POSTTRAUMATIC STRESS DISORDER AMONG WIDOW SURVIVORS OF THE 1994 RWANDESE GENOCIDE

A DISSERTATION PRESENTED IN PART FULFILLMENT FOR THE AWARD OF THE DEGREE OF MASTER OF MEDICINE IN PSYCHIATRY

OF UNIVERSITY OF NAIROBI.

BY

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SEPTEMBER 2009.

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DECLARATION

I, Dr. Ngamije K.Schadrac do hereby declare that this dissertation is my original work carried out in part fulfillment of the requirements for the award of the degree of Master of Medicine in Psychiatry (Mmed.Psych.) of the University of Nairobi .I further declare that this dissertation has not been submitted for the award of any other degree or to any other university.

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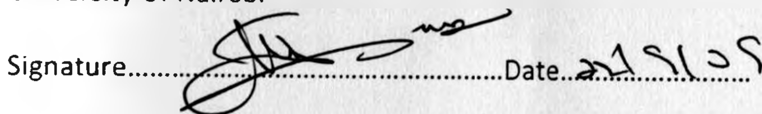

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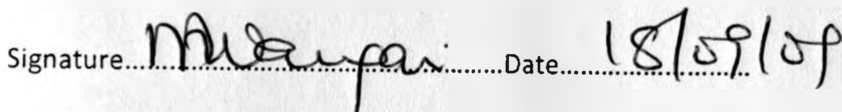

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Dedication

This dissertation is sincerely dedicated to the victims of the1994 Rwandese genocide, the men and women who contributed towards stoppage of the 1994 Rwandese genocide, my wife Mukamusoni Fanny and our son Serge Kirenga.

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ABBREVIATIONS AND ACRONYMS.

1. AIDS: Acquired Immunodeficiency Syndrome
2. ARCT: Association Rwandaise des Conseillers en Traumatisme.
   Rwandese association of trauma counselors
3. AVEGA: Association des Veuves du Genocide – AGAHOZO.
   Widows association of genocide survivors.
4. HIV: Human Immune Virus.
5. IBUKA:Kinyarwanda word,meaning <remember>,is an umbrella of all Rwandese associations of genocide survivors.
6. IES-R: Impact of Event Scale Revised
7. KNH: Kenyatta National Hospital.
8. NUR: National University of Rwanda.
9. PNSM: Programme National de santé Mentale
   Mental health national programme
10. PTSD: Posttraumatic Stress Disorder.
11. RPF: Rwandese Patriotic Front
12. SCID: Structured Clinical Interview for the Diagnostic and Statistical Manual.
13. SCPS: Service de Consultation Psycho-Sociale
    Psycho-social consultation center.
14. SPSS: Statistical Package for Social Sciences.
15. WHO: World Health Organization.

ABSTRACT

Introduction.

The1994 Rwandese genocide was Africa's largest in modern times, the quickest and most vicious yet recorded in human history. Hence, psychiatric morbidity, especially Posttraumatic Stress Disorder, could be expected among survivors of the tragedy, especially among widows who continue to experience the negative socio-economic consequences. No studies have been carried out to assess the psychological sequels, especially among this particular population of widows.

Objectives.

-To determine the prevalence of PTSD among widows, survivors of 1994 Rwandese genocide, fourteen years after the event
-To correlate Socio-demographic patterns and PTSD
-To correlate various traumatic events which occurred in Rwandese genocide and PTSD among widow survivors.
-To determine any other psychiatric disorder among widow survivors of Rwandese genocide

Methodology.

The study design was a cross-sectional descriptive study with sample size comprising of 110 widows, survivors of the 1994 Rwandese genocide, registered with AVEGA-AGAHOZO, selected randomly in 5 different sites representing the five current provinces of Rwanda.

Study instruments included:
-A researcher-designed socio-demographic questionnaire.
-The Harvard trauma questionnaire (modified).
-The Impact of Events Scale-Revised.
-The Alcohol, Smoking and substance Involvement Screening Test.
-Beck's suicidality scale.
-The structured Clinical Interview for the Diagnostic and Statistical Manual IV.

Results

The study involved 110 subjects aged between 36 and 65years.Most of the subjects had no formal education and were Catholics.

Lifetime PTSD was found in 59(53.2%)subjects while current PTSD was present in 31(28.2%). Subjects with current PTSD showed severe symptoms.
Among those with current PTSD; Major depressive disorder and alcohol abuse were the comorbid illnesses associated with statistical significance.
Traumatic events related to PTSD with statistical significance were: Rape/sexual abuse, being tied up, being shot, being slashed, being ill and inaccessibility to care, being severely wounded, inability to help your relative in danger.
Other significant associations with PTSD were: suicide ideation, suicide plan, and satisfaction with assistance.
There was no statistical significant association between PTSD and age, level of education occupation, monthly income, being treated for another mental illness, family history of mental illness, assistance and trial of genocide perpetrators.

Conclusion and recommendations

Fourteen years after the 1994 Rwandese genocide, widow survivors do still suffer from PTSD and other psychiatric disorders mainly related to that tragedy.
It was recommended that other studies among this population be conducted to confirm the findings and find the long-term effects of chronicity and devise intervention strategies.

CHAPTER 1: INTRODUCTION.

1.1.Background.

The Republic of Rwanda is a 26,338 (square kms), landlocked country in the Great Lakes region of east-central Africa, bordered by Uganda, Burundi, the Democratic Republic of Congo and Tanzania.

The Berlin International Conference of 1885 at which the African continent was divided and allocated to colonial powers, Rwanda was granted to Germany. During the First World War, in 1916, the Belgians defeated the Germans and occupied Rwanda until 1962 when she gained her independence. (Wikipedia, 2007).

Historically, Rwandese people were called Hutu, Tutsi and Twa depending on their economic activities: agricultural, pastoral, hunting-pottery. The system was flexible; people could switch from one group to another and vice versa. They shared the same culture; the same language and the same land and lived peacefully for generations (Mamdani, 1998). According to Hornby, tribe is a group of people of the same race and the same custom, language, religion, etc, living in a particular area and often led by a chief (Hornby, 2000). Following that definition the Rwandese is one tribe with three sub ethnic groups.

During the colonial era, the policy of "Divide and Rule" was used to divide once united Rwandese people by emphasizing on the little difference between the three subgroups. Both colonizers, Germans then Belgians leaned on existing power structure to reinforce their domination on the native population.

In 1930's; identity cards were issued to the native population, with ethnic mention. Following that identification tribe was a hallmark, which was used, in successive ethnic killings from 1959 to 1994. Both colonialist and powerful Catholic clergy taught the scholars that the three tribes came from different regions of Africa. This theory of origins of Rwandan people impacted negatively on the political life of the country after independence dominated exclusively by one group at the expense of others.

In 1950's, when Africans started agitating for their independence, European settlers began to feel threatened that they were losing ground and influence over the native population as they become more adapt in governing themselves. In order to maintain influence, they changed allegiance and began a propaganda campaign arming one sub-ethnic group against others. That spread campaign resulted in the outbreak of violence throughout the country in 1959, and fearing their fate, thousands of Rwandese fled into exile in neighbouring countries (Uganda, Burundi, Tanzania, Congo).

By 1962, Rwanda achieved independence but with escalating violence, and political tension, killing and looting continued (Kanamugire, 2003).

By 1990,the Rwandese Patriotic Army, an army formed mainly by former refugees of successive killings and others opposed to the tyrannical regime invaded the country. The international community sought political solution to end that civil war; both sides came to the negotiation table but little was resolved because extremists in power, for more than three decades, didn't agree for a power sharing with people they consideredenemies.Instead, both antagonists hoped for a solution, which would be advantageous to their individual political interests. The then government did little to eradicate the growing lethal militia groups being controlled by extremists. Lists of persons to be killed were compiled throughout the country, firearms, machetes, grenades, studded bludgeons... were

distributed to the negatively sensitized people. Media houses (Radio, News Papers...) owned by extremists openly incited people towards ethnic hatred. Peasants were told by radio and word of mouth that it was their duty to wipe out their enemies (Rutinduka, 2002).

On 6th April 1994, the presidential plane carrying Rwandese president and his Burundian counterpart, as both presidents returned from a summit of regional leaders in Tanzania, was shot down as it approached the Kigali airport, by unknown forces who up to now remain unidentified. Both presidents died, as did their senior aides and the French aircrew. Within hours the presidential guard were out on streets setting up roadblocks in Kigali and going house to house to find and attack Rwandese opposition leaders and ordinary citizens accused of being related to the rebels group. Military, police and militia groups systematically set out to murder all so called enemies they could capture, irrespective of their age or sex.

During one hundred days, from 6th April to 17th July 1994, almost one million people were killed in the most atrocious and horrible orgy of death. Most victims were killed in their villages or in towns, often by their neighbors and fellow villagers. The militia members typically murdered their victims by hacking them with machetes, although some used rifles.

People were severely wounded, shot or beaten and denied health care or amputated and left alive deliberately to make them suffer or to die.
Victims were forced to witness killing, torture, rape of their relatives without any possibility to help them. The victims were often hiding in churches and school buildings, where militia gangs massacred them. They were killed by their fellow countrymen without any international rescue (Prunier, 1995).

The Rwandese genocide, which was ended by the victory of the Rwandese Patriotic Front rebels and overthrow of the existing regime in July 1994,one hundred days after it had started, left the country totally devastated. Thousands of widows and hundreds of thousands of orphans were left behind (Rutabana, 1999).

1.2.Posttraumatic Stress Disorder

Posttraumatic Stress Disorder (PTSD) is a syndrome that develops after a person sees, is involved in, or hears of an extreme traumatic stressor. The person reacts to this experience with fear and helplessness; persistently relieves the event and tries to avoid being reminded of it (Sadock et al. 2003). The stressor is the prime factor in development of PTSD. However, not everyone experiences the disorder after a traumatic event. The stressor alone does not suffice to cause the disorder. Preexisting biological and psychosocial factors and events that happened before and after the trauma could be considered.
PTSD is defined in the DSM-IV TR (American Psychiatric Association, 2000) as a pervasive anxiety disorder meeting the following diagnostic criteria:

A. The person has been exposed to a traumatic event in which both of the following were present:

1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or threat to the physical integrity of self or others.

2) The person's response involved intense fear, helplessness, or horror. **Note:** in children, this may be expressed instead by disorganized or agitated behavior.

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

1) Recurrent intrusive distressing recollections of the event, including image, thoughts, or perception. **Note:** in young children, repetitive play may occur in which themes or aspects of the trauma are expressed.

2) Recurrent distressing dreams of the event. **Note:** in children, there may be frightening dreams without recognizable content.

3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusion, hallucination and dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** in young children, trauma-specific reenactment may occur.

4) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

5) Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the trauma event.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

1) Efforts to avoid thoughts, feelings, or conversation associated with the trauma.

2) Efforts to avoid activities, places, or people that arouse recollections of the trauma.

3) Inability to recall an important aspect of the trauma.

4) Markedly diminished interest or participation in significant activities.

5) Feeling of detachment or estrangement from others.

6) Restricted range of affect (e.g., unable to have loving feelings).

7) Sense of a foreshortened future (e.g., does not expert to have a career, marriage, children, or normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

1) Difficulty falling or staying asleep.

2) Irritability or outbursts of anger.

3) Difficulty concentrating.

4) Hyper vigilance.

5) Exaggerated startle response.

E. Duration of the disturbance (symptoms in criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or others important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months.
Chronic: if duration of symptoms is 3 months or more.

Specify if:

With Delayed Onset: if onset of symptoms is at least 6 months after the stressor.

In addition to the above criteria, DSM-IV states that the following signs may be associated with PTSD.

- Painful feelings of guilt about surviving when others did not survive or about the things the individual did or didn't at the time of trauma.
- Avoidance patterns.
- Impaired relationship with others.
- Marital conflicts, divorce and /or loss of job.
- Self destructive and impulsive behavior.
- Dissociative symptoms.
- Somatic complaints.
- Feeling permanently damaged.
- A loss of previously sustained beliefs.
- Feeling of ineffectiveness, shame, despair and hopelessness.

- Hostility.
- Social withdrawal.
- Feeling constantly threatened.
- A change from the individual's previous personality characteristics.
- Auditory hallucinations and paranoid ideation in some severe and chronic cases.

1.3.Justification of the study.

Public health experts in Rwanda generally agree that the highest risk groups for psychiatric disorders currently are widows, orphans and soldiers (Lawson R., Hagengimana A., 1998). According to Kilonzo et al (2006), trauma caused by human action such as rape and torture, tend to precipitate more severe PTSD reactions than do natural disasters such as hurricanes and earthquakes.

Considering the magnitude of Rwandese genocide and being man made; survivors experienced horrible atrocities (rape, torture, serious injuries...) or witnessed death and maltreatment of their close relatives, and there are no doubts for psychological consequences.
The campaign against women well preceded the 1994 genocide. Propagandists claimed, " Beautiful Rwandese women are desirable but inaccessible to common people" (Llezlie, 2002). As such, rape served to shatter these images by humiliating, degrading and ultimately destroying women.

The militias commonly employed sexual mutilation and public humiliation to heighten the suffering of the victims. Some women and girls were stripped and /or slashed and exposed to public mockery while others had pieces of trees branches pushed into their vagina. Thousands of women survivors have AIDS as a consequence to the policy of the militia who ensured that known HIV carriers did the rape.

Thousands of widows and their orphans left by the genocide were at great need of shelter, food and medical help. Effort was made to rehabilitate survivors by government, international agencies, local associations by providing them with basic needs. The question that remains, was it enough to enable widows coping with the aftermath of that man made disaster?

Fourteen years after that sad event no one knows the prevalence rate of PTSD and other psychiatric morbidity affecting this vulnerable group of widows. This study therefore aims to address this gap.

1.4.Reseach Question

What is the prevalence and distribution of Posttraumatic stress disorder (PTSD) among widow survivors of the Rwandese genocide, fourteen years after the sad event in 1994?

1.5.Research Hypothesis

<u>**Null Hypothesis (Ho).**</u> There is no posttraumatic stress disorder among widow survivors of Rwandese genocide, 14 years after the event.

<u>**Alternative Hypothesis (Ha).**</u> There is Posttraumatic Stress Disorder among widow survivors of Rwandese genocide, 14 years after the event.

1.6.Research Objectives.

1. To determine the prevalence of PTSD among widow survivors of Rwandese genocide, fourteen years after the event.
2. To correlate socio-demographic pattern and PTSD.
3. To correlate various traumatic events which occurred in Rwandese genocide and PTSD among widow survivors.
4. To determine any other psychiatric disorder among widow survivors of Rwandese genocide.

CHAPTER 2: LITTERATURE REVIEW

A lot of research has been conducted on posttraumatic stress disorder all over the world but few were done concerning survivors of Rwandese genocide, especially from women and widows.

2.1. Risk factors.

According to Hagengimana A. (1996), the younger the woman at the time she is widowed, the more intense her grief will be and the more her health will be affected.

Inter-Agency Standing Committee (IASC, 2007) reported that women (pregnant, mothers, widows) and people who have been exposed to extremely stressful event trauma (lost close family members or the entire livelihoods, rape and torture survivors...) are at increased risk of experiencing social or psychosocial problems.

Sadock B.J & Sadock V.A (2003) described the predisposing vulnerability factors in development of posttraumatic stress disorder as:

1. Inadequate family or peer support system
2. Being female
3. Recent stressful life changes
4. Recent excessive alcohol intake.

Andreason N.C et al (2001) also, found that a person's age, history of emotional disturbance, level of social support and proximity to the stressors are all factors that affect the likelihood of developing PTSD.

Mc Eachem C. (2002) reported that PTSD is associated with a high risk of suffering from certain other disorders, either prior to, concurrent with or following the onset of symptoms of PTSD, specifically.

Creamer M et al (2001) and Farhood L. et al (2006) also, reported that women and young person and those with a low level of education are more susceptible to PTSD.

Kilonzo G. et al (2006) found that the psychological wreckage caused by PTSD might increase vulnerability to later development of other mental disorders. Women who experienced PTSD had double risk of developing a depressive disorder and three times the risk of developing alcohol-related problems in the future.

Ommeren M.V. et al (2005) also, found that exposure to extreme stressors is a risk factor for social and mental health problems, including common mental disorder and that further emergencies can severely disrupt social structures and ongoing formal and informal care of a person with preexisting disorders.

Inter-Agency Standing Committee (IASC, 2007) found that after stressful events, not every one has or develops significant psychosocial problems. Many people show resilience (the ability to cope relatively well in situations of adversity). There are numerous interacting

(social, psychological and biological factors) that influence whether people develop psychological problems or exhibit resilience in face of adversity.

Lalonde P.et al (1999) emphasized on the role of social support as a key factor in influencing considerable evolution towards recovery or development of PTSD.

2.2.Epidemiology of PTSD.

According to the National co morbidity survey in the United States (Kessler R.C et al, 1995), PTSD lifetime prevalence in the general population in countries that are not post conflict societies such as the United States is 7.8% or 10.4% among women and 5% among men. The same survey noticed that 88% of men and 79% of women with chronic PTSD meet the criteria of at least one other psychiatric diagnosis.

A study done by Arrayo (1985) in Nicaragua found that 33.3% of children below eighteen, victims of a civil war have symptoms of PTSD. While Polovina N. (1992) in Croatia among former war prisoner (in ex Yugoslavia) found a high rate of PTSD (87.5%) and various psychiatric symptoms (70%).

Farhood L., et al (2006), did a cross sectional study with random sampling in South Lebanon, which experienced prolonged armed conflict. The study aimed to investigate the degree of exposure to traumatic events and prevalence of posttraumatic stress disorder (PTSD) in a civilian population of South Lebanon.PTSD prevalence rate was found to be 29.3%.

Neuner F. et al (2004) studied a random sample of 3,339 refugees in the Western Nile region, including Ugandans and Sudanese and found that 31.6% of the male and 40.1% of female respondents fulfilled the criteria for DSM IV PTSD diagnosis. He also found a near linear rise of psychological distress with the increasing number of traumatic events, ranging from a 23% prevalence of PTSD in those who reported three or fewer pre-defined traumatizing experience to a 100% prevalence in those who reported 28 or more traumatic events.

A study done by Musisi S. (2005) about war and mental health in Africa reports of significant physical war-related trauma inflicted to Ugandans, in their homes, at military checkpoints and in detention. The most commonly encountered mental disorders were found to be Posttraumatic Stress Disorder at 39.9%, depression at 52%, anxiety at 60% and somatization disorder at 72.2%. The prevalence of suicidal behavior was recorded as 22.7% and that of alcohol abuse at 18.2%.

Jolly A. (2000) reported that in recent estimates, traumatic events are common and PTSD is more prevalent than previously believed as this disorder is diagnosed in 5% of men and in 10% to 12% of women over their lifetime, and that 80% of participants with PTSD are diagnosed with concomitant psychiatric disorders.

Fabri M. and Kovler M. (2007) did a study on HIV infected women who survived the 1994 genocide in Rwanda, attending a women's HIV clinic.891 Harvard trauma questionnaires

were completed. The PTSD prevalence rate in this sample of Rwandese women was found to be 35.5%

Phan P.N et al (2004) did a multistage, stratified cluster random survey of 2091 eligible adults in selected households in 4 districts in Rwanda, conducted in February 2002, using PTSD symptoms checklist-civilian version. Among the 2091 total participants, 518 (24.8%) were found meeting the diagnostic criteria for PTSD.

Lawson R. and Hagengimana A. (1998) reported: "No one knows how prevalent PTSD is in Rwanda, but according to our recent survey it's prevalence may approach 20% in the adult population, much higher than in other warn-torn countries"

Onyancha N. (2004) did a cross sectional study on 116 sexually abused females aged 18 years and above attending Nairobi Women's Hospital, using the revised version of the Impact Event Scale (IES-R) and the Standard Psychiatric Interview (SPI). The psychiatric morbidity was found to be 74.1% and the PTSD Prevalence rate was found to be 33.8%.

Hinga S. (2006) in a cross sectional descriptive study on 75 women survivors of domestic violence aged between 19 and 61 years attending the Women's rights Awareness Programme (WRAP) in Nairobi, using the Structured Clinical Interview for the diagnostic and statistical manual (SCID) found a PTSD Prevalence rate of 52.5%; and that 53.3% of survivors suffered from various psychiatric morbidity.

Lukoye A. (2006) did a study on181 survivors of Mau Mau concentration camps in Kenya using the revised version of the Impact Events Scale (IES-R) and the Structured Clinical Interview for the diagnostic and statistical manual IV (SCID) and found a lifetime prevalence of PTSD in132 (72.9%) subjects, while current PTSD was present in 119 (65.7%). PTSD prevalence showed a rising trend over the years from 1962 (58%) to the time of the study in 2006 (65.7%). Among those with current PTSD, 63 (52.9%) had a comorbid psychiatric illness, with depression (43.7%) being the leading comorbid disorder.

In a comparative study done by Njau J.W. (2005) among internally displaced populations in Rift valley province, Kenya, following ethnic clashes, found in this highly traumatized population a prevalence rate of 80.2% of PTSD amongst the heads of households.

Ndetei D.M et al (2008) in a study done at Mathare Hospital Kenya, on admitted patient, found that the schizophrenia was the most frequent DSM-IV diagnosis (51%) followed by bipolar I disorder (42.3%), substance use disorder (34.4%) and major depression illness (24.6). Suicidal features were common in the depression group with 14.7% of the group reporting a suicidal attempt.
Traumatic events were reported in 33.3% of the patients; these were multiple and mainly violent events.Despite the multiplicity of these events, only 7.4% of the patients had a PTSD diagnosis in a previous admission while 4% currently diagnosed with PTSD.

Okello J et al, (2007) in a comparative study among war abducted and non-abducted adolescent in Gulu district, Uganda, found that more than 90% of adolescents reported exposure to severe trauma either through direct or indirect experiences and significantly more war abducted adolescent reported PTSD (26.8% versus 12.7%), major depression

(19.5% versus 4.2%) and generalized anxiety disorder (13.4% versus 4.2%) than non abducted adolescents.

CHAPTER 3: METHODOLOGY.

3.1. Study design.

The study was a cross sectional descriptive survey.

3.2. Study population.

The study population consisted of widowed survivors of the 1994 Rwandese genocide, who were members of AVEGA Agahozo (Association des Veuves du Genocide), one of the Rwandese genocide survivor's associations.

3.3. Study Sites

The study was conducted in 5 different districts, representing the five knew provinces of the Republic of Rwanda.

- Nyarugenge district in Kigali capital city.
- Ruhango district in Southern province
- Rwamagana district in Eastern province
- Rubavu district in Western province
- Gicumbi district in Northern province

3.4. Sample Size.

The sample was calculated using the following formula (Naing L.et al, 2006)

$$N=\frac{Z^2Pq}{d^2}$$

Where:

N: minimum sample size required testing the hypothesis.
Z: standard deviation of the normal distribution sat at 1.96 corresponding to 95% confidence interval.
P: hypothesized prevalence in the population being studied, 20.3% or 0.203.This figure is derived from a study of PTSD prevalence among war survivors in Rwanda (Hagengimana, 1996)
q: 1-p (1-0.203)=0.797.
d: level of precision: 7.5% or 0.075

Therefore subsisting the values,

$$N=\frac{1.96^2 \times 0.203 \times 0.796}{0.075^2} \quad =110$$

3.5. Study sampling

Selection of the five districts and calculation of the size of respondents for each selected district was conducted at AVEGA national level.
Then, meetings were convened with different district coordinators to explain the nature, objectives and procedure of the study to their members at sector level.
For each meeting, a list of participants was established and the study subjects were chosen randomly following the list.
Out of the first five subjects listed, one person was picked randomly, thereafter every fifth on the list. If the selected subject was excluded by the criteria, the next consecutive was picked till the desired sample size achieved.
Where the desired sample size by district was not achieved in one sector, the same procedure continued in another sector of the same district till a sample size was reached.
Each participant, before being interviewed, signed the consent form.
The Interview was conducted by the researcher himself in form of a questionnaire containing all instruments mentioned in the study in strict confidentiality.

3.6. Inclusion criteria

a) A widow who fulfilled the criteria of a "survivor" of the 1994 Rwandese genocide.
b) A married woman who lost her spouse due to genocide.
c) A widow survivor of the1994 Rwandese genocide who gave consent to participate in the study.

3.7. Exclusion criteria.

a) A widow who did not fulfill the criteria of a "Survivor" of the 1994 Rwandese genocide
b) A widow survivor of the 1994 Rwandese genocide who did not give consent to participate in the study.

3.8. Study instruments.

The following instruments were used in the study:

a)Reseacher-designed socio-demographic questionnaire .

It contained questions on Age, gender, number of dependents (children or others) highest-level education, religion, income, occupation, relatives alive, past history of mental illness, family history of mental illness, assistance, compensation, legal suit against perpetrators.

b) Harvard Traumatic Questionnaire (modified). The Harvard trauma questionnaire was modified and adapted to the Rwandan situation by Hagengimana A. It includes 38 items describing a range of traumatic events (Hagengimana 1996).

c) The Impact of Event Scale-Revised (IES-R).

The IES-R is a 22-item self- reported measure that assesses subjective distress caused by traumatic events. It is a revised version of the older version, the 15 item IES.

The IES-R contains 7 additional items related to hyper-arousal symptoms of PTSD, which were not included in the original IES. Items correspond directly to 14 of the 17 DSM-IV symptoms of PTSD.

Respondents are asked to identify a specific stressful life event and then indicate how much they were distressed or bothered during the past seven days by each "difficulty" listed. Items are rated on a 5-point scale ranging from 0("not at all") to 4("extremely").

The IES-R yield a total score (ranging from 0 to 88) and subscale score can also be calculated for the intrusion, avoidance and hyper-arousal subscales (Weiss D.S. et al, 1997).

d) Structured Clinical Interview for the Diagnostic and Statistical Manual IV (SCID).

The SCID is based on DSM-IV diagnostic criteria and has been used in many settings to detect PTSD and other psychiatric illnesses in population samples and in help-seeking individuals.

It is a semi-structured diagnostic interview designed to assist clinicians, researchers and trainees in making reliable DSM-IV psychiatric diagnoses.

Many studies have been carried out to assess the reliability and validity of this instrument and these can be found at the "SCID web page": http://cumc.columbia.edu/dept/scid/.

Reliability. Reliability assessments quoted have yielded varying kappa values, ranging from 0.03(any somatoform disorder) to 1.0(PTSD, Alcohol dependence and other substance abuse).

Most studies, however, rate it highly reliable, with kappa values above 0.7 for most of the studied disorders.

The high reliability rating for SCID in PTSD in all the quoted studies, makes it an ideal instrument for detecting this disorder as defined in the DSM-IV-TR (Lukoye A., 2006).

e) Beck's Suicidality Scale (BSS).

The Beck's suicidality scale is a self-report instrument for detecting and measurement the current intensity of the patient's specific attitudes, behaviors and plans to commit suicide during the past week.

f) The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).

The ASSIST is a brief screening questionnaire to find out about people's use of psychoactive substances. It was developed by the World Health Organization (WHO) and an international team of substance use researchers as a simple method of screening for hazardous, harmful and dependant use of alcohol, tobacco and other psychoactive substances.

3.9.Data analysis and presentation.

Data was entered into a microcomputer and analyzed using the Statistical Package for Social Science (SPSS) for windows version12. Results were considered to be statistically significant when P <0.05.Results were presented in form of tables, charts, as well as in a descriptive form.

3.10.Ethical consideration.

Written informed consent was sought from all research subjects before including them in the study. This followed a full and detailed explanation of the study.

The information collected during the study was used only for the purposes of the study.

Study subjects were assured total confidentiality; their names or address are not used on the study documents.

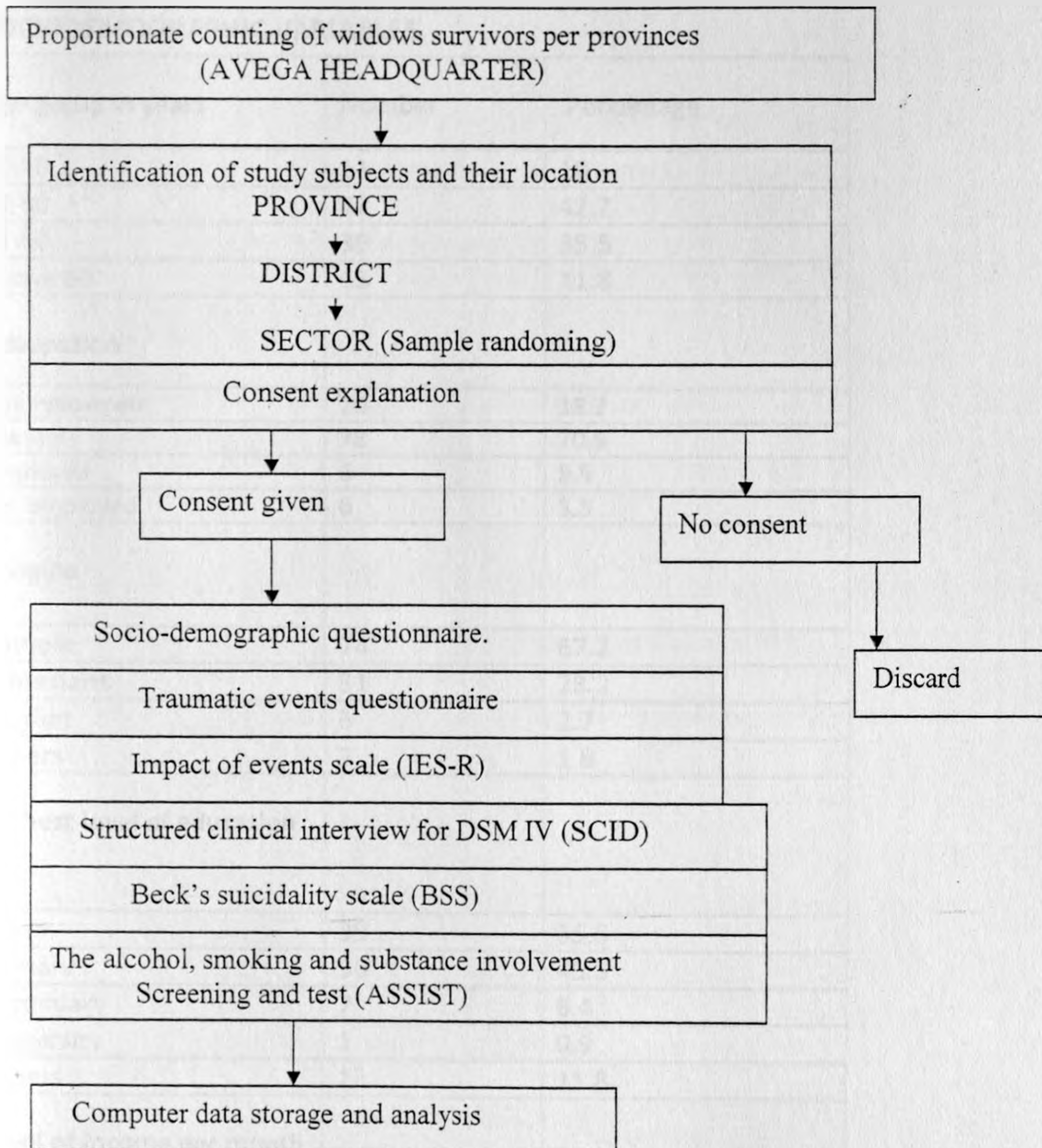
Subjects found to be suffering from any illness were offered medical advice and treatment options pointed out.

The study proposal was presented and approved by to the department of Psychiatry, University of Nairobi.

Authority to conduct the study was sought from both Ethics and research committee at KNH and Rwanda National Ethics Committee/Ministry of Health, Rwanda.

Permission to accede to AVEGA's members was obtained from the AVEGA authority.

3.11. The flow charts study.



CHAPTER 4 : RESULTS.

A total of 110 females who fulfilled the inclusion criteria over the two-month study period were recruited into the study.

Table1.

SOCIODEMOGRAPHIC VARIABLES

Age group in years	Number	Percentage
30-40	11	10
41-50	47	42.7
51-60	39	35.5
Above 60	13	11.8
Occupation		
Unemployment	20	18.2
Peasant	78	70.9
Employed	6	5.5
Self employed	6	5.5
Religion		
Catholic	74	67.2
Protestant	31	28.2
Muslim	3	2.7
Others	2	1.8
Highest level of education		
None	39	35.5
Primary	50	45.5
Secondary	7	6.4
University	1	0.9
Others	13	11.8
Level of income per month in Rwandan francs		
<5000	82	74.5
5000-20000	17	15.5
20000-100000	10	9.1
100000-300000	1	0.9
>300000	0	0.0

Number of children or dependent		
0	4	3.6
1-3	38	34.5
4-6	56	50.9
7 or more	12	10.9

Table 2.

OTHER VARIABLES

VARIABLES	NUMBER	PERCENTAGE
Treatment for mental illness		
Yes	9	8.2
No	101	91.8
Family history of mental illness		
Yes	28	25.5
No	82	74.5
Assistance		
Yes	93	84.5
No	17	15.5
Satisfaction with assistance		
Yes	56	50.9
No	54	49.1
Satisfaction with trial of the genocide perpetrators		
Yes	9	8.2
No	89	80.9

Table 3.

FREQUENCIES OF PSYCHIATRIC MORBIDITIES (Using SCID)

Axis 1 diagnosis	Negative	Positive
Current PTSD	79(71.8%)	31(28.2%)
Lifetime PTSD	51(45.9%)	59(53.2%)
Major depressive disorder	98(88.3%)	12(10.8%)
Dysthymic disorder	103(93.6%)	7(6.4%)
Somatization disorder	107(97.3%)	3(2.7%)
Generalized anxiety disorder	85(77.3%)	25(22.7%)

SOCIO DEMOGRAPIC DETAILS IN RELATION TO PTSD

Table 4.

PTSD vs age

		PTSD		Total
Age		Negative	Positive	
30-40	Count	8.0	3.0	11.0
	%	10.1	9.7	10.0
41-50	Count	35.0	12.0	47.0
	%	44.3	38.7	42.7
51-60	Count	29.0	10.0	39.0
	%	36.7	32.3	35.5
Above 60	Count	7.0	6.0	13.0
	%	8.9	19.4	11.8
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 2.367 df: 3 P-value: 0.500 (not significant)

There is no statistical significant relationship between PTSD and age of respondents.

Table 5.
PTSD vs number of children/dependants

		PTSD		Total
Children (or dependent		Negative	Positive	
0	Count	3.0	1.0	4.0
	%	3.8	3.2	3.6
1-3	Count	30.0	8.0	38.0
	%	38.0	25.8	34.5
4-6	Count	35.0	21.0	56.0
	%	44.3	67.7	50.9
7 or more	Count	11.0	1.0	12.0
	%	13.9	3.2	10.9
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 5.712 df: 3 P-value: 0.126 (not significant)
There is no statistical significant relationship between PTSD and number of children/dependants.

Table 6.
PTSD vs highest level of education

		PTSD		Total
Highest education level		Negative	Positive	
None	Count	27.0	12.0	39.0
	%	34.2	38.7	35.5
Primary	Count	34.0	16.0	50.0
	%	43.0	51.6	45.5
Secondary	Count	6.0	1.0	7.0
	%	7.6	3.2	6.4
University	Count	1.0	0.0	1.0
	%	1.3	0.0	0.9
Others	Count	11.0	2.0	13.0
	%	13.9	6.5	11.8
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 2.601 df: 4 P-value: 0.627 (not significant)

There is no statistical significant relationship between PTSD and level of education.

Table 7.
PTSD vs occupation

		PTSD		Total
Occupation		Negative	Positive	
Unemployed	Count	16	4	20
	%	20.3	12.9	18.2
Peasant farmer	Count	52.0	26	78
	%	65.8	83.9	70.9
Employed	Count	6	0	6
	%	7.5	0	5.4
Self employed	Count	5	1	6
	%	6.3	3.2	5.4
TOTAL	Count	79	31	110
	%	100	100	100

X^2 value: 4.432 df: 3 P-value: 0.218 (not significant)
There is no statistical significant relationship between PTSD and occupation.

Table 8.
PTSD vs religion

		PTSD		Total
Religion		Negative	Positive	
Catholic	Count	52	22	74
	%	65.8	70.9	67.2
Protestant	Count	23	8	31
	%	29.1	25.8	28.1
Islam	Count	3	0	3
	%	3.7	0	2.7
Others	Count	1	1	2
	%	1.2	3.2	1.8
TOTAL	Count	79	31	110
	%	100	100	100

X^2 value: 1.822 df: 3 P-value: 0.610 (not significant)

There is no statistical significant relationship between PTSD and religion.

Table 9.
PTSD vs level of income per month

		PTSD		Total
Level of income per month in Rwandan francs		Negative	Positive	
<5,000	Count	54.0	28.0	82.0
	%	68.4	90.3	74.5
5,000-20,000	Count	14.0	3.0	17.0
	%	17.7	9.7	15.5
20,000-100,000	Count	10.0	0.0	10.0
	%	12.7	0.0	9.1
100,000-300,000	Count	1.0	0.0	1.0
	%	1.3	0.0	0.9
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 6.690 df: 3 P-value: 0.082 (not significant)
There is no statistical significant relationship between PTSD and monthly income.
Note: 1US$=570 Rwandan francs.

Table 10.
PTSD vs prior treatment for mental illness

		PTSD		
Been treated for mental illness		Negative	Positive	Total
Yes	Count	5	4	9
	%	6.3	12.9	8.2
No	Count	74	27	101
	%	93.7	87.1	91.8
TOTAL	Count	79	31	110
	%	100	100	100

X^2 value: 1.281 df: 1 P-value: 0.258 (not significant)

There is no statistical significant relationship between PTSD and prior treatment for mental illness.

Table 11.
PTSD vs family history of mental illness

		PTSD		Total
Family history of mental illness		Negative	Positive	
Yes	Count	21.0	7.0	28.0
	%	26.6	22.6	25.5
No	Count	58.0	24.0	82.0
	%	73.4	77.4	74.5
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value:0. 188 df: 1 **P-value: 0.665 (not significant)**

There is no statistical significant relationship between PTSD and family history of mental illness.

Table 12.
PTSD vs assistance*

		PTSD		Tota l
Having benefited from assistance		Negative	Positive	
Yes	Count	70.0	23.0	93.0
	%	88.6	74.2	84.5
No	Count	9.0	8.0	17.0
	%	11.4	25.8	15.5
TOTAL	Count	79.0	31.0	110. 0
	%	100.0	100.0	100. 0

X^2 value: 3.54 df: 1 **P-value: 0.060 (not significant)**

There is no statistical significant relationship between PTSD and assistance.

Note: *material assistance

Table 13.
PTSD vs satisfaction with assistance*

		PTSD		Total
Satisfaction with assistance*		Negative	Positive	
Yes	Count	48.0	8.0	56.0
	%	60.8	25.8	50.9
No	Count	31.0	23.0	54.0
	%	39.2	74.2	49.1
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 10.884 df: 1 P-value:0. 001 (significant)
There is no statistical significant relationship between PTSD and satisfaction with assistance.
Note: *material assistance

Table 14.
PTSD vs Satisfaction with trial of genocide perpetrators

		PTSD		Total
Satisfaction with the trial of the perpetrators of genocide		Negative	Positive	
Yes	Count	7.0	2.0	9.0
	%	8.9	6.5	8.2
No	Count	63.0	26.0	89.0
	%	79.7	83.9	80.9
Undecided	Count	9.0	3.0	12.0
	%	11.4	9.7	10.9
TOTAL	Count	79.0	31.0	110.0
	%	10.0	100.0	100.0

X^2 value: 0.265 df: 2 P-value: 0.876 (not significant)
There is no statistical significant relationship between PTSD and Satisfaction with the trial of the genocide perpetrators.

TRAUMATIC EVENTS AS RELATED TO PTSD

Table 15.

PTSD vs Rape/sexual abuse

			PTSD		Total
Rape or sexual abuse			Negative	Positive	
	Experienced	Count	13.0	13.0	26.0
		%	16.5	41.9	23.6
	Witnessed	Count	5.0	2.0	7.0
		%	6.3	6.5	6.4
	Heard about it	Count	38.0	13.0	51.0
		%	48.1	41.9	46.4
Nil event		Count	23.0	3.0	26.0
		%	29.1	9.7	23.6
TOTAL		Count	79.0	31.0	110.0
		%	100.0	100.0	100.0

X^2 value: 9.86 df: 3 P-value: 0 .020 (significant)

There is no statistical significant relationship between PTSD and rape/sexual abuse.

Table 16.

PTSD vs Forced separation from family members

			PTSD		Total
Forced Separation from family members			Negative	Positive	
	Experienced	Count	32.0	24.0	56.0
		%	40.5	77.4	50.9
	Heard about it	Count	6.0	1.0	7.0
		%	7.6	3.2	6.4
Nil event		Count	41.0	6.0	47.0
		%	51.9	19.4	42.7
TOTAL		Count	79.0	31.0	110.0
		%	100.0	100.0	100.0

X^2 value: 12.145 df: 2 P-value: 0 .002 (significant)

There is a statistical significant relationship between PTSD and forced separation from family members.

Table 17.
PTSD vs Murder of a family member or a friend

		PTSD		Tota l
Murder of family or friend		Negative	Positive	
Witnessed	Count	46.0	26.0	72.0
	%	58.2	83.9	65.5
Heard about it	Count	33.0	5.0	38.0
	%	41.8	16.1	34.5
Nil event	Count	0.00	0.00	0.00
	%	0.00	0.00	0.00
TOTAL	Count	79.0	31.0	0.00
	%	100.0	100.0	100. 0

X^2 value: 6.475 df: 1 P-value: 0 .000 (significant)
There is a statistical significant relationship between PTSD and murder of a family member or a friend.

Table 18.
PTSD vs being slashed

		PTSD		Total
Being slashed		Negative	Positive	
Experience d	Count	4.0	6.0	10.0
	%	5.1	19.4	9.1
Witnesse d	Count	30.0	20.0	50.0
	%	38.0	64.5	45.5
Heard about it	Count	23.0	4.0	27.0
	%	29.1	12.9	24.5
Nil event	Count	22.0	1.0	23.0
	%	27.8	3.2	20.9
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 17.291 df: 3 P-value: 0 .001 (significant)
There is a statistical significant relationship between PTSD and being slashed.

Table 19.

PTSD vs being beaten

			PTSD		Total
Being beaten			Negative	Positive	
	Experienced	Count	29	20	49
		%	36.7%	64.5%	44.5%
	Witnessed	Count	16	3	19
		%	20.3%	9.7%	17.3%
	Heard about it	Count	15	0	15
		%	19.0%	.0%	13.6%
Nil event		Count	19	8	27
		%	24.1%	25.8%	24.5%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-11.22 df-3 P- value- 0.110 (not significant)
There is a statistical relationship between PTSD and being beaten.

Table 20.
PTSD vs being shot

			PTSD		Total
Being shot			Negative	Positive	
	Experience d	Count	1	3	4
		%	1.3%	9.7%	3.6%
	Witnessed	Count	20	19	39
		%	25.3%	61.3%	35.5%
	Heard about it	Count	37	8	45
		%	46.8%	25.8%	40.9%
Nil event		Count	21	1	22
		%	26.6%	3.2%	20.0%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-20.938 df :3 P-value : 0.000 (significant)
There is a statistical relationship between PTSD and being shot.

Table 21.
PTSD vs being severely wounded

		PTSD		Total
Being severely wounded		Negative	Positive	
Experienced	Count	3	8	11
	%	3.8%	25.8%	10.0%
Witnessed	Count	8	8	16
	%	10.1%	25.8%	14.5%
Heard about it	Count	9	0	9
	%	11.4%	.0%	8.2%
Nil event	Count	59	15	74
	%	74.7%	48.4%	67.3%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2 value-20.368 df-3 P-value :0. 000 (significant)

There is a statistical significant relationship between PTSD and being severely wounded.

Table 22.
PTSD vs inability to help your relative or a friend in danger

		PTSD		Total
Inability to help your relatives, friends in danger		Negative	Positive	
Experienced	Count	62	27	89
	%	78.5%	87.1%	80.9%
Witnessed	Count	1	3	4
	%	1.3%	9.7%	3.6%
Heard about it	Count	2	1	3
	%	2.5%	3.2%	2.7%
Nil event	Count	14	0	14
	%	17.7%	.0%	12.7%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2 value- 10.069 df-3 P-value :0. 018 (significant)

There is a statistical relationship between PTSD and Inability to help your relatives or friends in danger.

Table 23.
PTSD vs being forced to kill or to steal

			PTSD		Total
Being forced to kill or steal			Negative	Positive	
	Experienced	Count	3	3	6
		%	3.8%	9.7%	5.5%
	Witnessed	Count	0	2	2
		%	.0%	6.5%	1.8%
	Heard about it	Count	18	5	23
		%	22.8%	16.1%	20.9%
Nil event		Count	58	21	79
		%	73.4%	67.7%	71.8%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-7.080 **df-3** **P-value :0. 069 (not significant)**

There is a statistical relationship between PTSD and being forced to kill or to steal.

Table 24.
PTSD vs hiding for a long time*

			PTSD		Total
Hiding for a long time			Negative	Positive	
	Experienced	Count	67	30	97
		%	84.8%	96.8%	88.2%
	Heard about it	Count	2	0	2
		%	2.5%	.0%	1.8%
Nil event		Count	10	1	11
		%	12.7%	3.2%	10.0%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-3.127 **df-2** **P-value :0. 209 (not significant)**

There is no statistical significant relationship between PTSD and hiding for long time*
Note: *subjective sense of time.

Table 25.
PTSD vs being buried alive

			PTSD		Total
Being buried alive			Negative	Positive	
	Experienced	Count	5	3	8
		%	6.3%	9.7%	7.3%
	Witnessed	Count	20	14	34
		%	25.3%	45.2%	30.9%
	Heard about it	Count	37	10	47
		%	46.8%	32.3%	42.7%
Nil event		Count	17	4	21
		%	21.5%	12.9%	19.1%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-5.153 df-3 P-value :0.161 (not significant)

There is no statistical significant relationship between PTSD and being buried alive.

Table 26.
PTSD vs no where to hide

			PTSD		Total
No where to hide			Negative	Positive	
	Experienced	Count	55	28	83
		%	69.6%	90.3%	75.5%
	Heard about it	Count	1	0	1
		%	1.3%	.0%	.9%
Nil event		Count	23	3	26
		%	29.1%	9.7%	23.6%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-5.215 df-2 P- value :0.074 (not significant)

There is no statistical significant relationship between PTSD and nowhere to hide.

Table 27.
PTSD vs denying your relatives, tribe, origin

			PTSD		Total
Denying your relatives, tribes, origin			Negative	Positive	
	Experienced	Count	24	8	32
		%	30.4%	25.8%	29.1%
	Witnessed	Count	1	0	1
		%	1.3%	.0%	.9%
	Heard about it	Count	7	2	9
		%	8.9%	6.5%	8.2%
Nil event		Count	47	21	68
		%	59.5%	67.7%	61.8%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-0.955 df-3 P-value: 0.812 (not significant)

There is no statistical significant relationship between PTSD and denying your relatives, tribe, and origin.

Table 28.
PTSD vs being tied up

			PTSD		Total
Being tied (hands and/ or legs)			Negative	Positive	
	Experienced	Count	5	1	6
		%	6.3%	3.2%	5.5%
	Witnessed	Count	22	18	40
		%	27.8%	58.1%	36.4%
	Heard about it	Count	27	6	33
		%	34.2%	19.4%	30.0%
Nil event		Count	25	6	31
		%	31.6%	19.4%	28.2%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-8.807 df-3 P-value: 0. 032 (significant)

There is no statistical significant relationship between PTSD and being tied up.

Table 29
PTSD vs lying among corpses

		PTSD		Total
Lying among corpses for long		Negative	Positive	
Experienced	Count	7	5	12
	%	8.9%	16.1%	10.9%
Witnessed	Count	9	4	13
	%	11.4%	12.9%	11.8%
Heard about it	Count	20	7	27
	%	25.3%	22.6%	24.5%
Nil event	Count	43	15	58
	%	54.5%	48.4%	52.7%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2 value-1.679 df-4 P- value: 0.794 (not significant)
There is no statistical significant relationship between PTSD and lying among corpses.

TABLE 30
PTSD vs. being ill and inaccessibility to care

		PTSD		Total
Being ill and inaccessibility to medical care		Negative	Positive	
Experienced	Count	46	27	73
	%	58.2%	87.1%	66.4%
Witnessed	Count	10	0	10
	%	12.7%	.0%	9.1%
Nil event	Count	23	4	27
	%	29.1%	12.9%	24.5%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2 value-9.104 df-2 P- value: 0.011 (significant)

There is a statistical significant relationship between PTSD and being ill and inaccessibility to care.

IMPACT OF EVENTS SCALE vs PTSD

Globally,92.4% of subjects with PTSD were found with severe symptoms ,while 7.6% have moderate symptoms.

Table 31
Reexperiencing/Intrusion sub-scale (1,2,3,6,9,14,16,20)

		PTSD		Total
Grade in re-experiencing		Negative	Positive	
Mild	Count	41.0	1.0	42.0
	%	51.9	3.2	38.2
Moderate	Count	34.0	2.0	36.0
	%	43.0	6.5	32.7
Severe	Count	4.0	28.0	32.0
	%	5.1	90.3	29.1
Total	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X2 Value-78.55 df-2 P-value:0.000 (significant)

90.3% of those with PTSD have severe symptoms of reexperiencing.

Table 32
Avoidance sub-scale (5,7,8,11,12,13,17,22)

		PTSD		Total
Grade in avoidance		Negative	Positive	
Mild	Count	47.0	0.0	47.0
	%	59.5	0.0	42.7
Moderate	Count	29.0	0.0	29.0
	%	36.7	0.0	26.4
Severe	Count	3.0	31.0	34.0
	%	3.8	100.0	30.9
Total	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X2 value-96.485 df-2 P-value: 0.000 (significant)

All of those with PTSD have severe symptoms of avoidance.

Table 33
Hyperarousal sub-scale (4,10,15,18,19,21)

		PTSD		Total
Grade in hyperarousal		Negative	Positive	
Mild	Count	43	0	43
	%	54.4%	.0%	39.1%
Moderate	Count	35	0	35
	%	44.3%	.0%	31.8%
Severe	Count	1	31	32
	%	1.3%	100.0%	29.1%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2_value-105.214 df-2 P- value: 0.000(significant)

All of those with PTSD have severe symptoms of hyperarousal.

OTHER PSYCHIATRIC MORBIDITIES IN RELATION TO PTSD

Table 34
PTSD vs Major depressive disorder

		PTSD		Total
Major depressive disorder		Negative	Positive	
Negative	Count	74	24	98
	%	93.7%	77.4%	89.1%
Positive	Count	5	7	12
	%	6.3%	22.6%	10.9%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X^2 value-6.050 df- 1 P-value : 0. 014 (significant)

There is a statistical significant relationship between PTSD and Major depressive disorder.

Table 35
PTSD vs dysthymic disorder

		PTSD		Total
Dysthymic disorders		Negative	Positive	
Negative	Count	75.0	28.0	103.0
	%	94.9	90.3	93.6
Positive	Count	4.0	3.0	7.0
	%	5.1	9.7	6.4
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 0.795 df:1 P-value: 0 .372 (not significant)

There is no statistical significant relationship between PTSD and dysthymic disorder.

Table 36
PTSD vs depressive disorder not otherwise specified

		PTSD		Total
Depressive disorder not otherwise specified		Negative	Positive	
Negative	Count	76.0	28.0	104.0
	%	96.2	90.3	94.5
Positive	Count	3.0	3.0	6.0
	%	3.8	9.7	5.5
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 1.493 df:1 P-value: 0 .222 (not significant)

The is no statistical significant relationship between PTSD and depressive disorder not otherwise specified.

Table 37
PTSD vs generalized anxiety disorder

		PTSD		Total
Generalized anxiety disorder		Negative	Positive	
Negative	Count	56.0	29.0	85.0
	%	70.9	93.5	77.3
Positive	Count	23.0	2.0	25.0
	%	29.1	6.5	22.7
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 6.511 df: 1 P-value: 0. 011 (significant)
There a statistical significant relationship between PTSD and generalized anxiety disorder.

Table 38
PTSD vs somatization disorder

	PTSD			Total
Somatization disorder		Negative	Positive	
Negative	Count	76.0	31.0	107.0
	%	96.2	100.0	97.3
Positive	Count	3.0	0.0	3.0
	%	3.8	0.0	2.7
TOTAL	Count	79.0	31.0	110.0
	%	100.0	100.0	100.0

X^2 value: 1.210 df:1 P-value: 0.271 (not significant)

There no statistical significant relationship between PTSD and somatization disorder.

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ASSIST vs. PTSD

Table 39
Smoking vs PTSD

Risk of health from smoking		PTSD		Total
		Negative	Positive	
No intervention (low risk)	Count	66	22	88
	%	83.5%	71.0%	80.0 %
Brief intervention (moderate risk)	Count	12	6	18
	%	15.2%	19.4%	16.4 %
More intensive treatment (high risk)	Count	1	3	4
	%	1.3%	9.7%	3.6%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0 %

X2 value-5.008 df-2 P- value: 0.082 (not significant)
There is no statistical significant relationship between PTSD and smoking.

Table 40
Alcohol intake vs PTSD

Risk of health from alcohol intake		PTSD		Total
		Negative	Positive	
No intervention (low risk)	Count	68	20	88
	%	86.1%	64.5%	80.0%
Brief intervention (moderate risk)	Count	7	4	11
	%	8.9%	12.9%	10.0%
More intensive treatment (high risk)	Count	4	7	11
	%	5.1%	22.6%	10.0%
Total	Count	79	31	110
	%	100.0%	100.0%	100.0%

X2 value -8.489 df-2 P- value: 0.014 (significant)
There is a statistical significant relationship between PTSD and alcohol intake.

BECK'S SUICIDALITY SCALE vs PTSD

Table 41
Suicide ideation vs PTSD

			PTSD		Total
Suicide ideation			Negative	Positive	
	Negative	Count	76	24	100
		%	96.2%	77.4%	90.9%
	Positive	Count	3	7	10
		%	3.8%	22.6%	9.1%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-9.504 df-1 P- value: 0.002 (significant)

There is a statistical relationship between PTSD and suicide ideation.

Table 42
Suicide plan vs PTSD

			PTSD		Total
Suicide plans			Negative	Positive	
	Negative	Count	77	27	104
		%	97.5%	87.1%	94.5%
	Positive	Count	2	4	6
		%	2.5%	12.9%	5.5%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-4.644 df-1 P- value: 0.031 (significant)

There is a statistical relationship between PTSD and suicide plan.

Table 43
Suicide attempt vs PTSD

			PTSD		Total
Suicide attempt			Negative	Positive	
	Negative	Count	77	29	106
		%	97.5%	93.5%	96.4%
	Positive	Count	2	2	4
		%	2.5%	6.5%	3.6%
Total		Count	79	31	110
		%	100.0%	100.0%	100.0%

X2 value-0.976 df-1 P- value: 0.3239 (not significant)

There is no statistical relationship between PTSD and suicide attempt.

CHAPTER FIVE: DISCUSSION

AGE

This study found the association between PTSD and age not statistically significant which is consistent with other studies (Reginah S.N, 2008).

The possible explanation is that all respondents were adults and married when the genocide took place.

CHILDREN OR DEPENDANTS

In this study, PTSD is not statistically associated with the number of children or dependants. The highest rate of PTSD was found in a group who had 4-6 children/dependants and the lowest rate was found in the group who had zero (0) child or dependant.

A possible explanation for this fact may be that a larger number of children or dependants is a burden for a widow headed household and a source of distress in a population where 74.5% earn less than USD 10 equivalent per month.

LEVEL OF INCOME

The association between PTSD and level of monthly income which was found to be statistically not significant in this study is consistent with Kaoruko S.et all (2005) study but differs with others, Pearlin L.et al. (1981) and Sadock B.J and Sadock V.A, (2003). The author did not find a good explanation for that fact

LEVEL OF EDUCATION AND OCCUPATION

The association between PTSD and level of education and occupation, which was found not to be statistically significant, is consistent with Kaoruko S. et al. study (2005). On the other hand, Karunakara U.K et al (2004), found that education and occupation are significantly associated with the development of PTSD symptoms.

The possible explanation is that 81% of participants had none or only primary level of education and 90.3% of those with PTSD belong to the same groups.

Also, 90.9% of participants are either unemployed or classified as peasant-farmers.

The difference between the two classes is very little, most often farmers consider themselves as unemployed considering the size of the land they hold which cannot allow substantial productivity. And 96.6% of subjects with PTSD belong to the same classes.

This distribution of PTSD seems to be a normal distribution.

RELIGION

The association between PTSD and religion which was found not to be statistically significant, differs with Lukoye A. (2006) findings that being non-Catholic might be a potential risk factor for PTSD.The possible explanation is that 70.9% of subjects with PTSD are Catholics in a study population where 67.2% are Catholics and 25.8% of subjects with PTSD are Protestants in a study population of 28.1% protestants.

The distribution of PTSD seems to be an equal distribution considering the two big religions, meaning that none of the two religions was protective against developing PTSD or was a risk factor for developing PTSD.

The low numbers of other religions did not influence the results.

ASSISTANCE

The researcher could nct establish why 15.5% of respondents allegedly claim never benefited from material assistance like other genocide survivors.

The study did not find the association between benefiting from material assistance and PTSD statistically significant. However, under satisfaction with material assistance was found to be statistically associated with PTSD with significance.

The finding is consistent with Van Griensven (2009) who argued that restoration of person's livelihoods prevents and diminishes mental morbidity among population affected by natural disaster.

Thus, any assistance to regain livelihoods especially if it brings about satisfaction seems to be a protective factor against developing PTSD.

PAST HISTORY OF MENTAL ILLNESS

About 12.5% of subjects with PTSD were treated for mental illness with 3.2% before the genocide and 9.7% after the genocide. The nature of the mental illnesses was not clearly identified because all cases were treated by traditional healers.

Statistically, PTSD was not found to be associated with the past mental illnesses with significance. The author speculates that may be under diagnosis played a role in having a low numbers resulting in statistical insignificance.

FAMILY HISTORY OF MENTAL ILLNESS

About 22.6% of subjects with PTSD indicated having relatives with history of mental illness, mainly deceased due to genocide. There was no statistical significant association between family history of mental illness and PTSD.

The author speculates that this fact may be explained that all supposedly mentally ill were not first-degree relatives and since no clinical evaluation was made, the above prevalence rate is not reliable.

SATISFACTION WITH TRIAL OF GENOCIDE PERPETRATORS

The association between PTSD and satisfaction with trial of genocide perpetrators, which was found statistically not significant in this study, differs with Phong N.P et al (2004) study, which found that respondents who met PTSD symptom criteria were less likely to have positive attitudes toward the Rwandan national trials. The finding also, differs with Metin B.et al (2005) who considered impunity for those responsible for trauma to be associated with psychological problems in survivors of political violence.

Respondents seem to be affected by PTSD equally independent of being satisfied or not with trial of genocide perpetrators.

PREVALENCE OF PTSD

The study was undertaken to establish the prevalence of PTSD among widow survivors of the 1994 Rwandese genocide fourteen years after that vicious event.

The 1994 Rwandese genocide was Africa's largest in modern times, the quickest and most vicious yet recorded in human history. Therefore, the prevalence rate of PTSD or other psychiatric morbidity could be expected to be high.

The current PTSD prevalence of 28.2% found in this study is consistent with Kaoruko Seine (2005) study among mothers of children under five in Kabul, Afghanistan, after decades of armed conflicts and Farhood L.et al. study (2003) in a civilian population of South Lebanon, which experienced a prolonged armed conflict.

However ,the findings differs with other studies done elsewhere in post conflict settings by Polovina N. (1992) in Croatia, Musisi S. (2005) in Uganda, Njau J.W (2005) among internally displaced population in Rift valley province, Kenya, and. Lukoye A. (2006) among Mau Mau concentration camp survivors in Kenya.

This finding differs also with those found by Hagengimana A. (1996), 20.3%, two years after the 1994 Rwandese genocide, probably because his study was done among general population, contrary to this study done among a special population of widows.

There was no baseline data on PTSD among widows of genocide for the current study to make comparison with.

The author attributes the relative moderate prevalence rate of PTSD to the special psychosocial support given to the genocide survivors. Many organizations set up by survivors themselves (AVEGA, IBUKA...), by government (FARG), or others (ARCT) are trying to deal with problems facing survivors like health care (mental and physical), reburial and funerals ceremonies, building of genocide victims memorial sites, human rights, education, vocational rehabilitation and assistance in the basic needs of life (housing, food, clothes).

COMORBIDIY.

The Statistical significant association found between PTSD and major depressive disorder and generalized anxiety disorder in this study is consistent with Breslau N. et al study (1991), which found that persons with PTSD were at increased risk for other psychiatric disorders and that PTSD had stronger association with anxiety and affective disorders than with substance abuse or dependence. It is also consistent with Patrick Vinck study (2007), which found that respondents, who experienced the most traumatic exposures, were more likely to have PTSD and depression symptoms compared with others.

However, It is not clear if other mental disorders developed secondary to PTSD or if traumatic events may be a direct or indirect risk factor for all types of mental disorders.

SUBSTANCE USE

The significant association between PTSD and alcohol found in this study is not surprising. This finding is in accordance with Sadock B.J&Sadock V.A (2003). However, the association between PTSD and smoking was not found to be statistically significant unlike a study done by Steven S. F. et al. (2007). Probably it is due to low numbers in the current study.

SUICIDALITY

The statistically significant association between PTSD and suicide ideation and suicide plan found in this study, is consistent with Wilcox M. (2009) and Amir M et al (1999) studies that suggest that suicide risks are higher due to the symptoms of PTSD.In contrast, Fontana A. and Rosenheck A. (1995) attribute the suicide high risk to other psychiatric conditions related to PTSD.

The association between PTSD and attempted suicide was not found statistically significant; probably due to low numbers.

TRAUMATIC EVENTS.

The significant association between PTSD and various traumatic events (tables 15,16,17,18,20,21,22,28,30) is consistent with Kessler R.C (1995) study, which reported that for females rape and molestation were frequently associated with PTSD followed by physical abuse and the threat with weapons. It is also consistent with Neuner F.et al study (2004), which found a near linear rise of psychological strain with the increasing number of traumatic events.

In accordance with the DSM-IV-TR diagnostic criterion A-2 for Posttraumatic Stress Disorder, which specifies that the person's response to traumatic events, involved intense fear, helplessness or horror (APA 2000), all respondents expressed awaiting to be executed anytime for each traumatic event they went through.

STUDY LIMITATIONS

The study was carried out at a time the screening of needy survivors was being conducted countrywide. The process of screening was generally viewed by survivors as being partisan and had increased distress in this vulnerable population. Probably, this contributed to the outcome of results in this study.

Genocide and some traumatic events like rape and sexual abuse are very sensitive issues not only to the respondent but also to the interviewer. Hence, some respondents may have given guarded information.

Inadequate funds and limited time compelled the researcher to use the minimum sample size required. Hence, the results of this study may not represent the entire population of widow survivors and the conclusions cannot be generalized to them or the entire population of survivors or the Rwandan general population.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

CONCLUSION

Fourteen years after the 1994 Rwandese genocide, widow survivors are still suffering from PTSD and other psychiatric morbidity.

The PTSD prevalence rate among widow survivors is relatively higher than that found earlier in the general population of survivors.

Factors associated with PTSD diagnosis are: under satisfaction with assistance, rape or sexual abuse, separation from family members, murder of family member or friend, being slashed, being severely wounded and inability to help a relative in danger.

Factors showing no statistical significant association with PTSD: age, number of children or dependants, level of education, occupation, religion, income, previous mental illness, family history of mental illness, assistance, satisfaction with trial of genocide perpetrators.

Comorbid axis I diagnosis found among those with PTSD are major depressive disorder, dysthymic disorder, generalized anxiety disorder, somatization disorder and alcohol abuse.

The leading psychiatric morbidity among this population of widow survivors was PTSD followed by generalized anxiety disorder.

RECOMMENDATIONS

-There is need for a mechanism for witness protection in trial of genocide perpetrators.
-To increase the government budget allocated annually to genocide survivors.
-To facilitate further studies, to confirm risk factors associated with PTSD in this group of widows and other groups of survivors.
-To facilitate further studies examining the chronicity and trans-generational effects of PTSD.
-To enhance mental health services, so that all genocide survivors can be screened for PTSD and other psychological disorders for mitigation purposes

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Appendices

Appendix 1: Informed consent Explanation.

- To be read and questions answered in a language in which the subject is fluent (Kinyarwanda or English).

- My names are Dr Schadrac NGAMIJE, postgraduate student in psychiatry in the University of Nairobi. As part of my training I am required to do a research project. I am doing a study entitled "Posttraumatic Stress Disorder among widow survivors of the 1994 Rwandese genocide.

- My supervisors are Prof. D.M Ndetei, Dr John Mburu and Dr Wangari Kuria of University of Nairobi.

- Permission is requested from you for enrolment in a medical research study. You should understand the following general principles, which apply to all medical research, whether normal or patient volunteers:

    1. Your agreement to enroll is voluntary.
    2. You may withdraw from the study at any time
    3. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled.
    4. After you read explanation, please feel free to ask any question that will allow you to understand clearly the nature of the study.

In this research I will ask you questions about personal and social data, questions linked to the 1994 genocide and questions concerning your current living conditions and your mental health.

- These will be in the form of questionnaires; no invasive procedures will be carried out. Apart from the emotional discomfort for asking you questions that will remind you sad and painful events; there will be no other risks.

- If in the course of asking questions you feel you need a help (psychological). I will refer you to the appropriate clinic (SCPS, AVEGA, ARCT...).

All information collected will be kept confidential and your name will not be used in this study or any publication.

Consent Form.

I, the undersigned do hereby volunteer to participate in this study. The nature and purpose have been explained to me by Dr Ngamije Schadrac.

I understand that all information gathered will be used for purposes of this study only and my confidentiality will be upheld throughout.

Signature-- Date ------------------------------

Serial number -------------------------- ----------------------------

Appendix 2: Socio-Demographic Questionnaire.

1. Study No

2. Age

   a. 30-40 c. 51-60

   b. 41-50 d. above 60

3. Children (or dependents)

   a. 0 c. 4-6

   b. 1-3 d. 7 or more.

4. Highest education level

   a. None d. University

   b. Primary e. Others

   c. Secondary

5. Occupation

   a. Unemployed d. Employed

   b. Peasant farmer e. Self employed

6. Religion

   a. Catholic c. Islam

   b. Protestant d. Others

7. Level of income per month in Rwandan Francs

   a. <5.000 c.20.000-100.000

   b 5.000-20.000 d.100.000-300.000

   e. >300.000

8. Have you ever been treated for Mental illness?

   a. Yes b. No

9. If the answer of question number 8 is yes, specify

   a. Before the genocide

   b. After the genocide

10. Family history of Mental illness

    a. Yes b. No

11. Have you ever got assistance from any association, non-government organization or government?

    a. Yes b. No

12. If the answer of question number 11 is yes; are you satisfied?

    a. Yes b. No

13. Are you satisfied with the trial of the perpetrators of genocide?

    a. Yes c. Undecided

    b. No

Appendix 3: Harvard trauma questionnaire (modified).

Please indicate whether you have experienced, witnessed, or heard any of the following events. (Check all that apply).

a) Experienced
b) Witnessed
c) Heard about it
d) Nothing

1	Lack of food and water				
2	Health without access to medical care				
3	Lack of shelter				
4	Imprisonment				
5	Serious injury				
6	Combat situation				
7	Brainwashing				
8	Rape or sexual abuse				
9	Forced isolation from others				
10	Being close to death				
11	Forced separation from family members				
12	Murder or family or friend				
13	Unnatural death of family or friend				
14	Murder of a stranger or strangers				
15	Lost or kidnapped				
16	Laying among corpses for long				
17	Relatives, friends tortured in front of you				
18	Mock execution				
19	Being tied up (hands or/and legs)				
20	Being looted				

21	Displacement more than 50 kms				
22	Hiding for a long time				
23	Being buried alive				
24	Awaiting execution anytime				
25	Nowhere to hide.				
26	Denying your relatives, tribe, origin				
27	Lack of medical care				
28	Destruction of home				
29	Being beaten				
30	Slashed				
31	Being shot				
32	Being tortured				
33	Being forced to kill or steal				
34	Ambivalent choices				
35	Helpless witnessing of torture				
36	Inability to help your relatives, friends in danger				
37	Being raped				
38	Being severely wounded				

Appendix 4 :Impact of Events Scale Revised (IES-R)

The following is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you during the past seven days for the event and context we have been discussing. If the item did not occur during the past seven days, choose 'Not at all' option. Indicate on the space to the left of each comment the number that best describes that item. Please complete each item.

0=Not at all 1=A little bit 2=Moderately 3=Quite a bit 4=Extremely

1. Any reminder brought back feeling about it
2. I had trouble staying asleep
3. Other things kept making me think about it.
4. I felt irritable and angry.
5. I avoided letting myself get upset when I thought about it or was reminded of it.
6. I thought about it when I didn't mean to.
7. I felt as if it hadn't happen or wasn't real.
8. I stayed away from reminders about it.
9. Pictures about it popped into my mind.
10. I was jumpy and easily startled.
11. I tried not to think about it.
12. I was aware that I still had a lot of feeling about it but I didn't deal with them.
13. My feelings about it were kind of numb.
14. I found myself acting or feeling like I was back at the time.
15. I had trouble falling asleep.
16. I had waves of strong feelings about it.
17. I tried to remove it from m memory.
18. I had trouble concentrating.
19. Reminders of it caused me to have physical reactions such as sweating, trouble breathing, nausea, or a pounding heart.
20. I had dreams about it.
21. I felt watchful and on guard.
22. I tried not to talk about it.

Appendix 5:The Alcohol, Smoking and Substance

Involvement Screening Test (ASSIST)

1. **In your life, which of the following substances have you ever used?**	0=No	1=Yes
(a) Tobacco products (cigarettes, chewing tobacco, cigars, etc.)		
(b) Alcohol beverages (beer, wine, spirits changaa, (kumi kumi.)		
(c) Caffeine		
(d) Cannabis (marijuana, pot, grass, hash, bhang)		
(e) Cocaine (coke, crack, etc.)		
(f) Amphetamine type stimulants (speed, diet pills, ecstasy, Khat/Miraa)		
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc.)		
(h) Sedatives or Sleeping pills (Valium, Serepax, Rohypnol)		
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K)		
(j) Opioids (heroin, morphine, codeine, Brown sugar)		
(k) Other-specify:		

Q2-Q5 tick: 0=Never, 1=once or twice, 2=monthly, 3=Weekly 4=Daily or almost daily

2. In the past 3 months, how often have you used the substance you mentioned?	0	1	2	3	4
(a) Tobacco products cigarettes, chewing tobacco, cigars, etc.)					
(b) Alcohol beverages (beer, wine spirits, changaa)					
(c) Caffeine					
(d) Cannabis (marijuana, pot, grass, hash, bhang)					
(e) Cocaine (coke, crack, etc)					
(f) Amphetamine type stimulants (speed, diet pills ecstasy, khat/miraa)					
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc)					
(h) Sedatives or sleeping pills (Valium, Serepax, Rohypnol					
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K.)					
(j) Opioids (heroin, morphine, codeine, Brown sugar)					
(k) Other-specify:					
3. During the past 3 months, substance you have mentioned in Q1 how often have had a strong desire or urge to use them?					
(a) Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
(b) Alcohol beverages (beer, wine, spirits, changaa, (kumi kumi)					
(c) Caffeine					
(d) Cannabis (marijuana, pot, grass, hash, bhang)					
(e) Cocaine (coke, crack, etc.)					
(f) Amphetamine type stimulants (speed, diet pills, ecstasy, Khat/Miraa					
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
(h) Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol					
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K)					
(j) Opioids (heroin, morphine, codeine, Brown sugar)					
(k) Other-specify:					

4. During the past 3months, how often has your use of drugs mentioned in question Q1 led do health, and social, legal or finance problem? **(Specify the four leading drugs).**					
Health Problems (specify the four leading drugs).					
i) Drug					
ii) Drug					
iii) Drug					
iv) Drug					
Social Problems (specify the leading drugs).					
i) Drugs					
ii) Drugs					
iii) Drugs					
iv) Drugs					
Legal problem (specify the four leading drugs).					
i) Drugs					
ii) Drugs					
iii) Drugs					
iv) Drugs					
Financial (specify the four leading drugs).					
i) Drugs					
ii) Drugs					
iii) Drugs					
iv) Drugs					
5. During the past 3 months, how often have you failed to do what was normally expected of your because of your use of:**(specify the four leading drugs).**					
i) Drugs					
ii) Drugs					
iii) Drugs					
iv) Drugs					

Q6-Q8Tick 0=No, Never 1=Yes, but not in the past 3 months, or 2= Yes in the past 3 months.

6. Has a friend of relative or anyone else ever expressed concern about your use of drug? **(If Yes specify the four leading drugs).**	0	1	2
i) Drugs			
ii) Drugs			
iii) Drugs			
iv) Drugs			
7. Have you ever tried to control, cut down or stop using drug? **(If Yes specify the four leading drugs).**			
i) Drugs			
ii) Drugs			
iii) Drugs			
iv) Drugs			
8. Have you ever used any drug by injection (non-medical use only)? **(If Yes specify the four leading drugs).**			
i) Drugs			

8. Have you ever used any drug by injection (non-medical use only)? **(If Yes specify the four leading drugs).**			
i) Drugs			
ii) Drugs			
iii) Drugs			
iv) Drugs			

Appendix 6: Beck's Suicidality Scale (BSS)

Please carefully read each group of statements below.

Circle the one statement in each group that best describes how you have been feeling for the past week, including today.

Be sure to read all of the statements in each group before making a choice.

Part: 1

1.	0. I have a moderate to strong wish to live. 1. I have a weak wish to live. 2. I have no wish to live.	5.	0. I would try to save my life if I found myself in a life-threatening situation. 1. I would take a chance on life or death if I found myself in a life-threatening situation. 2. I would not take the steps necessary to avoid death if I found myself in a life-threatening situation.
2.	0. I have no wish to die. 1. I have weak wish to die. 2. I have a moderator to strong wish to die.		**If you have circled the (0) Statements in both Groups 4and 5 above, then skin down to Group 20.** **If you have marked a 1 or 2 in either Group 4 or 5, then open here and go to Group 6.**
3.	0. My reasons for living outweigh my reasons for dying. 1. My reasons for living or dying are about equal. 2. My reasons for dying outweigh my reasons for living.	6.	0. I have brief periods of thinking about killing myself which pass quickly. 1. I have periods of thinking about myself which last for moderate amounts of time. 2. I have long periods of thinking about myself.
4.	0. I have no desire to kill myself. 1. I have a weak desire to kill myself. 2. I have a moderate to strong desire to kill myself.	7.	0. I rarely or only occasionally think about killing myself. 1. I have frequent thoughts about killing myself. 2. I continuously think about killing myself.

8.	0. I do not accept the idea of killing myself. 1. I neither accept nor reject the idea of killing myself. 2. I accept the idea of killing myself.	12.	0. I have no specific plan about how to kill myself. 1. I have considered ways of killing myself, but have not worked out the details. 2. I have a specific plan for killing myself.
9.	1. I can keep myself from committing suicide. 2. I am unsure that I can keep myself from committing suicide. 3. I cannot keep myself from committing suicide.	13.	0. I do not have the courage or the ability to commit suicide 1. I am unsure that I have the courage or the ability to commit suicide. 2. I have the courage and the ability to commit suicide.
10.	0. I would not kill myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc. 1. I am somewhat concerned about killing myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc. 2. I am not or only a little concerned about killing myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc.	14.	0. I do not have access to a method or an opportunity to kill myself. 1. The method that I would use for committing suicide cakes time, and I really do not have a good opportunity to use this method. 2. I have access or anticipate having access to the method that I would choose for killing myself and also have or shall have the opportunity to use it.
11.	0. My reasons for wanting to commit suicide are primarily aimed at influencing other people, such as getting even with people, making people happier, making people pay attention to me, etc. 1. My reasons for wanting to commit suicide are not only aimed at influencing other people, but also represent a way of solving my problems. 2. My reasons for wanting to commit suicide are primarily based upon escaping from my problems.	15	0. I do not expect to make a suicide attempt. 1. I am unsure that I shall make a suicide attempt. 2. I am sure that I shall make a suicide attempt.
16	0. I have made no preparations for	19.	0. I have not hidden my desire to kill myself from people.

	committing suicide. 1. I have made some preparations for committing suicide 2. I have almost finished or completed my preparations for committing suicide.		1. I have held back telling people about wanting to kill myself. 2. I have attempted to hide, conceal, or lie about wanting to commit suicide.
17	0. I have not written a suicide note 1. I have thought about writing a suicide note or have started to write one, but have not completed it. 2. I have completed a suicide note:	20.	0. I have never attempted suicide. 1. I have attempted suicide once. 2. I have attempted suicide two or more limes. **If you have previously attempted suicide, please continue with the next statement group.**
18.	0. I have made no arrangements for what will happen after I have committed suicide. 1. I have thought about making some arrangement for what will happen after I have committed suicide. 2. I have made definitive arrangements for what will happen after I have committed suicide.	21.	0. My wish to die during the last suicide attempt was low. 1. My wish to die during the last suicide attempt was moderate. 2. My wish to die during the last suicide attempt was high.

Part2

This questionnaire consists of statement. Please read the statements carefully one by one. If the statement describes your attitude for the past week including today, circle around 'T indicating TRUE before the statement. If the statement does not describe your attitude, circle 'F' indicating FALSE to statement. Please be sure to read each statement carefully.

1. I look forward to the future with hope and enthusiasm. **T F**
2. I might as well give up because there is nothing I can do about things better for myself. **T F**
3. When things are going badly, I am helped by knowing that they cannot stay that way forever. **T F**
4. I can't imagine what my life would be in ten years. **T F**
5. I have enough time to accomplish the things I want to do. **T F**
6. In the future, I expect to succeed in what concerns me most. **T F**
7. My future seems dark to me. **T F**
8. I happen to be particularly lucky, and I expect to get more of the good things in life than the average person. **T F**
9. I just can't get the breaks, and there's no reason I will in the future. **T F**
10. My past experiences have prepared me well for the future. **T F**
11. All I can see ahead of me is unpleasantness rather than pleasantness. **T F**
12. I don't expect to get what I really want. **T F**
13. When I look ahead to the future, I expect that I will be happier than I am now. **T F**
14. Things just won't work out the way I want them to. **T F**
15. I have great faith in the future. **T F**
16. I never get what I want, so it's foolish to want anything. **T F**
17. It's very unlikely that I will get any real satisfaction in the future. **T F**
18. The future seems vague and uncertain to me. **T F**
19. I can look forward to more good times than bad times. **T F**
20. There's no use in really trying to get anything I want because I probably won't get it. **T F**

Appendix 7: Structured Clinical Interview for the Diagnosis and Statistical Manual IV

(SCID) screening module

Now I want to ask you some more specific questions about problems you may have had. We will go into more details later.

1 = **NO (N)** 2 = **SUBTHRESHOLD (S)** 3 = **YES (Y)**

Responses 2 or 3 score means more probing needed. Go to the pages indicated in the brackets. The following sections are mandatory: 1, 2, 3, 8, 9, 20, and 21. All the same, try all sections.

S1 Have there been any times in your life when you have had 5 or more drinks of alcohol on one occasion?(4,5) 1 2

S2 Have you ever-used drugs of addiction? **(6)** 1 2 3

S3 Have you ever gotten hooked on any prescribed medication or taken more of it than you were supposed to? **(Insert/give details at the back of the code sheet)**

S4 Have you ever had a panic attack; when you suddenly felt frightened or anxious or suddenly developed a lot of physical symptoms? **(12)** 1 2 3

S5 Were you ever afraid of going out of the house alone, being in crowds, standing in the line, traveling in taxis or buses? **(13)** 1 2 3

S6 Is there anything that you have been afraid to do or felt uncomfortable doing in front of other people, like speaking, eating or writing? **(14)** 1 2 3

S7 Are there any other things that you have been especially afraid of like flying, seeing blood, heights, closed places or certain kinds of animals/insects? **(15)** 1 2 3

S8 Have you ever been bothered by thoughts that did not make any sense and kept coming to you even when you tried not to have them? **(16)**

S9 Was there ever anything that you had to do over and over again, that you could not resist doing, like washing your hands again and again, counting up a certain number, or checking something several times to make sure you had it right? **(16)** 1 2 3

S10 Sometimes things happen to people that are extremely upsetting, like being in life threatening a situation like a major disaster, accidents or fire; being physically assaulted or raped; seeing another person killed or dead or badly hurt; or hearing about something horrible happening to someone close to you. At any time during your life, have any of these things happened to you? **(17)** 1 2 3

S11 In the last six months, have you been particularly nervous or anxious? **(18, 19)** 1 2 3

S12 Have you been sick a lot over the years? **(20)** 1 2 3

S13 Have you ever had a time when you weighed much less than other people thought you ought to weigh? **(1, 2, 3, 8, 9, 21)** 1 2 3

S14 Have you often had times when your eating was out of control? **(as S13 above)** 1 2 3

S15 Has there ever been a time when your mood was excessively high for several days or more? If yes, anyone of the following present? **(10)** 1 2 3

(a) Were your thoughts racing? 1 2 3

(b) Were you bursting with energy? 1 2 3

(c) Did you think you had "special" power or abilities? 1 2 3

S16 Have you ever had unusual experiences, for example, interference of your thoughts, that your thoughts could be read; that messages could be put in your mind; that the radio, TV or newspaper were talking about you; that you were being spied on; or that you could hear voices that other people could not? **(11)** 1 2 3

NB: IF ANY OF THE ABOVE IS SCORED "2" OR "3", GO TO THE APPROPRIATE MODULE.

SCID MODULES

1. DEPRESSIVE EPISODES

A1	Depressed mood for 2 or more weeks	1 2 3
A2	Loss of interest in daily activities	1 2 3
A3	Weight loss or gain	1 2 3
A4	Weight loss or decreased appetite	1 2 3
A5	Weight loss or increased appetite	1 2 3
A6	Insomnia	1 2 3
A7	Hypersomnia	1 2 3
A8	Psychomotor agitation	1 2 3
A9	Psychomotor retardation	1 2 3
A10	Fatigue or loss of energy	1 2 3
A11	Feelings of worthlessness	1 2 3
A12	Feelings of inappropriate guilt	1 2 3
A13	Diminished ability to concentrate or think	1 2 3
A14	Indecisiveness	1 2 3
A15	Recurrent thoughts of own death	1 2 3
A16	Suicidal ideation	1 2 3
A17	Specific plan for suicide	1 2 3
A18	Suicide attempt	1 2 3
A19	At least 5 of the primary symptoms above are coded "3" and at least one of these is item A1 or A2 (Official only)	1 3
A20	Symptoms cause significant distress or impairment	1 2 3
A21	Not due to direct effect of substance or medical condition	1 2 3
A22	Not better accounted for by bereavement	1 2 3

A23 Major depressive episode (Official only) 1 3

2. DYSTHYMIC DISORDER

A83 Depressed mood for the past 2 years 1 2 3

A84 Poor appetite or over-eating 1 2 3

A85 Insomnia or hypersomnia 1 2 3

A86 Low energy or fatigue 1 2 3

A87 Low self-esteem 1 2 3

A88 Poor concentration or difficulty in making decisions 1 2 3

A89 Hopelessness 1 2 3

A90 At least 2 symptoms above (A84-A89) are coded "3" (Official only) 1 3

A91 Symptoms have not been absent for more than 2 months 1 2 3

A92 No major depressive episode during first 2 years of disturbance 1 2 3

A93 Age of onset of current dysthymic disorder (**Insert actual age in score sheet**)

A94 Has never had a manic or hypo manic episode 1 2 3

A95 Does not occur during course of chronic psychotic disorder 1 2 3

A96 Not due to direct effects of a substance or medical condition 1 2 3

A97 Symptoms cause significant distress or impairment 1 2 3

A98 Dysthymic disorder (Official only) [A83, A90, A91, A95, A96, and A97 are all code "3"] 1 3

3. DEPRESSIVE DISORDER NOT OTHERWISE SPECIFIED (NOS)

D7 Depressive symptoms that do not meet criteria for manic-depressive episode, Dysthymia, adjustment disorder, or not accounted for by bereavement 1 2 3

D8 Not due to direct effect of a substance or medical condition 1 2 3

D9 Depressive disorder not otherwise specified (NOS) : - (Official) Rate 1, 2, 3,4 or 5

1- Post-psychotic depressive disorder of schizophrenia 1 3

2- Major depressive disorder superimposed on delusional disorder, psychotic disorder not otherw specified, or active schizophrenia

3- Minor depressive disorder

4- Recurrent brief disorder

5- Other

D10 Depressive disorder not otherwise specified present in the last month 1= Yes 2 = No

4. SUBSTANCE USE DISORDERS:

ALCOHOL DEPENDENCE

A1 Alcohol taken in large amounts or for long periods 1 2 3

A2 Persistent desire or unsuccessful efforts to cut down drinking 1 2 3

A3 Large amounts of time spent in activities obtaining alcohol 1 2 3

A4 Important activities given up or reduced 1 2 3

A5 Use continued despite physical or physiological problems 1 2 3

A6 Increased tolerance 1 2 3

A7 Withdrawal: at least two of

(a) Sweating or 1 2 3

(b) Racing heart, 1 2 3

(c) Hand shakes, 1 2 3

(d) Trouble sleeping, 1 2 3

(e) Feeling nauseated, 1 2 3

(f) Feeling agitated, 1 2 3

(g) Feeling anxious, 1 2 3

(h) Having a seizure, 1 2 3

(i) Seeing or, 1 2 3

(j) Hearing things that are not really there. 1 2 3

(k) If no withdrawal, then alcohol to relieve withdrawal. 1 2 3

A8 Onset and course:

(a) When did your drinking problems first start? (**Insert date in the scores**)

(b) How long did they go on for? (**Insert in the score sheet**)

A9 Treatment:

(c) Did you see a doctor about your drinking problems? 1 2 3

(d) Did you receive any treatment? 1 2 3

(e) What treatment? (**Insert in the score sheet**)

(f) Did you seek any other professional help? 1 2 3

(g) What help? (**Insert in the score sheet**)

5. ALCOHOL ABUSE: At least one of the items A10-A13 coded "3" if present in the last 12 months period. **1 3**

A10 Failure to fulfill role 1 2 3

A11 Physically hazardous 1 2 3

A12 Legal problems 1 2 3

A13 Social problems 1 2 3

6. DRUG DEPENDENCE

Now I am going to ask you some specific questions about your use of................... (**Drugs**)

Have you ever taken any of these to get high, to sleep better, to lose weight, or to change your mood?

Sedatives/hypnotics/anxiolytics: Valium, Librium, barbiturates, Milltown, Ativan, Restoril, Seconal.

Cannabis: marijuana, hashish, bhang, tetrahydrocabbinol.

Stimulants: amphetamine /"speed", Crystal meth, Dexadrine, Ritalin/methylphenidate/'ice'.

Opioids: heroin, morphine, opium, Methadone, Darvon, Demerol, Dilaudid, Pethidine, Codeine, Pentazocine, methaqualone, Madrax.

Cocaine: intranasal, intravenous, 'freebase', 'crack', and 'speedball'.

Hallucinogens: PCD. LSD. Mescaline. Peyote. PCP ('angle dust'), Ecstasy, MDMN, others.

Other drugs e.g. Khat, nicotine, glue, paint, inhalants, nitrous oxide ('laughing gas').

B1 Large amounts / longer periods 1 2 3

B2 Persistent desire / unsuccessful efforts to control/cut down 1 2 3

B3 Great deal of time spent obtaining/recovering 1 2 3

B4 Social, occupations, recreations given up or reduced 1 2 3

B5 Use despite physiological/physical problems 1 2 3

B6 Tolerance (either markedly increased amounts for desired effects, or markedly diminished effects) 1 2 3

B7 Withdrawal

(a) Ever had withdrawal symptoms when cut down or stopped drug? 1 2 3

(b) Ever taken more of drug to get rid of withdrawal symptoms? 1 2 3

LIST OF WITHDRAWAL SYMPTOMS

(a) Sedatives/hypnotics/anxiolytics: two or more of the following developing within several hou[r]... few days after cessation (or reduction) after heavy or prolonged use

1. Autonomic hyperactivity 1 2 3
2. Increased hand tremor 1 2 3
3. Insomnia 1 2 3
4. Nausea and vomiting 1 2 3
5. Transient visual, tactile or auditory hallucinations or illusions 1 2 3
6. Psychomotor agitation 1 2 3
7. Anxiety 1 2 3
8. Grand mal seizures 1 2 3

(b) Stimulants:

(i) Cocaine: - dysphoric mood and two or more of the following physiological changes

1. Fatigue 1 2 3

2. Vivid unpleasant dreams 1 2 3

3. Insomnia or hypersomnia 1 2 3

4. Increased appetite 1 2 3

5. Psychomotor retardation or agitation 1 2 3

(ii) Opioids: - three or more of the following

1. Dysphonic mood 1 2 3

2. Nausea and vomiting 1 2 3

3. Lacrimation or rhinorrhoea 1 2 3

4. Muscle aches 1 2 3

5. Sweating, piloerection 1 2 3

6. Diarrhea 1 2 3

7. Yawning 1 2 3

8. Fever 1 2 3

9. Insomnia 1 2 3

7. **DRUG ABUSE**

B8 Recurrent use/failure to fulfill major roles / obligations 1 2 3

B9 Recurrent use in hazardous situations 1 2 3

B10 Recurrent use related to social problems 1 2 3

B11 Recurrent use related to social problems 1 2 3

B12 Onset and course

(a) When did the drug problems first start? **(Insert on the score sheet)**

(b) When did they finally stop? **(Insert on the score sheet)**

B13 Treatment

(a) Did you see a doctor about the drug problems? 1 2 3

(b) Did you receive any treatment? 1 2 3

(c) What treatment? (**Insert on the score sheet**)

(d) Did you seek any other professional help? 1 2 3

(e) What help? (**Insert on the score sheet**)

(f) How old were you when you first started taking drugs? (**Insert on the score sheet**)

8. RECENT MAJOR DEPRESSIVE EPISODE: AT LEAST FIVE ITEMS C1-C9 CODED "3", ONE OF THEM C1 OR C2, IN SAME 2-WEEK PERIOD.

C1 Depressed mood 1 2 3

C2 Diminished interest/pleasure 1 2 3

C3 Weight/appetite gain or loss 1 2 3

C4 Sleep disturbance: insomnia or hypersomnia or early waking 1 2 3

C5 Psychomotor agitation or retardation 1 2 3

C6 Fatigue or loss of energy 1 2 3

C7 Feeling of worthlessness or inappropriate guilt 1 2 3

C8 Diminished ability to concentrate or indecisiveness 1 2 3

C9 Recurrent thoughts of death, suicidal ideation 1 2 3

C10 Episode not due to medical condition/medication/substance 1 2 3

C11 Episode not following bereavement 1 2 3

C12 Treatment (**Insert on the score sheet)**

C13 When did your depression start? (**Insert on the score sheet**)

C14 How long did it go on? (**Insert on the score sheet**)

9. PAST MAJOR DEPRESSIVE EPISODE

I would like to ask you about other times in your life when you have felt very low.

C15 Depressed mood 1 2 3

C16 Diminished interest/pleasure 1 2 3

C17 Weight/appetite gain or loss 1 2 3

C18 Sleep disturbance: insomnia or hypersomnia or early waking 1 2 3

C19 Psychomotor agitation or retardation 1 2 3

C20 Fatigue or loss of energy 1 2 3

C21 Feeling of worthlessness or inappropriate guilt 1 2 3

C22 Diminished ability to concentrate or indecisiveness 1 2 3

C23 Recurrent thoughts of death, suicidal ideation, specific suicide plan, or suicide attempt(s) 1 2 3

C24 Episode not due to medical condition/medication/substance 1 2 3

C25 Episode not following bereavement 1 2 3

C26 Treatment (**Insert on the score sheet**)

C27 When did your depression start? (**Insert on the score sheet**)

C28 How long did it go on? (**Insert on the score sheet**)

10. MANIA: CURRENT MANIC EPISODE. AT LEAST D1 PLUS ANY THREE D2-D7 (OR FOUR IF MOOD IS IRRITABLE) IN A WEEKS TIME (OR LESS IF ADMISSION NEEDED)

D1 Persistently elevated expansive or irritable mood 1 2 3

D2 Inflated self-esteem or grandiosity 1 2 3

D3 Decreased need for sleep 1 2 3

D4 Flight of ideas/subjective experiences of racing thoughts 1 2 3

D5 Distractibility (attention too easily drawn to unimportant or irrelevant stimuli) 1 2 3

D6 Increase in goal directed activity (socially, at work, school or sexually) or
Psychomotor agitation 1 2 3

D7 (a) Excessive involvement in pleasurable activities that have high potential for painful
experience 1 2 3

D7 (b) 3 Three or more of above (D1-D7): MANIC EPISODE (Official) 1 3

D8 Not due to a mixed episode 1 2 3

D9 Significant impairment in function 1 2 3

D10 Not due to medication, drug of abuse or medical condition 1 2 3

D11 (a) Past episodes of mania 1 2 3

(b) How many? (**Insert on the score sheet**)

D12 Treatment (**Insert on the core sheet**)

11. SCHIZOPHRENIA:

E1 Delusions

1. Delusions of reference 1 2 3
2. Persecutory delusions 1 2 3
3. Grandiose delusions 1 2 3
4. Somatic delusions 1 2 3
5. Delusions of control 1 2 3
6. Bizarre delusions 1 2 3
7. Thought insertion 1 2 3
8. Thought broadcasting 1 2 3
9. Thought insertion 1 2 3
10. Other delusions (**Insert on the score sheet**)

E2 Hallucinations

1. Running commentary hallucinations 1 2 3
2. Third party hallucinations 1 2 3
3. Visual hallucinations 1 2 3
4. Tactile hallucinations 1 2 3
5. Commanding hallucinations that are obeyed 1 2 3

6. Other hallucinations (**Insert on the score sheet)**

E3 Disorganized speech **1 2 3**

E4 Behavior

1. Catatonic (motor immobility) 1 2 3

2. Excessive motor activity 1 2 3

3. Extreme negativism 1 2 3

4. Posturing or stereotyped movements 1 2 3

5. Grossly disorganized speech 1 2 3

6. Grossly inappropriate effect 1 2 3

E5 Negative symptoms

1. Affective flattening 1 2 3

2. Alogia 1 2 3

3. Avolition 1 2 3

E6 Social/ occupation dysfunction 1 2 3

E7 Not schizoaffective or mood disorder 1 2 3

E8 Previous treatment (Insert in the score sheet)

E9 If any two of E1-E5 are "3": SCHIZOPHRENIA 1 3

12. LIFE HISTORY OF PANIC DISORDER

Panic attack

F1 Suddenly felt frightened, or anxious or developed physical symptoms 1 2 3

F2 Attacks came out of the blue 1 2 3

F3 How many attacks? **(Insert in the score sheet)**

IF NONE STOP, HERE; IF PRESENT:

F4 Worry about implications? 1 2 3

F5 Concern about additional attacks? 1 2 3

F6 Significant changes in behavior 1 2 3

F7 Criterion panic attack 1 2 3

F8 Abrupt/peak in 10 minutes 1 2 3

F9 Autonomic symptoms:

(i) Heart race, pound or skip beat 1 2 3

(ii) Tremble /shake 1 2 3

(iii) Short of breath 1 2 3

(iv) Feel choking 1 2 3

(v) Have nausea, stomach upset or diarrhoea 1 2 3

(vi) Feel dizzy, unsteady or faint 1 2 3

(vii) Feel unreal 1 2 3

(viii) Fear of going crazy or dying 1 2 3

(ix) Tingling/numbness in parts of the body 1 2 3

(x) Flushes or chills 1 2 3

F10 Not due to substance medical condition 1 2 3

F11 Life time panic disorder: Recurrent unexpected panics (at least two) with four or more autonomic symptoms 1 3

13. PANIC DISORDER WITH AGORAPHOBIA

F12 Situations

(i) Away from home 1 2 3

(ii) Crowded places 1 2 3

(iii) Standing in a queue 1 2 3

(iv) Being on a bridge 1 2 3

(v) Using public transport 1 2 3

F13 Endured with marked distress 1 2 3

LIFE TIME AGORAPHOBIA (NO HISTORY OF PANIC ATTACK)

F14 Agoraphobic symptom (being alone, in a crowd, in a queue public transport or other) 1 2 3

IF "NO", STOP HERE.

F15 Endured with marked distress 1 2 3

F16 Avoidance 1 2 3

F17 Not due to substance or medical condition 1 2 3

14. LIFETIME SOCIAL PHOBIA

F18 Marked and persistent fear in social situations 1 2 3

IF "NO", STOP HERE

F19 Exposure to feared social situation almost invariably provokes anxiety 1 2 3

F20 Fear is excessive 1 2 3

F21 Avoidance 1 2 3

F22 Endured with marked distress 1 2 3

F23 Interfered with normal routine 1 2 3

F24 Not due to substance or medical condition 1 2 3

15. LIFETIME SPECIFIC PHOBIA

F25 Marked and persistent fear of flying, seeing blood, heights, closed places, certain kind of animals or insects 1 2 3

IF "NO", STOP HERE

F26 Exposure to feared phobic stimulus almost invariably provokes anxiety 1 2 3

F27 Fear excessive 1 2 3

F28 Avoidance 1 2 3

F29 Endured with marked distress 1 2 3

F30 Interference with normal routine 1 2 3

F31 Not due to substance or medical condition 1 2 3

16. LIFE TIME OBSESSIVE COMPULSIVE DISORDER (OCD)

F32 Obsessions: recurrent and persistent thoughts/impulses/images 1 2 3

IF "NO", STOP HERE.

F33 Attempts to ignore or suppress such thoughts 1 2 3

F34 Thoughts/images/impulses recognized as coming from own mind 1 2 3

F35 Compulsions: Repetitive behaviour e.g. washing, counting, checking 1 2 3

F36 Behaviour aimed at preventing or reducing mental distress or preventing some dreaded event/situation 1 2 3

IF "NO" TO OBSESSIONS OR COMPULSIONS, STOP HERE.

F37 Excessive thoughts 1 2 3

F38 Marked distress/time consuming 1 2 3

F39 Not due to substance medical condition 1 2 3

17. LIFE TIME POST TRAUMATIC STRESS DISORDER (PTSD)

F106 Traumatic Event List: **(Score for each one of them 0=not present; or 1=present)**

(i) Been involved in a road or motor accident? 0 1

(ii) Been attacked with a gun? 0 1

(iii) Been attacked with a knife or a similar weapon? 0 1

(iv) Any member of your family been attacked with a gun? 0 1

(v) Any member of your family been attacked with a knife or a similar weapon? 0 1

(vi) Ever been physically assaulted, causing you bodily harm? 0 1

(vii) Been sexually assaulted/ raped? 0 1

(viii) Your house been burned by fire? 0 1

(ix) Been caught up in a riot? 0 1

(x) Been robbed in armed robbery or mugged? 0 1

(xi) Your house/home been broken into by armed robbers? 0 1

(xii) Been involved in a car- or matatu-jacking? 0 1

(xiii) Been involved in a life-threatening flood? 0 1

(xiv) Been involved in tribal clashes? 0 1

(xv) Witnessed violence in the street, neighbourhood, or school? 0 1

(xvi) Been robbed? 0 1

(xvii) Seen family members injured, beaten, hurt or killed? 0 1

(xviii) Been beaten or physically hurt, beaten or hurt? 0 1

(xix) Been physically hurt or attacked by a non-family member? 0 1

(xx) Others (**specify/insert in the score sheet**) 0 1

F107 (a) Experienced, witnessed, or was confronted with an event involving actual or threatened death, serious injury, or the physical integrity of self or others, e.g. a very serious accident or fire; being physically assaulted or raped; seeing another person killed, dead or badly injured 1 2 3

(b) Hearing about something horrible that has happened to some one close to you 1 2 3

IF "NO", STOP HERE.

F108 Response: involved intense fear, helplessness or horror 1 2 3

F109 Recurrent, intrusive and distressing recollections (including images, thoughts, perceptions) 1 2 3

F110 Recurrent distressing dreams 1 2 3

F111 Re-living the experience 1 2 3

F112 Autonomic symptoms 1 2 3

F113 Intense psychological distress to cues 1 2 3

F114 At least one of the above (F109-F113) coded "3" (Official) 1 3

IF NO SYMPTOM PRESENT, STOP HERE.

F115 Efforts to avoid thoughts, feelings, conversation about event 1 2 3

Item	Code
F116 Efforts to activities, places or conversation about event	1 2 3
F117 Inability to recall an important aspect	1 2 3
F118 Diminished interest or participation in activities	1 2 3
F119 Detachment or estrangement from others	1 2 3
F120 Restricted range of affect	1 2 3
F121 Sense of foreshortened future	1 2 3
F122 At least three of the above (F115-F121) coded "3" (Official)	1 3
F123 Difficulty falling or staying asleep	1 2 3
F124 Irritability or outbursts of anger	1 2 3
F125 Difficulty in concentrating	1 2 3
F126 Hypervigilance	1 2 3
F127 Exaggerated startle response	1 2 3
F128 At least two of the above (F123-F127) coded "3" (Official)	1 3
F129 Duration at least one month	1 2 3
F130 Causes marked distress or significantly interferes	1 2 3
F131 Post -Traumatic Stress Disorder F107, F108, F114, F122, F122, F128, F130 all coded "3" (Official)	1 3
F132 Current PTSD (symptoms of PTSD in past month) (Official)	1 3

18. GENERALISED ANXIETY DISORDER (GAD)

Item	Code
F138 Excessive anxiety and worry	1 2 3
F139 Difficult to control	1 2 3
F140 Not during mood disorder or psychotic disorder	1 2 3
F141 Restless, keyed up or on edge	1 2 3
F142 Easily fatigued	1 2 3

F143 Difficulty in concentrating 1 2 3

F144 Irritability 1 2 3

F145 Muscle tension 1 2 3

F146 Sleep disturbance 1 2 3

F147 At least three of the above (F141-F146) coded "3" (Official) 1 3

F148 Focus not confined to another axis I disorder 1 2 3

F149 Distress or impairment 1 2 3

F150 Not due to direct effects of a substance or medical condition 1 2 3

F151 Generalized anxiety disorder (F138, F140, F150 ALL CODED "3") (Official) 1 3

19. ACUTE STRESS DISORDER

J9 Numbing, detachment or absence of emotional response 1 2 3

J10 Reduction in awareness of surroundings 1 2 3

J11 Derealization 1 2 3

J12 Depersonalization 1 2 3

J13 Dissociative amnesia 1 2 3

J14 At least three of the above (J9-J13) coded "3" (Official) 1 3

J15 Causes marked distress or significantly interferes 1 2 3

J16 Duration at least 2 days and less than 4 weeks; and occurs within 4 weeks of traumatic event 1 2 3

J17 Not due to direct effects of a substance or medical condition 1 2 3

J18 ACUTE STRESS DISORDER

(J6-J9 all code "3" and F107, F114, F122, F128 all code "3") (Official) 1 3

J19 ACUTE CURRENT STRESS DISORDER

(Symptoms of Acute Stress Disorder in past month) (Official) 1 3

20. SOMATIZATION DISORDER

G1 Screen 12-Somatization Disorder (Official)	1		3
G2 History of many physical complaints before age 30 (Official)	1		3
G3 Age at onset (**Insert on the score sheet**)			
G4 Impaired co-ordination or balance	1	2	3
G5 Paralysis or localized numbness	1	2	3
G6 Difficulty swallowing or lump throat	1	2	3
G7 Aphonia	1	2	3
G8 Urinary retention	1	2	3
G9 Loss of touch or pain sensation	1	2	3
G10 Double vision	1	2	3
G11 Blindness	1	2	3
G12 Deafness	1	2	3
G13 Seizures	1	2	3
G14 Amnesia	1	2	3
G15 Loss of consciousness	1	2	3
G16 One symptom above (G4-G15) code "3" (Official)	1		3
G17 Head pain	1	2	3
G18 Stomach pain	1	2	3
G19 Back pain	1	2	3
G20 Joint pain	1	2	3
G21 Pain in the extremities	1	2	3
G22 Chest pain	1	2	3
G23 For women, pain during menstruation	1	2	3
G24 Pain during intercourse	1	2	3

G25 Pain during urination 1 2 3

G26 Pain anywhere else 1 2 3

G27 Four symptoms above (G17-G26) coded "3" (Official) 1 3

G28 Nausea 1 2 3

G29 Bloating 1 2 3

G30 Vomiting other than during pregnancy 1 2 3

G31 Diarrhea 1 2 3

G32 Intolerance of several foods 1 2 3

G33 Sexual indifference 1 2 3

G34 Two symptoms above (G28-G33) coded "3" (Official) 1 3

G35 Irregular menses 1 2 3

G36 Excessive menstrual 1 2 3

G37 Vomiting through out pregnancy 1 2 3

G38 One symptom above coded "3" 1 3

G39 Somatization Disorder (G2, G16, G27, F34, G38) all coded "3" (Official) 1 3

21. ADJUSTMENT DISORDER

H1 Emotional or behavioral symptoms in response to an identifiable stressor occurring within 3 months of stressor e.g. divorce, diagnosis of a terminal illness 1 2 3

H2 The symptoms cause marked distress in excess of what would be expected 1 2 3

H3 The symptoms cause significant impairment in social or occupational functioning 1 2 3

H4 The symptoms do not represent, bereavement 1 2 3

H5 Once the stressor has terminated, the symptoms do not persist for more than an Additional 6 months 1 2 3

H6 Predominant symptoms may be of depressed mood, anxiety, mixed or disturbance of conduct 1 2 3

22. DELIRIUM

K1 Disturbance of consciousness with reduced ability to focus, sustain or shift attention	1	2	3
K2 Change in cognition not due to established or evolving dementia	1	2	3
K3 Disturbance develops over a short period of time (hours to days) and tends to fluctuate during the of the day	1	2	3
K4 Disturbance is not caused by direct physiological consequences of a general medical condition	1	2	3

23. DEMENTIA

L1 Impaired ability to learn new information or to recall previously learned information	1	2	3
L2 One or more of:			
(i) Aphasia	1	2	3
(ii) Apraxia	1	2	3
(iii) Agnosia	1	2	3
(iv) Disturbance in executive functioning i.e. planning, organizing	1	2	3
L3 Cognitive deficits in L1 and L2 cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning	1	2	3
L4 Course is characterized by gradual onset and continuing decline	1	2	3
L5 Deficits do not occur exclusively during the course of a delirium	1	2	3

SCREENING PAGE

S1----S2----S3----S4----S5----S6----S7----S8----S9----S10----S11----S12----S13---S14---S15---- S15 (a) -----

S15 (b) --------S15(c) -------S16-------

1. DEPRESSIVE EPISODES

A1----A2----A3----A4----A5----A6----A7----A8---A9---A10---A11----A12----A13----A14----15----A16---

A17----A18---**A19***----A20----A21----A22-----**A23***----

2. DYSTHYMIC DISORDERS

A83------A84------A85-------A86------A87-------A88--------A89-------**A90***--------A91-------A92--------

A93-------A94----A95--------A96-------A97-------**A98***--------

3. DEPRESSION DISORDER NOT OTHERWISE SPECIFIED

D7--------D8-------D9-------D10*---------

4. SUBSTANCE USE DISORDERS:

ALCOHOL DEPENDENCE

A1-----A2-----A3-------A4----A5----A6----A7(a)--------A7(b)--------A7(c)----A7(d)---- A7(e)--------

7(f)----A7(g)--------A7(h)---------A7(i)---------A7(j)---------A7(k)--------A8(a)------------A8(b)---------

A9(c)----------A9(d)-----A9 (e) --------A9 (f) ----------A9 (g) ----------

5. ALCOHOL ABUSE

A10-------A11--------A12--------A13--------

6. DRUG DEPENDENCE

B1--------B2-------B3-------B4--------B5-------B6-------B7 (a) ---------B7 (b) ---------

a) Sedatives: a)1-------a)2-------a)3------a)4-------a)5------a)6-------a)7-------a)8------

b) Stimulants:

(i) Cocaine:- b)(i)1-------b)(i)2------b)(i)3------b)(i)4-------b)(i)5-------

(ii) Opioids:- b)(ii)1----b)(ii)2----b)(ii)3----b)(ii)4----b)(ii)5----b)(ii)6----b)(ii)7----b)(ii)8----b)(ii)9----

7. DRUG ABUSE

B8-------B9-------B10-----B11------B12 (a) -------B12(b)-------B13(a)--------B13(b)-------

B13(c) --------B13 (d) -----B13 (e) ---------- (f) ---------

8. RECENT MAJOR DEPRESSIVE EPISODE

C1-------C2------C3-------C4-------C5------C6-------C7-------C8-------C9--------C10--------C11--------

C12-------C13---------C14-------

9. PAST MAJOR DEPRESSIVE EPISODE

C15-----C16-----C17------C18-----C19-----C20-----C21-----C22-----C23-----C24-----C25-----

C26--------C27--------C28-------

10. CURRENT MANIC EPISODE

D1----D2----D3----D4-----D5----D6----D7---- D8----D9----D10----D11 (a) -----D11 (b) ----D12-----

11. SCHIZOPHRENIA

E1 Delusions

E11----E12----E13----E14----E15----E16----E17----E18----E19----E20-------

E2 Hallucinations

E21----E22----E24----E25----E26-----

E3 Disorganized Speech----

E4 Behavior

E41----E42----E43----E44----E45----E46----E47----

E5 Negative symptoms

E51----E52----E53----

E6 Social/Occupational dysfunction----

E7 Not Schizo-affective or Mood Disorder----

E8 Previous treatment------------

12. LIFE HISTORY OF PANIC DISORDER

F1----F2----F3----F4----F5----F6----F7----F8----F9----

F9.1----F9.2----F9.3----F9.4----F9.5----F9.6----F9.7----F9.8----F9.9----F9.10----

F10----

F11----

13 PANIC DISORDER WITH AGORAPHOBIA

F12 Situations

F12.1----F12.2----F12.3----F12.4----F12.5----

F13----F14----F15----F16----

14. LIFE TIME SOCIAL PHOBIA

F18----F19----F20----F21----F22----F23----F24----

15. LIFE TIME SPECIFIC PHOBIA

F25----F26----F27----F28----F29----F30----F31----

16. LIFE TIME OBSESSIVE COMPULSIVE DISORDER

F32----F33----F34----F35----F36----F37----F38----F39----

17. POST TRAUMATIC STRESS DISORDER- LIFETIME PTSD

F106----F107----F108----F109----F110----F111----F112----F113----F114----F115----F116----F117----F118----F119----F120----F121----F122----F123----F124----F125----F126----

F127----F128----F129----F130----F131----F132*----

18. GENERALISED ANXIETY DISORDER

F138----F139----F140----F141----F142----F143----F144----F145----F146----F147----F148----F149----F150----F151*-----

19. ACUTE STRESS DISORDER

J9----J10----J11----J12----J13----J14*----J15----J16----J17----J18----J19*----

20. SOMATIZATION DISORDER

G1----G2----G3----G4----G5----G6----G7----G8----G9----G10----G11----G12----G13----G14----G15----G16----G17----G18----G19----G20----G21----G22----G23----G24----G25----G26----G27----G28----G29----G30----G31----G32----G33----G34----G35----G36----G37----G38----G39*----

21. ADJUSTMENT DISORDER

C1----C2----C3----C4----C5----C6----

22. DEL IRIUM

K1----K2----K3----K4----

23. DEMENTIA

L1----L2----L3----L4----L5----

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Ref: KNH/UON-ERC/ A/139

29th January 2009

Dr. Ngamije Kabare Schadrac
Dept. of Psychiatry
School of Medicine
University of Nairobi

Dear Dr. Ngamije

RESEARCH PROPOSAL: "POSTTRAUMATIC STRESS DISORDER AMONG WIDOW SURVIVORS OF THE 1994 RWANDESE GENOCIDE" (P307/11/2008)

This is to inform you that the Kenyatta National Hospital Ethics and Research Committee has reviewed and **approved** your above revised research proposal for the period 29th January 2009 –28th January 2010.

You will be required to request for a renewal of the approval if you intend to continue with the study beyond the deadline given. Clearance for export of biological specimen must also be obtained from KNH-ERC for each batch.

On behalf of the Committee, I wish you fruitful research and look forward to receiving a summary of the research findings upon completion of the study.

This information will form part of database that will be consulted in future when processing related research study so as to minimize chances of study duplication.

Yours sincerely

DR. L. MUCHIRI
AG. SECRETARY, KNH/UON-ERC

c.c. Prof. K.M. Bhatt, Chairperson, KNH/UON-ERC
The Deputy Director CS, KNH
The Dean, School of Medicine, UON
The Chairman, Dept. of Psychiatry, UON
Supervisors: Prof. David M. Ndetei, Dept. of Psychiatry, UON
Dr. John Mburu, Dept. of Psychiatry, UON
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REPUBLIQUE DU RWANDA

NATIONAL ETHICS COMMITTEE / COMITE NATIONAL D'ETHIQUE
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Ministry of Health
P.O. Box 84
Kigali, Rwanda.

Assurance No. FWA 00001973
IRB 00001497 of IORG 0001100

No. 32/ RNEC /2009

Date: 11th March 2009

Dr Schadrac Ngamije
University of Nairobi

Your research Project: **Post traumatic stress disorder among widow survivors of 1994 Rwandese genocide.** Has been evaluated by the Rwanda National Ethics Committee.

		Involve in the decision		
			No (Reason)	
Name	**Institute**	**Yes**	**Absent**	**Withdrawn from the proceeding**
Dr Kayitesi Kayitenkore	Medical Doctor, Dermatologist	X		
Prof.Bajyana Emmanuel	Immunologist, Dean of faculty of sciences (NUR)		X	
Dr. Nkeramihigo Emmanuel	Senior Lecturer, National University of Rwanda. Faculty of Medicine (NUR)	X		
Dr. Naasson Munyandamutsa	Medical Doctor, Psychiatrist		X	
Dr. Dariya Mukamusoni	Director of Nyamata Hospital	X		
Pastor. Elise Musemakweli	PhD Theology C/o. EPR Kigali, Rwanda		X	

After reviewing your protocol, during the RNEC meeting of December 13th 2008, where the quorum was met and revisions made on the advice of the RNEC submitted On 05th March 2009, **we hereby provide approval for the above mentioned protocol.**

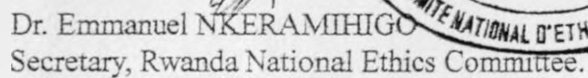
11/05/09
10/05/2010

Please note that approval of the protocol and consent form is valid for 12 months.

You are responsible for fulfilling the following requirements:

1. Changes, amendments, and addenda to the protocol or consent form must be submitted to the committee for review and approval, prior to activation of the changes.
2. Only approved consent forms are to be used in the enrollment of participants
3. All consent forms signed by subjects should be retained on file. The RNEC may conduct audits of all study records, and consent documentation may be part of such audits.
4. A continuing review application must be submitted to the RNEC in a timely fashion and before expiry of this approval.
5. Failure to submit a continuing review application will result in termination of the study.

Sincerely,



Dr. Emmanuel NKERAMIHIGO
Secretary, Rwanda National Ethics Committee.

C.P.I.
- Hon. Minister of Health.
- The Permanent Secretary, Ministry of Health.

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