PRIOR CAMP EXPERIENCES AND STRESS RELATED TO POSTTRAUMATIC STRESS DISORDER (PTSD) AMONG REFUGEES AT MAHEBA REFUGEE SETTLEMENT IN ZAMBIA

BY

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DECLARATION

I, **Kaluso C. Masuwa** do solemnly declare that this dissertation is a representation of my own work and it has not been previously submitted for a degree or diploma or any other qualification at this or any other University, and all the work of other people has been duly acknowledged.

Sign: _____ Date_____

Supervisor: Professor D. Nabuzoka, Sign:_____Date_____

CERTIFICATE OF APPROVAL

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ABSTRACT

Traumatic experiences can have devastating impact on the victim, altering their physical, emotional, cognitive and social aspects of life. They can lead to the development of Post-Traumatic Stress Disorder (PTSD), an anxiety disorder common among victims of trauma, such as refugees. Very few studies have been conducted in Zambia in relation to the link between traumatic experiences and PTSD related symptoms. The aim of the study was therefore to find out the experiences of refugees at a camp in North Western Zambia (Maheba Refugee Settlement) prior to camp, and subsequent stress related to PTSD.

The study was conducted on a representative sample of 234 participants, who were refugees at Maheba Refugee Settlement in August 2016. Data was collected through two instruments namely: a self-constructed questionnaire to capture demographical data and prior camp traumatic experiences that participants underwent, and a standardized Post Traumatic Symptoms Scale (PTSS) to ascertain the symptoms of Post-Traumatic Stress Disorder (PSTD).

Findings indicate that 66% of participants hadexperiencedphysical, emotional, economic and socialtraumatic events prior to camp; also on the PTSS scale 64% of participantshad symptoms of PTSD. Further, there was a strong relationship between prior camp experiences, specifically physical experiences andsymptoms related to PTSD.

The study concluded that certain types of experiences suffered by refugees are closely related to PTSD, and a number of factors, especially man made factors, are attributed to this scenario. Implications for theory, research and practice were drawn and recommendationsare made for all stakeholders involved in the affairs of refugees, including the need to take keen interest in mental health as much as they promote physical health of refugees.

DEDICATION

Dedicated to all trauma victims in the world

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LIST OF SYMBOLS

Zmw-Zambian kwacha.

Df-degree of freedom (in statistics)

Km-kilometer.

LIST OF ACRONYMS

APA-American Psychiatry Association

CBT-Cognitive Behavioural Therapy

DSMV-Diagnostic Statistical Manual-Version Five

HBC-Home Based Care

ICD-10-International Statistical Classification of Disease and Related Health Problems-10^{th} revision

MANSA-Manchester Quality of Life Scale

MNS-Mental, Neurological, and Substance Use

MOE-Ministry of Education

MOHA-Ministry of Home Affairs

MOH-Ministry of Health

NGO-Non-Governmental Organisation

OVC-Orphaned and Vulnerable Children

PTSD- Post Traumatic Stress Disorder

PTSS- Post Traumatic Symptoms Scale

SPSS-Statistical Packaging for Social Science

TFCBT-Trauma Focused Cognitive Behavioural Therapy

UNHCR-United Nations High Commissioner for Refugees

UN-United Nations

UNZABREC-University of Zambia Biological Research Ethics Committee

UNZA-University of Zambia

USA-United States of America

UTH-University Teaching Hospital

WHO-World Health Organisation

WWII-World War Two

CHAPTER ONE

INTRODUCTION

1.1.Overview

This chapter presents the background to the study and defines the problem that the study attempted to address. It states the purpose and objectives that needed to be met. The chapter further reflects on the significance, conceptual framework and operational definitions of key terms.

1.2.Background to the Study

Traumatic experiences can have devastating impact on the victim, altering their physical, emotional, cognitive and social aspects of life. In turn, the impact can have profound implications on their family, community, ultimately humanity at large. One such impact can be Posttraumatic Stress Disorder (PTSD).

A good number of trauma victims such as survivors of domestic violence, rape victims, survivors of car accidents, survivors of natural disasters, terrorist attacks, as well as children who are neglected, or abused physically and sexually, are likely to develop PTSD (Durand & Barlow, 2006).

According to a 2015 report from the United Nations High Commissioner for Refugees (UNHCR), as of the end of 2014, 19.5 million people around the world had been driven from their homes by armed conflict, persecution, natural disasters or other causes (UNHCR, 2015). Indeed, the current overall number of displaced persons globally represents a crisis of historic proportions, as the "number of refugees, asylum-seekers and internally displaced people worldwide has, for the first time in the post-World War II era, exceeded 50 million people," (Dourgnon, Kassar, and Kassene, 2014).

And a number of studies have also documented a greater prevalence of psychiatric disorders among refugee populations when compared to the general population; these disorders include: Post-Traumatic Stress Disorder (PTSD), depression, anxiety, somatization, and adjustment reactions (Ovitt, 2003).

There are many outcomes of trauma which meet most psychiatric diagnosis, which may include major depressive disorder, generalised anxiety disorder, panic disorder and substance abuse disorder (Kessler, et al, 1995), but the most common and most recognized is PTSD.

PTSD is a psychological response to the experience of intense traumatic events, particularly those that threaten life; it can affect people of any age, culture or gender. Although it has become popular in recent years, the condition has been known to exist at least since the ancient times and has been called by many different names. For instance, in the American Civil War, it was referred to as "soldier's heart;" in the First World War, it was called "shell shock" and in the Second World War, it was known as "war neurosis." (Matsumoto, 2009)

It is a mental disorder characterized by the re-experiencing of an extremely traumatic event accompanied by symptoms of increased arousal and by avoidance of stimuli associated with the trauma (Brooker, 2008). It is a common mental condition of victims, among others, of disaster, combat or war, childhood abuse, rape, physical assaults, natural or human-caused disasters, severe road traffic accidents, and other forms of traumatic events.

PTSD is mainly characterised by symptoms in three clusters: 1. Persistent intrusive thinking or re-experiencing (intrusions) of trauma, such as flashbacks, traumatic memories, recurrent dreams or nightmares. 2. Avoidance, such as avoiding

thoughts, feelings and conversations associated with the trauma, and loss of interests in significant activities, such as avoiding watching war movies, to some extent others avoid neither listening nor watching news at all. 3. Increased arousal, such as hyper-vigilance, sleep disturbances, poor concentration and exaggerated startle (surprise or worry) response (Matsumoto, 2009).

Many war victims exhibit acute and chronic symptoms that are described commonly by the diagnostic categories "PTSD" and "torture syndrome" (American Psychiatric Association, 2013). As earlier mentioned, refugees' suffering is bordered around a number of distressing experiences such as fleeing their home country, loss of family, relatives and friends, witnessing their children suffer torture, sexual abuse and death, whereas the stress of adjusting to the new country gives victims higher chances of suffering from PTSD. Also according to WHO (2006), refugees are among, if not, the most at risk population for undergoing health disparities for a variety of reasons, including their relocation, their poverty, as well as the actually demographics of refugees of which 80% are women and children.

They respond with terror to any sudden and high pitched sound like simple tyre burst, others avoid any bloody sights, even shunning eating meat. On the social aspect, most of them do not trust strangers; they are very suspicious and highly judgemental (Schwartz, 2000).

According to the DSM-V-TR, to meet the criteria for PTSD, one must have experienced a traumatic event, characterised by an event in which the life of physical integrity of the person or a loved one is harmed or threatened with harm and that results in the emotional reactions of fear, helplessness, or horror (American Psychiatric Association, 2013). People with PTSD have persistent frightening

thoughts and memories of their ordeal and feel emotionally numb, especially with people they were once close to.

Generally, War experiences have strong and horrible memories and catastrophic phenomena in the minds of the victims. Memories of the shootings, the rape and sexual abuses, the loss of beloved ones, property, shelter, loss of dignity, employment, business and school, the dead bodies on the streets, the mass graves and the separation from family, and many other traumatic events are strong enough to provide a haven for PTSD (Tribe, 2002). These experiences are common among refugees; hence a good number of refugees are prone to suffering from this disorder.

Also, as refugees are being resettled in other countries, a number of social, economic, physical and emotional challenges come along. Ideally, treatment programs differ in structure and size depending on the medical care provided in that particular country of refuge, which is normally a challenge for developing nations like Zambia. And if the country of refugee lacks proper interventional and coping skills, the recovery process is compromised and this provides a predisposition for PTSD (Ovitt, 2003).

Considerable evidence gathered has proved that the human mind has a set of very important and predictable response to threats that may come from an internal (for example, pain) or external (for example, murder) source, hence in the process, an individual may suffer from PTSD, typical of refugees (Katona, Cooper, and Robertson, 2008). Therefore a number of factors may play the predisposing role of the development of PTSD.

PTSD can infringe on behavioural areas and daily routine of victims. The victim can show characteristics such as; poor interpersonal relations with family, friends and workmates, feeling lonely and strange, extreme fear of war related activities, avoidance of places and activities that may trigger traumatic experiences, alterations in dressing, aggressiveness, and other maladjustments in behaviour, others have contemplated suicide and self-harm (Ibid).

PTSD ranges as mild, moderate, severe and sometimes profound depending on the measures taken to end the trauma. It is characterised by activities and behavioural patterns that impede on the coping skills of the victim because it has adverse impact. Hence, this study was aimed at exploring the experiences of PTSD among refugees living in Zambia.

1.3. Statement of the Problem

The overall research problem to be addressed in this study is that traumatic experiences that refugees have suffered in the past (prior to camp), have devastating mental effects making them vulnerable to suffering from disorders such as PTSD whose symptoms are manifested in their (refugees) social, emotional, cognitive, physiological, and behavioural aspects of life.

It is important to note that not everyone who experiences a traumatic event will develop PTSD, but chances increase with more severe or repeated traumas and subsequent stress related to PTSD, a common phenomenon among people who have suffered traumatic experiences (in this case, refugees). Hence the study is meant to shed more light on this problem as there are very few studies that have been conducted in Zambia on this problem, and among those few, none was specific to PTSD experiences among refugees.

1.4. Rationale for the Study

The logical basis of this study is that there are very few studies that have been conducted in Zambia in relation to this problem, and among those few, none was specific to the topic at hand. And it is meant to determine the link between specific experiences and PTSD symptoms among trauma survivors.

For instance studies by Mulenga (2015), Mulenga (2010), and Itziar etal (2013) were captured, as also indicated in Literature Review. However, these studies are different from the topic in question in that, those conducted on refugees are tackling other health issues, but not PTSD. And those conducted on PTSD were not targeted on the refugee populous, but other participants.

Hence, the current study was important, as it would fill up some gaps with regard to this subject because traumatic situations that refugees may have experienced could bear a socio-cultural influence, which would be different from refugees of other regions or countries.

On the other hand, the study meant to provide an understanding of the relationship between different types of experiences and subsequent stress levels associated with PTSD among refugees, as it is a common phenomenon among individuals who have been through traumatic situations (in this case, refugees).

Few studies have investigated the factors associated with PTSD among trauma survivors in relation to posttraumatic stress symptoms, depressive symptoms and among refugee populations. Furthermore, few studies have included psychiatric outpatients with exposure to war and war related situations, and further research on this population is needed. The majority of PTSD research has investigated only the positive changes that occur after exposure to a traumatic event. In this study, the

researcher therefore sought to investigate negative psychological symptoms, and risk factors of the condition.

1.5. Significance of the Study

A number of benefits from the findings of this research were anticipated, these have both academic relevance as well as practical significance. Some of the cardinal ones include the following:

Firstly, as evident from a number of studies, people who have a strong support network are less likely to develop PTSD after a trauma. Trauma victims need a sense of belonging, and caring group around them which could affect their biological and psychological response to stress. Hence, the findings may be beneficial to refugee health care providers, the UNHCR, as well as the Ministry of Home Affairs in their quest to combat challenges faced by refugees.

Secondly, the study sought to shed more light on the relationship between past traumatic experiences and subsequent stress levels associated with PTSD among refugees. And the knowledge generated may be of interest to various stake holders,including the community and general public as this may promote consideration on trauma related conditions and positive attitude towards individuals who have experienced traumatic events, hence a healthy society.

Thirdly, and most importantly, this study sought to fill up the academic gap that has been in existence with regard to this subject in Zambia. A few studies in Zambia, related to this study did not tackle the problem at hand, in that, those conducted on refugees are tackling other health issues, but not PTSD whilst those concerning PTSD were not targeted on the refugee experiences.

In the similar vein it was envisaged that the findings of the study, could contribute to refinement of the Psychoanalytic explanation by Sigmund Freud which argues that PTSD is as a result of unresolved conflicts and issues in the unconscious minds of the victim (Lahey, 2001).

Lastly, but not the least, on a global level, this study sought to add voice to previous related studies, whose findings and recommendations have advocated for more attention and interventional measures from global stakeholders like the UN and UNHCR, and other humanitarian agencies with regard to refugees' welfare.

1.6.Aim

The aim of this study was to find out the relationship between experiences of Refugees at Maheba Refugee settlement prior to camp and the subsequent stress related to PTSD.

1.6.1. Specific Objectives:

i. To identify different types of experiences of refugees prior to camp.

ii. To identify levels of stress associated with PTSD among refugees.

iii. To determine the relationship between different types of experiences and stress levels associated with PTSD among refugees.

1.6.2. Hypothesis:The study considered an alternative hypothesis which states "based on studies that have been documented in literature from other countries, certain types of experiences, such as torture, sexual abuse, financial challenges isolation, and exposure to severe stressors, are strongly associated with PTSD."

1.7. OPERATIONAL DEFINITIONS:

- **Asylum seeker**- a person who has left their home country as a political refugee and is seeking asylum in another.
- **Comorbidity**-the presence of one or more additional disorder co-occurring with a primary disorder.
- **Epidemiologic factors**-events or characteristics that have the potential to bring about change in a health condition.
- **Experiencing**-undergoing an event or occurrence, as a victim.
- **Flash back**-an involuntary recurrent memory, a psychological phenomenon in which an individual has a sudden, usually powerful re-experiencing of a past experience.
- **Insomnia**-difficulty falling or staying asleep even when one has he chance to do so.
- **Intrusive thought**-a thought that is unwelcome, involuntary thought, image, or an unpleasant idea that is upsetting and feels difficulty to eliminate.
- **Militia**-a military force that is raised from the civil population.
- **Numbing**-lacking the power of sensation.
- **Perpetuating factors**-factors or conditions that maintain symptoms of a disorder.
- **Precipitating factors**-factors that cause or trigger the onset of a disorder.
- **Prior camp experiences**-traumatic events that took place previous to (precede) attaining refugee status.
- **Refugee** –someone who has been forced to flee his or her country because of persecution, war or violence.

- **Sequel a**-a condition which is the consequence of a previous disease or injury.
- **Stress**- a state of mental or emotional strain.
- **Stressor**-any event, experience, or environmental stimulus that causes stress in an individual.
- **Subsequent stress**-stress experienced after an original stressful situation.
- **Symptomatic**-exhibiting symptoms of a condition(in this case PTSD)
- **Traumatic**-a deeply distressing emotional shock following a stressful event.
- **Witnessing**-seeing events take place, but not necessarily the victim.

CHAPTER TWO

LITERATURE REVIEW

2.1.Overview

This section reviews previous and similar studies that have been done on factors associated with Post-Traumatic Stress Disorder (PTSD) in Zambia and other parts of the world. The literature review is on published articles and accredited books from computerized data base and libraries. It will be looked at from two dimensions, namely:

- Empirical framework; this framework carries synopsis of a number of studies conducted in relation to this study.
- Theoretical framework; the theoretical framework will involve analysis of theories and prepositions that support the experience of PTSD among refugees.

2.2. Studies Conducted Globally

2.2.1. Stress levels and symptoms associated with Post Stress Traumatic Disorder (PSTD).

Many studies have been conducted to find out the symptoms of PTSD in refugees. For example, in a study conducted by Wendy et al (2011) on 'the physical health problems after single trauma exposure' identified the symptoms of PTSD as being characterized by three symptom clusters namely: intrusions which comprise flash backs, nightmares, emotional or physiological reactivity to reminders; avoidance or numbing – this includes avoiding reminders associated with the event and loss of event; and hyper arousal – this includes exaggerated startle, hyper vigilance and having difficulty sleeping. These symptoms are explained in detail below:

Re-experiencing

Researchers have observed that victims of war may re-experience the trauma they went through (Schwarz, 2000). Re-experiencing symptoms are symptoms that involve reliving the traumatic event. There are a number of ways in which people may relive a trauma. They may have upsetting memories of the traumatic event. These memories can come back when they are not expecting them. At other times the memories may be triggered by a traumatic reminder such as when a combat veteran hears a car backfire, when a motor vehicle accident victim drives by a car accident, or when a rape victim sees a news report of a recent sexual assault. These memories can cause both emotional and physical reactions. Sometimes these memories can feel so real it is as if the event is actually happening again. This is called a "flashback." Reliving the event may cause intense feelings of fear, helplessness, and horror similar to the feelings they had when the event took place.

Avoidance and Numbing

Avoidance symptoms are efforts people make to avoid the traumatic event. Individuals with PTSD may try to avoid situations that trigger memories of the traumatic event. They may avoid going near places where the trauma occurred or seeing TV programs or news reports about similar events. They may avoid other sights, sounds, smells, or people that are reminders of the traumatic event. Some people try to distract themselves as one way to avoid thinking about the traumatic event (Katona, Cooper and Roberson, 2008).

Numbing symptoms are another way to avoid the traumatic event. Individuals with PTSD may find it difficult to be in touch with their feelings or express emotions

toward other people. For example, they may feel emotionally "numb" and may isolate from others. They may be less interested in activities they once enjoyed. Some people forget, or are unable to talk about important parts of the event. Some think that they will have a shortened life span or will not reach personal goals such as having a career or family.

Emotions

People with PTSD may feel constantly alert after the traumatic event. This is known as increased emotional arousal, and it can cause difficulty sleeping, outbursts of anger or irritability, and difficulty concentrating (Schwartz, 2000). They may find that they are constantly ‘on guard’ and on the lookout for signs of danger. They may also find that they get startled.

Another study conducted by Reeves et.al (2005) on veterans of the military conflicts in Iraq and Afghanistan may have been exposed to significant psychological stressors, resulting in mental and emotional disorders. This study confirms the findings of other researchers on the symptoms of PTSD. They as well found that Posttraumatic stress disorder (PTSD) is characterized by symptoms in three domains: re-experiencing the trauma, avoiding stimuli associated with the trauma, and symptoms of increased autonomic arousal.

Impact of War-related Trauma on post war survivor

There are several impacts of PTSD. One common impact is psychological. Current research suggests that the psychological impact of trauma appears to be broad affecting mood and anxiety. Kessler and colleagues (1997) conducted a study on 8 000 civilians on the impact of trauma. They found out that among those with PTSD, 88% had at least one other co-occurring psychiatric illness. The study lacked

specificity of the factors associated with PTSD, something that the current study will consider.

A study was conducted on 126 participants of Bosnian refugees resettled in Australia by Weine et al (2001), drawn from a community centre and supplemented by a snow boll sampling method, findings showed that refugee survivors of inter-ethnic welfare vary greatly in the extent and range of their trauma experience, discerning which experiences are silent to generating and perpetuating disorders such as PTSD critical to the mounting rational strategies for targeted psychosocial intervention.

Physiological aspects of PTSD

Research also documents other impacts of trauma on post war survivors. These include cardiovascular illness- witnessing and experiencing a traumatic event leads to long-term changes in systolic blood pressure. It may also lead to atrioventricular defects and increased risk for coronary events (Wendy, 2011). This has been confirmed by Uchino et.al (2005) who conducted a longitudinal study on adults who were exposed to trauma.

Participants were found to have an increase in systolic blood pressure reactivity and parasympathetic withdrawal in response to acute stress. The study concentrated on the physiological effects of PTSD, not the predisposing physiological factors of PTSD which this study will cover.

Another study was carried by Bravo-Mehmedbasic et al (2010)at the Psychiatric Clinic of the Sarajevo University Clinical Center**.** Research data from studies of 'functional neuroanatomical and neurochemistry' indicate various dysfunctions in certain areas of the brain in individuals who suffer from chronic Posttraumatic Stress

Disorder. The aim of the study was to evaluate the subjective perception of the quality of life in participants suffering from chronic PTSD, and to compare prior to treatment results to results three and six months after receiving therapy, as well as to analyse whether perception of the Quality of life change was related to treatment.

The study made use of a sample of 100 male persons, with war trauma experiences, whose age range was between 35 and 60 years, who were seeking treatment at the Psychiatric Clinic, University of Sarajevo Clinical Center and met the criteria for the diagnosis of chronic PTSD (Posttraumatic Stress Disorder) according to ICD-10 (International Statistical Classification of Diseases and Related Health Problems, 10th Revision). The exclusion criterion was prior psychiatric illness (traumatization before the war) and less than 8 years of education. All participants received out-patient treatment. Their treatment involved psychopharmacological and psychotherapeutic therapy.

The participants were assessed using the following instruments: Socio demographic Questionnaire designed by the authors for registering the social and demographic characteristics of the participants (age, years of education, current employment, and socioeconomic status), and Manchester Quality of Life Scale (MANSA) as a self-report scale. The participants were assessed prior to treatment, and three and six months after beginning the treatment (follow-up).

The results of the study indicate that participants who are suffering from chronic PTSD have a lower subjective perception of their quality of life. Combined psychopharmacological and psychotherapeutic treatment over a period of six months leads to improvement in the perception of quality of life

This may indicate the need for longer treatment of individuals suffering from chronic PTSD. However treatment costs can be avoided by simply combating preventative measures, through focusing on risk factors, which the current study is centred on.

Genetically influenced factors of PTSD

A multitude of studies have focused on determining whether or not a child of a survivor will have the signs and symptoms of PTSD if his or her parents have been diagnosed with this disorder. Solomon, Kotler, and Mikulincer (1988) conducted a longitudinal study examining a sample of 96 Israeli soldiers who fought on the front line during the Lebanon War in 1982. Of the 96 soldiers, 44 were off springs of Holocaust survivors, and they were compared with 52 soldiers who were not children of Holocaust survivors.

The soldiers were recruited randomly through personal letters that asked them to participate in a routine, periodical health assessment in which they were given the PTSD Inventory 1, 2, and 3 years post war. Results indicated that after participating in the Lebanon War, the soldiers whose parents were Holocaust survivors had higher rates of posttraumatic stress disorder (PTSD) and they presented with more pronounced PTSD symptoms than the comparison group.

The study highlights physiological factors associated with PTDS; however, it is mainly focused on military personnel whose experiences could be different from civilians'. The current study considered refugees regardless of their military status.

New Arrivals and Settlers

A review of Utah refugee arrivals in the USA (Wong, 2015) between October 1, 2009 and September 30, 2014 found that: 27% of the total arriving refugee population had symptoms of mental health conditions. Among those, 10% had

symptoms of anxiety, 9% of depression and 25% showed symptoms of having suffered torture and violence. The highest burden of mental health conditions and risk factors was among those between the ages of 45 and 64 years. A higher percentage of women had mental health conditions and were twice as likely to be referred for services as men (Ibid).

The study considered similar variables (age and sex) to the current study, except it concentrated on the new arrivals that could have different and fresh responses to traumatic events compared to settlers who are considered in the current study. Also socio-cultural factors of Utah refugees (in the US), may differ from those of refugees resettled in Zambia (mainly from the central African region), in terms of demographic and cultural factors, which may contribute to the risk factors of PTSD.

Relocation factors

Among the refugees, more than 6 million were in the Middle East, Southern Africa and the East and the Horn of Africa, and more than 1 million in Europe. Among all of the conflicts in recent memory that have spurred refugee crises, the Syrian Civil War has proven to be the most extensive and severe, with 4 million registered refugees as of June 2015; the total number of refugees in the Middle East and North Africa has nearly doubled in recent years (Gornall, 2015). As the numbers grow, displacement patterns are shifting away from camps and toward urban areas.

On the other hand, Gorst-Unsworth and Goldenberg (1998) conducted a study on the "psychological sequelae of torture and organised violence suffered by refugees from Iraq-Trauma-related factors compared with social factors in exile" on 84 male Iraqi refugees, in which adverse events and level of social support were measured. It was found out that Social factors in exile, particularly the level of "affective" social

support, proved important in determining the severity of both post-traumatic stress disorder and depressive reactions, particularly when combined with a severe level of trauma/torture.

Torture

A study was conducted by Crepulja and colleagues in March 2000 and July 2002 on "factors associated with posttraumatic stress disorder and depression in war-survivors displaced in Croatia" and it was revealed that displaced war survivors reported the exposure to war stressors, including combat, torture, serious injury, death of close persons, and loss of property, they also reported higher rates of marked to severe impact of war on family, social, economic, and occupation (Crepulja et al, 2002).

A study titled "Psychosocial Needs of Torture Survivors" was conducted by Silove and colleagues in in which it was discovered that torture survivors are usually refugees who, in addition to torture, have suffered a sequence of traumatic experiences and face on going linguistic, occupational, financial, educational and cultural obstacles in their country of resettlement (Silove et al, 2014).

Jaranson et al (2004) conducted a cross-sectional study on Somali and Omoro refugees on correlates of torture and trauma history. Using a nonprobability sample of 1134, it was found that showed that torture prevalence ranged from 25% to 69% by ethnicity and gender, higher than usually reported. Unexpectedly, women were tortured as often as men. Torture survivors had more health problems, including posttraumatic stress.

A study by Silove et al (2002) concerning the impact of torture on post-traumatic stress symptoms in war-affected Tamil refugees and immigrants, it was discovered

that the torture factor identified by the PCA (Principal components analysis) was found to be the main predictor of PTSD in a multiple regression analysis.

Epidemiological evidence from a number of studies shows that, at least 50% of all adults and children are exposed to a psychologically traumatic event (such as a life-threatening assault or accident, human made or natural disaster, or war). As many as 67% of trauma survivors experience lasting psychosocial impairment, including post-traumatic stress disorder (PTSD); panic, phobic, or generalized anxiety disorders; depression; or substance abuse (Van der Kolk, et al, 1994).

The above studies were conducted from the Middle East and other parts of the world, whose geographical characteristics, and socio-cultural conditions would be different from the Zambian set up where the current study occurred. Hence the findings may not necessarily be the same.

2.3. Studies Conducted Within Zambia

Below are some few studies that have been conducted in Zambia among the refugee community with regard to health matters. Also some studies conducted on the subject of PTSD in Zambia in the recent past.

A study titled "Assessment of reproductive Health for Refugees in Zambia" was conducted in various refugee camps in Zambia in September 2001 by Sandra Krause, Julia Mathews and Margaret Mutambo on behalf of Women's Commission for Refugee Women and children. The study was conducted in the following refugee camps in Zambia; Kala in Luapula province, Mwange in Northern Province ,Mayukwayukwa in Western Province, Nangweshi in Western Province, Maheba in North Western province, and Ukwimi in Eastern Province.

The findings indicated that the reproductive health of refugees is being addressed in Zambia as evidenced by the wide ranging efforts of United Nations Organisations and numerous local and international non-governmental organisations in the country (Krause et al, 2001).

The above study though conducted on refugees, as does the current study, concentrated only on women and specifically on reproductive health, and it was a countrywide assessment unlike the study reported here. This study was centred on PTSD for both male and female refugees with specific reference to Maheba Refugee Camp.

Mulenga Davie conducted a study in November 2010 titled, "The Health Related quality of life of refugees with disabilities in Zambia", at Mayukwayukwa refugee camp. Covering a sample size of 314 male and female randomly selected participants with physical disabilities, and aged between 18-65 years.

The findings showed that the majority of participants (68.8%) had a lower limb disability. And gunshots, land mines and bomb explosions were the main causes of disabilities for 88.9% of the participants (Mulenga, 2010).

The study generally found out that disability is an issue in conflict affected populations, in particular refugees in Zambia, a similar group of participants (refugees) to the current study. However it was specific on physical disability and at Mayukwayukwa refugee camp, unlike the current study whose focus is on mental health problems, specifically PTSD among refugees at Maheba refugee camp in Zambia.

Another study similar to this one was “Post-traumatic stress symptoms and structure among orphans and vulnerable children and adolescents in Zambia” conducted by: Itzair Familiar, Laura Murray, Alden Gross, Stephanie Skavenki, Elizabeth Jere, and Judith Bass. Data was collected between March 2009 and May 2010 by 46 HBC (Home Based Care givers), in which a convenience sample of children aged 5-18 years was involved through the Catholic Relief Service in Lusaka and Kabwe Zambia. Participants were 343 children comprising 53.1% (180) females and the rest males.

Results suggest that PTSD symptoms in OVC (orphans and vulnerable children) from these urban centers in Zambia exposed to multiple and on-going trauma is probably shaped by cultural and contextual factors (Itziar etal,2013).

The gap in the above study is that though the study looked at PTSD, like the current study, the sample size was limited to children and not of the refugee populous as is the case with the topic in question.

Another study was conducted by Jeremy et al (2013) titled “Mental, Neurological, and Substance use problems among refugees in primary health care: Analysis of the Health Information System in 90 refugee camps” across Africa targeting large refugee camps, which included some Zambian refugee camps. Data was collected between January 2009 and March 2013 for 90 refugee camps.

It was found out that, the largest proportion of MNS (Mental, Neurological, and Substance use) was attributable to epilepsy (46.91% male, 35.13% female), and seizure and psychotic disorders (25.88% male and 19.98% female). With a conclusion that refugee health systems must be prepared to manage severe neuropsychiatric disorders in addition to mental conditions associated with stress

(Jeremy, etal 2013). However, unlike, the above study, this study will only concentrated on refugees in one country (Zambia), and one refugee camp (Maheba refugee camp) with limitation to PTSD.

The most recent study was conducted by MariaAkani under the title: "Prevalence of PTSD among sexually abused children of the child sexual abuse center at UTH, Zambia," in 2015. Dealing with a sample of 246 children aged between 4 and 15 years, who were recruited through convenient sampling, results indicated that the prevalence of the PTSD was 34% (Akani, 2015).

The above study is very important indeed on PTSD, however unlike this study, it was conducted among children at University Teaching Hospital with specification to the sexually abused victims, whose experiences are different from the experiences of Refugees at Maheba refugee camp.

These few captured studies are related to the current study; however it is evident that some gap needs to be filled up. The studies were mainly looking at other health conditions affecting refugees in various refugee camps in Zambia, however the subject of PTSD was lacking, yet this is a condition that is directly related to individuals who have suffered traumatic experiences (Schwartz, 2000), in this case refugees.

On the other hand, among the studies that were conducted on PTSD in Zambia, none was tackling the refugee community. The prevalence and impact of PTSD differs across experiences of participants, hence the findings in the above studies may not necessarily be the case with the findings that can be captured in this study. Therefore this is a very important study as it shall fill up the note worth academic gaps with regard to PTSD in Zambia.

2.4. Theoretical Framework

A number of theories in Psychology have provided insight to the nature of PTSD, especially with regard to its causes and effects. In this study the Psychoanalysis theory will be of consideration. Personality theorists Sigmund Freud of the psychoanalytical perspective strongly argues that we are the sum total of our experiences, especially bad experiences. In terms of PTSD, the psychoanalytic theory of personality development explains that past experiences have strong impact and influence to the present (Oltmanns and Emery, 2003).

According to Sigmund Freud, events and emotions that are particularly disturbing are repressed into the unconscious mind. People with PTSD have persistent frightening thoughts and memories of their ordeal and feel emotionally numb, especially with people they were once close to(Hilgard, Atkinson, and Carison, 1999).

It is very clear, however, that the literature on experiences associated with PTSD among refugees in Zambia is extremely scanty and scarce and not easily available in the country, hence the base of this study to fill up the gaps.

CHAPTER THREE

METHODOLOGY

3.1.Overview

This chapter gives details of methods that were used to collect, interpret and analyse data, in form of research design, study setting, population or target population, sample size, sampling procedure (recruitment), instruments for data collection, the procedure for data collection, data analysis and ethical issues.

3.2. Research site.

The research was conducted in Zambia, in North-western province, Solwezi district, at Maheba refugee settlement (popularly known as refugee camp). The camp is situated 75 km from Solwezi; the Provincial Headquarters of the North-Western Province of Zambia. The camp was created by the United Nations High Commission for Refugees (UNHCR),it covers a vast area of 720 km², and an estimated population of 18,000 refugees (UNHCR, 2015).

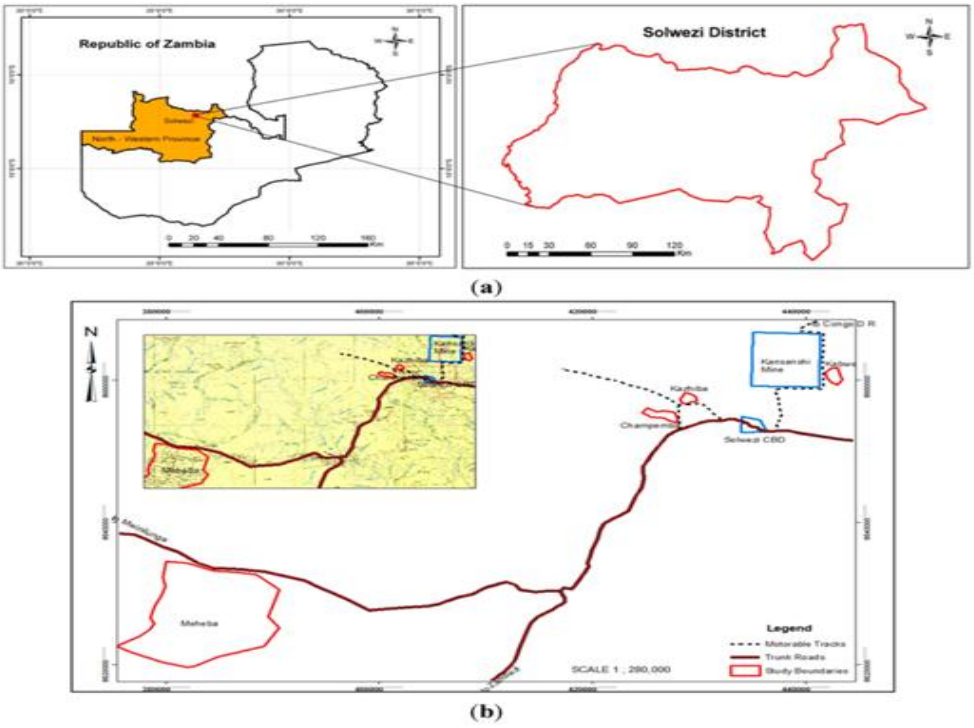

Figure 1. Site Map

3.3. Research design

A quantitative cross-sectional and correlational design was used, cross-sectional because it considered a representative sample of participants with different variables (such as sex, age, occupations, ethnicity, and period of refuge), who were studied at a single point of time. The study was correlational as it gathered information about two types of variables: (i). Experiences of refugees prior to coming to camp; and (ii). Stress levels associated with PTSD, and then determined the relationship between two variables above.

This design was adopted because among other advantages, it collected much information from many participants at one time, and it also studied a wide range of variables and their interrelations (which was the core aim of this study).

3.4. Data collection/ sampling procedure

After approval from the Biomedical Research Ethics Committee (UNZA), permission was obtained from relevant authorities to meet participants **(**refer to appendix A). Purposive sampling was used in which the researcher with the help of staff of Maheba refugee settlement, went in the refugee camps, and in gathering places like schools, churches, clinics, MOA offices, MOCD offices; and distributed the instruments (questionnaire and PTSD scale) following the inclusion and exclusion criteria (see below).

Participants were briefed about the study and asked to consent before responding to the research instruments. Some questionnaires were collected after three (3) days, and kept confidentially in data collection folders and bags. The other questionnaires

were collected after five (5) days after distribution due to challenges highlighted in chapter six below.

This sampling method was selected because it was ideal for quantitative data, as it was the most valuable sampling techniques in obtaining information from a very specific group of people (in this case refugees). Also, it was less time consuming because most appropriate people for the study had already been selected, as the technique considers only the most suitable candidates. Generally, the results of purposeful sampling are usually expected to be more representative.

3.5. Target population

The study population included all male and female adult refugees at Maheba refugee camp in Zambia. Further, the target group comprised of those refugees who were able to read and write in English at the time of data collection.

3.6.1. Sample Size

The approximate total population of refugees at Maheba refugee settlement is 18, 000 people, adults are estimated at 10, 000, and of the 10,000, those who are able to read and write English are estimated at 4,000 (UNHCR, 2015). Hence following the sample size table, as shown in appendix F, with a precision level of ±5%, where confidence level is 95% and P=.5, a sample size of at least 364 participants of the target population was targeted. These comprised of both male and female participants. However, of the intended sample size, only 267 participants were recruited, and 234 participants successfully took part in the study.

3.6.2. Demographic characteristics of participants:

i. The **sex** composition of the participants of the study indicates that 61.1% of the respondents were male while 38.9% are female.

ii. Concerning the **age**, 24.8% of the respondents were in the age range of 18-20; 18.8% were 46 years and above, 16.7% were in the age range of 21 and 25 years, 10.3% aged from 31-35 years, 7.3% ranged from 36-40 years and 6.4% were from 41-45 years. Those who did not indicate their age were represented by 0.4%.

iii. As regard to the **level of education**, the majority (50.4%) of the respondents had a secondary school education, 24.8% had primary education, 12.4% did not have any form of education while 9.8% have tertiary education and 2.6% did not indicate their level of education.

iv. The **marital status** of the respondents indicated that 45.3% of the respondents were single while 36.8% were married. Those who were on separation were represented by 6.8% and 3.4% for those who were divorced, 6% were widowed and 2.1% did not indicate their marital status.

v. The **fluently spoken language** is Portuguese (27%) followed by English 15%. Luvale was the other language which fluently spoken is represented by 13%, Swahili and French were represented by 11%. Other languages are represented by 24%.

vi. It was further found out that 15% have **lived in Zambia** for over 26 years. Those who have lived from 6 – 10 years were also 15%. About 6.8% of the respondents had lived from 21 to 25 years and 12.4% from 6 months to 11 months.

3.7. Inclusion-Exclusion Criteria:

Inclusion: Adults- male and female, able to understand, read and write English, settlers (those who have stayed at the camp for more than 6 months).

Exclusion: Children, refugees on transit (those who have just arrived), illiterate, unable to communicate in English.

This was so because the data collection instruments were in English version, they could not be interpreted in other languages to avoid bias, since many different languages are used at the settlement, also due to time and financial constraints.

Settlers were considered because the study is concentrating on PTSD whose symptoms manifest long after the traumatic experience, unless in cases of Acute PTSD (which was not the focus). Further, adults were considered because they could easily understand the data collection instruments compared to children.

These were captured by simply asking if they were able to read and write in English, this was done with the help of the research assistance and the care takers who were able to communicate in other languages too.

3.8. Instruments:

Data collection involved two instruments:

- The PTSD scale known as the Post Traumatic Symptom Scale (PTSS) was used. This is a standardized screening rating scale for PTSD comprising 17 items that correspond to the key symptoms of PTSD. Item 6 for instance talks about avoidance of thinking or talking about a stressful experience from the past or avoiding having feelings related to it. Item 10, talks of isolation, it

seeks to record the level of feeling distant or cut off from other people. For further details, refer to appendices.

This scale was picked because it has been widely used cross-culturallyby Hermansson et al (2003), and it has shown to have validity in measuring PTSD related symptoms.

- A self-constructed semi structured questionnaire that captured experiences of PTSD in the physical, psychological/emotional, socio-cultural and economical categories, as well as demographical data of participants. This questionnaire was designed with the help of data captured in the literature in relation to the topic at hand. It had two (2) major sections namely: A, for demographical data and B, for traumatic experiences. Section B had 14 items which were associated with various traumatic experiences, for instance item 4 to 9 taping on socio-cultural experiences, item 1 to 3 tackled psychological/ emotional experiences. For further details refer to appendix D.

3.9. Data analysis and interpretation:

Data was analysed using the Statistical Package of Social Sciences (SPSS), version 20, which was used to assess the degree of the relationship of the two variables (Experiences of refugees prior to coming to camp, and stress levels associated with PTSD). This was determined statistically by correlational analysis between scores on different experiences as captured in the questionnaire, and scores on the PTSS (Post Traumatic Symptoms Scale).

The PTSS is scored as follows:

1) Add up all items for a total severity score or, 2) Treat response categories 3–5 (moderately or above) as symptomatic, and responses 1–2 (below moderate) as non-symptomatic. For further details refer to appendix E.

3.10. Ethical Issues.

Bearing in mind that the refugee community is a very sensitive fraternity, all ethical considerations and procedures were followed throughout all stages of this study, and permissions were obtained accordingly, from all relevant authorities as shown in appendix F. Main considerations were as indicated in the following sub-sections.

3.10.1. Possible Risks to Participants

There were three (3) major issues anticipated to adversely affect participants, and below each one of them, were plans on how they would be mitigated.

Psychological discomfort of recurring memories of traumatic phenomena

This was mitigated simply by informing participants of possible risks prior to them responding to the research instruments, and those who felt uncomfortable to participate did not participate, some withdrew in the process, and this was one of the reasons why the number of successful participants declined. For details of the information sheet and consent sheet, refer to appendices F and G respectively.

Avoidance to think of or mention the traumatic experience

Participants were free not to respond to sections in the questionnaire that they felt could trigger some traumatic experiences.

Irritability, difficulty concentrating, or outbursts of anger

Could participants be more traumatised none the less, they would be referred for mental health counselling services at the nearest health center (which is situated

within study site) which provides counselling and psychotherapy services by qualified personnel. However, such an incidence never occurred.

Further, it was considered that the more one is exposed to traumatic events, the quicker they heal. An important step in managing anxiety and trauma involves facing feared situations, places or objects, it is normal to want to avoid the things one fears. However, avoidance prevents one from learning that the things they fear are not as dangerous as they think (Katona, Cooper & Robertson, 2008). Hence, the research process also played a therapeutic role to participants who could have been traumatised by the study.

3.10.2. Confidentiality

The participant anonymity and confidentiality was well maintained. Data was coded by simply numbering the data collection instruments, that is, the questionnaire and Post Traumatic Symptoms Scale (PTSS), which were not linked to participants' identity. Further, all raw data was stored in a secured locker, and any soft copy data was stored in a laptop computer secured with a password.

3.10.3. Informed consent

The research was conducted with the awareness of the participants and all stakeholders (meaning, all participants were provided with prior information of the study). Both verbal and written consenting was done before the participants could respond to the data collection instruments. The written consent was provided alongside the questionnaires, on the first pages, hence the participant only responded to the instruments after reading and accepting the consent framework. After reading and understanding the consent form, participants were further required to sign (as reflected in the appendices).

3.10.4. Provision of debriefing

Individual debriefing was not very necessary as this was a quantitative study (moreover consent was fully provided). However, this was partially done to the personnel in charge centre.

3.10.5. Approval by the ethics committee

The research was conducted after approval by of the University of Zambia, Biomedical Research Ethics Committee as earlier mentioned.

3.10.6. Voluntary Participation

In as much as participants were selected through purposeful sampling technique, participation in this study was entirely voluntary. However, all participants who voluntarily accepted to participate were required to sign the consent form after reading and understanding the information sheet.

3.10.7. Right to withdraw or seek clarification

Some items in the data collection instruments contained questions that would be thought-provoking. If, however, the participant felt uncomfortable in any way when responding to the questionnaire, they had the right to decline to answer any question, or withdraw in the process. If they needed clarification, they were free to contact the researcher and his assistant (whose contact details were made available throughout the data collection process), as reflected on the consent form and information sheet.

3.11. Summary

This chapter gave details of the methodology of the study with emphasis on themes like, research site, research design, data collection/ sampling procedure, target population, sample size, and inclusion and exclusion criteria of participants. It

further gives information on the data collection instruments, which involved two instruments: The PTSD scale known as the Post Traumatic Symptom Scale (PTSS), and a self-constructed semi structured questionnaire. It also outlines how data was analysed and interpreted, and finally, provides details of the ethical issues of the study and how they were mitigated.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1.Overview

This chapter deals with the presentation and interpretation of research findings based on the analyses of the cases under investigation, the findings are based on data collection instruments, namely: the questionnaire and PTSS. This chapter is presented in a pattern following the research objectives as follows:

Firstly, Prior Camp Experiences-here the findings on the questionnaire are explored to ascertain various types of experiences suffered by refugees prior to camp. Secondly, stress levels associated with PTSD-here data collected from the PTSS was considered. The scale represents the current situation of the participants. It only provided symptoms of PTSD as captured through the stress levels in the measures of: below moderate, moderate and severe.

Lastly, the relationship between prior camp experiences and stress levels associated with PTSD, as captured in the scale (PTSS). Here an analysis was made among selected variables in the questionnaires; talking about prior camp experiences, and selected variables on the PTSS. The analysis helps to ascertain if some past experiences are associated with PTSD among participants.

4.2.Prior Camp Experiences

The objective of this part of the study was to review the traumatic experiences of the respondents, prior to camp. This part is divided into psychological/emotional, socio-cultural, economic, and physical experiences. Information on the traumatic experiences of the respondents was important for the interpretation of the findings presented in this thesis.

4.2.1. Emotional Experiences

This section sought to find out the emotional or psychological experiences of the refugees prior to camp. The study set out to find out the experiences whether the respondents had in the past witnessed killing, threat to their integrity, felt withdrawn and inhibited, and experienced emotional discomfort. The results are collectively shown in the table below.

Table 1.Emotional Experiences

Response	Average	percentage
Yes	136	58%
No	67	29%
Missing	31	13%
Total	234	100

The table above shows that majority (136) of participants, represented by 58% suffered the above emotional turmoil prior to camp. Whereas 67represented by 29% did not, however, 31 (13%) did not indicate either way.

Further, there was a cross tabulation between the sex of participants and experiences of emotional discomfort. A chi square test did not indicate a significant relationship between sex of participants and experiences of emotional discomfort ($\chi^2_{(1)}$ =1.218, p=0.27).

4.2.2. Economic Experiences

This part of the study sought to find out if the respondents had experienced economic challenges prior to camp. It considered the following variables: starvation, financial problems, loss of property and shelter, and job loss. The results have been summarized in the table below.

Table 2 Economic Experiences

Response	Average	percentage
Yes	156	66.6%
No	39	16.7%
Missing	39	16.7%
Total	234	100

The table above shows that majority (156) of participants, represented by 66.6% suffered the above economic turmoil prior to camp. Whereas 39represented by 16.7% did not, however, 39 (16.7%) did not indicate either way.

A cross tabulation was further done between various variables under this category and some demographical characteristics. Results of a chi square test indicated no significant relationship between country of origin and loss of property ($\chi^2_{(6)}$ =7.849, p=0.249). Also, a chi square test indicated no significant relationship between occupation and financial problems of participants ($\chi^2_{(4)}$ =684, p=0.953).

4.2.3. Social Experiences

Furthermore, the study sought to find out if the participants had experienced any of the following during their struggle for refuge: separation from family, isolation, language barriers, struggle to cope with new cultural values, and weak social interactions. The results have been summarized in the table below.

Table 3 Social Experiences

Response	Average	Percentage
Yes	155	66%
No	44	19%
Missing	35	15%
Total	234	100

The table above shows that majority (155) of participants, represented by 66% suffered social experiences prior to camp. Whereas 44 represented by 19% did not, however, 35 (15%) did not indicate either way.

To ascertain the interaction between related variables, a cross tabulation was done, results of a chi square test indicated a significant relationship between language barriers and struggle to cope with cultural values ($\chi^2_{(2)}$ =46.606, p=0.000).

4.2.4. Physical Experiences

On the physical domain, the participants were asked to indicate whether they experienced sleeplessness during their struggle for refuge, if they have been exposed to fear of dead bodies on the streets, or if they had been exposed to sounds of militia gun shots. Respondents were also asked if they have ever experienced torture or persecution in terms of beatings, bodily harm or pain, and sexual abuse.

Table 4 Physical Experiences

Response	Average	Percentage
Yes	132	56%
No	69	30%
Missing	33	14%
Total	234	100

The table above shows that the majority (132)of participants represented by 56% suffered physical challenges.A cross tabulation was made between sex of participants and the above variables using chi-square test. The test was $\chi^2_{(1)} = 7.792$, p=0.005, showing that there is a strong significant relationship between sex of participants and the trauma of witnessing sexual abuse, with a percentage of 64.3 females and 44.3 males.

A chi square test indicated no significant relationship between country of origin and experiences of sounds of militia ($\chi^2_{(6)} = 11.584$, p=0.072).

1.4.1. History of anxiety disorders

The respondents were also asked a question on the history of anxiety disorders. The aim was to find out if the respondents had any disorders related to PTSD in their families. Results show that, the majority of the respondents (56%) have history of anxiety disorders in their families while 38% of the respondents do not have. About 6% did not respond to this question.

Further, a chi square test indicated a significant relationship between history of anxiety and intense fear during trauma ($\chi^2_{(1)} = 16.607$, $p=0.000$).

4.5. Symptoms of PTSD-As per Symptoms Scale (PTSS)

This part of the study sought to find out the levels of stress associated with PTSD though the assessment of symptoms of PTSD using a standardized rating scale (the PTSS). The scale is a symptomatic scale, meaning it does not necessarily provide a diagnosis, but symptoms of PTSD, and it is used for screening PTSD. It is comprised of 17 items that correspond to the key symptoms of PTSD. It indicates the stress levels related to PTSD symptoms (as shown in appendix C).

The table in appendix Eshows a collective picture of the responses on the scale, with the average showing that of the 234 participants, 72 represented by 31% responded as extremely experiencing the phenomena in the scale, followed by 56, represented by 24% who fell on quite a bit, on moderately, 21 participants bearing 9% responded, whereas, 43 participants of 18% indicated a little bit, and 35 participants represented by 15% responded that they were not at all having stress related experiences, whereas, 7, of 3% did not indicate any response.

In this section it was necessary therefore to consider only the total severity of the scale across the 234 participants, instead of individual 17 items per participant. And a few selected variables of the scale were considered for the sake of cross tabulation, as indicated in the next section of this chapter.

Total Severity Score

Table 5 Total severity

Category	Severity	Frequency	Percentage	
None Symptomatic	Not at all	35	15%	
	A little bit	43	18%	**78, 33%**
Symptomatic	Moderate	21	9%	
	Quite a bit	56	24%	
	Extremely	72	31%	**149, 64%**
Missing	Missing	7	3%	**7, 3%**
Total		**234**	**100%**	**234, 100%**

The above table shows that majority (149) fell at moderate and above moderate (i.e 21+56+72), represented by 64%, and were symptomatic of PTSD, whilst minority (78) fell below moderate (i.e. 35+43), represented by 33%, were none symptomatic, whereas 7, represented by 3% did not indicate either. This then implies that most participants had symptoms of PTSD.

For further analysis, the data was computed in accordance with three classes of symptoms because by their nature, the 17 variables of the scale correspond with the three key clusters of symptoms of PTSD namely, re-experiencing, avoidance, and

arousal symptoms (Katona, Cooper, and Robertson, 2008). Variables 1 to 6 are re-experiencing symptoms, variables 7 to 12 are avoidance symptoms, and variables 13 to 17 are arousal symptoms. Hence the following figures:

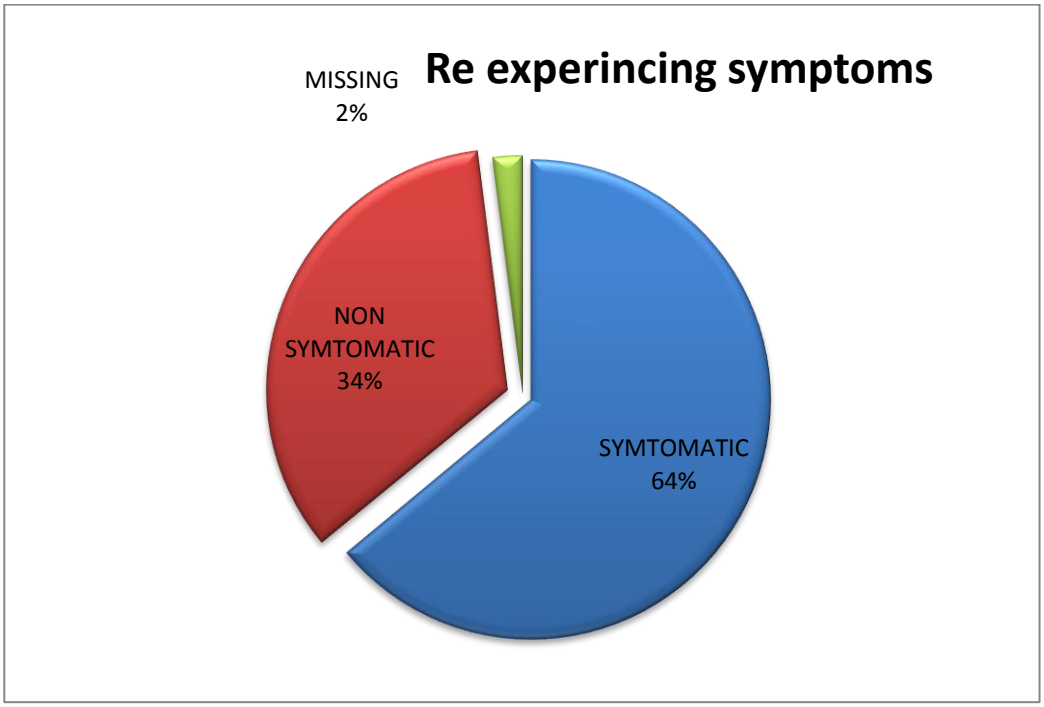

Figure 2Re-experiencing Symptoms

The figure above shows that 64% of participants were symptomatic of the re-experiences symptoms of PTSD, whilst 32% were not, and 2% did not indicate either.

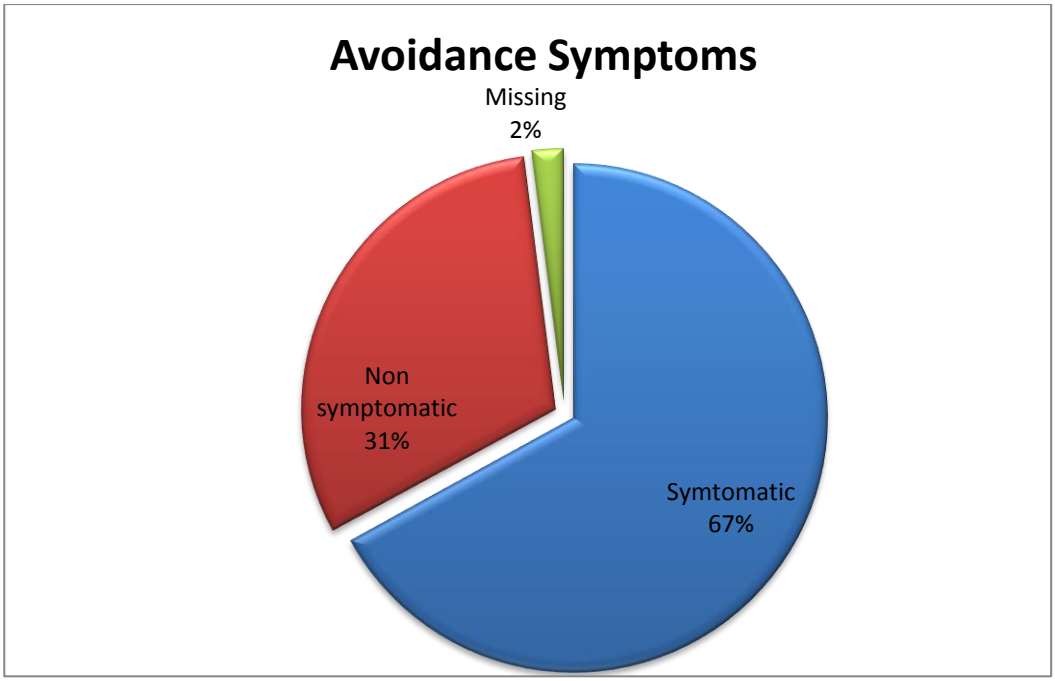

Figure 3Avoidance Symptoms

The figure above shows that 67% of participants were symptomatic of the avoidance symptoms of PTSD, whilst 31% were not, and 2% did not indicate either.

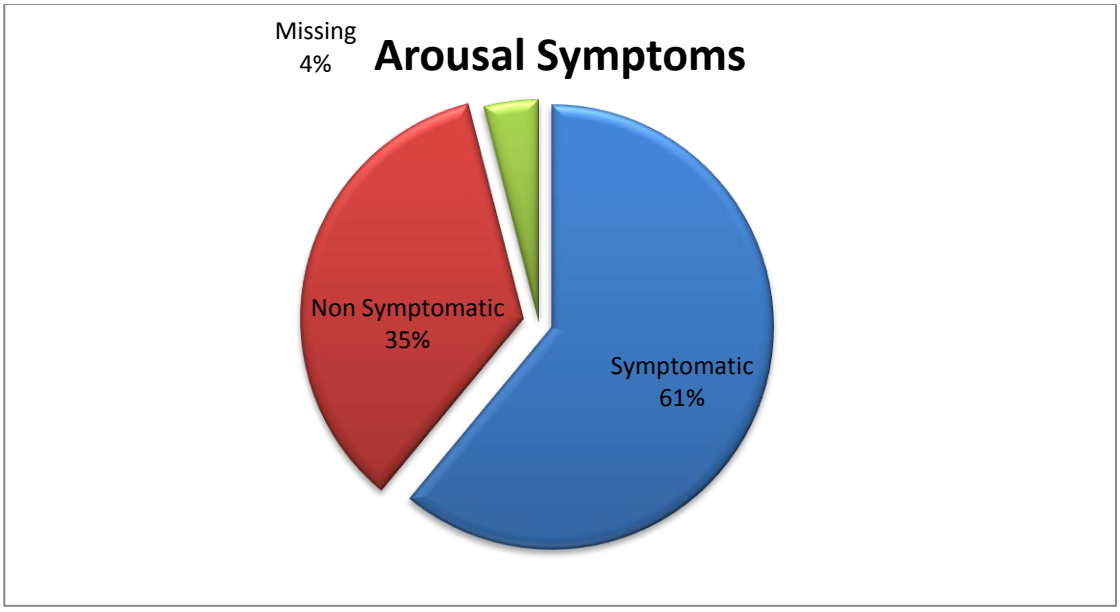

Figure 4Arousal Symptoms

The figure above shows that 61% of participants were symptomatic of the arousal symptoms of PTSD, whilst 35% were not, and 4% did not indicate either.

4.6.Relationship between Different Types of Experiences and Symptoms of PTSD.

To give us a clear picture of the interaction between the symptoms scale and the traumatic experiences, a cross tabulation was done between the symptoms scale and some demographic characteristics, and between the scale and respective domains of traumatic experiences. This was so to answer the third objective of the study. Which tries to ascertain the relationship between the prior camp experiences and symptoms of PTSD, This was statistically done using chi-square tests as shown below.

4.6.1 Relationship between symptoms of PTSD and some demographical characteristics of participants.

A cross tabulation was done to ascertain the relationship between the symptoms of PTSD and some demographical characteristics of participants in this study (occupation, period of refuge, country of origin, marital status, age, sex, level of education, period of refugee in Zambia, and language). The cross tabulation shows the following results:

i. There was no significant relationship between participants' occupation and the symptoms of PTSD ($\chi^2_{(296)} = 278.205$, $p = 0.764$).

ii. There was no significant relationship between participants' period of refuge and the symptoms of PTSD ($\chi^2_{(518)} = 551.127$, $p = 0.145$).

iii. There was a relatively significant relationship between participants' country of origin and the symptoms of PTSD ($\chi^2_{(444)}$ =509.118, p=0.017), with Congo D.R on the lead.

iv. There was no significant relationship between participants' marital status and the symptoms of PTSD ($\chi^2_{(370)}$ =322.049, p=0.966).

v. There was strong relationship between participants' current age and the symptoms of PTSD ($\chi^2_{(518)}$ =732.217, p=0.000).

vi. There was no significant relationship between participants' sex and the symptoms of PTSD ($\chi^2_{(74)}$ =79.643, p=0.306).

vii. There was no significant relationship between participants' level of education and the symptoms of PTSD ($\chi^2_{(296)}$ =341.869, p=0.034).

viii. There was a relatively significant relationship between participants' language (mostly Swahili) and the symptoms of PTSD ($\chi^2_{(814)}$ =911.372, p=0.010).

Basically there was no significant relationship between the symptoms of PTSD and the above demographical characteristics, except for age, language and country of origin which showed some relationship.

4.6.2.Relationship between symptoms of PTSD and domains of prior camp experiences.

This section shows a cross tabulation between the symptoms of PTSD and respective classification of prior camp experience (social, physical, emotional, and economic experiences).

i. A cross tabulation was made between the symptoms scale and the social domain of traumatic experiences using chi-square test which gave $\chi^2_{(438)}$ =361.560, p=0.997, showing that there is no significant relationship

between the symptoms scale and the social domain of traumatic experiences.

ii. Similar to the above, a cross tabulation was made between the symptoms scale and the physical domain of traumatic experiences using chi-square test which gave $\chi^2_{(444)} = 545.829$, p=0.001, showing that there is a significant relationship between the participants symptoms of PTSD and the physical experiences they suffered prior to camp.

iii. Further, a cross tabulation was made between the symptoms scale and the emotional domain of traumatic experiences using chi-square test which gave a chi-square of $\chi^2_{(444)} = 452.536$, p=0.379, showing that there is no significant relationship between the participants symptoms of PTSD and the emotional experiences they suffered prior to camp.

iv. Also, a cross tabulation was made between the symptoms scale and the economic domain of traumatic experiences using chi-square test which gave a chi square of $\chi^2_{(365)} = 385.367$, p=0.222, showing that there is no significant relationship between the participants symptoms of PTSD and the economic experiences they suffered prior to camp.

Basically it has been statistically shown that most experiences had no significant relationship with symptoms of PTSD among participants, expect for the physical domain.

4.6.3.Relationship between Some Experiences and Selected Variables of the PTSS.

In order to have a depth understanding of the relationship between symptoms of PTSD and prior camp experiences of the physical domain (which has shown a

significant relationship), a further analysis was done on a selected variables of the symptoms scale (which are directly associated with physical characteristics). The selected variables include:

i. Experience of repeated disturbing dreams ,

ii. Experiences of repeated, disturbing memories of a stressful experience,

iii. Experienced loss of interest in things once enjoyed,

iv. Feeling Emotionally Numb,

v. Experiences of Super alert or watchful on guard, and

vi. Trouble falling or staying asleep.

Results on the cross tabulations were as follows:

- A chi square test indicated no significant relationship between loss of interest in things once enjoyed and failure to cope with new cultural values ($\chi^2_{(5)}$ =7.095, p=0.214).
- A chi square test indicated no significant relationship between feeling emotionally numb and threat to integrity ($\chi^2_{(4)}$ =2.796, p=0.592).
- A chi square test indicated a strong significant relationship between Trouble falling or staying asleep and witnessing killing ($\chi^2_{(5)}$ =16.991, p=0.005).
- A chi square test indicated a significant relationship between experiences of super alert or watchful on guardand exposure to sounds of militia ($\chi^2_{(1)}$ =29.209, p=0.000).
- -A chi square test indicated a significant relationship between experience of repeated disturbing dreams and exposure to dead bodies ($\chi^2_{(4)}$ =23.116, p=0.001).

- A chi square test indicated a significant relationship between Experiences of repeated, disturbing memories of a stressful experience and witnessing killing ($\chi^2_{(4)}$ =22.284, p=0.000).
- A chi square test indicated a significant relationship of repeated, disturbing memories of a stressful experience and bodily harm and pain ($\chi^2_{(4)}$ =19.745, p=0.001).
- A chi square test indicated a significant relationship between loss of interest in things once enjoyed and isolation ($\chi^2_{(5)}$ =24.965, p=0.000).

4.7. Summary

The chapter presents the findings of the study with regard to the two instruments, whereas the first section considers the prior camp experiences as captured in the questionnaire, the experiences were put in four domains namely: emotional, economic, social and political domains. It was found that the majority of the participants had had these experiences prior to coming to camp. The second section considers the stress levels associated with PTSD as captured in the Symptoms Scale (the PTSS), which had17 variables that considered the severity of symptoms of PTSD. Findings indicate that most participants were symptomatic of PTSD. Finally the chapter looked at the relationship between prior camp experiences and stress levels associated with PTSD; this was done through cross tabulations of the total severity score were participants were divided into symptomatic vs. non symptomatic for chi square analysis and with experiences and demographical data.The next chapter presents a discussion of these findings whose nature is guided by the study's objectives.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1.Overview

This chapter provides a full discussion of the findings presented in the previous chapter. It is organised under subtitles in relation to the research objectives: one, to identify different types of experiences of refugees prior to camp, two, to identify levels of stress associated with PTSD among refugees, and three, to determine the relationship between different types of experiences and stress levels associated with PTSD among refugees. Further a theoretical framework of the study is discussed.

5.2. Prior Camp Experiences

The part sought to find out different traumatic experiences that refugees suffered prior to camp. Different types of experiences were captured; these were put in the following domains: social, emotional, economic and physical experiences.

A. Emotional Experiences

The findings indicate that of the 234 participants, 136 (58%), who were the majority, had experienced traumatic experiences in form of emotional phenomena prior to camp. The emotional experiences were mainly in form of witnessing killing, threat to integrity, emotional discomforts, and feeling worthless and withdrawn or inhibited. Other factors, like sex of participants, may have contributed to this experience, hence a cross tabulation between the sex of participants and experiences of emotional discomfort was done, however the chi square test did not indicate a significant relationship. Meaning this experience was suffered by both males and females.

Emotional experiences seem to be common among trauma victims of various tragedies, and a number of studies across the globe have shown that the severity of PTSD is directly influenced by the level of the psychological/emotional discomfort experienced by the victim (Barlow, 2001). For instance, it is reported in a study on the World Trade Center tragedy of USA that "a great many people experienced emotional trauma on September 11, including the more than 100, 000 people who directly witnessed the terrorist attacks on the World Trade Center and Pentagon, and countless others who lost loved ones in the attacks" (Oltmanns and Emery, 2003: 229).

Another study conducted by Reeves et al (2005) on veterans of the military conflicts in Iraq and Afghanistan, found out that participants may have been exposed to significant psychological stressors, resulting in mental and emotional disorders. Further, Schlenger et al (2002) reported that the terrorist attacks of September 11, 2001 triggered apparent PTSD in 4% of Americans who lived very far from the scenes of the attacks. Evidently, televised coverage of the violence caused the disorder.

The above support the findings in this study, and considering the variables under this category, it can basically be said that most refugees suffered emotional trauma due to various events, and this could be manifested in different ways, for instance, victims may feel constantly alert after the traumatic event. This is known as *increased emotional arousal*, and it can cause difficultysleeping, outbursts of anger or irritability, and difficulty concentrating (Schwartz, 2000).

This implies that emotional experiences are a critical factor to consider when dealing with trauma victims, because they may affect one's livelihood, as one would have

unpleasant feelings such as shock, denial or disbelief, anger, irritability, mood swings, fear, shame, self-blame, and feeling sad or hopeless.Hence the emotional wellbeing of trauma victims (in this case, refugees) needs to be given critical care.

B. Economic Experiences

Findings show that the majority (156, representing 66.6%) of participants experienced economic challenges such as job loss, loss of property and shelter, starvation, and other financial problems during their struggle for refuge. Thus a number of refugees are not employed, regardless of a good number having attained tertiary education prior to refugee status, as presented in the demographical findings above.

Findings indicate a non-significant relationship, which suggests that most refugees, regardless of their occupation and social status suffered economic challenges prior to camp.

Research has also shown that this domain of experiences is common among trauma victims of the nature of participants of this study, for instance according to the findings in a study done by Crepulja etal (2002), displaced war survivors reported the exposure to war stressors, including combat, torture, serious injury, death of close persons, and loss of property, they also reported higher rates of marked to severe impact of war on family, social, economic, and occupation.

It can further be argued that, events in a person's life that are not of traumatic magnitude (e.g. job loss, starvation, and financial problems) can weaken the person's defence against trauma-induced stress in the same way that hardship can weaken the

immune system, hence providing a breeding ground for PTSD (Katona, Cooper, and Robertson,2008). Therefore, economic experiences in form of life stressors, as the ones mentioned above, contributed to the level of trauma refugees at Maheba suffered prior to camp.

C. Social Experiences

Findings also show that majority (155) of participants (66%) suffered social experiences prior to camp. Among the prominent ones recorded in this study are: separation from family, isolation, relocation factors (language barriers, struggle to cope with new cultural values), and weak social interactions.

These findings are similar to the ones in a study conducted by Gorst-Unsworth and Goldenberg (1998) where it was found that social factors in exile, particularly the level of "affective" social support, proved important in determining the severity of both post-traumatic stress disorder and depressive reactions, particularly when combined with a severe level of trauma/torture.

Relocation Factors

As shown in chapter two above, research provides evidence that relocation is a strong risk factor for PTSD. It poses a number of challenges, such as struggle to adapt to the new environment. In the case of participants of this study; relocation was associated with language and cultural challenges. Most participants came from French and Swahili speaking countries with various cultural norms and values, however in their quest for survival, they encountered different cultural standards which proved difficult to diffuse.Hence separation from family was found to be a strong traumatizing variable among participants.

D. Physical Experiences

As it has been shown in the findings, the physical domain dominated the experiences that refugees suffered prior to camp, which included variables like exposure to fearful stressors (exposure to phenomena like dead bodies on thestreets, sounds of militia gun shots and explosions, and screaming of a person in danger). The findings indicate that the majority of the participants (60%)reported having experienced torture or persecutions in form of beatings, injury, bodily harm and pain, and sexual abuse.

Sexual Abuse is a common phenomenon during civil arrest and political violence, most participants (especially women) experience sexual abuse during such events. The findings show that there was a strong relationship ($p= 0.005$) between the sex variables and the above experience with a higher percentage of female victims. Thus, apart from experiences like beatings, loss of beloved ones, isolation, starvations and others, most women suffered sexual abuse.

Bodily harm and pain were recorded to have been common experiences under the physical domain in this study. And majority of the participants indicated to have experienced anxiety due to exposure to militia (gun shots, bomb explosions etc.), and exposure to dead bodies. Just as for sexual abuse, research has shown that torture in form of beatings, gunshot wounds, and exposure to fearful situations are also common phenomena in war, and political violence related trauma (Oltmanns and Emery, 2003).

The above experiences were associated with several demographical factors such as sex, age, marital status, occupation, country of origin and level of education. Country of origin was a factor of interest in this study, as it would show different

levels of traumatic events across countries. And it was found that most experiences were closely related to the country of origin, and that most participants were refugees from Congo D.R (101) followed by Angola (65) and the least being Zimbabwe (1),an indication that people from the above countries suffered a number experiences prior to camp. This could be because these countries have had experienced much political unrest in the recent past, leading to a number of conflicts compared to other nations in the region (Draulans and Krunkelsven,2002).

5.3. Symptoms of PTSD

Findings show that the majority of the participants (65%) were symptomatic of symptoms associated with PTSD in relation to the three classes of PTSD symptoms as indicated below.

A. Re-Experiencing symptoms

Findings show that majority 64% of participants had symptoms associated with re-experiencing the traumatic event. These are symptoms of PTSD where the trauma victim seems to be re-living a traumatic event, feeling as if the event was happening again. These symptoms are also known as *intrusive thoughts*because memories, images, smells, sounds, and feelings of the traumatic event can "intrude" into the lives of individuals with PTSD (Brooker, 2008). These symptoms include:

- Distressing memories or images of the incident.
- Nightmares of the event or other frightening themes.
- Flashbacks (reliving the event).
- Becoming upset when reminded of the incident.
- Physical symptoms, such as sweating, increased heart rate, or muscle tension when reminded of the event.

Researchers have observed that victims of war may re-experience the trauma they went through, at other times the memories may be triggered by a traumatic reminder, such as without warning, a sight or sound (such as a helicopter), or when a motor vehicle accident victim drives by a car accident, or when a rape victim sees a news report of a recent sexual assault, could trigger a flashback (American Psychiatric Association, 2000).

Nightmares

Having frequent nightmares is a strong symptom of PTSD, and 64% of participants above, indicated having nightmares. Sometimes these nightmares will focus on the event that created the trauma to begin with, or they may even be completely unrelated in some cases. However, they are a strong indicator that something is not quite right emotionally. This was shown in the responses of most participants. Nightmares are different from flashbacks in that they occur more on a subconscious level (usually during sleep), while flashbacks are generally created while the mind is alert and awake (McFarlane, 1989).

Pitman etal (1990) report of a Gulf War veteran, a Dr. Carole Ballodi who worked as a medical military personnel and experienced a number of traumatic events, such as a patient dying of wounds in her care. She is reported to have had nightmares about the war, and during the day she was easily startled by unexpected noise, which is a similar case with participants in this study.

Flashbacks

A flashback is basically an involuntary recurrent memory, a psychological phenomenon in which an individual has a sudden, usually powerful re-experiencing of a past experience (Matsumoto, 2009). The findings show that most participants

experienced flashbacks of the traumatic events they experienced. This is consistent with findings of various studies in this respect, for instance, Kaene etal (1994) report of soldiers who are suffering from PTSD due to time spent in active war zones and in dangerous situations with multiple outcomes. Loud noises may become a trigger for these feelings, as well as situations that are a reminder of the event that initially created the trauma. It can cause fear and panic, often triggering physical conditions, like heart problems and high blood pressure, as well. Kaene etal (1994) further report of Vietnam War veterans who are so debilitated by flashbacks that they are unable to function in society, and are living on streets.

Like the above war veterans and other trauma victims, most refugees in this study depicted similar symptoms, justifying the argument that memories of traumatic experiences can trigger flashbacks, even years later, in other instances they may be manifested through nightmares, victims may remain so captured by the memory of past horror that they have difficulty paying attention to the present, which may eventually interfere with routine activities.

B. AvoidanceSymptoms

Findings show that majority (67%) of participants were symptomatic of avoidance symptoms of PTSD, also known as *numbing symptoms*; these are efforts people make to avoid the traumatic event (Schwartz, 2000). These symptoms include:

- Trying to avoid any reminders of the trauma, such as thoughts, feelings, conversations, activities, places and people.
- Gaps in memory– forgetting parts of the experience.
- Losing interest in normal activities.
- Feeling cut-off or detached from loved ones.

- Feeling flat or numb.
- Difficulty imagining a future.

Individuals with PTSD may try to avoid situations that trigger memories of the trauma, such as detachment, numbing and estrangements; others may avoid conversations associated with the trauma even movies, news items and songs related to the traumatic event (Asmundson etal, 2004).

Some may think that they will have a shortened life span or will not reach personal goals such as having a career or family. Often, PTSD sufferers will be afraid of how they might behave in front of other people, sometimes worried that they might become angry or react strangely to things that might appear abnormal to others; hence they would rather stay in solitude (Schwartz, 2000).

C. Arousal Symptoms

Findings here also indicate that 61% of participants had arousal symptoms, slightly lower than the previous two categories. Despite their general withdrawal from feelings, people and painful situations, as in avoidance, people with PTSD also experience symptoms that indicate increased arousal and anxiety in comparison with how they felt before the trauma (Oltmanns and Emery, 2003). Arousal symptoms of PTSD include:

- Sleep disturbance.
- Anger and irritability.
- Concentration problems.
- Constantly on the look-out for signs of danger.
- Jumpy, or easily startled.

This domain is associated with physiological symptoms and related emotions, because people with PTSD may feel constantly alert after the traumatic event. This is known as '*increased emotional arousal'*, and it can cause difficulty sleeping, outbursts of anger or irritability, and difficulty concentrating. They may find that they are constantly 'on guard' and on the lookout for signs of danger, and hyper-vigilant, they may also experience exaggerated startle (sudden shock or alarm) (Schwartz, 2000). Anger is often a central feature in PTSD, with sufferers feeling irritable and prone to angry outbursts with themselves, others around them, and the world in general.

Insomnia

The actual lack of not being able to sleep, also known as insomnia, is another symptom of PTSD. There are many reasons that this may occur. Sufferers may find that they keep worrying about the event that caused the trauma, making it difficult to clear their minds and drift off to sleep. They might also awaken in the night with nightmares of the experience; insomnia is closely related to a number of physiological factors surrounding the victim of trauma (Durand and Barlow, 2006). And this was a common phenomenon among participants in this study as findings showed.

5.4.Relationship between Some Traumatic Experiences and Symptoms of PTSD

As it was revealed above, most participants suffered social, emotional, economic and physical experiences prior to camp, further the study showed that most participants had symptoms of PTSD in the areas of re-experiencing, avoidance, and arousal characteristics. Hence this section explores some experiences that refugees underwent which are related to the stress levels associated with PTSD above. This is so because "exposure to a traumatic event is required for diagnosis of PTSD" (Heim

etal, 2009), however, this study is centered on symptoms of PTSD and their relationship to various prior camp experiences, not necessarily the diagnosis of this disorder.

The findings aboveshow that specific experiences are related to PTSD. After considerations of the four (4) domains, of prior camp experiences (physical, social, emotional and economic), the physical domain shows a strong significant relationship with symptoms of PTSD as per findings on the PTSS (p= .001).

Further, analysis was done between symptoms of PTSD and demographical characteristics of this study:-(occupation, period of refuge, country of origin, marital status, age, sex, level of education, period of refugee in Zambia, and language) showed that there was no significant relationship between the symptoms of PTSD and the demographical characteristics, except with ageand language, which showed some relationship (p =0.000 and p = 0.001 respectively).

Notable Experiences that Relate to PTSD:

Not all prior camp experiences were related to symptoms of PTSD, on the other hand, results show that some experiences were related to symptoms of PTSD. This is similar to the findings of a study by Goodwin (1987) on the long-term consequences of combat-stress for Vietnam veterans, which showed that several PTSD symptoms particularly common within this population included depression, isolation, rage, alienation, survivor guilt, anxiety, nightmares, and intrusive thoughts. As earlier stated, a number of experiences that refugees suffered prior to camp are associated with PTSD,which included the following in the study.

i. Torture-Experiencing Bodily Harm and Pain

Findings show that 68% of participants experienced physical torture and persecution in terms of bodily harm and pain. This could have been caused by gun shots and beatings. A strong relationship between this experience and levels of symptoms of PTSD was found. In other words, torture and persecution that refugees suffered prior to camp can lead to PTSD, this is consistent with various studies, and for instanceSilove etal (2002)examined the effects of torture in generating post-traumatic stress disorder (PTSD) symptoms by comparing its impact with that of other traumas suffered by a war-affected sample of Tamils living in Australia. Tamils exposed to torture returned statistically higher PTSD scores than other war trauma survivors after controlling for overall levels of trauma exposure. The torture factor was identified to be the main predictor of PTSD.

Further, Jaranson etal (2004) conducted a cross-sectional, community-based, epidemiological study characterized by Somali and Ethiopian (Omoro) refugees in Minnesota to determine torture prevalence and associated problems on a sample of 1134. Results showed that Torture prevalence ranged from 25% to 69% by ethnicity and gender, higher than usually reported. Unexpectedly, women were tortured as often as men. Torture survivors had more health problems, including posttraumatic stress.

Uchino et al (2005) also conducted a longitudinal study on adults who were 'exposed to trauma'. Participants were found to have an increase in systolic blood pressure reactivity and parasympathetic withdrawal in response to acute stress. More support of findings of this study, comes from a study conducted by Mulenga (2010) as shown in literature review above, from a sample of 314 randomly selected participants; results showed that majority of them had a lower limb disability,

attributed to gunshots, land mines and bomb explosions. Similarly, PTSD is more prevalent among Vietnam veterans who were wounded, who were involved in the deaths of noncombat, or who witnessed atrocities (Oei etal, 1990).

As earlier mentioned, the findings show that indeed there is a statistically significant relationship between torture and PTSD ($p = .001$), and this is manifested through different phenomena like repeated disturbing memories (or flashbacks), in most participants.

ii. Isolation or estrangement

This is another experience that has shown a close relationship with the PTSD avoidance symptoms, such as loss of interest in activities that one once enjoyed. Majority of the participants indicated that they experienced isolation due to loss of beloved ones, separation from family and friends during their struggle for refuge. There was a statistically significant positive relationship ($p=.000$) between isolation and loss of interest in activities that refugees once enjoyed. The majority of them showed that they had lost interest in activities they once enjoyed; hence the experience of isolation may lead to symptoms of PTSD.

This is consistent witha study conducted on 338 participants, aged 18-25 years by Jaranson etal (2004) to describe war-related trauma history, immigration factors, problems, and coping of Somali and Oromo refugee youths. Results showed that many young Somali and Oromo immigrants to the United States experience life problems associated with war trauma and torture. This shows that social experiences are a common factor of traumatic events among most refugees and immigrants, and may lead to PTSD.

In another study conducted by Siloveetal (2014)it was revealed that torture survivors in western countries (these survivors are usually refugees) who, in addition to torture, have suffered a sequence of traumatic experiences and face on going linguistic, occupational, financial, educational and cultural obstacles in their country of resettlement. Further, according to Durand and Barlow (2006), the high prevalence of PTSD, in reference to Vietnam War veterans, could be attributed to the absence of social support for the group when they returned home.

As evidenced from these studies, people who have a strong support network during traumatic experience are less likely to develop PTSD after the trauma. Because, according to Schwartz(2000), the most crucial protective factor from PTSD during and after a trauma is the ability to rely on family, friendsand community to prevent isolation and distract the victim from the traumatic memories. Unfortunately most participants in this study lacked this protection and social support during their struggle for refuge, and this could have contributed to presenting symptoms of PTSD.

iii. Exposure to severe stressors: (Dead Bodies, and Sounds of Militia)

Results revealed that this experience was common among most participants in this study, and according toKatona, Cooper, and Robertson (2008),anyone who has been victimised or has witnessed a violent act or who has been repeatedly exposed to a life-threatening situation is a potential victim of PTSD.

Another study conducted by Reeves et al (2005) on veterans of the military conflicts in Iraq and Afghanistan who were ‘exposed’ to significant psychological stressors, the findings show that there were symptoms of PTSD characterized by three

domains: re-experiencing the trauma, avoiding stimuli associated with the trauma, and symptoms of increased autonomic arousal.

The psychological effects of exposure to natural or manmade disasters, like September 11 or the Oklahoma City bombing in 1995 also are of great concern both to scientists and to public policy makers. Disasters that involve deliberate violence and greater loss of life create more psychological problems (Rubonis&Bickman, 1991).

Also in a study by Familiar etal in March 2009 and May 2010 in Lusaka and Kabwe, Zambia, findings showed that PTSD victims may also express their fear and anxiety through somatic symptoms, including stomach-aches, heart palpitations, and concerns about their physical health, hence a strong link between psychological experiences and physiological trauma (Familiar et al, 2010).

In the current study, exposure to stressors was strongly related to experiencing repeated disturbing dreams (nightmares),p= .001. In other words, the majority of the participants indicated having been exposed to dead bodies prior to camp, which may have contributed to the symptom of PTSD in the form of nightmares and other arousal symptoms. Further, findings showed there was a relatively significant relationship between this variable and participants' country of origin (p= .017), which suggests that this experience was common in some countries of origin of participants, mostly Angola and DR. Congo, and less common in other countries.

However, results showed that this experience is closely related to a symptom of PTSD where victims are easily startled (jumpy) when they are exposed to sounds similar to traumatic events (p = .001). Accordingto Oltmanns and

Emery(2003),victims may get startled to a mere sound of a helicopter, fireworks or even a tyre burst.

Heim, Charles, and Nemeroff (2009) also argue that the symptoms of PTSD are believed to reflect stress-induced changes in neurobiological systems and/or an inadequate adaptation of neurobiological systems to exposure of severe stressors. Hence exposure to severe stressors, in this case exposure to dead bodies on the streets, and exposure to sounds of militia, is closely related to PTSD, and this is manifested through the arousal symptoms.

iv. Sexual Abuse

This experience, according to the findings was in form of rape, sexual molestation and verbal abuse. According to the study by Akani (2015), sexual abuse is one of the leading causes of PTSD among women. Victims of attempted rape are more likely to develop PTSD if the rape is complicated; they are physically injured during the assault; and they perceive the sexual assault as life-threatening (Oltmanns and Emery, 2003).

Rape can be devastating physically, socially, and emotionally, 39% of rape victims are physically injured on parts of their bodies other than the genitals. A significant proportion of rape victims are infected with sexually transmitted disease and 5 % of rapes result in pregnancy (Breslau et al., 2002).

Most victims of sexual assault show the symptoms of PTSD. Victims may re-experience the horrors of assault; they may feel numbed in reacting to others, particularly sexual partners; and they may maintain both autonomic, hyper arousal and hyper vigilance against possible victimization. Other research also found that

women are especially likely to develop PTSD as a result of rape, while combat exposure is a major risk factor for PTSD among men (Breslau et al, 2002).

As earlier mentioned, PTSD also affects victims of violence, especially rape, and according to the findings of this study, most female participants indicated having suffered sexual abuse and violence prior to camp, hence this left some devastating memories which are depicted in their responses on the PTSS, depicting symptoms of PTSD.

Gender is an especially important and well researched risk factor for PTSD, and as earlier mentioned, results show that there is a close relationship between gender and the experience of sexual abuse ($p = .005$). According to a recent study, men report having experienced more traumatic events in their lives, but women have a higher prevalence ofPTSD (Katona, Cooper, and Robertson, 2008). A similar study found that, indeed, men are exposed to more traumas throughout life, except for sexual violence, to which women are more prone to experience (Chivers-Wilson, 2006).

In men, the types of trauma that most frequently lead to PTSD are military combat and witnessing someone being badly injured; in women, the events most commonly associated with PTSD are rape and sexual molestation. Chivers-Wilson (2006) noted that the lifetime prevalence of PTSD among sexual assault survivors (50%) was a lot higher than the national prevalence of the disorder (7.8%). With the above findings, it can safely be mentioned that experiencing sexual abuse can lead to PTSD, and could be manifested through various symptoms.

These symptoms may have been caused by past experiences quiet alright, however according to Katona,Cooper, and Robertson(2008:27), “risk of PTSD is proportional

to the magnitude of the stressor, but may be greater following man-made rather than natural disasters." The symptoms are perpetuated by various factors (stressors).

The above factors interact with various other factors surrounding the individual, such as age, sex, ethnicity, and personality. Certain long-standing traits, such as pessimism and introversion, low self-esteem, emotionality, and resilience, deny a person the tools needed to deal with a challenging affliction such as PTSD (McFarlane, 1989). And can increase a person's chance of developing PTSD.

It has been revealed from the findings of this study, and subsequent research findings, that some experiences are closely related to PTSD as symptomized above. A number of factors could play a role in this relationship; two of such factors include the following.

History of anxiety

One of the variables under the physical category sort to find out if participants had a history of anxiety, in order to assess if it was a contributing factor to the above experiences; results showed that 56% of participants had a history of anxiety. Further, the findings are consistent with multiple studies that argue that PTSD can be genetically influenced, as shown in chapter two above.

For instance, Solomon, Kotler, and Mikulincer (1988), using a longitudinal study, examined a sample of 96 Israeli soldiers who fought on the front line during the Lebanon War in 1982. Of the 96 soldiers, 44 were off springs of Holocaust survivors, and they were compared with 52 soldiers who were not children of Holocaust survivors.

The soldiers were recruited randomly through personal letters that asked them to participate in a routine, periodical health assessment in which they were given the PTSD Inventory 1, 2, and 3 years post war. Results indicated that after participating in the Lebanon War, the soldiers whose parents were Holocaust survivors had higher rates of posttraumatic stress disorder (PTSD) and they presented with more pronounced PTSD symptoms than the comparison group. Hereditary traits could have played an etiological role of PTSD to some participants (Solomon, Kotler, and Mikulincer, 1988).

Country of origin

Participants in this study came from various countries of origin, namely Angola, Burundi, Rwanda and Democratic Republic of Congo (DRC). However, a bigger number of participants came from Democratic Republic of Congo (DRC), followed by Rwanda. This is a similar case with the previous studies. These two nations have recorded a higher level of civil wars, genocides and political unrest, making more individuals victims of circumstances.

It is also important to note that not all trauma survivors suffer from PTSD; however, the above factors can make a person vulnerable to developing the condition, because, most time is spent on worries and anxieties of what tomorrow holds in a quest to make ends meet. In this process, the haven for disturbing memories and events is created in the minds of most refugees, in turn providing the etiologic situation for PTSD.

5.5. Theoretical Framework

This section sought to relate the findings of this study to the theories of PTSD with regard to the topic at hand. Different theories have provided some explanation

onPTSD, however the theory below was considered, due to the nature of the objectives of this study.

Psychoanalytic theory- by Sigmund Freud

As earlier mentioned, findings show that there is a strong relationship between past experiences (referred to in this study as, 'prior camp experiences') and PTSD. This relationship supports the theoretical perspective.

The theory is based on the view that behaviour is motivated by unconscious (the part of the mind of which one is not fully aware, but which influences one's actions and emotions) inner forces over which the individual has little control. It assumes that all behaviour and mental processes reflect the constant and mostly unconscious psychological struggles within the individual. Freud believed that unconscious conflicts stemmed from unresolved past life experiences (in this case prior camp experiences) (Hilgard, Atkinson, and Carison, 1999). Hence the PTSD symptoms of participant in this study, such as flashbacks, recurrent dreams and memories can be a manifestation of information packed in their unconscious minds.

However, a contrary view by Bargh&Morsella (2008) who noted that many psychological scientists view our unconscious mind as a shadow of our conscious awareness (e.g equating unconscious with subliminal), but ague with substantial evidence challenging this view, and research which demonstrates the existence of relatively independent unconscious perceptual, evaluative, and motivational guidance systems. They conclude that unconscious action can precede reflexion, implying that the unconscious mind is not always the force behind actions and reactions.

However more studies cited above, and findings in this study, show that there is a relationship between some past experiences (referred to in this study as, 'prior camp experiences') and symptoms of PTSD, meaning some experiences can be precipitating factors of PTSD.

5.6. Summary

The chapter has discussed the findings in four major sections, the first one was looking at the traumatic experiences that refugees at Maheba experienced prior to camp, the second one explored the symptoms of PTSD, the third section considered the relationship between some traumatic experiences and symptoms of PTSD.Further, this relationship helped to refine the theoretical perspective of this study, the Psychoanalytic Theory of Sigmund Freud. It can further be stated that as shown in this chapter, the findings of this study are consistent with findings in similar studies, which suggests the problem at hand is a global matter; hence a number of recommendations are made aftera conclusion of the study in the next chapter.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1.Overview

The study has highlighted the relationship between prior camp experiences of refugees and PTSD related symptoms. This final chapter provides a summary of the findings. A conclusion is made in the first partandsome recommendations are provided in the final part of the chapter.

6.2. Conclusion

The study has revealed that refugees at Maheba refuge settlement center suffered a number of experiences prior to camp categorised in four domains: emotional experiences, economic experiences, social experiences, physical experiences, however the physical domain dominated the experiences. It has further reviewed that most refugees have stress levels associated with PTSD (as shown in the symptoms) which are manifested in three areas namely, re-experiencing, avoidance, and arousal.

It has also revealed that some experiences that refugees at Maheba refugee settlement suffered prior to camp are related to PTSD, the following experiences were directly associated with PTSD: isolation, torture, sexual abuse, exposure to severe stressors like sounds of militia and dead bodies on the streets. It also revealed that a number of factors contribute to the above scenario, notably: history of anxiety and country of origin of participants. Further the findings of the study fitted in the theoretical framework of the psychoanalytic theory that argues that past life experiences have influences on victims presently. This means that experiences suffered by refugees, may physically be, buried, and wounds healed, but their effects

are still flesh in their minds, as if it were happening today. Finally, the findings are consistent with the study hypothesis.

6.3. Recommendations

The effects of prior camp experiences can be prolonged and long-lasting, or reduced, even completely dealt with dependent on the efforts made by stakeholders dealing with the affairs of refugees in Zambia. Hence it is important to consider the following recommendations.

1. Refugee health care providersvis-à-vis MOH and WHO

In addition to providing physical health, there is need for promoting mental health effectively. As earlier mentioned, refugees may physically heal from the past, but the wounds are psychologically very fresh. Hence a wholesome approach (mental and physical health services) in dealing with their health should be considered; in the same vain, the above stakeholders should consider employing more health personnel, especially in the area of mental health and social life. A bio psychosocial approach would be most ideal.

2. Government of Zambia through the Ministry of Home Affairs

The Government of Zambia is doing its best to providing accommodation for refugees and asylum seekers, this is very much commendable.

- However, more is still lacking in terms of economic activities and social facilities that may help the victims find a home in this country of refugee.
- Also to consider lifting some restrictions especially on movement, so that refugees may try and make ends meet in other places within the country unlike restricted to the settlements.

- Also to promote programs and training of personnel employed in the Ministry of Home affairs as their reception and attitude towards these people may have positive or negative impact which may influence their mental wellbeing.

  If the above are put into consideration, the levels of stress associated with PTSD will reduce, eventually reducing the possible risks of PTSD.

3. UN through UNHCR

Refugees are part of the global world; they need critical attention bearing in mind their traumatic experiences, as shown in the findings. Hence the following should be taken into consideration:

- To consider promoting mental health care even at the point of asylum or refuge seeking, in other words to include more psychological personnel in the relief service of refugees, as is the case with physical health. Especially individuals trained in Cognitive Behavioural Therapy, Disaster Psychology, health psychology, abnormal psychology, clinical psychology, counselling psychology, psychiatry, to mention just a few. Because it is clear from the findings that most trauma victims need more mental assistance than physical aid.

- To provide more funding to this department of the United Nations, especially to countries like Zambia, a home to millions of refugees in various camps. The funds should further be used to establish more schools, health facilities, more economic activities and suitable infrastructure around refugee settlements in Zambia.

- In liaison with the Military Department of the UN, to find a lasting solution to civil unrest especially in regions of political tensions like Africa and the Middle East. This may seem hard and impossible; however it stands out as the best solution. It shall help prevent the huge influx of refugees, as the saying goes, "prevention is better than cure".

- To take keen interest and support such studies in order to capture a bigger sample which may yield more results than this current study as it was limited in some areas, mainly because it was a self-funded study, which encountered some challenges as indicated below.

4. Refugees Themselves

Participants are the key stakeholder in their mental health welfare, they are the best therapists, treatment and therapy may be provided, however, the victims' attitude and efforts are key to the healing process. The researcher recommends that participants:

- Be self-reliant- as the economic status of this country is not strong, hence they are encouraged to start up some business for instance in the area of farming (as the settlement is rich in natural farming conditions), and other economic activities, this is because most of them indicated to be unemployed under the category of occupation.

- Learn to socialize among one another and with the indigenous people through participating in religious activities and social activities like sports, as this will help them forget of the harsh pasted experiences.

- To avoid drug misuse and abuse, as it may prolong the levels of PTSD as earlier mentioned.

- To adapt to the new environment by promoting a positive attitude towards the new environment, it is a great privilege to be alive and safe in this peaceful nation regardless of not having all they need, it is said "life is the greatest gift humanity has ever had". They may not have the best employment, the best family, the best education, the best home nor the communication facilities, however, the gift of life is great to make them appreciate and adapt accordingly.

5. General public

The general public, in this case, refers to those who are not directly affected with the refugees' status, which include the following:

- NGOs, religious groups, donors, and other private institutions; to provide a helping hand to the government through various activities such as sponsoring some student refugees, proving employment, and health facilities.

- Indigenous people; to show love, care and sympathy to the refugee populous, through positive conduct and attitude towards them, as this will help them have a home away from home, as it was revealed in the study that poor social support can be a risk factor for PTSD.

- Humanity across the global world; to play a role in one way or the other in the fight against injustice, against civil unrest, political violence, and ethnicity, as the outcome of these vices have great

impact on the general wellbeing of the victim. The experiences that refugees go through are very tormenting, such as the ones captured in this study. Let us take the world as one global village and leave as brothers and sisters.

For further support of the above recommendations, it is important to consider the challenges faced in this study. As earlier mentioned, this study is first of its kind in Zambia, hence challenges were unavoidable, however the research was able to combat them and adjust accordingly were necessary, as shown below.

Challenges

1. Language barrier; it was not easy to find participants who met the inclusion criteria of being able to communicate in English, as most refugees are from French and Swahili speaking nations. However with the help of the research assistance, the local authority, a good number of participants were recruited (though not meeting the target group).

2. Some participants withdrew along the way; others felt discomfort over some items of the data collection instrument, especially those that reminded them of the harsh past. However this scenario was anticipated, no wonder in the consent form and information sheet, participants were given liberty to withdraw from the study whenever they felt so. And in cases where the discomfort was severe, participants were advised to approach the social welfare department of the settlement which offered counselling services. Luckily no participant had severe discomfort.

3. Regardless of the researcher being introduced and providing the information sheet, some participants were full of suspicion, especially on a notion of

repatriation (something they never wish). Hence some questionnaires were submitted blankly and others were rejected.

4. Time; it was not easy to do the study within the anticipated time due to the following two reasons:

    - It was not easy to obtain permission to conduct this study due to the sensitivity of the nature of the study, the area, and participants involved. However procedure was followed and permission was obtained.

    - Most participants who met the inclusion criteria were in scarce places, they were not centrally located, hence it demanded for plenty of time and a number of days to collect the instruments (as the area is vast, as shown in the site map).

5. Financial constrains ;

    - Transport; the place is far from Lusaka where the researcher resides, and participants were spaced up, hence more money was used on transport than anticipated.

    - Accommodation; since participants were spaced apart, and more days were spent, hence more money was spent on accommodation than anticipated.

However, regardless of these challenges (of which most were mitigated in the process), the study was successful and fruitful, hoping that it will be of help to all stakeholders locally and globally.

Generally the study has revealed the following:

i) That most refugees at Maheba refugee settlement center suffered different experiences prior to camp in form of physical, social, economic and emotional domains.

ii) That most of the refugees at Maheba refugee settlement center had symptoms associated with PTSD in form of re-experiencing the traumatic events, avoidance of events and thoughts related to the traumatic event, and arousal symptoms.

iii) That some experiences suffered by refugees prior to camp are closely related to symptoms associated with PTSD, a finding that is consistent with the Psychoanalytic theory of Sigmund Freud.

Areas for further studies

- This study is first of its kind in Zambia; hence academicians need to consider a number of studies in the area of refugees and asylum seekers, especially in the aspect of mental health, and to consider other designs.

- The study was only restricted to Maheba refugee settlement; it would be helpful if the study was replicated to other refugee camps like Mayukwayukwa in Zambia, and others around Africa.

- Also it would be important to consider a population that was in the exclusion criteria of this study, such as children, because their experiences may be different from adults.

- This study has discovered a problem (that some prior camp experiences are associated with symptoms related to PTSD); hence there is need for interventional studies in order to find ways of combating this problem.
- Also academicians should consider the promotion of fields of psychology like disaster psychology in Africa, which somewhat is silent in this region.

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APPENDICES

APENDIX A:

7.1. INFORMATION SHEET

INFORMATION SHEET

I am a graduate student at the University of Zambia, School of Medicine, Department of Psychiatry, pursuing a Master of Science degree in clinical neuropsychology. I am carrying out a study about some of the experiences that you have gone through and how they affect your psychological wellbeing. I am inviting you to join in this study.

If you agree, you will be requested to respond to questions in the questionnaires to be provided. The information will be collected to help us to learn what recommendations to give your health care services, and help you copy up with life in this country of refuge. If you feel you need any help regarding your feelings, or we find that you should get further help to handle your feelings, you will be referred to the Maheba Health Center for psychotherapy or counselling to help you, or you will be provided with self-help sheets and psychotherapeutic measures that will help you recover on your own. If such occurs you can indicate your details in the slot provided in the questionnaire.

You might not like some of the questions in the questionnaire. But they will give us information that will help us to help you and other refugees that may have bad experiences as well. If you would rather not answer those questions, that is alright.

When the study is finished, a report will be written about what we will learn. If you do

not want to be in the study, you are free to reject the questionnaire.

Risks and Benefits:

- You will not experience any physical harm from participating in this study.
- No privileges will be withdrawn from you for participating in this study.
- We cannot guarantee that you will receive any direct benefits from this study, though you will be availed a psychotherapist or counsellor and relevant medical services if identified as in need of that.
- You will also have an opportunity to contribute to information that will help other refugees in general by participating in this study.

Participation Rights:

- Participation in this study is purely voluntary so that if you decide to withdraw at any point, there will be no consequences to you.
- Also know that you are not obliged to answer questions that you may deem sensitive or uncomfortable.
- You are not going to provide personal details (unless where psychotherapy will be needed), hence your responses will be highly confidential. All personal identifying information will be kept confidential and the data sheets.

If the results of this study are required for publication as we hope, your identity will still be kept private.

For more information or comments, please contact:

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7.2. **APENDIX B:**

CONSENT FORM

CONSENT FOR PARTICIPATION IN INTERVIEW RESEARCH

I volunteer to participate in a research study conducted by KalusoMasuwa from the University of Zambia. I understand that the study is designed to gather information about traumatic experiences prior to camp and stress related to a condition known as Post Traumatic Stress Disorder (PTSD). I will be one of approximately 360 participants for this research.

1. My participation in this study is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty.

2. I understand that some questions may be thought-provoking. If, however, I feel uncomfortable in any way when responding to the questionnaire, I have the right to decline

to answer any question.

3. Participation involves responding a questionnaire and a screening scale. I will be given at least two days in which to respond to the questionnaires.

4. I understand that the researcher will not identify me by name in any reports using information obtained from this study, and that my confidentiality as a participant in this study will remain secure.

5. I understand that this research study has been reviewed and approved by the Biomedical Research Ethics Committee of the University of Zambia (UNZABREC) in charge of an institutional review for Studies Involving Humans.

7. I declare that I have been informed of the nature of possible risks or effects of this study. I have read and understood the information sheet to my satisfaction, and I voluntarily agree to participate in this study.

8. I have been given a copy of this consent form.

My Signature _____Date _____

Signature of the researcher _____Date_____

For more information or comments, please contact:

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7.3. APENDIX C: DATA COLLECTION INSTRUMENTS

7.3.1. POSTTRAUMATIC STRESS DISORDER SCREENING SCALE (PTSS)

The PTSS is a standardized rating scale for screening PTSD. It is comprised of 17 items that correspond to the key symptoms of PTSD. It indicates the stress levels related to PTSD symptoms. It is scored by using a 5-point (1–5) scale, with respondents circling their responses. Responses range from 1 "Not at All" to 5 "Extremely".

The scale is scored as follows:

1) Add up all items for a total severity score or, 2) Treat response categories 3–5 (moderately or above) as symptomatic, and responses 1–2 (below moderately) as non-symptomatic.

	RESPONSE	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing *memories*, *thoughts*, or *images* of a stressful experience from the past?					
2.	Repeated, disturbing *dreams* of a stressful experience from the past?					

3.	Suddenly *acting* or *feeling* as if a stressful experience *were happening again* (as if you were reliving it)?					
4.	Feeling *very upset* when *something reminded* you of a stressful experience from the past?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful experience from the past?					
6.	Avoid *thinking about* or *talking about* a stressful experience from the past or avoid *having feeling*s related to it?					
7.	Avoid *activities* or *situations* because *they remind you* of a stressful					

	experience from the past?					
8.	Trouble *remembering important parts* of a stressful experience from the past?					
9.	Loss of interest in things that you used to enjoy?					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cutshort*?					
13.	Trouble falling or staying asleep?					
14.	Feeling irritable or having angry outbursts?					
15.	Having difficulty concentrating?					

16.	Being *"super alert"* or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

7.3.2. APPENDIX D: QUESTIONNAIRE

QUESTIONNAIRE ON TRAUMATIC EXPERINCES.

INSTRUCTIONS:

a. Respond by ticking [√] the appropriate to the question.
b. Write using pen ink where you are required to write.
c. All the information you will provide will be used for the purpose of the study only, therefore, provide genuine information and ensure that all questions are carefully answered.

SECTION A: DEMOGRAPHICAL DATA

i. **Age:** 18-25yrs [ ] 25-30yrs [ ] 31-40yrs [ ] 41-50yrs [ ] 51-60yrs [ ] 60 & above yrs [ ]

ii. **Sex**: Male [ ] Female [ ]

iii. **Marital Status**: Single [ ] Married [ ] Separated [ ] Divorced [ ] Widowed [ ]

iv. **Level of Education**: None [ ] Primary [ ] Secondary [ ] Tertiary [ ]

v. **Occupation:**

Employee [ ] Student [ ] Business person [ ] None [ ]

vi. **Country of Origin:**_____

vii. **Fluently spoken language:** _____

viii. **Period of refuge in Zambia:**

1-4 years [ ] 5-10 years [ ] 10-15 years [ ] 15years and above [ ]

ix. **Reason for refuge:**

Civil War [ ] Political Unrest [ ] Natural Disasters [ ]

Others (specify) _____

x. **Settlement number or address** (Only applicable to those who need psychotherapy):

_____

_____

_____

_____

_____

SECTION B: TRAUMATIC EXPERIENCES

PSYCHOLOGICAL/EMOTIONAL

1) Have you in the past witnessed any of the following?

   Killing:

   YES [ ] NO [ ]

   Blood shedding:

   YES [ ] NO []

   Sexual abuse:

   YES [ ] NO [ ]

2) Have you in the past experienced threat to the integrity of self or others?

   YES [ ] NO [ ]

3) Have you in the past felt emotional discomfort by a traumatizing event?

   YES [ ] NO [ ]

SOCIO-CULTURAL AND ECONOMIC:

4) During your struggle for refugee, did you experience any of the following?

Starvation

YES [ ] NO [ ]

Separation from family

YES [ ] NO [ ]

Loss of property and shelter.

YES [ ] NO [ ]

5) During your resettlement process have you ever experienced any of the following?

Estranged

YES [ ] NO [ ]

Isolation

YES [ ] NO [ ]

Language barriers.

YES [ ] NO [ ]

Struggle to copy with new cultural values.

YES [ ] NO [ ]

6) As a result of the traumatic experience, did you experience any of the following life stressors?

Job loss

YES [ ] NO [ ]

Property loss

YES [ ] NO [ ]

Financial problems.

YES [ ] NO [ ]

7) Did the traumatic event make you?

Experience low self esteem

YES [ ] NO [ ]

Feel inadequate

YES [ ] NO [ ]

Feel worthless

YES [ ] NO [ ]

Feel withdrawn and inhibited

YES [ ] NO [ ]

8) As a result of trauma did you experience?

No or limited sense of belonging

YES [ ] NO [ ]

Weak social interactions

YES [ ] NO [ ]

Loss of identity

YES [ ] NO [ ]

9) After the traumatic event, did you receive enough support from?

Family

YES [ ] NO [ ]

Friends

YES [ ] NO [ ]

Community

YES [ ] NO [ ]

PHYSICAL:

10) Did you experience any of the following when exposed to a traumatic event?

Prolonged headache

YES [ ] NO [ ]

Loss of appetite due to trauma

YES [ ] NO [ ]

Sleeplessness

YES [ ] NO [ ]

Poor or lack of bladder or bowel control

YES [ ] NO [ ]

11) Do you have a history of anxiety disorders in your family?

YES [ ] NO [ ]

12) Have you been exposed with fear to?

Dead bodies on the streets

YES [ ] NO [ ]

Sounds of militia gun shots.

YES [ ] NO [ ]

Screaming of a person in danger

YES [ ] NO [ ]

13) Have you ever experienced torture or persecution in the following manner?

Beatings

YES [ ] NO [ ]

Sexual abuse

YES [ ] NO [ ]

Verbal insults

YES [ ] NO [ ]

Bodily harm and pain

YES [ ] NO [ ]

14) Did you experience any of the following during a traumatising event?

Intense fear

YES [ ] NO [ ]

Injury

YES [ ] NO [ ]

Rapid heartbeat

YES [ ] NO [ ]

SECTION C: OFFICAL USE ONLY

Serial NO._____

THANK YOU FOR PARTICIPATION

APENDIX E. RESULTS ON THE PTSS.

The table below gives responses on the scale, collectively.

Table 6

VARIABLE	1.Not at all		2.A little bit		3.Moderate		4.Quiteabit.		5.Extreme		Missing	
1.disturbing memories	**29**	12.4%	**58**	24.8%	**19**	8.1%	**36**	15.4%	**88**	37.6%	**4**	1.7%
2.disturbing dreams	**43**	18.4%	**38**	16.2%	**30**	12.8%	**49**	20.9%	**68**	29.5%	**5**	2.1%
3.experience happening again	**46**	19.7%	**42**	17.9%	**16**	6.8%	**42**	17.9%	**83**	35.5%	**5**	2.1%
4. upset when reminded	**25**	10.7%	**44**	18.8%	**18**	7.7%	**40**	17.1%	**100**	42.7%	**7**	3.0%
5. physical reactions when reminded	**23**	9.8%	**47**	20.1%	**20**	8.5%	**66**	28.2%	**71**	30.3%	**5**	2.1%
6. Avoid thinking	**26**	11.1%	**51**	21.8%	**22**	9.4%	**71**	30.3%	**57**	24.4%	**6**	2.6%
7. Avoid activities	**35**	15.0%	**30**	12.8%	**28**	12.0%	**39**	16.7%	**96**	41.0%	**6**	2.6%
8. Trouble remembering	**33**	14.1%	**40**	17.1%	**21**	9.0%	**38**	16.2%	**98**	41.9%	**4**	1.7%
9. loss of interest	**14**	6.0%	**34**	14.5%	**27**	11.5%	**81**	34.6%	**72**	30.8%	**4**	1.7%
10. feeling of distant or cut off	**34**	14.5%	**42**	17.9%	**21**	9.0%	**82**	35.0%	**51**	21.8%	**4**	1.7%
11. Emotionally Numb	**30**	12.8%	**51**	21.8%	**22**	9.4%	**32**	13.7%	**91**	38.9%	**8**	3.4%

12. future will be cut short	**47**	20.1%	**32**	13.7%	**20**	8.5%	**34**	14.5%	**92**	39.3%	**8**	3.4%
13. Trouble falling/staying asleep.	**42**	17.9%	**42**	17.9%	**23**	9.8%	**74**	31.6%	**38**	16.2%	**12**	5.1%
14. anger outburst	**33**	14.1%	**45**	19.2%	**23**	9.8%	**69**	29.5%	**52**	22.2%	**11**	4.7%
15. Difficulty concentrating	**40**	17.1%	**44**	18.8%	**32**	13.7%	**87**	37.2%	**24**	10.3%	**5**	2.1%
16. Super alert	**51**	21.8%	**34**	14.5%	**13**	5.6%	**28**	12.0%	**101**	43.2%	**7**	3.0%
17. jumpy or easily startled	**34**	14.5%	**49**	20.9%	**28**	12.0%	**75**	32.1%	**42**	17.9%	**6**	2.6%
AVERAGE	**35**	**15%**	**43**	**18%**	**21**	**9%**	**56**	**24%**	**72**	**31%**	**7**	**3%**

APENDIX F. Table 7. SAMPLE SIZE TABLE

Sample Size for ±3%, ±5%, ±7%, and ±10% Precision Levels where Confidence Level is 95% and P=.5.

Size of Population	Sample Size (n) for Precision (e) of:			
	±3%	±5%	±7%	±10%
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99

Cochran, (1963).