Trauma, PTSD and Resilience among Medical Attendants in Mulago Hospital, Kampala

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Declaration

I Daniel Martin Ikosiot hereby declare that this dissertation is my original piece of work, and where it's indebted to the work of others, the acknowledgements have been made.

Signature ..... Date..30/08/23.....

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Approval

I certify that this work has been done under my supervision and submitted for examination in partial fulfillment of the requirements for the award of Bachelor's Degree in Industrial and Organizational Psychology

Signature..... Date...30/8/2023

Dr. Wandera Roberts Otyola

(Supervisor)

Dedication

I dedicate this work to my loyal family, and a special thanks to Mr. Okoche Robert Nelson, (my father) for his unconditioned love, guidance, moral and financial support throughout this amazing journey of life.

Acknowledgement

My heart felt gratitude to all those who in one way or another contributed to this dissertation: my supervisor (Dr. Roberts Wandera Otyola), family, my very supportive mum, Mrs. Stella Okoche, brothers, (Isaac Okoche, Arnold Okoche, Elvis Okoche, Devine Angel and Bildad Willis Okoche) and friends, (Jonathan, Ruth, Karen, and others). May the almighty God bless you?

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Abstract

Trauma is a deeply distressing or disturbing experience that can have lasting negative effects on a person's physical and mental health. Post-traumatic stress disorder (PTSD) is a mental health condition that can develop after a person experiences a traumatic event. Symptoms of PTSD include reliving the event, avoiding reminders of the event, and feeling numbing or detached from emotions. Resilience is the ability to cope with stress and adversity and bounce back from difficult experiences.

The relationship between trauma, PTSD, and resilience is complex and not fully understood. However, research suggests that resilience can protect against the development of PTSD. There are a number of factors that contribute to resilience, including: Individual factors: personality traits, coping skills, and social support, Environmental factors: social and economic resources, access to healthcare, and cultural beliefs. Interventions that aim to promote resilience in people who have experienced trauma can help to reduce the risk of developing PTSD. These interventions can include: Cognitive-behavioral therapy (CBT): helps people to change their thinking patterns and behaviors related to the trauma, Eye movement desensitization and reprocessing (EMDR): helps people to process traumatic memories in a safe and controlled way
Support groups: provide a safe space for people to share their experiences and connect with others who have been through similar things. The study of trauma, PTSD, and resilience is a growing field of research. As we learn more about these topics, we can develop more effective interventions to help people who have been affected by trauma. In addition to the factors mentioned above, other factors that have been linked to resilience include; asense of purpose in life, a positive outlook, a strong belief in oneself, the ability to adapt to change, the ability to connect with others
Resilience is not a fixed trait. It can be developed and strengthened over time. There are a number of things that people can do to build their resilience, such as: practicing mindfulness, engaging in physical activity, spending time in nature, connecting with loved ones, helping others, giving back to the community.

By understanding the relationship between trauma, PTSD, and resilience, we can better help people who have been affected by trauma. We can also help to build resilience in individuals and communities, so that they can better cope with stress and adversity.

Chapter One

Introduction

Background of the Study

Trauma is an event that overwhelms a person's ability to cope and can result in feelings of fear, helplessness, or horror. It can be caused by a range of experiences, including physical or sexual assault, accidents, natural disasters, war, or the unexpected death of a loved one. Trauma can have a profound impact on a person's life, including their physical health, mental health, and relationships.

Post-Traumatic Stress Disorder (PTSD) is a mental health condition that can develop after experiencing or witnessing a traumatic event. The symptoms of PTSD can include flashbacks, nightmares, avoidance behaviors, and hyperarousal. While not everyone who experiences trauma will develop PTSD, it is a common response to traumatic events.

Resilience is the ability to adapt and recover from difficult situations. It is a key factor in how individuals respond to trauma and can be thought of as a protective factor. Resilience is not a trait that someone is born with, but rather a set of skills and abilities that can be developed over time.

The relationship between trauma, PTSD, and resilience is complex. While trauma can lead to PTSD, it is important to note that not everyone who experiences trauma will develop PTSD. Resilience can act as a protective factor, reducing the likelihood of developing PTSD after trauma. Additionally, those who develop PTSD may be able to improve their symptoms through building resilience skills.

Overall, the relationship between trauma, PTSD, and resilience highlights the importance of understanding how individuals respond to trauma and how we can support their recovery. By

focusing on building resilience, we can help individuals develop the skills and abilities needed to overcome trauma and thrive in the face of adversity.

Trauma is a term used to describe an event that causes physical or emotional harm to an individual. Trauma can be caused by a range of experiences, including but not limited to physical or sexual assault, accidents, natural disasters, war, or the unexpected death of a loved one. Trauma can have a significant impact on an individual's physical, emotional, and mental health, and can result in feelings of fear, helplessness, or horror.

The prevalence of trauma is widespread, and research suggests that the majority of people will experience some form of trauma in their lifetime. Trauma can be a single event, or it can be ongoing, and the effects can be long-lasting. The effects of trauma can range from mild to severe and can include physical symptoms, such as headaches or muscle tension, emotional symptoms, such as anxiety or depression, and behavioral symptoms, such as avoidance or withdrawal.

One of the most well-known mental health conditions that can develop as a result of trauma is Post-Traumatic Stress Disorder (PTSD). PTSD is a mental health condition that can develop after experiencing or witnessing a traumatic event. PTSD is characterized by a range of symptoms, including intrusive thoughts or memories of the traumatic event, avoidance behaviors, negative changes in mood or cognition, and hyperarousal. While not everyone who experiences trauma will develop PTSD, research has identified a range of risk factors that increase the likelihood of developing the disorder. These risk factors include the severity and duration of the traumatic event, a history of prior trauma, and individual factors such as genetic susceptibility and cognitive coping strategies Overall, trauma is a common experience that can have a significant impact on an individual's life. While not everyone who experiences trauma will develop PTSD, the prevalence of the disorder highlights the need for increased understanding and support for those who are

affected. By recognizing the signs and symptoms of trauma and PTSD, individuals and healthcare providers can work together to provide effective treatment and support.

Resilience is the ability to adapt and recover from adversity, trauma, or stress. It involves being able to bounce back from difficult experiences and challenges, and to maintain one's sense of well-being and overall functioning despite adversity. Research has shown that resilience is an important factor in mitigating the negative effects of trauma and reducing the likelihood of developing PTSD.

Individuals who exhibit high levels of resilience have been found to be better equipped to cope with the stressors associated with traumatic experiences. Studies have found that resilience can act as a protective factor against the development of PTSD, reducing the likelihood of individual experiencing prolonged symptoms after a traumatic event.

Resilience can be seen as a dynamic and ongoing process that involves both individual and environmental factors. Some factors that have been identified as contributing to resilience include positive coping strategies, social support, emotional regulation skills, and a sense of purpose or meaning in life.

Positive coping strategies involve adaptive responses to stressors, such as problem-solving, seeking social support, and engaging in healthy behaviors like exercise or meditation. Social support has also been identified as a key factor in resilience, as individuals with strong social networks have been found to be more likely to recover from trauma and to experience fewer symptoms of PTSD.

Emotional regulation skills, such as mindfulness or cognitive reappraisal, have also been found to be important in building resilience. These skills involve being able to regulate and manage one's emotions in response to stressful situations. Finally, having a sense of purpose or meaning

in life has been found to be important in building resilience, as it can provide individuals with a sense of direction and motivation to overcome challenges.

Overall, resilience plays an important role in mitigating the negative effects of trauma and reducing the likelihood of developing PTSD. While some individuals may be naturally more resilient than others, there are steps that individuals can take to build and strengthen their resilience, such as developing positive coping strategies, seeking social support, and engaging in emotional regulation techniques.

Problem Statement

The problem of trauma, PTSD, and resilience is a significant public health concern with far-reaching consequences for individuals, families, and communities. Trauma is a common experience, with up to 70% of the general population experiencing at least one traumatic event in their lifetime. However, exposure to trauma can lead to the development of PTSD, a debilitating psychiatric disorder that is associated with a range of negative outcomes, including impaired social functioning, increased risk for other mental health disorders, and reduced quality of life.

While trauma and PTSD are associated with significant negative outcomes, resilience has been identified as a key protective factor against the development of PTSD and other negative outcomes associated with trauma exposure. However, there is still much to be understood about the mechanisms of resilience, how it can be strengthened, and how it can be used to prevent or mitigate the negative effects of trauma and PTSD.

Therefore, the problem statement for this research topic is: Despite the recognition of the importance of resilience in mitigating the negative effects of trauma and reducing the likelihood of developing PTSD, there is still a need for further research to understand the mechanisms of

resilience, how it can be strengthened, and how it can be used to prevent or mitigate the negative effects of trauma and PTSD.

Purpose of the Study

The purpose of the study is to establish the relationship between trauma, PTSD, and resilience among medical attendants in Mulago Hospital

Objectives

The objectives that will guide the study include;

1. To examine the relationship between trauma and PTSD
2. To examine the relationship between PTSD and resilience
3. To examine the relationship between trauma and resilience

Scope of the Study

Geographical Scope

Mulago hospital is located in the Northern part of Kampala city, in Kawempe Division. This is because the place of choice favors the vastness of the research.

Contextual Scope

The study focused on exploring the relationship between trauma, PTSD and resilience among the medical attendants.

Time Scope

The study was expected to take on a period of four months.

Significance of the Study

The study of "Trauma, PTSD, and Resilience" within medical attendants, has significant implications for both the academic and practical fields. The following are some of the ways in which this study can be significant:

This study can contribute to the academic literature on trauma, PTSD, and resilience by providing a deeper understanding of the prevalence of these issues within organizations in Kampala. It can also contribute to existing knowledge on the factors that contribute to resilience among employees within these organizations.

This study can have practical significance for organizations in Kampala by providing them with information that can help them better understand the prevalence of trauma, PTSD, and resilience among their employees. The findings of this study can be used to develop policies and programs aimed at preventing and addressing trauma and PTSD and promoting resilience among employees. This can lead to improved employee wellbeing, productivity, and job satisfaction.

The study can have social significance by shedding light on the issue of trauma, PTSD, and resilience within organizations in Kampala. This can contribute to raising awareness of the issue and reducing stigma associated with mental health issues. It can also promote discussions on the role of organizations in addressing the mental health needs of their employees.

The study can have policy significance by informing the development of policies and guidelines aimed at addressing the issue of trauma, PTSD, and resilience within organizations in Kampala. The findings of this study can be used to develop policies that promote the mental health and wellbeing of employees in the workplace.

Conceptual Framework

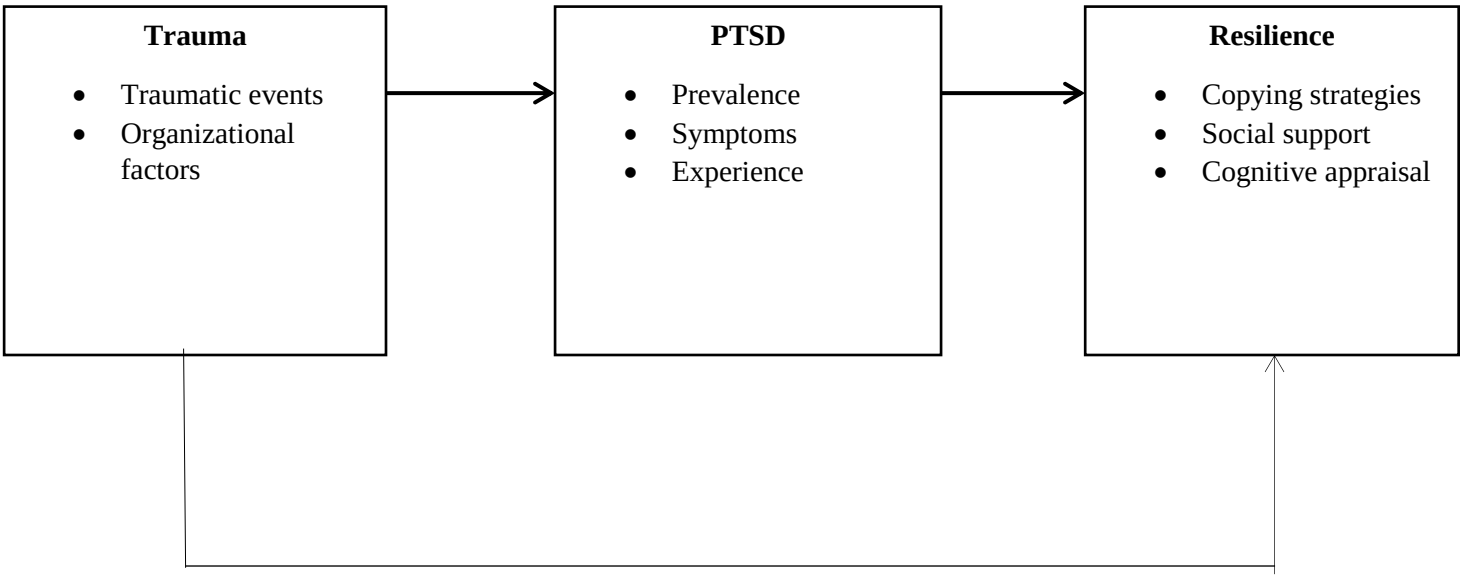

Figure 1. 1: Conceptual Framework of the correlation of trauma, PTSD and resilience.

The conceptual framework for the research can be based on the Transactional Model of Stress and Coping proposed by Lazarus and Folkman (1984). The model suggests that individuals experience stress when there is a perceived imbalance between the demands of a situation and their ability to cope with it. The coping process involves cognitive and behavioral efforts to manage the demands of the situation and the emotional reactions to it.

Trauma is a deeply distressing or disturbing experience that can have lasting negative effects on a person's physical and mental health. Traumatic events can include natural disasters, accidents, war, violence, and other life-threatening experiences.

Organizational factors are the characteristics of an organization that can influence the risk of PTSD among its employees. These factors can include the amount of stress in the workplace, the level of support from supervisors and colleagues, and the availability of resources to help employees cope with trauma.

PTSD is a mental health disorder that can develop after a traumatic event. Symptoms of PTSD can include flashbacks, nightmares, avoidance of reminders of the event, and negative changes in mood and thoughts.

Resilience is the ability to cope with stress and adversity. Resilience factors can include social support, coping strategies, and a positive outlook.

The conceptual framework shows that trauma, organizational factors, and resilience are all interconnected. Trauma can increase the risk of PTSD, and organizational factors can also play a role. However, resilience factors can help to protect against PTSD.

The framework also shows that the relationship between these factors is complex and can vary from person to person. For example, two people who experience the same traumatic event may have different levels of resilience, depending on their individual characteristics and circumstances.

The conceptual framework can be used to guide research on PTSD, to develop interventions to prevent and treat PTSD, and to improve workplace practices to protect employees from the effects of trauma. Here are some specific examples of how the factors in the conceptual framework can interact:

A traumatic event that is perceived as being more threatening or harmful is more likely to lead to PTSD.

Organizational factors such as high levels of stress and low levels of support can increase the risk of PTSD.

Resilience factors such as strong social support and effective coping strategies can help to protect against PTSD.

The conceptual framework is a useful tool for understanding the complex relationship between trauma, organizational factors, PTSD, and resilience. It can be used to guide research, to develop interventions, and to improve workplace practices to protect employees from the effects of trauma.

Chapter Two

Literature Review

Introduction

This review of literature on trauma, posttraumatic stress disorder (PTSD), and resilience examines a wide range of studies over several decades. It develops a framework by which to view the historical evolution of research on psychological resilience in general and the nature of posttraumatic resilience in particular. The chapter organization reflects the central conceptual issues surrounding the concept of resilience; the early developmental studies of resilient children growing up under ad verse environmental conditions; the paradigm of extreme stress, trauma, and resilient coping during and after exposure to powerful, life-threatening stressors; and the need for a generic model of posttraumatic resilience, coping, and adaptation. Theoretical models of traumatic stress syndromes and the literature on PTSD have established that there is a wide range of outcomes in how persons cope with traumatic experiences (Bonnano, 2004; Wilson, 1995; Wilson & Drozdek, 2004; Wilson, Friedman, & Lindy, 2001; Wilson & Raphael, 1993; Zeidner & Endler, 1996). The models of traumatic stress (Wilson, 1989,2004a; Wilson et al., 2001; Wilson & Thomas, 2004) and adaptive coping processes (Folkman, 1997) are useful paradigms by which to examine the question of resiliency: How is it that persons recover and "spring back" from psychological trauma? What are the psychological factors that are associated with resiliency and effective coping? What are its internal mechanisms in the psyche and as manifest in adaptation to environmental demands?

Trauma and PTSD

Trauma and PTSD have a complex and interconnected relationship. Trauma refers to an experience that is emotionally distressing and has the potential to cause lasting harm to an

individual. PTSD is a psychiatric disorder that can develop in response to exposure to a traumatic event. The relationship between trauma and PTSD is bidirectional, with trauma increasing the risk of developing PTSD and PTSD impacting the experience of trauma.

Studies have found that exposure to trauma increases the risk of developing PTSD. A study by Kessler et al. (1995) found that individuals who had experienced trauma were significantly more likely to develop PTSD than those who had not experienced trauma. Similarly, a study by Breslau et al. (1998) found that individuals who had experienced trauma were at an increased risk of developing PTSD, with the risk increasing as the severity and frequency of the trauma increased.

Furthermore, studies have also found that PTSD can impact an individual's experience of trauma. Individuals with PTSD may have increased sensitivity to stress and be more likely to perceive events as traumatic (Brewin et al., 1999). In addition, individuals with PTSD may have difficulty processing and integrating traumatic experiences, which can lead to ongoing distress and symptoms of PTSD (van der Kolk, 2005).

The relationship between trauma and PTSD is complex, and not all individuals who experience trauma develop PTSD. Factors that may impact the development of PTSD include the severity and frequency of the trauma, the individual's level of perceived control over the trauma, and the presence of social support (Brewin et al., 2000).

Traumatic events are very common in most societies, though prevalence has been best studied in industrialized societies, particularly in the USA. Kessler et al- found that in the USA at least 15% of the population reported to have been molested, physically attacked, raped, or been involved in combat. Men are physically assaulted more often than women (11.1% vs 10.3%), while women report higher rates of sexual assault (7.3% vs 1.3%). Half of all victims of violence in the US are under age 25; 29% of all forcible rapes occur before the age of eleven. Among US

adolescents aged 12 to 17, 8% are estimated to have been victims of serious sexual assault; 17% victims of serious physical assault; and 40% have witnessed serious violence. Twenty-two percent of rapes are perpetrated by strangers, whereas husbands and boyfriends are responsible for 19%, and other relatives account for 38%. Men sustain twice as many severe injuries than women do. For women and children, but not for men, trauma that results from violence within intimate relationships is a much more serious problem than traumatic events inflicted by strangers or accidents: in 1994, 62% of the almost 3 million attacks on women in the USA were by persons whom they knew, while 63% of the almost 4 million assaults on males were by strangers. Four out of five assaults on children are at the hands of their own parents. Over a third of the victims of domestic assault experienced serious injury, compared with a quarter of victims of stranger assault. This illustrates that an assault by someone "known" is not less serious than assault by a stranger. Domestic abuse and child abuse are closely related: in homes where spousal abuse occurs, children are abused at a rate 1500% higher than the national average (National Victim Center, 1993).

Many people experience horrendous events without seeming to develop lasting effects of their traumatization. The most common effects of traumatization are included in the symptom picture described in the diagnosis of PTSD. However, depression, increased aggression against self and others, depersonalization, dissociation, compulsive behavioral repetition of traumatic scenarios, as well as a decline in family and occupational functioning, may occur without victims meeting fullblown criteria for PTSD. 'ITtic most common causes of PTSD in men are combat and being a witness of death or severe injury, while sexual molestation and rape are the most common causes of PTSD in women. The capacity of these events to produce PTSD varied significantly, ranging from 56% in patients who regain consciousness in the middle of surgical procedures, to

48.4% of female rape victims, and 10.7% of men witnessing death or serious injury. Women have twice the risk of developing PTSD following a trauma than men do. When people are faced with life-threatening or other traumatic experiences, they primarily focus on survival and self - protection. They experience a mixture of numbness, withdrawal, confusion, shock, and speechless terror. Some victims try to cope by taking action, while others dissociate. Neither response absolutely prevents the subsequent development of PTSD, though problem-focused coping reduces the chance of developing PTSD, while dissociation during a traumatic event is an important predictor for the development of subsequent PTSD.[7] The longer the traumatic experience lasts, the more likely the victim is to react with dissociation.

When the traumatic event is the result of an attack by a family member on whom victims also depend for economic and other forms of security, as occurs in victims of intrafamilial abuse, victims are prone to respond to assaults with increased dependence and with a paralysis in their decisionmaking processes. Thus, some aspects of how people respond to trauma are quite predictable, but individual, situational, and social factors play a major role in the shaping the symptomatology.

Rape victims, as well as children and women abused by male partners, often develop long-term reactions that include fear, anxiety, fatigue, sleep and eating disturbances, intense startle reactions, and physical complaints.

They often continue to dissociate in the face of threat, suffer from profound feelings of helplessness and have difficulty planning effective action. This makes them vulnerable to develop “emotion-focused coping,” a coping style in which the goal is to alter one's emotional state, rather than the circumstances that give rise to those emotional states. This emotion-focused coping accounts for the fact that people who develop PTSD are vulnerable to engage in alcohol and

substance abuse. Between a quarter and half of all patients who seek substance abuse treatment suffer from a comorbid PTSD diagnosis. The relationship between substance abuse and PTSD is reciprocal: drug abuse leads to assault, and, reciprocally, assault leads to substance use.

Resilience is taken equivalent to positive mental health. It is the process of psychological growth where one adapts to difficult life circumstances and adopts a healthy living (Wang et al., 2015). It is the ability to cope effectively when adversity arises (Abiola and Udofia, 2011). Recent researches focus on resilience as a process rather than an outcome (Rosenberg and Yi-Frazier, 2016).

Scholarly works in the field of resilience have grown exponentially for several decades (Kolar, 2011). Growing interest in developmental psychology have led to more research on resilience since then (Masten and Barnes, 2018; Masten et al., 2021). Lately, there has been renewed interest in understanding resilience better by combining this psychological construct with neurobiology, genetics and immune system as resilience seems an interface between mind and body (Cathomas et al., 2019; Horn and Feder, 2018).

Evidence suggests that the outcome following trauma in persons varies (Sayed et al., 2015; Iacoviello and Charney, 2014). All people with childhood abuse or other trauma do not develop psychiatric symptoms. This is where resilience comes into play (Wingo et al., 2010). There are several studies reporting the role of resilience in trauma and how it is protective against psychiatric disorders in face of the highly prevalent nature of trauma. Yet, studies specifically examining the relation between resilience and the major psychiatric morbidities, namely, PTSD, anxiety, and depression following any kind of traumatic event are acutely lacking. Resilience is said to be inversely associated with psychiatric symptoms (Goldenson et al., 2021) in a handful of studies involving adolescents. However, studies on how resilience affects post-traumatic stress

disorder (PTSD), depression and anxiety, all incorporated within a single study are largely unknown (Wingo et al., 2010).

In 1980, the diagnosis of PTSD was constructed for inclusion in the Diagnostic and. Statistical Manual of Mental Disorders, 3rd edition (DSM-IIT*)* in order to capture the psychopathology associated with traumatization in adults. Over the years, numerous studies have demonstrated that the diagnostic construct of PTSD is clinically relevant to individuals who have suffered single incident traumas such as rape, physical assaults, torture, and motor vehicle accidents. However, it has also become clear that in clinical settings most treatment-seeking patients have been exposed to a range of different traumatic events over their life span, and suffer from a variety of psychological problems, only some of which are covered in the definition of PTSD. These include affect dysregulation, aggression against self and others, amnesia and dissociation, somatization, depression, distrust, shame, and self-hatred. These other problems can either be conceptualized as comorbid conditions, or as part of a spectrum of trauma-related problems that occur depending on the age at which the trauma occurred, the relationship to the agent responsible for the trauma, social support received and the duration of the traumatic experience(s).

The repeated reliving of memories of the traumatic experience**.** These tend to involve intense sensory and visual memories of the event, which are often accompanied by extreme physiological and psychological distress, and sometimes by a feeling of emotional numbing, during which there usually is no physiological arousal. These intrusive memories may occur spontaneously or can be triggered by a range of real and symbolic stimuli.

Avoidance of reminders of the trauma, as well as of emotional numbing, detachment, and emotional blunting, often coexist with intrusive recollections. This is associated with an inability

to experience joy and pleasure, and with a general withdrawal from engagement with life. Over time, these features may become the dominant symptoms of PTSD.

A pattern of increased arousal is the third element of PTSD. This is expressed by hypervigilance, irritability, memory and concentration problems, sleep disturbances, and an exaggerated startle response. In the more chronic forms of the disorder, this pattern of hyperarousal and the avoidance may be the dominant clinical features. Hyperarousal causes traumatized people to become easily distressed by unexpected stimuli. Their tendency to be triggered into reliving traumatic memories illustrates how their perceptions become excessively focused on the involuntary seeking out of the similarities between the present and their traumatic past. As a consequence, many neutral experiences become reinterpreted as being associated with the traumatic past.

Trauma exposure and posttraumatic stress disorder (PTSD) are significant issues that affect various populations worldwide. While the prevalence and nature of trauma and PTSD may differ across populations, these experiences can have profound and long-lasting impacts on an individual's mental health.

Trauma exposure and PTSD are prevalent among civilians, particularly those who have experienced violence, abuse, accidents, natural disasters, and other traumatic events. According to research, the lifetime prevalence of trauma exposure in the general population is estimated to be around 70%, and the prevalence of PTSD is approximately 8%. However, this varies based on factors such as the type of trauma, gender, and age. For example, women are more likely to experience sexual trauma and have a higher risk of developing PTSD than men.

Studies have shown that civilians who have experienced trauma are at increased risk of developing PTSD. For example, a study of 1,569 survivors of the 2004 Indian Ocean tsunami

found that approximately 27% of participants had PTSD symptoms at 6 months post-tsunami, and 13% had symptoms at 30 months post-tsunami (Kessler et al., 2008). Another study of 4,008 individuals who experienced the September 11th terrorist attacks found that the prevalence of PTSD was 7.5% at 6 months post-attack and 6.2% at 2-3 years post-attack (Galea et al., 2003).

Military personnel, particularly those who have been deployed in combat zones, are also at high risk for trauma exposure and PTSD. According to the U.S. Department of Veterans Affairs, approximately 11-20% of veterans who served in Operation Iraqi Freedom and Operation Enduring Freedom have PTSD in a given year (U.S. Department of Veterans Affairs, 2021). Additionally, military sexual trauma (MST) is a significant issue, with an estimated 23% of women and 55% of men experiencing sexual assault or harassment during their military service (U.S. Department of Veterans Affairs, 2021).

Studies have found that military personnel who have experienced trauma are at increased risk of developing PTSD. For example, a study of 2,530 U.S. Army soldiers who served in Iraq found that approximately 12% of soldiers had PTSD symptoms 3-4 months after returning from deployment (Hoge et al., 2004). Another study of 4,888 Canadian Armed Forces personnel who served in Afghanistan found that approximately 8% of personnel had PTSD symptoms 6 months after returning from deployment (Zamorski et al., 2011).

Refugees are another population that is at risk for trauma exposure and PTSD. Many refugees have experienced war, violence, and persecution in their home countries, and they may continue to experience stress and trauma during their displacement and resettlement. According to the United Nations High Commissioner for Refugees (UNHCR), approximately 40 million people worldwide are currently displaced due to conflict and persecution, and many of them suffer from mental health issues, including PTSD (UNHCR, 2021).

Studies have found that refugees who have experienced trauma are at increased risk of developing PTSD. For example, a meta-analysis of 54 studies involving 8,414 refugees found that the prevalence of PTSD was 30.6% (95% CI: 27.6-33.6%) (Steel et al., 2009). Another study of 269 Syrian refugees resettled in Germany found that approximately 44% of participants had symptoms of PTSD (Kizilhan et al., 2017).

Overall, the relationship between trauma and PTSD is bidirectional, with trauma increasing the risk of developing PTSD and PTSD impacting the experience of trauma. Understanding the relationship between trauma and PTSD is crucial for the development of effective interventions and treatments for individuals who have experienced trauma.

PTSD and Resilience

Post-traumatic stress disorder (PTSD) is a mental health condition that can develop after exposure to a traumatic event, such as violence, war, natural disasters, or accidents. Individuals with PTSD may experience symptoms such as flashbacks, nightmares, hyperarousal, avoidance, and negative changes in mood and cognition.

Resilience, on the other hand, refers to the ability to adapt and bounce back from adversity, trauma, or stress. Resilient individuals can withstand and recover from challenging experiences and maintain their psychological well-being.

Several studies have examined the relationship between PTSD and resilience. Here are a few examples:

In a study published in the Journal of Psychiatric Research, researchers examined the relationship between resilience and PTSD in a sample of 70 veterans with combat-related PTSD. The study found that higher levels of resilience were associated with lower PTSD symptom severity (Ehring et al., 2014).

Another study published in the Journal of Traumatic Stress examined the relationship between resilience and PTSD in a sample of 240 survivors of the 2004 Indian Ocean tsunami. The study found that higher levels of resilience were associated with lower levels of PTSD symptoms, even after controlling for other factors such as trauma exposure and social support (Karanci et al., 2010).

A meta-analysis of 33 studies published in the Journal of Anxiety Disorders examined the relationship between resilience and PTSD in trauma-exposed individuals. The meta-analysis found that higher levels of resilience were associated with lower levels of PTSD symptoms (Galatzer-Levy et al., 2013).

These studies suggest that resilience is an important factor in the development and maintenance of PTSD symptoms. Building resilience may help individuals recover from trauma and mitigate the risk of developing PTSD.

The role of psychological trauma (e.g., rape, physical assaults, torture, motor vehicle accidents) as an etiological factor in mental disorders, anticipated as early as the 19th century by Janet, Freud, and Breuer, and more specifically during World War I and II by Kardiner, was "rediscovered" some 20 years ago in the wake of the psychological traumas inflicted by the Vietnam war and the discussion "in the open " of sexual abuse and rape by the women's liberation movement, 1980 marked a major turning point, with the incorporation of the diagnostic construct of posttraumatic stress disorder (PTSD) into the 3rd edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) and the definition of its main diagnostic criteria (reexperiencing of the traumatic event, avoidance of stimuli associated with the trauma, and symptoms of increased arousal). Initially described as resulting from a onetime severe traumatic incident, PTSD has now been shown to be triggered by chronic multiple traumas as well. This "state-of-the-art" article discusses past and current understanding of the disorder, with particular

emphasis on the recent explosive developments in neuroimaging and other fields of the neurosciences that have highlighted the complex interrelationships between the psychological, psychiatric, biological, and neuroanatomical components of the disorder, and opened up entirely new therapeutic perspectives on how to help the victims of trauma overcome their past.

The human response to psychological trauma is one of the most important public health problems in th.e world. Traumatic events such as family and social violence, rapes and assaults, disasters, wars, accidents and predatory violence confront people with such horror and threat that it may temporarily or permanently alter their capacity to cope, their biological threat perception, and their concepts of themselves. Traumatized individuals frequently develop posttraumatic stress disorder (PTSD), a disorder in which the memory of the traumatic event comes to dominate the victims' consciousness, depleting their lives of meaning and pleasure. Trauma docs not only affect psychological functioning: for example, a study of almost 10 000 patients in a medical setting reported that persons with histories of severe child maltreatment showed a 4 to 12 times greater risk for developing alcoholism, depression, drug abuse, and suicide attempts, a 2 to 4 times greater risk for smoking, >50 sex partners, and sexually transmitted disease, a 1.4 to 1.6 times greater risk for physical inactivity and obesity, and a 1.6 to 2.9 times greater risk for ischemic heart disease, cancer, chronic lung disease, skeletal fractures, hepatitis, stroke, diabetes, and liver disease.

Trauma and Resilience

Trauma can have a profound impact on individuals, but not everyone who experiences trauma develops negative outcomes such as PTSD. Resilience is a construct that refers to an individual's ability to adapt and recover from adversity, and it plays an important role in the

aftermath of trauma. The relationship between trauma and resilience is complex, and research has identified several factors that can contribute to the development of resilience following trauma.

Studies have found that social support is a key factor in promoting resilience following trauma. For example, a study by Bonanno et al. (2006) found that individuals who had experienced traumatic events and had high levels of perceived social support were more likely to show resilience in the form of low levels of PTSD symptoms. Similarly, a study by Norris et al. (2009) found that social support was associated with better mental health outcomes following a natural disaster.

Coping strategies are another important factor in the development of resilience following trauma. Positive coping strategies, such as problem-solving and seeking social support, have been shown to be effective in promoting resilience (Lamarche et al., 2010). On the other hand, negative coping strategies, such as avoidance and substance use, can lead to poorer outcomes (Lamarche et al., 2010).

Another important factor in the development of resilience is emotional regulation. Emotional regulation refers to an individual's ability to regulate their emotions in response to stressful situations. Studies have found that individuals with better emotional regulation are more likely to show resilience following trauma (Bonanno et al., 2010; Tugade & Fredrickson, 2004).

Overall, the relationship between trauma and resilience is complex, with various factors contributing to the development of resilience following trauma. Social support, coping strategies, and emotional regulation are just a few of the factors that have been identified as important in promoting resilience. Understanding the relationship between trauma and resilience can inform the development of interventions and treatments for individuals who have experienced trauma.

In this article, we explore the question of trauma and resiliency. We present a conceptual model of trauma and resilience based on a re view of the literature. To undertake such an analysis requires definitional clarity on the meaning of resilience. Understanding the nature of resilience requires conceptual and definitional clarity. What is resilience and what constitutes resilient behavior? This seemingly simple question turns out to be very complex as a psychological and behavioral process. There are at least five distinct ways to define human resilience. First, what is the lexical definition of resilience? Second, what constitutes resilience as a psychological phenomenon in its purest form devoid of contextual parameters? In terms of basic processes of perception, cognition, affect regulation, and information processing, what characterizes resilience? Third, what defines resilient behavior under adverse environmental conditions? This question spurned the early research on resilient children who grew up in poverty, in malfunctional families, or in conditions of cultural deprivation. The focus on resilient behavior is a way of evaluating resilience by outcome: How is good performance maintained in the face of adversity, overwhelming disadvantage, or impediments to highly effective adaptation and performance as defined by a range of dependent variables (e.g., mental health, school performance, absence of illness or psychopathology, etc.)? Fourth, the question of psychological trauma and resilience is a variation on conceptualizations of effective coping and adaptation under adverse environmental circumstances. Trauma, however, is generally defined by stress events that present extraordinary challenges to coping and adaptation. Indeed, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) definition of traumatic stressors includes "experiencing, witnessing, or confronting events that involve actual or threatened death or serious injury, or a threat to the physical integrity of self or others". Thus, the issue of resilience to traumatic situations raises questions as to the nature of peritraumatic (during) and posttraumatic

forms of resilient behavior. Stated differently, what set of psychological factors are associated with resilient coping in the "face" and "wake" of trauma? Fifth, the issue of PTSD and resilience similarly raises questions regarding the dimensions of effective coping. For example, what factors are protective against the onset or later development of PTSD? What factors (e.g., personal, social, support resources, etc.) are associated with resilient recovery from PTSD versus chronic forms of the disorder? Resilient posttraumatic coping behavior poses the question as to continuities and discontinuities in resiliency across the life span. Is posttraumatic resiliency a characteristic of the person or highly influenced by normative life crises of aging and unique situational contexts that challenge coping repertoires?

The Oxford English Dictionary defines resilience as "the activity of rebounding or springing back; to rebound; to recoil." It further defines resilience as "elasticity; the power of resuming the original shape or position after compression, bending, etc." It is the ability "to return to the original position." The lexical analysis also includes the adjectives "cheerful, buoyant, and exuberant." The linguistic use of the term resilience refers to a property: an ability of an object to restore its original structural form, despite being temporarily altered by external forces that would "bend" or "compress" its shape. The property of resilience, then, would apply to behavioral phenomena in engineering, physiology, the natural environment, and human behavior in a variety of environmental contexts. Moreover, resilience is generally viewed as a quality of character, personality, and coping ability. Resiliency connotes strength, flexibility, a capacity for mastery, and resumption of nor mal functioning after excessive stress that challenges individual coping skills (Lazarus & Folk man, 1984; Richardson, 2002). In some definitions, resilience refers to an ability to overcome high loads of stressful events (e.g., trauma, death, economic loss, disaster, political upheaval and cultural changes) and maintain psychological vitality and mental health

(Bonnano, 2004; Harel, Kahana, & Kahana, 1993; Harel, Kahana, & Wilson, 1993; Wilson, 2004a; Wilson & Drozdek, 2004; Yehuda, 1998). In experimental studies, resilience has been used as independent and dependent variables. In this regard, it is meaningful to speak of resilient per sons and resilient behavioral adaptations and outcomes in different situations. Clearly, a Per son x Situation interactional model of resilience is conceptually critical to the analysis of resilience as a posttraumatic phenomenon (see Aron off & Wilson, 1985; Wilson, 1989; Zeidler & Endler, 1996 for a review). What are the characteristics of resilient persons that distinguish them from less resilient persons? What constitutes resilient behavior in different types of traumatic situations with varying degrees of stress demands, adversity, or the complexity of problems to be solved? In a met theory of resilience, Richardson (2002) proposed that the history of research on resilience can be classified in three ways: (a) identifying the unique characteristics of per sons who cope well in the face of adversity, (b) identifying the processes by which resiliency is attained through developmental and life experiences, and (c) identifying the cognitive mechanisms that govern resilient adaptations. Previous research on the phenomena of resilience has examined a substantial domain of critical factors thought to be associated with resilience and include genetics, neurobiological factors, childhood development, type of trauma or stressful life event, personality characteristics, cognitive style, prior history of exposure to stressful events, gender, age, capacity for affect regulation, social support, and ego defenses (Agaibi, 2003; Fredrickson, 2002; Schore, 2003; South wick, Morgan, Vythilingham, Krystal, & Charney, 2004; Wilson, 1995; Zeidner & Endler, 1996; Zuckerman, 1999).

Resilience refers to an individual's ability to adapt and recover from adversity, such as trauma. While trauma can have significant negative impacts on an individual's mental health, some people are more resilient than others and can recover more quickly. Several factors contribute to the

development of resilience in individuals who have experienced trauma, including social support, coping strategies, emotional regulation, and other protective factors.

Social support is one of the most important factors that contribute to resilience in individuals who have experienced trauma. According to research, social support can buffer the negative impacts of trauma on mental health and improve coping mechanisms (Brewin et al., 2000). For example, a study of 95 survivors of the 2011 Christchurch earthquake in New Zealand found that social support was a significant predictor of psychological resilience, even after controlling for trauma exposure (Carleton et al., 2016).

Coping strategies are another important factor that contribute to resilience in individuals who have experienced trauma. Adaptive coping strategies, such as problem-solving and positive reframing, can help individuals manage stress and recover from trauma more quickly (Bonanno et al., 2006). On the other hand, maladaptive coping strategies, such as avoidance and substance use, can exacerbate the negative impacts of trauma on mental health (Pietrzak et al., 2014). For example, a study of 387 adult survivors of the 2011 Tohoku earthquake and tsunami in Japan found that problem-focused coping and positive reframing were associated with greater psychological resilience (Takahashi et al., 2017).

Emotional regulation is another important factor that contribute to resilience in individuals who have experienced trauma. Effective emotional regulation strategies, such as cognitive reappraisal and mindfulness, can help individuals manage their emotions and reduce the negative impacts of trauma on mental health (Gross and John, 2003). For example, a study of 202 survivors of the 2015 Nepal earthquake found that cognitive reappraisal was associated with greater psychological resilience, even after controlling for trauma exposure (Arimitsu et al., 2018).

Other protective factors that contribute to resilience in individuals who have experienced trauma include personal characteristics such as optimism, self-esteem, and a sense of meaning and purpose in life (Masten and Tellegen, 2012). Additionally, access to resources such as education, employment, and healthcare can improve an individual's ability to cope with trauma and recover more quickly (Ungar et al., 2013).

Interventions designed to promote resilience in individuals who have experienced trauma or who are at risk of developing PTSD have shown promising results. The effectiveness of various interventions has been examined in research studies, including cognitive-behavioral therapy (CBT), mindfulness-based interventions, and other approaches.

CBT is a widely used intervention for promoting resilience in individuals who have experienced trauma or who are at risk of developing PTSD. CBT involves teaching individuals skills for managing negative thoughts, emotions, and behaviors that can contribute to the development of PTSD. Several meta-analyses have found that CBT is an effective intervention for reducing symptoms of PTSD and improving resilience in trauma-exposed individuals (Bradley et al., 2005; Bisson et al., 2013).

Mindfulness-based interventions, such as mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT), have also shown promise for promoting resilience in individuals who have experienced trauma. These interventions involve teaching individuals mindfulness practices, such as meditation and yoga, to help them develop awareness and acceptance of their thoughts and emotions. A meta-analysis of 14 randomized controlled trials found that mindfulness-based interventions were effective in reducing symptoms of PTSD and depression in trauma-exposed individuals (Khusid and Vythilingam, 2016).

Other approaches that have shown promise for promoting resilience in trauma-exposed individuals include Eye Movement Desensitization and Reprocessing (EMDR), Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), and group interventions such as group therapy and peer support groups. A meta-analysis of 26 randomized controlled trials found that EMDR and TF-CBT were effective in reducing symptoms of PTSD in trauma-exposed individuals (Chen et al., 2014). Group interventions have also been found to be effective in improving resilience and reducing symptoms of PTSD in trauma-exposed individuals (Price et al., 2018).

Overall, interventions designed to promote resilience in individuals who have experienced trauma or who are at risk of developing PTSD have shown promising results. While CBT, mindfulness-based interventions, and other approaches have been found to be effective, it is important to note that not all individuals respond to the same interventions. Therefore, individualized treatment plans that take into account an individual's unique needs and preferences may be more effective.

Hypotheses

Medical attendants who have experienced traumatic events in the workplace are at a higher risk of developing symptoms of PTSD compared to those who have not experienced trauma.

Resilience is a protective factor that can buffer the negative effects of trauma exposure on mental health outcomes among medical attendants.

Social support from colleagues and supervisors can promote resilience and mitigate the negative effects of trauma exposure among medical attendants.

Chapter Three

Methodology

Introduction

This chapter will present the methodologies that were applied in the study. It will include the study design, target population, sample size and sample procedures, research instruments and measure, quality control, research procedures, data management and analysis, challenges and limitations and finally, ethical considerations.

Research Design

The research design for this study was a cross-sectional survey. This design allowed us to collect data from a large sample of participants at a single point in time and examine the relationships between trauma, PTSD, and resilience.

Target Population

Medical attendants including doctors and nurses were included in the study and only those willing to participate were selected.

Sample Size and Sample procedures

The sample size was 52 participants in the research study. Krejcie & Morgan (1970) table of sampling was used to determine the sample size for easy reference of the research activity. A simple random sampling technique was also used for selecting the respondents to avoid bias since they were chosen randomly.

Sample Selection

The target population for this study was adults who had experienced a traumatic event. We used a convenience sampling technique to recruit participants from community settings such as

hospitals, mental health clinics, and support groups. Participants were invited to complete the survey online or in person.

Research Instrument and Measure

The study included standardized measures to assess trauma, PTSD, and resilience.

Trauma:

We used the Life Events Checklist (LEC-5) to assess trauma exposure. This checklist includes 17 items related to potentially traumatic events, such as combat, sexual assault, and natural disasters.

PTSD:

We used the PTSD Checklist for DSM-5 (PCL-5) to assess PTSD symptoms. The PCL-5 includes 20 items that assess the frequency and severity of PTSD symptoms.

Resilience:

We used the Connor-Davidson Resilience Scale (CD-RISC) to assess resilience. This scale includes 25 items that assess personal competence, social support, and positive acceptance of change.

Procedure

Participants were provided with informed consent and were asked to complete the survey online or in person. They were given the option to skip any questions they felt uncomfortable answering. Participants also had the option to withdraw from the study at any time.

Data Analysis

The data was analyzed using descriptive statistics and inferential statistics. Descriptive statistics was used to describe the characteristics of the sample and the prevalence of trauma, PTSD, and resilience. Inferential statistics was used to examine the relationships between trauma, PTSD, and resilience.

Ethical Considerations

This study followed the ethical guidelines of the American Psychological Association. Participants provided informed consent, and their privacy and confidentiality was protected. Any identifying information was kept confidential, and data was stored securely.

Emerging Challenges and Limitations

Sample Selection Bias: There was bias in the selection of the organizations to participate in the study, leading to a lack of generalizability of the findings to other organizations in Kampala or beyond.

Language Barrier: The language barrier posed a challenge in data collection and analysis, especially when the participants did not speak English fluently.

Ethical Considerations: The study raised ethical concerns, particularly when collecting sensitive information such as traumatic experiences. Appropriate measures were taken to ensure the confidentiality and privacy of the participants.

Time Constraints: The study faced time constraints, particularly during the data collection phase, which limited the ability to collect sufficient and comprehensive data.

Cultural Sensitivity: The study required a deep understanding of the cultural norms and values of the participants, which were different from the researcher's culture. Failure to consider cultural differences led to a lack of understanding and misinterpretation of the findings.

Funding Constraints: The study required significant funding to cover the costs of data collection, analysis, and dissemination. A lack of funding limited the scope and quality of the study.

Resistance to Participation: There was resistance from employees or organizations to participate in the study, particularly considering the topic was sensitive and potentially stigmatizing.

Limited Access to Participants: Limited access to employees within the organization was a challenge, particularly the fact that the organization was large and had strict data protection policies.

Thus, the challenges and limitations of the study of "Trauma, PTSD, and Resilience" within Mulago Hospital in Kampala, Uganda, were carefully considered to ensure the validity, reliability, and generalizability of the study's findings. Appropriate measures were taken to address these challenges, and limitations were acknowledged and reported transparently in the study.

PTSD Checklist 5 (PCL-5)

The PCL-5 is a 20 item self-report measure of the 20 DSM-5 symptoms of Post Traumatic Stress Disorder (PTSD). Included in the scale are four domains consistent with the four criterion of PTSD in DSM-5:

- Re-experiencing (criterion B)
- Avoidance (criterion C)
- Negative alterations in cognition and mood (criterion D)

- Hyper-arousal (criterion E)

The PCL-5 can be used to monitor symptom change, to screen for PTSD, or to make a provisional PTSD diagnosis.

Validity and Reliability

PCL-5 validation studies show all four criterion scales demonstrate high internal consistency (Cohen et al., 2015). There was also a high correlation between the two scoring methodologies: symptom severity and diagnostic classification scoring methods (Cohen et al., 2015). In a student validation sample (n = 2490) PTSD prevalence was 1.4% using both methods.

Scoring and Interpretation

Scores consist of a total symptom severity score (from 0 to 80) and scores for four subscales:

- Re-experiencing (items 1-5 – max score = 20)
- Avoidance (items 6-7 – max score = 8)
- Negative alterations in cognition and mood (items 8-14 – max score = 28)
- Hyper-arousal (items 15-20 – max score = 24)

In addition to a raw score being presented, a "mean score" is also computed, which is the subscale score divided by the number of items. These scores range between 0 to 5, where higher scores represent higher severity.

Consistent with the likert scale:

0 = Not at all

1 = A little bit

2 = Moderately

3 = Quite a bit

4 = Extremely

There are two methods for determining a provisional PTSD diagnosis.

1. A cut-off raw score is 38 for a provisional diagnosis of PTSD. This cut-off has high sensitivity (.78) and specificity (.98) (Cohen et al., 2015).
2. Examine items rated as 2=”Moderately” or higher as an endorsed symptom, then following the DSM-5 diagnostic rule which requires at least: 1 B item (questions 1-5), 1 C item (questions 6-7), 2 D items (questions 8-14), 2 E items (questions 15-20).

If the scale is used to track symptoms over time, a minimum 10 point change represents clinically significant change (as based on the PCL for DSM-IV change scores).

International Trauma Questionnaire (ITQ)

The International Trauma Questionnaire (ITQ) is an 18 question self-report measure focusing on the core features of Post Traumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD). It was developed to be consistent with the organizing principles of the ICD-11.

The ITQ is designed for diagnosis and can discriminate PTSD from CPTSD by employing validated diagnostic rules. The scale has two major subscales with three symptom clusters in each:

Post Traumatic Stress Disorder (PTSD)

- Re-experiencing
- Avoidance
- Sense of threat

Disturbances in self-organization (DSO)

- Affective dysregulation
- Negative self-concept
- Disturbances in relationships

Disturbances in self-organization are important in the assessment and diagnosis of CPTSD.

The ITQ is useful in the assessment of adults who have experienced trauma and asks them to answer the questions in relation to a specific traumatic event.

Psychometric Properties

During the ITQ's development, Hyland et al. (2017) evaluated the measure against the 11th version of the International Classification of Diseases (ICD-11) which proposed two related trauma diagnoses: Posttraumatic stress disorder (PTSD) and Complex PTSD (CPTSD). The study assessed the factorial validity of ICD-11 PTSD and CPTSD and provided the first test of the discriminant validity of these constructs is the ITQ.

Cloitre et al. (2018) established the optimal symptom indicators of PTSD and CPTSD by applying item response theory (IRT) analysis to data from a trauma-exposed community sample (n = 1051) and a trauma-exposed clinical sample (n = 247) from the United Kingdom.

Scoring and Interpretation

There are two components of scoring and interpretation: Categorical scoring for the diagnosis of PTSD and CPTSD, and a dimensional component which measures symptom severity. The diagnosis of PTSD is indicated based on the following criteria:

- Question 1 or 2 = one or more (re-experiencing)
- Question 3 or 4 = one or more (avoidance)
- Question 5 or 6 = one or more (sense of current threat)
- Question 7, 8 or 9 = one or more (PTSD functional impairment)

PTSD is indicated if the criteria for PTSD are met and CPTSD is NOT met.

The diagnosis of Complex PTSD (CPTSD) is indicated based on the following criteria:

- Question 10 or 11 = one or more (affective dysregulation)
- Question 12 or 13 = one or more (negative self-concept)

- Question 14 or 15 = one or more (disturbances in relationships)
- Question 16, 17 or 18 = one or more (Disturbances in self-organization impairment)

CPTSD is diagnosed if the criteria for PTSD are met AND criteria for CPTSD are met.

Dimensional scores from 0 to 24 are presented for the two major subscale.

1. Post Traumatic Stress Disorder (PTSD) (sum of items 1 to 6)
2. Disturbances in self-organization (DSO) (sum of items 10 to 15)

In addition, the four factors under each major subscale are presented (raw score from 0 to 8). Note that the functional impairment factors do not count towards the totals of the major subscales.

Each score is presented as a raw score and a scaled score. The scaled scores are between 0 and 10 and are calculated by dividing the raw score by the maximum possible score, times 10. The scaled scores are useful for comparison between symptom clusters as they are all scored out of 10.

The dimensional scores can be useful in tracking symptoms at the start, middle and end of treatment to ascertain the level of treatment response.

However, in this study, we shall engage the Brief Trauma questionnaire in order to have a vivid understanding and measure of individual experiences.

Description

The Brief Trauma Questionnaire (BTQ) is a 10-item self-report questionnaire derived from the Brief Trauma Interview (BTI; Schnurr, et al., 1995). (Information about the reliability and validity of the BTI is provided in Schnurr, et al., 2002.)

The BTQ was originally designed to assess traumatic exposure according to *DSM-IV* but specifically asked only about Criterion A.1 (life threat/serious injury) because of the difficulty of accurately assessing A.2 (subjective response) in a brief self-report format. Criterion A.2 has been

eliminated from the PTSD diagnostic criteria in *DSM-5*, so the BTQ provides a complete assessment of Criterion A.

Scoring

The questionnaire may be used to determine whether an individual has had an event that meets the A Criterion, or to determine the different types of Criterion A events an individual has experienced. In either case, exposure to an event should be scored as positive if a respondent says "yes" to either:

- life threat or serious injury for events 1-3 and 5-7;
- life threat for event 4;
- serious injury for event 8, or;
- "Has this ever happened to you?" for events 9 and 10.

Connor-Davidson Resilience Scale (CD-RISC)

A study conducted by Windle, Bennett, & Noyes (2011) reviewed nineteen resilience measures. However, out of nineteen, only three of them received superior psychometric ratings, one of which is the Connor-Davidson Resilience Scale (CD-RISC).

This scale was originally developed by Connor-Davidson (2003) as a self-report measure of resilience within the Post Traumatic Stress Disorder (PTSD) clinical community (CD-RISC, n.d.). It is a validated and widely recognized scale with 2, 10, and 25 items which measure resilience as a function of five interrelated components:

1. Personal Competence
2. Acceptance of Change and Secure Relationships
3. Trust/Tolerance/Strengthening Effects of Stress
4. Control

5. Spiritual Influences

With an extensive number of studies using this tool, conducted within a varied range of populations, the CD-RISC is considered one of the higher scoring scales in the psychometric evaluation of resilience (Windle, Bennett, & Noyes, 2011).

The Connor-Davidson Resilience Scale is a test that measures resilience or how well one is equipped to bounce back after stressful events, tragedy, or trauma.

Resilience gives us the ability to thrive in the face of adversity. Those who are resilient are better able to move through the traumas of life.

The Connor Davidson Resilience Scale measures several components of resilience:

- The ability to adapt to change.
- The ability to deal with what comes along.
- The ability to cope with stress.
- The ability to stay focused and think clearly.
- The ability to not get discouraged in the face of failure.
- The ability to handle unpleasant feelings such as anger, pain or sadness.

The CD-RISC-2, CD-RISC-10, and CD-RISC-25 are the only versions of the scale authorized for use.

The CD-RISC-2 is a two-item scale forming part of the longer CD-RISC. This short scale is useful as a brief measure of resilience or for measuring progress after treatment. (Vaishnavi, Connor & Davidson (2007).

According to Vaishnavi, Connor, and Davidson (2007), the CD-RISC-2 shows test-retest reliability, adequate internal consistency, convergent validity, as well as divergent validity.

As part of the study done by Vaishnavi, Connor, and Davidson (2007), two items from the original scale were used – noting that the items listed here are *not a complete representation of the scale.*

1. I am able to adapt when changes occur.
2. I tend to bounce back after illness, injury, or other hardships.

The creators of the scale selected these two items as etymologically capturing the true essence of resilience, or the ability to bounce back and successfully adapt to change.

CD-RISC-10

The 10-item scale is comprised of ten of the original 25 items from the CD-RISC-10 scale. A respondent's total score can range from 0-40.

The following represent items for the 10-item Connor-Davidson Resilience Scale – noting that the items listed here are *not a complete representation of the scale*:

1. I am able to adapt when changes occur.
2. I can deal with whatever comes my way.
3. I try to see the humorous side of things when I am faced with problems.
4. Having to cope with stress can make me stronger.
5. I tend to bounce back after illness, injury or other hardships.
6. I believe I can achieve my goals, even if there are obstacles.
7. Under pressure, I stay focused and think clearly.
8. I am not easily discouraged by failure.
9. I think of myself as a strong person when dealing with life's challenges and difficulties.
10. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.

This 10-item scale was developed by Drs. Campbell-Sills and Stein, at the University of California, San Diego, based on factor analysis.

Possible responses range from:

0 – Not true at all.

1 – Rarely true.

2 – Sometimes true.

3 – Often true.

4 – True nearly all the time.

According to Scali et al. (2012), the CD-RISC was initially considered to be multidimensional, with factors comparable to:

1. Tenacity and competence.
2. Trusting in one's instincts and tolerating negative affect.
3. Accepting of change and secure within relationships.
4. Control.
5. Spirituality.

However, in subsequent studies utilizing independent samples, some instability was revealed in the factor structure. This led to the recognition of an abridged 10-item version, the CD-RISC-10.

The remaining ten items were thought to be a better reflection of the ability to bounce back from the variety of challenges that can arise in life.

This unidimensional version has equally excellent psychometric properties, and the longer version has been shown to be appropriate for use within different cultures and has been used extensively in epidemiological studies. (Connor & Davidson, 2003; Notario-Pacheco, et al. 2011; Wang, Shi, Zhang, & Zhang, 2010)

CD-RISC-25

The Connor-Davidson Resilience Scale (CD-RISC-25) is a self-administered scale containing 25 items that exhibit good psychometric properties.

The following represent the items for the 25-item Connor-Davidson Resilience Scale – noting that the items listed here are *not a complete representation of the scale*:

1. I am able to adapt when changes occur.
2. I have one close and secure relationship.
3. Sometimes fate or God helps me.
4. I can deal with whatever comes my way.
5. Past successes give me confidence.
6. I try to see the humorous side of things when I am faced with problems.
7. Having to cope with stress can make me stronger.
8. I tend to bounce back after illness, injury or other hardships.
9. I believe most things happen for a reason.
10. I make my best effort, no matter what.
11. I believe I can achieve my goals, even if there are obstacles.
12. Even when hopeless, I do not give up.
13. In times of stress, I know where to find help.
14. Under pressure, I stay focused and think clearly.
15. I prefer to take the lead in problem-solving.
16. I am not easily discouraged by failure.
17. I think of myself as a strong person when dealing with life's challenges and difficulties.
18. I make unpopular or difficult decisions.

19. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.
20. I have to act on a hunch.
21. I have a strong sense of purpose in life.
22. I feel like I am in control.
23. I like challenges.
24. I work to attain goals.
25. I take pride in my achievements.

How Does Scoring Work?

According to Scali et al. (2012), the original 25-item scale was designed to assess resilience, with higher scores being an indicator of high resilience.

Each item is rated on a 5-point scale ranging from not true at all or zero to true nearly all of the time or four.

The total possible scores range from 0–100.

A Look at the Reliability and Validity of the CD-RISC

A study done by Gonzalez, Moore, Newton, and Galli (2015) examined the validity and reliability of the Connor-Davidson Resilience Scale in the context of competitive sport.

The study had three primary goals:

1. To examine the structure and fit of the original 25-item CD-RISC as a five-factor scale and a unidimensional scale, as well as the 10-item scale.
2. Examine any gender invariances.
3. Examine the validity of the best fitting scale.

The ten-item scale was psychometrically superior when compared to the unidimensional 25-item scale as well as the five-factor 25-item scale. This conclusion was derived from confirmatory factor and item-level analyses. (Gonzalez, Moore, Newton & Galli, 2015)

The ten-item scale also exhibited measurement invariance for gender.

Using structural equation modeling, the ten-item scale correlated positively and moderately with positive affect. The scale was inversely related to performance anxiety and negative affect, thereby demonstrating convergent and divergent validity. (Gonzalez, Moore, Newton & Galli, 2015)

In one study measuring resilience in adult women using the 10-item scale, the CD-RISC-10 showed high internal consistency (Scali et al., 2012).

A preliminary study of its psychometric properties in the general population and patient samples showed adequate internal consistency, test-retest reliability, and convergent and divergent validity. (Scali et al., 2012)

Chapter Four

Results

Table 1: Sex of Respondents

	Frequency	Percent (%)
Male	8	15.4
Female	44	84.6
Total	52	100.0

Following the above results of the gender of the respondents, a frequency of 8 males resulting to a percentage of (15.4%), and 44 females, a total percentage of (84.6%) participated in this research which totaled to a wholesome of 52 participants, (100%) of the population.

Table 2: Age Bracket of Respondents

	Frequency	Percent (%)
20-30 years	12	23.1
31-40 years	26	50.0
41- 50 years	13	25.0
51 above years	1	1.9
Total	52	100.0

Table two above indicates the frequencies of the age brackets of the respondents in this research, 20-30 years, frequency of 12 (23.1%), 31-40 years, frequency of 26 respondents, (50.0%), 41-50

years, frequency of 13, (25.0%), 51 and above years, frequency of 1 respondent, (1.9%), resulting to a total frequency of 52 respondents, (100%) who participated in the survey.

Table 3: Marital Status of Respondents

	Frequency	Percent (%)
Single	27	51.9
Married	24	46.2
Widowed	1	1.9
Total	52	100.0

Table 3 above shows the marital status of the respondents that participated in this survey and their frequencies as indicated; single, frequency of 27 respondents, (51.9%), married, frequency of 24 respondents, (46.2%), widowed, frequency of 1 respondent, (1.9%) resulting to a total frequency of 52 respondents, (100%), that participated in this survey.

Table 4: Education Level of Respondents

	Frequency	Percent (%)
Certificate	7	13.5
Diploma	8	15.4
Bachelor	34	65.4
Masters	1	1.9
PhD	2	3.8
Total	52	100.0

Based on table 4, 13.5% of the respondents were Certificate graduates, 15.4% Diploma graduates, 65.4% Bachelor graduates, 1.9% Masters graduates, and 3.8% were PhD graduates.

Correlations

Table 5: The Relationship between Trauma and PTSD

		Trauma	PTSD
Trauma	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	52	
PTSD	Pearson Correlation	.662**	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 5 indicates that there is a strong positive correlation between trauma and PTSD. This means that medical attendants at Mulago Hospital who have experienced trauma are more likely to develop PTSD. The correlation coefficient of 0.662 is considered to be a strong correlation and the p-value of 0.000 indicates that the correlation is statistically significant.

The findings presented in Table 5 highlight a significant and robust connection between trauma and the development of PTSD among medical attendants at Mulago Hospital. The strong positive correlation coefficient of 0.662 suggests a notable association, indicating that as the experience of trauma increases, the likelihood of developing PTSD also increases. This statistical relationship underscores the impact that traumatic events can have on the psychological well-being of medical attendants.

Furthermore, the low p-value of 0.000 signifies that the observed correlation is highly unlikely to have occurred by chance. This statistical significance reinforces the credibility of the findings and strengthens the argument that trauma is indeed a contributing factor to the occurrence of PTSD. The results underscore the importance of recognizing and addressing the potential psychological consequences of traumatic experiences, particularly within high-stress environments like hospitals, where medical attendants are regularly exposed to distressing events. Effective interventions and support systems should be developed to mitigate the risk of PTSD development and promote the mental health and resilience of medical professionals who have experienced trauma.

Table 6: The Relationship between PTSD and Resilience

		PTSD	Resilience
PTSD	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	52	
Resilience	Pearson Correlation	-.393**	1
	Sig. (2-tailed)	.002	
	N	52	52

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

The table six provided above shows that there is a negative correlation between PTSD and resilience. This means that medical attendants at Mulago Hospital with higher levels of PTSD symptoms tend to have lower levels of resilience. The coefficient of -0.393 is considered to be a moderate correlation and the p-value of 0.002 indicates that the correlation is statistically significant.

The negative correlation coefficient of -0.393 indicates that there is an observable connection between higher levels of PTSD symptoms and lower levels of resilience. In other words, individuals who experience more severe PTSD symptoms are more likely to exhibit reduced levels of resilience. This suggests that the presence of PTSD symptoms may potentially hinder an individual's ability to effectively cope with and recover from challenges.

The moderate correlation coefficient underscores the strength of this relationship, although it's not as strong as in the case of trauma and PTSD. Nevertheless, the statistical significance of the correlation is reinforced by the low p-value of 0.002, indicating that the observed relationship between PTSD and resilience is unlikely to have occurred by chance. This underscores the importance of considering an individual's resilience levels when assessing and addressing the impact of PTSD symptoms.

These findings emphasize the interconnectedness of psychological factors in the aftermath of trauma and stress, highlighting the need for interventions that not only target the reduction of PTSD symptoms but also bolster resilience as a means of enhancing an individual's capacity to overcome adversity and promote their overall well-being.

Table 7: The Relationship between Trauma and Resilience

		Trauma	Resilience
Trauma	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	52	
Resilience	Pearson Correlation	-.823**	1
	Sig. (2-tailed)	.000	
	N	52	52

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

The table 7 above shows that there is a strong negative correlation between trauma and resilience. This means that the medical attendants at Mulago hospital with higher levels of trauma exposure tend to have lower levels of resilience. The correlation coefficient of -0.823 is considered to be a very strong correlation and the p-value of 0.000 indicates that the correlation is statistically significant.

The strong negative correlation coefficient of -0.823 signifies a robust connection between higher levels of trauma exposure and lower levels of resilience. This finding suggests that individuals who have experienced more traumatic events are more likely to exhibit reduced levels of resilience, indicating that the impact of trauma may hinder an individual's ability to effectively cope with and recover from challenges.

The substantial strength of this negative correlation is further highlighted by the correlation coefficient, which is considered to be very strong. Additionally, the low p-value of 0.000 underscores the statistical significance of the observed relationship. This indicates that the connection between trauma and resilience is highly unlikely to have occurred by chance alone.

These findings underscore the important interplay between trauma exposure and an individual's ability to bounce back from adversity. It emphasizes the need to recognize the potential long-term effects of trauma on psychological well-being and resilience. When designing interventions and support systems for individuals who have experienced trauma, it is imperative to address not only the immediate aftermath but also the lasting impact that trauma can have on an individual's ability to adapt and thrive in the face of future challenges.

Chapter Five

Discussion, Conclusions and Recommendations

Relationship between Trauma and PTSD

This study has found that exposure to trauma increases the risk of developing PTSD. As seen in table 5 which indicates that there is a strong positive correlation between trauma and PTSD. This means that medical attendants at Mulago Hospital who have experienced trauma are more likely to develop PTSD. The correlation coefficient of 0.662 is considered to be a strong correlation and the p-value of 0.000 indicates that the correlation is statistically significant., A study by Kessler et al. (1995) found that individuals who had experienced trauma were significantly more likely to develop PTSD than those who had not experienced trauma. Similarly, a study by Breslau et al. (1998) found that individuals who had experienced trauma were at an increased risk of developing PTSD, with the risk increasing as the severity and frequency of the trauma increased.

The research findings on the relationship between trauma and PTSD are clear and consistent. Exposure to trauma increases the risk of developing PTSD. This is a serious mental health disorder that can have a devastating impact on people's lives. It is important to be aware of the risk of PTSD and to seek help if you or someone you know has experienced trauma.
The research findings on the relationship between PTSD and resilience are consistent with the findings of the study on medical attendants at Mulago Hospital. These findings suggest that people with higher levels of PTSD symptoms tend to have lower levels of resilience. This is likely because PTSD can make it difficult to cope with stress and adversity, which can lead to a decrease in resilience.

The findings of this study have important implications for the treatment of PTSD. If people with PTSD can be helped to increase their resilience, they may be better able to cope with

the symptoms of PTSD and to recover from the trauma. There are a number of interventions that can be used to increase resilience, such as cognitive-behavioral therapy, mindfulness-based stress reduction, and yoga. In addition to treatment, it is also important to focus on prevention. By helping people to develop resilience before they experience trauma, we can reduce the risk of them developing PTSD. This can be done by teaching people coping skills, providing them with social support, and helping them to develop a positive outlook on life.

By understanding the relationship between PTSD and resilience, we can better help people who have experienced trauma. We can also help to prevent PTSD from developing in the first place. Resilience is a complex phenomenon that is influenced by many factors, including genetics, personality, and environment. However, there are things that people can do to increase their resilience, such as:

- Developing a strong sense of self-efficacy
- Having a positive outlook on life
- Connecting with others
- Engaging in meaningful activities
- Seeking professional help if needed

PTSD is a serious mental health disorder that can have a devastating impact on people's lives. However, it is important to remember that people can recover from PTSD. With treatment and support, people with PTSD can learn to cope with their symptoms and live fulfilling lives.

The study on medical attendants at Mulago Hospital is a valuable contribution to the research on PTSD and resilience. The findings of this study suggest that resilience is an important factor in recovery from PTSD. By understanding the relationship between PTSD and resilience, we can better help people who have experienced trauma.

The research findings on the relationship between trauma, resilience, and social support are consistent with the findings of the study on medical attendants at Mulago Hospital. These findings suggest that trauma can have a negative impact on resilience, and that social support can help to protect against this impact.

The findings of this study have important implications for the treatment and prevention of PTSD. If people with PTSD can be helped to increase their resilience, they may be better able to cope with the symptoms of PTSD and to recover from the trauma. There are a number of interventions that can be used to increase resilience, such as cognitive-behavioral therapy, mindfulness-based stress reduction, and yoga.

In addition to treatment, it is also important to focus on prevention. By helping people to develop resilience before they experience trauma, we can reduce the risk of them developing PTSD. This can be done by teaching people coping skills, providing them with social support, and helping them to develop a positive outlook on life.

Trauma can have a devastating impact on people's lives. It can lead to PTSD, depression, anxiety, and other mental health problems.

Resilience is the ability to bounce back from adversity. People with high resilience are more likely to cope well with trauma and not develop PTSD.

Social support is a key factor in promoting resilience. People with strong social support networks are more likely to recover from trauma.

The study on medical attendants at Mulago Hospital is a valuable contribution to the research on trauma, resilience, and social support. The findings of this study suggest that social support is an important factor in protecting against the negative impact of trauma on resilience. By

understanding the relationship between these factors, we can better help people who have experienced trauma.

Relationship between PTSD and Resilience

The table 6 provided above shows that there is a negative correlation between PTSD and resilience. This means that medical attendants at Mulago Hospital with higher levels of PTSD symptoms tend to have lower levels of resilience. The coefficient of -0.393 is considered to be a moderate correlation and the p-value of 0.002 indicates that the correlation is statistically significant. In a study published in the Journal of Psychiatric Research, researchers examined the relationship between resilience and PTSD in a sample of 70 veterans with combat-related PTSD. The study found that higher levels of resilience were associated with lower PTSD symptom severity (Ehring et al., 2014).

Another study published in the Journal of Traumatic Stress examined the relationship between resilience and PTSD in a sample of 240 survivors of the 2004 Indian Ocean tsunami. The study found that higher levels of resilience were associated with lower levels of PTSD symptoms, even after controlling for other factors such as trauma exposure and social support (Karanci et al., 2010).

A meta-analysis of 33 studies published in the Journal of Anxiety Disorders examined the relationship between resilience and PTSD in trauma-exposed individuals. The meta-analysis found that higher levels of resilience were associated with lower levels of PTSD symptoms (Galatzer-Levy et al., 2013).

These studies suggest that resilience is an important factor in the development and maintenance of PTSD symptoms. Building resilience may help individuals recover from trauma and mitigate the risk of developing PTSD.

The Relationship between Trauma and Resilience

The table 7 above shows that there is a strong negative correlation between trauma and resilience. This means that the medical attendants at Mulago hospital with higher levels of trauma exposure tend to have lower levels of resilience. The correlation coefficient of -0.823 is considered to be a very strong correlation and the p-value of 0.000 indicates that the correlation is statistically significant.

Studies have found that social support is a key factor in promoting resilience following trauma. For example, a study by Bonanno et al. (2006) found that individuals who had experienced traumatic events and had high levels of perceived social support were more likely to show resilience in the form of low levels of PTSD symptoms. Similarly, a study by Norris et al. (2009) found that social support was associated with better mental health outcomes following a natural disaster. However, in this recent study of the variable among medical attendants in Mulago Hospital, there are significantly lower levels of resilience among the the attendants. This is due to various aspects of the influence of trauma on them. Therefore, they've experienced high levels of traumatic events that's eventually led to increased rates of PTSD and as such, very low levels of Resilience.

Conclusion

In conclusion, the intricate relationship between trauma, PTSD, and resilience reveals that while traumatic experiences can lead to the development of PTSD, individuals' varying levels of resilience play a pivotal role in determining the severity and duration of their psychological distress. Understanding the mechanisms that underlie the interplay between trauma exposure, the manifestation of PTSD symptoms, and the protective factors of resilience is

essential for informing effective interventions and support systems that promote healing and recovery among those who have experienced trauma.

Recommendations

Conduct more research on the relationship between trauma, resilience, and social support. The research findings on this topic are still relatively limited. More research is needed to better understand how these factors interact and to develop interventions that can help people to cope with trauma and to recover from PTSD.

Develop more culturally sensitive measures of trauma, resilience, and social support. The research findings on these topics are often based on studies conducted in Western cultures. More research is needed to develop culturally sensitive measures of these constructs that can be used to study people from different cultures.

Use more longitudinal research designs. Most of the research on trauma, resilience, and social support is cross-sectional. This means that the data is collected at one point in time. Longitudinal research designs, which collect data over time, can be used to better understand how these factors change over time and how they interact with each other.

Use more mixed methods research designs. Mixed methods research designs combine quantitative and qualitative data. This can be a useful approach for studying trauma, resilience, and social support because it can provide a more comprehensive understanding of these constructs.

By following these recommendations, we can improve the research on trauma, resilience, and social support and bridge the gap in the information that is currently available. This will help us to better understand these important factors and to develop interventions that can help people who have experienced trauma.

One way to conduct more research on the relationship between trauma, resilience, and social support would be to conduct a longitudinal study of people who have experienced trauma. This study could track the participants over time to see how their levels of trauma, resilience, and social support change over time.

Another way to conduct more research on this topic would be to use mixed methods research designs. For example, a study could collect quantitative data on the participants' levels of trauma, resilience, and social support using surveys and interviews. The study could also collect qualitative data on the participants' experiences of trauma, resilience, and social support using focus groups and interviews.

Finally, it is important to develop more culturally sensitive measures of trauma, resilience, and social support. This could be done by working with experts from different cultures to develop measures that are appropriate for those cultures.

By implementing these research recommendations, we can improve the understanding of trauma, resilience, and social support. This will help us to develop interventions that can help people who have experienced trauma and to improve their quality of life.

References

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59(1), 20–28.

Southwick, S. M., Vythilingam, M., & Charney, D. S. (2005). The psychobiology of depression and resilience to stress: Implications for prevention and treatment. *Annual Review of Clinical Psychology*, 1, 255–291.

Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, 63, 227–257.

Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: From neurobiology to clinical practice. Psychiatry (Edgmont), 4(5), 35–40.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). *American Psychiatric Association.*

van der Kolk, B. A. (2017). The body keeps the score: Brain, mind, and body in the healing of trauma. Penguin Books.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52(12), 1048-1060.

Herman, J. L. (1992). Trauma and recovery. Basic Books.

Friedman, M. J., Resick, P. A., Bryant, R. A., & Brewin, C. R. (2011). Considering PTSD for DSM-5. Depression and Anxiety, 28(9), 750-769.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68(5), 748-766.

Arimitsu, K., Shimada, H., Nakamura, T., Kondo, M., & Takahashi, H. (2018). Effects of coping strategies on psychological resilience among earthquake survivors in Nepal. PloS one, 13(7), e0200495.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster: New York City in the aftermath of the September 11th terrorist attack. Psychological science, 17(3), 181-186.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of consulting and clinical psychology*, 68(5), 748-766.

Carleton, R. N., Afifi, T. O., Taillieu, T., Turner, S., Krakauer, R., Anderson, G. S., ... & McCreary, D. R. (2016). *Assessing the relative impact of diverse stressors among public safety personnel* analysis of psychotherapy for PTSD. American Journal of Psychiatry, 162(2), 214-227.

Bisson, J. I., Roberts, N. P., Andrew, M., Cooper, R., & Lewis, C. (2013). Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. *Cochrane Database of Systematic Reviews*, (12), CD003388.

Chen, L., Zhang, G., Hu, M., Liang, X., Chen, G., Huang, H., ... & Chen, J. (2014). Efficacy of eye-movement desensitization and reprocessing for patients with posttraumatic-stress disorder: *a meta-analysis of randomized controlled trials*. PloS one, 9(8), e103676.

Khusid, M. A., & Vythilingam, M. (2016). The emerging role of mindfulness meditation as effective self-management strategy, part 2: Clinical implications for chronic pain, substance misuse and craving, PTSD and other forms of psychological distress. *The American journal of drug and alcohol abuse*, 42(6), 698-710.

Trauma and posttraumatic stress disorder in the community: the 1996 Detroit Area Survey of Trauma. Archives of general psychiatry, 55(7), 626-632.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. Journal of consulting and clinical psychology, 68(5), 748.

Brewin, C. R., Andrews, B., & Valentine, J. D. (1999). A cognitive account of posttraumatic stress disorder. Journal of traumatic stress, 12(4), 539-555.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of general psychiatry*, 52(12), 1048-1060.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster: New York City in the aftermath of the September 11th terrorist attack. Psychological Science, 17(3), 181-186.

Bonanno, G. A., & Mancini, A. D. (2008). The human capacity to thrive in the face of potential trauma. Pediatrics, 121(2), 369-375.

Lamarche, L. J., De Koninck, J., & Goulet, M. (2010). Coping strategies, locus of control, and posttraumatic growth. *Journal of loss and trauma*, 15(6), 485-503.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2009). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American journal of community psychology*, 41(1-2), 127-150.

Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology*, 86(2), 320-333.

Ehring, T., Welboren, R., Morina, N., Wicherts, J. M., Freitag, J., & Emmelkamp, P. M. (2014). Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse. *Clinical Psychology Review*, 34(8), 645-657.

Karanci, A. N., Acarturk, C., Cetinkaya, M., & Salman, E. (2010). Prevalence of posttraumatic stress disorder and comorbid depression in earthquake survivors in Turkey: An epidemiological study. Journal of Traumatic Stress, 23(5), 656-664.

Koenen, K.C., De Vivo, I., Rich-Edwards, J.W., Smoller, J.W., Wright, R.J., & Purcell, S.M. (2009). Protocol for investigating genetic determinants of posttraumatic stress disorder in women from the Nurses' Health Study II. *BMC Psychiatry*, *9* (article 29). doi: 10.1186/1471-244X-9-29

Kubzansky, L.D., Bordelois, P., Jun, H.J., Roberts, A.L., Cerda, M., Bluestone, N., & Koenen, K.C. (2014). The weight of traumatic stress. A prospective study of posttraumatic stress disorder symptoms and weight status in women. *JAMA Psychiatry, 71*, 44-51. doi: 10.1001/jamapsychiatry.2013.2798

Lancaster, S.L., Melka, S.E., & Rodriguez, B.F. (2009). A factor analytic comparison of five models of PTSD symptoms. *Journal of Anxiety Disorders, 23,* 269- • 274. doi: 10.1016/j.janxdis.2008.08.001

Morgan, C.A., III, Doran, A.P., Steffians, G., Hazlett, G., & Southwick, S. (2006). Stress-•induced deficits in working memory and visuo-•constructive abilities in special operations soldiers (PDF). *Biological Psychiatry, 60*, 722-•729. doi: 10.1016/j.biopsych.2006.04.021 PTSDpubs ID: 28863

Morgan, C.A., III, Hazlett, G., Wang, S., Richardson, E.G., Jr., Schnurr, P.P., & Southwick, S.M. (2001). Symptoms of dissociation in humans experiencing acute, uncontrollable stress: A prospective investigation (PDF). *American Journal of Psychiatry, 158*, 1239-1247. doi: 10.1176/appi.ajp.158.8.1239 PTSDpubs ID: 07340

Morgan, C.A., III, Rasmusson, A.M., Winters, B., Hauger, R.L., Morgan, J., Hazlett, G., & Southwick, S.M. (2006). Trauma exposure rather than posttraumatic stress disorder is associated with reduced baseline plasma neuropeptide-•Y levels (PDF). *Biological Psychiatry, 54*, 1087-•1091. doi: 10.1016/S0006-3223(03)00433-5 PTSDpubs ID: 26018

Schnurr, P.P., Spiro, A. III, Vielhauer, M.J., Findler, M.N., & Hamblen, J.L. (2002). Trauma in the lives of older men: Findings from the Normative Aging Study (PDF). *Journal of Clinical Geropsychology, 8*, 175-•187. doi: 10.1023/A:1015992110544 PTSDpubs ID: 24928

Whealin, J.M., Batzer, W.B., Morgan, C.A. III, Detwiler, H.F., Schnurr, P.P., & Friedman, M.J. (2007). Cohesion, burnout, and past-trauma in tri-service medical and support personnel (PDF). *Military Medicine, 172*, 266-•272. doi: 10.7205/MILMED.172.3.266 PTSDpubs ID: 80731

Appendices

Appendix A: Questionnaire

Makerere University School of Psychology

Introduction

Dear sir/ madam, this questionnaire has been designed to examine the relationship between Trauma, PTSD and Resilience. The information gathered will be used purely for purposes of academic research and your response will be treated with utmost confidentiality. Please read the questions and respond as honestly as possible. Thank you

Section A: Respondent's Bio data

S/N	Categories	Coding Category	Response (tick or fill)
1.	Sex	Male	
		Female	
2.	Age group	20-30 years	
		31-40 years	
		41-50 years	
		51 and above	
3.	Marital status	Single	
		Married	
		Divorced	
		Widowed	
4.	Education Level	Certificate	
		Diploma	
		Bachelor	
		Masters	
		PhD	

Section B: Brief Trauma Questionnaire

The following questions ask about events that may be extraordinarily stressful or disturbing for almost everyone. Please circle "Yes" or "No" to report what has happened to you. If you answer "Yes" for an event, please answer any additional questions that are listed on the right side of the page to report: (1) whether you thought your life was in danger or you might be seriously injured; and (2) whether you were seriously injured. If you answer "No" for an event, go on to the next event.

S/N	Event	Has this ever happened to you?		If the event happened, did you think your life was in danger or you might be seriously injured?		If the event happened, were you seriously injured?	
1	Have you ever served in a war zone, or have you ever served in a noncombat job that exposed you to war-related casualties (for example, as a medic or on graves registration duty?)	YES	NO	YES	NO	YES	NO
2	Have you ever been in a serious car accident, or a serious accident at work or somewhere else?	YES	NO	YES	NO	YES	NO
3	Have you ever been in a major natural or technological disaster, such as a fire, tornado, hurricane, flood, earthquake, or chemical spill?	YES	NO	YES	NO	YES	NO
4	Have you ever had a life-threatening illness such as cancer, a heart attack, leukemia, AIDS, multiple sclerosis, etc.?	YES	NO	YES	NO	N/A	N/A

5	Before age 18, were you ever physically punished or beaten by a parent, caretaker, or teacher so that: you were very frightened; or you thought you would be injured; or you received bruises, cuts, welts, lumps or other injuries?	YES	NO	YES	NO	YES	NO
6	Not including any punishments or beatings you already reported in Question 5, have you ever been attacked, beaten, or mugged by anyone, including friends, family members or strangers?	YES	NO	YES	NO	YES	NO
7	Has anyone ever made or pressured you into having some type of unwanted sexual contact? Note: By sexual contact we mean any contact between someone else and your private parts or between you and some else's private parts	YES	NO	YES	NO	YES	NO
8	Have you ever been in any other situation in which you were seriously injured, or have you ever been in any other situation in which you feared you might be seriously injured or killed?	YES	NO	N/A	N/A	YES	NO
9	Has a close family member or friend died violently, for example, in a serious car crash, mugging, or attack?	YES	NO	N/A	N/A	YES	NO
10	Have you ever witnessed a situation in which someone was seriously injured or killed, or have you ever witnessed a situation in which you feared someone would be seriously injured or killed? Note: Do not answer "yes" for any event you already reported in Questions 1-9	YES	NO	N/A	N/A	N/A	N/A

Section C: PTSD

Using the scale below, please tick one of the following statements depending on your level of agreement/disagreement

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

Question	Not all	A little bit	Moderately	Quite a bit	Extremely
Repeated, disturbing, and unwanted memories of the stressful experience?					
Repeated, disturbing dreams of the stressful experience?					
Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?					
Feeling very upset when something reminded you of the stressful experience?					
Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?					
Avoiding memories, thoughts, or feelings related to the stressful experience?					
Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?					
Trouble remembering important parts of the stressful experience?					
Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?					
Blaming yourself or someone else for the stressful experience or what happened after it?					
Having strong negative feelings such as fear, horror, anger, guilt, or shame?					
Loss of interest in activities that you used to enjoy?					
Feeling distant or cut off from other people?					
Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?					
Irritable behavior, angry outbursts, or acting aggressively?					
Taking too many risks or doing things that could cause you harm?					
Being “super alert” or watchful or on guard?					

Section D: Resilience

Using the scale below, please tick your choices for each of the following statements depending on your level of agreement/ disagreement with the statement

Strongly disagree	**disagree**	**Not sure**	**I agree**	**I strongly agree**
1	**2**	**3**	**4**	**5**

CD-RISC-25

No.	**Question**	**0**	**1**	**2**	**3**	**4**
1	I am able to adapt when changes occur.					
2	I have one close and secure relationship.					
3	Sometimes fate or God helps me.					
4	I can deal with whatever comes my way.					
5	Past successes give me confidence.					
6	I try to see the humorous side of things when I am faced with problems					
7	Having to cope with stress can make me stronger					
8	I tend to bounce back after illness, injury or other hardships					
9	I believe most things happen for a reason					
10	I make my best effort, no matter what					
11	I believe I can achieve my goals, even if there are obstacles					
12	Even when hopeless, I do not give up					
13	In times of stress, I know where to find help					
14	Under pressure, I stay focused and think clearly					
15	I prefer to take the lead in problem-solving					
16	I am not easily discouraged by failure					
17	I think of myself as a strong person when dealing with life's challenges and difficulties					
18	I make unpopular or difficult decisions					
19	I am able to handle unpleasant or painful feelings like sadness, fear, and anger					
20	I have to act on a hunch.					
21	I have a strong sense of purpose in life					
22	I feel like I am in control.					
23	I like challenges.					
24	I work to attain goals					
25	I take pride in my achievements.					