, have you tried not to gain weight?	NO YES 2
M2	Pamoja na uzito huu mdogo, je ulijaribu kutoongeza uzito?	

M3	Have you feared gaining weight or becoming fat, even though you were underweight?	→		
		NO	YES	3
M3	Je, ulihofia kuongezeka uzito au kuwa mnene hata kama ulikuwa na uzito mdogo?			

M4a	Have you considered yourself fat or that part of your body was too fat?	NO	YES	4
a	Je ulijiona wewe mwenyewe mnene, au sehemu ya mwili wako nene sana?			
b	Has your body weight or shape greatly influenced how you felt about yourself?	NO	YES	5
b	Je, uzito wa mwili wako au umbile umeathiri kwa kiasi kikubwa jinsi unavyojiona?			
c	Have you thought that your current low body weight was normal or excessive?	NO	YES	6
c	Je, ulifikiria kwamba uzito wako mdogo wa sasa ni kawaida au umezidi?			

		→		
M5	ARE **1** OR MORE **M4** ANSWERS CODED **YES**?	NO	YES	
M5	JE, KIPENGELE **KIMOJA** AU ZAIDI VYA **M4** VIMEJIBIWA **NDIYO?**			
		→		
M6	FOR WOMEN ONLY: During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)?	NO	YES	7
M6	Kwa wanawake tu: Katika miezi mitatu iliyopita, Je			

ulikosa siku zako zote za hedhi pale ambapo ulizitarajia kutokea (wakati hukuwa mjamzito)?

FOR WOMEN: ARE **M5** AND **M6** CODED **YES**?	**NO** **YES**
FOR MEN: IS **M5** CODED **YES**?	
KWA WANAWAKE: JE, **M5** NA **M6** VIMEJIBIWA **NDIYO**?	*ANOREXIA NERVOSA*
KWA WANAUME: JE, **M5** IMEJIBIWA **NDIYO**?	*CURRENT*

TABLE HEIGHT / WEIGHT THRESHOLD (HEIGHT-WITHOUT SHOES ; WEIGHT-WITHOUT CLOTHING)

HEIGHT(cm) UREFU (sm)	140	145	150	155	160	165	170	175	180	185	190
Females Wanawake WEIGHT (kg) UZITO (kilo)	37	38	39	41	43	45	47	50	52	54	57
Males Wanaume	41	43	45	47	49	51	52	54	56	58	61

THE WEIGHT THRESHOLDS ABOVE ARE CALCULATED AS A 15% REDUCTION BELOW THE NORMAL RANGE FOR THE PATIENT'S HEIGHT AND GENDER AS REQUIRED BY DSM-IV.

N. BULIMIA NERVOSA

N. UGONJWA WA TAFSIRI YA MAUMBILE BINAFSI UNAOHUSIANA NA KULA MNO

N1	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	YES	8
N1	Katika miezi mitatu iliyopita, je uliwahi kula kupita kiasi au wakati ambapo umekula chakula kingi sana ndani ya masaa mawili?			
N2	In the last three months, did you have eating binges as often as twice a week?	➔ NO	YES	9
N2	Katika miezi 3 iliyopita, je umewahi kula kupita kiasi kila mara, mara 2 kwa wiki?			

N3	During these binges, did you feel that your eating was out of control?	➔ NO	YES	10
N3	Katika milo hii, ulijisikia kwamba kula kwako ni kwa kushindwa kujitawala?			
N4	Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications ?	➔ NO	YES	11
N4	Je ulifanya kitu chochote kufidia, au kuzuia kuongezeka uzito kutokana na milo hii, kama vile kutapika, kushinda na njaa, kufanya mazoezi, kumeza dawa za kuharisha, enema, kuongeza mkojo au dawa nyinginezo?			
N5	Does your body weight or shape greatly influence how you feel about yourself?	➔		

NO   YES   12

N5   Je uzito wako au umbile lako linaathiri kwa kiasi kikubwa jinsi unavyojiona?

N6   DOES THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA?

NO   YES   13

IF **N6** = **NO**, SKIP TO **N8**

N7   Do these binges occur only when you are under _____ kg/lbs.*?

NO   YES   14

- TAKE THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE

Je, milo hii ya kupita kiasi hutokea pale tu una uzito chini ya kilo _____?

- ANDIKA KIWANGO CHA UZITO KINACHOLINGANA NA UREFU WA MGONJWA KUTOKA KATIKA JEDWALILILILOPO KWENYE KIHUNZI CHA UGONJWA WA KUTOKULA

N8   IS **N5** CODED **YES** AND **N7** CODED **NO** (OR SKIPPED)?

JE, **N5** IMEJIBIWA NDIYO **N7** IMEJIBIWA HAPANA (AU IMERUKWA KWA SABABU DALILI ZA MGONJWA HAZIFIKII VIGEZO VYA UGONJWA WA KUTOKULA)?

NO	**YES**

BULIMIA NERVOSA

CURRENT

IS **N7** CODED **YES**?

JE, **N7** IMEJIBIWA **NDIYO**?

	NO
YES	
ANOREXIA NERVOSA	
Binge-Eating/Purging Type	
CURRENT	

O. GENERALIZED ANXIETY DISORDER

O. UGONJWA WA WASIWASI MKUBWA

O1 a	Have you worried excessively or been anxious about several things of day to day life, at work, at home, in your close circle over the past 6 months?	→ NO YES 1
	DO NOT CODE YES IF THE FOCUS OF THE ANXIETY IS CONFINED TO ANOTHER DISORDER EXPLORED PRIOR TO THIS POINT SUCH AS HAVING A PANIC ATTACK (PANIC DISORDER), BEING EMBARRASSED IN PUBLIC (SOCIAL PHOBIA), BEING CONTAMINATED (OCD), GAINING WEIGHT (ANOREXIA NERVOSA)...	→ NO YES 2
O1 a	Are these worries present most days? Je, ulikuwa na woga sana au kupata wasiwasi juu ya mambo mawili au zaidi (mf. Pesa, afya ya watoto, msiba) kwa kipindi cha miezi 6 iliyopita? Zaidi ya watu wengi webgine wanavyokuwa? Je, woga huu unakuwepo karibu siku zote?	

O2	Do you find it difficult to control the worries or do they interfere with your ability to focus on what you are doing? Je unapata tabu kujizuia na woga, au je inavuruga uwezo	→ NO YES 3

O2   wako wa kuwa makini kwa unachokifanya?

O3   FROM O3a TO O3f, CODE NO THE SYMPTOMS CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT

O3

When you were anxious over the past 6 months, did you, almost every day :

Waakati ulipokuwa na wasiwasi katika miezi 6 iliyopita, je, muda mwingi:

a Feel restless, keyed up or on edge?   NO   YES 4

a Ulijisikia kutotulia, kuamshwa, au mwenye kiherehere?

b Feel tense?   NO   YES 5

b Ulijisikia kukakamaa?

c Feel tired, weak or exhausted easily?   NO   YES 6

c Ulijisikia kuchoka, mdhaifu, au kuchoka mapema?

d Have difficulty concentrating or find your mind going blank?   NO   YES 7

d Ulipata tabu ya kuwa makini, au kuona unapoteza kumbukumbu?

e Feel irritable?   NO   YES 8

e Ulijisikia mwenye kuudhika upesi?

f Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?   NO   YES 9

f Ulipata tabu ya usingizi (tabu ya kupata usingizi, kuamka katikati ya usiku, kuamka mapema asubuhi, au kulala mno)?

ARE **3** OR MORE **O3** ANSWERS CODED **YES**?

JE VIPENGELE **3** AU ZAIDI VYA **O3** VIMEJIBIWA **NDIYO**?

NO	YES
GENERALIZED ANXIETY DISORDER	

Q. ANTISOCIAL PERSONALITY DISORDER (optional)
Q. UGONJWA WA MAKUZI YA HULKA NA TABIA ZINAZOPINGANA NA JAMII (hiari)

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

Kabla hujawa na umri wa miaka 15, je:

a   Repeatedly skip school or run away from home overnight?   NO   YES   1

Ulikuwa ukitoroka shule mara kwa mara au kuondoka nyumbani usiku?

b   Repeatedly lie, cheat, « con » others, or steal?   NO   YES   2

Ulikuwa ukidanganya mara kwa mara, ukilaghai, kutapeli wengine, au kuiba?

c   Start fights or bully, threaten, or intimidate others?   NO   YES   3

Ulianzisha ugomvi au kudhulumu, kutishia au kutisha wengine?

d   Deliberately destroy things or start fires?   NO   YES   4

Kwa makusudi uliharibu vitu au kuwasha moto?

e   Deliberately hurt animals or people?   NO   YES   5

Kwa makusudi kuwadhuru wanyama au watu?

f   Force someone to have sex with you?   NO   YES   6

Kumlazimisha mtu kufanya mapenzi na wewe?

➔

ARE **2** OR MORE **P1** ANSWERS CODED **YES**?   NO   YES

JE, VIPENGELE **2** AU ZAIDI VYA **P1** VIMEJIBIWA **NDIYO**?

P2 DO NOT CODE YES THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED

USIJIBU NDIYO KWA TABIA ZILIZO HAPA CHINI IKIWA

ZIMESABABISHWA NA MAMBO YA KISIASA AU KIDINI

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

Tangu umri wa miaka 15, je:

a Repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself?

   Mara kwa mara ulikuwa na tabia ambayo watu wengine wangeona kama ni kutowajibika, kama vile kushindwa kulipa madeni, kwa makusudi kuwa jazba au kwa makusudi kutofanya kazi ili kujitegemea?
     NO   YES   7

b Done things that are illegal even if you didn't get caught (i.e., destroying property, shoplifting, stealing, selling drugs, or committing a felony?
     NO   YES   8

   Hufanya mambo kinyume cha sheria hata kama hukutiwa mbaroni (kama vile, kuharibu mali, kuiba vitu dukani, wizi, kuuza madawa ya kulevya, au kufanya kosa la jinai)?

c Been in physical fights repeatedly (including physical fights with your spouse or children)?
     NO   YES   9

   Ulikuwa ukipigana mara kwa mara (ikiwemo kupigana na mke / mume wako au watoto)

d Often lied or « conned » other people to get money or pleasure, or lied just for fun?
     NO   YES   10

   Mara kwa mara kudanganya au "kutapeli" watu wengine ili kupata pesa au starehe, au kudanganya kwa kuchekesha watu tu?

e Exposed others to danger without caring?
     NO   YES   11

   Kuwaweka wengine katika hatari bila ya kujali?

f Felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property?
     NO   YES   12

   Kujiona huna hatia baada ya kuleta madhara, kufanya maovu, kudanganya, au kuwaibia watu, au baada ya kuharibu mali?

ARE **3** OR MORE ITEMS FROM **P2** CODED **YES**?

JE, VIPENGELE **3** AU ZAIDI VYA **P2** VIMEJIBIWA **NDIYO**?

NO	YES
ANTISOCIAL	

Appendix D

INFORMATION AND CONSENT FORM FOR STUDY PARTICIPANTS
Name of Study: "The association between Substance Use Disorder and Schizophrenia."

Principal Investigator: Dr Stephen Sevalie, University of Nairobi, Kenya. Tel: 0712785947

Co- Principal Investigator: Professor David M Ndetei and Professor Mary W Kuria

A. consent explanation (To be read and questions answered in a language in which the study subject is conversant; English or Kiswahili, and those who cannot read will be thoroughly explained to).

My name is Dr Stephen Sevalie; I am a pursuing a Masters in Psychiatry at University of Nairobi. I am doing a study entitled "The association between substance use disorder and schizophrenia among patients attending outpatient services in Mathari Teaching and Referral Hospital"as part of my degree award fulfillment. My supervisors are Prof. David M.Ndetei and professor W Kuria who are all Lecturers in the Department of Psychiatry, University of Nairobi.

The aim of this study is to find out whether there is an association between substance use disorder and schizophrenia among patients attending outpatient services at Mathari Teaching and Referral Hospital. This study will be conducted by me under supervision of my supervisors and Mathri Teaching and Referral Hospital. This is a medical research and you are required to understand the following which apply to all in medical research.

1. Your participation is completely voluntary and you may withdraw consent at any time in the course of the interview.

2. Refusal to participate will not in any way affect your sentence/ health services/benefits which you are entitled.

3. After reading the explanation, don't hesitate to ask any questions in case you need clarifications.

4. I will assess your psychological profile by using instruments which will take about 30 minutes of your time. This instrument will assist me to pick any mental health problems that you may have and it will contain questions concerning your feelings, thoughts and

behavior.

5. There is no right or wrong answer.

6. No invasive procedures such as drawing blood will be involved and no risks will be posed to you except that you may experience an emotional disturbance through asking you emotionally questions.

7. All information obtained from this study will remain confidential and your privacy will be upheld. Serial numbers instead of your name will be used in this study for identification, however your name will only appear on the consent form which will be signed and kept separately from the study documents for legal purposes and for identification in case you will be found with psychological problems that need follow up.

8. There will be no material gain from this study. However the overall study may be of benefit to patients with schizophrenia that may be having mental substance use problems and in general in terms of policy implementation and better intervention and care of substance use disorder and schizophrenia.

9. During interviews, research participants who are found to have mental or physical problem will be provided with immediate counseling and referred for treatment and follow-up services in the appropriate departments in mathari teaching and referral hospital.

10. Results of the study can be availed to you upon request.

If you have any questions related to this study, or your health you can call me on my telephone numbers +**254712785947** or my lead supervisors at the department of psychiatry, University of Nairobi Or KNH/ UON Ethics and Research Committee at Kenyatta Hospital on telephone number **2726300 Ext 44102** or P.O BOX **20723 -00202**, Nairobi

INFORMED CONSENT EXPLANATION (SWAHILI TRANSLATION)
Fomu ya maelezo ya maridhiano:

Mimi ni daktari na jina langu Dr Stephen Sevalie, nasoma shahada udhamini ya magojwa ya akili chuo kikuu cha Nairobi. Nafanya utafiti unaojulikana kama ' Ukubwa wa matatizo ya unyogovu na utumiaji wa pombe kwa njia isiofaa miongoni mwa wanawake waliofungwa katika gereza ya Langata ya Wanawake kwa muda isiozidi mwaka moja ' ikiwa ni sehemu ya mahitaji ya digrii yangu. Wasimamizi wangu ni Profesa D.M. Ndetei na profesa M Kuria na ambao wote ni wahadhiri katika kitengo cha magojwa ya akili Chuo kikuu cha Nairobi.

Dhumuni la utafiti huu ni kujua ukubwa wa matatizo wa unyogovu, na utumiaji wa pombe kwa njia isiofaa, na huu utafiti utafanywa na mimi mwenyewe chini ya usimamizi wa wasimamizi wangu niliowataja hapo juu. Huu ni utafiti wa kitabibu na unahitaji kuelewa mambo yafuatayo ambayo hutumika katika tafiti zote za namna hii.

1. Kushiriki kwako ni kwa hiari na unaweza kusitisha ridhaa yako ya kushiriki wakati wowote

2. Kukataa kwako kushiriki haitaathiri kwa namna yoyote ile huduma zako za kiafya unazotakiwa kupewa

3. Baada ya kusoma maelezo usisite kuuliza maswali endapo utahitaji ufafanuzi.

4. Nitapima matatizo yako kwa kutumia vifaa ambavyo vitachukua kama dakika 30 ya muda wako. Hizi vifaa vitanisaidia kupata matatizo yoyote ya kiakili ambayo unaweza kuwa nayo, pia ina maswali yanayohusu vile unajisikia, fikira na pia tabia yako

5. Unaweza kupata ujumbe wowote kuhusu utafiti huu, unapouhitaji Hakuna jibu lililo sahihi au lisilo sahihi

6. Hakutakuwa na utolewaji damu katika utafiti huu

7. Hakutakuwa na athari zozote kwako isipokuwa labda maumivu ya kihisia kufuatia maswali yanayoumiza kihisia nitakayokuuliza

8. Habari zitakazopatikana katika utafiti huu zitabakia kuwa siri, na itatumika namba badala

ya jina lako katika kukutambua ,ila itakubidi kuandika jina lako katika fomu ya maridhiano ambayo itahifadhiwa tofauti na nyaraka nyingine za utafiti. Hii ni kwa madhumuni ya kukutafuta na kukufuatilia afya yako baadae endapo utapatikana na matatizo ya kisaikolojia, na pia itakuwa kwa ajili ya mambo ya kisheria

9. Hakutakuwa na kupewa hela ama zawadi zozote zile katika utafiti huu ila matokeo yake yataweza kuwasaidia waliofungwa kwa ujumla katika kuhakikisha huduma bora za afya ya akili zinatolewa kwa waliyefungwa.

10. Nitaweza pia kukusaidia endapo utahitaji msaada ambao upo ndani ya uwezo wangu

Endapo utakuwa na maswali yoyote kuhusiana na utafiti huu au afya yako tafadhali nipigie katika namba zangu za simu ambazo ni **+254712785947** au unaweza kuwauliza wasimamizi wangu katika kitengo cha afya na magonjwa ya akili chuo kikuu cha Nairobi Au unaweza kuwasiliana na KNH/ UON Ethics and Research Committee at Kenyatta Hospital kwenye namba **2726300 Ext 44102**.

Appendix E1.

Consent Form (English version)

I, ………………………………………………………………………the undersigned do hereby volunteer to participate in this study. The nature and purpose have been fully explained to me by Dr Stephen Sevalie.

The role I play by participating in the interviewee is to help the investigators collect information about the association between substance use disorder and schizophrenia. This information may or may not be useful in designing better ways to improve mental wellbeing in the future. My questions, if any, have been answered to my satisfaction. The Kenyatta National Hospital Research and Ethics Board, may be contacted by research subjects to discuss their rights on P.O Box 20723-0020 Nairobi or call on telephone number 02726300 Ext 44102

Participant's Signature _____Date_____

Serial Number _____

Investigators Statement

I (Dr Stephen sevalie) have explained to the respondent the nature and purpose of this study as described above. I have asked the respondent if there are any questions and I have answered them to the best of my knowledge and ability.

Witness Signature _____ Date_____

Appendix E2

Consent form (Swahili version)

B.FOMU YA MARIDHIANO

Mimi ninayesaini najitolea kwa hiari yangu kushiriki katika utafiti huu ambao asili na lengo lake nimeelezwa kwa kina na dokta Stephen Sevalie

Naelewa kwamba habari itakaypoatikana itatumika tu kwa ajili ya huu utafiti na si vinginevyo na kwamba naweza kusitisha ridhaa yangu ya kushiriki katika utafiti huu wakati wowote na hii haitaathiri kwa namna yoyote ile huduma zangu za kiafya ninazotakiwa kupewa.

Jina……………Namba………………..Saini/dolegumba………………………Tarehe………….

(Jina la mfungwa)

Mimi (Dr Stephen sevalie) nimelezea anaye jibu asili lengo la somo hili kama ilivyoelezwa hapo juu. Mimi nime mu uliza anaye jibu asili kama kuna maswali yoyote na nimejibu kadri ya ufahamu wangu na uwezo.

Mbele ya shahidi (Dr Stephen Sevalie)……… saini………………………Tarehe……………….