Relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya

Grace Njoki Kariuki

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DECLARATION

I, the undersigned declare that this research thesis is my original work and to the best of my knowledge, has not been presented for the award of a degree in any university.

Grace Kariuki

Signature

Date 03/10/2024

This research thesis has been submitted with our approval as university supervisors.

Supervisors.

Name Dr. Lucy Njiru (PhD)

Signature ……

Date 03/10/2024

Supervisor

Name Dr. Daniel M. Kitonga (PhD)

Signature ……

Date 03/10/2024

DEDICATION

I dedicate this research thesis to my spouse Peter, children Victor, Mark and Sharleen who have been my strength and support structure in the whole journey.

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ABSTRACT

This research thesis investigated the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. The research aimed to determine poverty and anxiety levels within this population, examine the influence of poverty on anxiety levels, and analyze the relationship between these two factors.

The study employed a cross-sectional survey design. The target population for the study were the females-heading urban refugee households in Nairobi County, with a sample of 363 female urban refugees from Somalia, South Sudan, Democratic Republic of Congo, and Ethiopia residing in Nairobi County. The participants were selected using stratified random sampling. Data collection was collected using the Hamilton Anxiety Rating Scale (HAM-A) and a Basic Needs Measuring Scale, both of which demonstrated high reliability and validity in previous studies.

Descriptive and inferential statistical analyses, including multiple linear regression and Pearson's correlation, were conducted. The results revealed that 68.4% of participants reported a monthly household income below 10,000 Kenyan Shillings, while 68.1% exhibited moderate to severe anxiety levels. A significant positive relationship was found between poverty levels and anxiety levels ($\beta = 0.491$, $p < 0.001$; $r = 0.491$, $p < 0.01$).

This findings suggest a complex interplay between economic hardship and mental health challenges among females-heading urban refugee households in Nairobi. The study highlights the need for integrated interventions addressing both economic and mental health aspects of this vulnerable population. Further research is recommended to explore the multifaceted nature of this relationship and inform evidence-based policies and support programs.

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ABBREVIATIONS/ACRONYMS

APA: American Psychological Association

DRC: Democratic Republic of Congo

HAM-A: Hamilton Anxiety Rating Scale.

NGO: Non-Governmental Organization

OPHI: Oxford Poverty and Human Development Initiative

SAMHSA: Substance Abuse and Mental Health Services Administration

SHH: Single Headed Household

TUCREC: Tangaza University College Research Ethics Committee

UNCTAD: United Nations Conference on Trade and Development

UNESCO: United Nations Educational Scientific and Cultural Organization

UNHCR: United Nations High Commissioner for Refugees

USA: United States of America

WHO: World Health Organization

OPERATIONAL DEFINATION OF KEY TERMS

ANXIETY: An emotion or state of intense worry, fear or apprehension experienced by female refugees who are the heads of households living in Nairobi County, Kenya.

HOUSEHOLD: Families where a woman serves as the principal caregiver and provider. There are several reasons why this might be happening, such as the woman being completely responsible for the families financial and mental well-being due to the death of the male head, separation, divorce, or other occurrences.

MENTAL HEALTH: A condition of emotional and psychological well-being that enables people to successfully operate in their social and cultural settings while coping with the stresses and difficulties of daily life. It can be evaluated using metrics including mood, behavior, and cognitive functions.

POVERTY: The lack of accessibility to necessary resources including food, shelter, medical care, education, and employment prospects, needed for a respectable level of living. Socioeconomic factors like income, work status, household size, and access to social services were used to measure it.

REFUGEE: An individual displaced from their homeland due to persecution, war, violence, or human rights violations. They are currently unable or unwilling to return home due to a well-founded fear of further persecution.

CHAPTER 1

INTRODUCTION

1.1. Introduction

This chapter lays the groundwork for the study by providing essential background information. It clearly defines the research problem and outlines the study's purpose. Additionally, it presents three specific research questions and establishes the research's scope and limitations. The chapter will also highlight the study's significance and discuss four underlying assumptions.

1.2. Background to the Study

Poverty remains a significant global challenge, impacting various aspects of human life. According to World Vision (2021), poverty is defined as a lack of sufficient means of subsistence, including inadequate access to food, clean and safe water, clothing, and safe housing for individuals and their families. Poverty can be categorized as either absolute or relative (Shaw,1988). According to End Poverty (2023) absolute poverty refers to individuals unable to meet basic needs due to earnings falling below a nationally defined poverty line. Relative poverty, on the other hand, indicates that an individual's income is sufficient only for basic needs, typically 60% of the median family income in their economy (End Poverty, 2023). Although often associated with financial constraints, poverty extends beyond monetary measures and can be assessed through three primary categories: health, education, and standard of living (OPHI, 2018).

Nations worldwide, supported by major financial institutions like the IMF and non-governmental organizations, have implemented policies to reduce poverty, such as promoting universal primary education (Biglaiser,2022). However, significant challenges persist, particularly in regions experiencing economic instability due to conflicts, poor governance, or environmental

factors. Although progress has been made in combating poverty globally, addressing its root causes remains crucial. These causes include inequality, conflicts, inadequate healthcare systems, poor water infrastructure, climate change, and lack of essential infrastructure such as education (Concern Worldwide, 2021). A number of countries are attempting to address these factors through measures like improving healthcare, education, and technology.

According to a global study by the World Vision (2021) 9.2% (717 million) people live under extreme poverty conditions and what they earn per day is less than $1.90. Globally, countries have different poverty levels, for example the poverty percentage in the USA is at 11.4%. Semega et al. (2021), notes that even though here the poverty line would be earning less than $35 everyday, which in some countries is a lot of money. Based on global estimates from the World Health Organization (WHO, 2017), at some stage in their lives, one out of every four individuals will suffer from a mental or a psychological disorder.

Mental health problem occurrence is significantly higher among those who are poor and especially women. People living in poor conditions have a greater chance of suffering from common mental diseases including anxiety and depression compared to those who don't (WHO, 2017). Poverty levels and lack of ability to adequately cater for ones' needs can be a catalyst for anxiety disorder. Mental health and poverty in the USA are closely related as according to SAMHSA (2016), 25% of people living below poverty lines in the USA are suffering from a mental health illness which includes anxiety.

According to Lucia et al. (2020) gender-specific restrictions prevent women from accessing the labor markets. This act as a major contributing element to the fact that more than half of the households headed by females live in extreme poverty as opposed to only one-fifth of

the households headed by males. However, most of these factors can be dealt with good governance and economic models.

A 2019 World Economic Forum study found that approximately 275 million individuals worldwide experience anxiety disorders, and these statistics represents about 4% of the current world population. The prevalence of anxiety disorders globally differs when nations are compared to each other, ranging from 2.5% to 6.5% of the population. Among those affected globally, around 62%, which equates to around 170 million individuals, are females, while 105 million are males. The common anxiety disorders symptoms are being afraid of what the future holds, difficulty concentrating, tension, inability to relax headaches and abnormal breathing.

Although anxiety disorder causes are unknown (Kubala, 2021), the National Institute of Mental Health (2018) states that environmental and genetic factors could lead to anxiety. This is supported by Adam (2021) in a Medical News Today article where he stated that anxiety levels can be impacted by environmental factors like the family dynamics one is in, the culture and religious beliefs where one was brought up, and a variety of other early events like childhood trauma. Research by Michael and Katharina (2016) linked genes related to peptide/hormone signaling to anxiety phenotypes, including panic disorder (women), social anxiety disorder (SAD), and generalized anxiety disorder (GAD).

This study was also supported by Mathew et al. (2015) where they acknowledged the role and importance of RBFOX1 gene in the formation and creation of illnesses related to anxiety. However, Kubala (2021) from Czech Republic notes that apart from genetic factors, other factors that could cause anxiety are stress levels, personality type, traumatic event, medical issues, social issues like racism, and sex. Females have a higher chance of suffering from anxiety disorders when compared to men due to factors like hormonal imbalance, pregnancy, premenstrual and

menopausal transition (Shide, 2021). According to Adwa's et al. (2019) anxiety can manifest itself through mood disturbances, sleep disturbances, difficulty in concentrating, difficulty to carry out social or occupational duties, exhaustion or brain going blank.

According to Shide (2021) United Nations states that female refugees have a greater chance of developing anxiety because they are vulnerable to physical violence, political violence, sexual violence and economic inequalities. According to a study done in China by Pudpong et al. (2021) being divorced or losing a spouse, having chronic conditions such as comorbidities. The significant cultural and linguistic differences encountered upon fleeing their homes further elevate the risk of mental health problems among female refugees.

According to Patel et al. (2020) mental illness and poverty tend to go hand in hand. Patel et al. (2020) concluded that investments should be made in low - cost innovations to ensure that quality of care is given to low- income communities to reduce the huge gaps both of wealth and mental health. However, Bell and Hewstone (2015) state in their conclusion that "poverty is an economic issue and not a psychological issue," (p. 34). This means that focus should be on economic strategies for reducing poverty rather than psychological processes, unless the psychological processes focus on economic reforms.

According to Manseau et al. (2018), the most suitable way to reduce the connection of the different factors leading to those challenges holistically is to tackle mental health conditions like anxiety, there needs to be deliberate commitment by the government and stake holders to solve the issues. It is imperative for governments to take mental health as serious as they take physical health, and more investments are supposed to be made to treat mental illnesses. According to Kheirallah et al. (2022), effective screening is necessary for female-headed urban refugee households to ensure that proper treatment is provided to those experiencing mental health issues.

Professional psychological assistance is also required for female refugees who have undergone traumatizing experiences. The non-governmental organizations have set up centers to help but more needs to be done by governments hosting the refugee's communities.

Poverty and mental health are recognized as a critical issue across Africa. A strong correlation exists between poverty and mental health challenges, people living in poverty are more prone to experiencing severe anxiety, particularly women (Ndetei et al., 2013). The results are worse in Africa because it has many third world countries. According to a study by UNCTAD (2021) about 35% of people living in Africa are in the extreme levels of poverty. Africa represents a global percentage of 70% of all populations living below the poverty line. Nigeria and DRC lead with the most people living under the poverty line in Africa, and it is estimated that by 2030, they will represent 50% of Africa's poor and Africa will represent 87% of the poor globally (Hofer et al., 2021).

In Kenya, currently people who live in the extreme levels of poverty is around 20.9%, however, the number could reduce to 4.3% within the next 10 years (Hofer et al., 2021). In an effort to reduce the poverty levels in Kenya, the Kenyan government has employed measures such as widening electricity connection and also ensuring that as many children as possible get a chance to go to school to acquire skills that will enable them secure themselves livelihoods.

According to a study by UNHCR (2020), there are more than 82.4 million people worldwide who are displaced, of which more than 26.4 are refugees; and of the total refugees, 50% are women and girls (Women for Women International, 2021). It is estimated that six in every ten refugees live under poverty and this number could be higher since most refugees are not included in national surveys (Relief Web, 2021). The fact that a large percentage of refugees live under poor conditions and also experience factors like joblessness, poor financial circumstances, and absence

of social integration, they often face environmental difficulties and stressors which puts them at greater risk for anxiety and depression (WHO, 2021). These can be worse to women refugees who make up a bigger percentage of refugees and also live under more difficult conditions than men (Tahir et al., 2022).

This indicates that there is a relationship between levels of poverty and anxiety faced by refugees, hence the motivation to carry out this research from the desire to work with females heading urban refugees and find out how poverty levels affect their anxiety. Therefore, this research is meant to determine the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya.

1.3. Statement of the Problem

Eradicating global poverty continues to be a critical and ongoing challenge. The governments and NGOs are allocating resources to reduce poverty, but further efforts are needed. The general factors contributing to poverty levels include inequality, civil strife, poor healthcare systems, inadequate water infrastructure, climate change, and lack of key infrastructure such as education (Concern Worldwide, 2021).

Societal factors including social and economic inequalities, along with environmental stressors, can trigger anxiety which can then exacerbate poverty (Bell & Hewstone, 2015). To address anxiety and improve the well-being of individuals living below the poverty line, especially underprivileged groups such as refugees, it is crucial to consider the influence of poverty and its root causes on mental well-being (Elliott, 2016).

In Kenya the situation is no different, and more research needs to be done to clearly show how poverty affects mental health. However, Kiima et al. (2009) states that poverty levels are high in Kenya. They further state that not having enough resources contributed to the development of

unfavorable mental well-being and this has reflected in the health care needs of those who have mental illness, female refugees included. According to the UNHCR (2018), few refugees have strategies of generating income and this has a direct consequence on their overall lifestyle (Shide, 2021). The female refugees find themselves challenged to start a business in the competitive world which is male dominated. Poverty and anxiety are two major challenges faced by female-heading urban refugee households in Nairobi County, Kenya.

Although poverty is a global issue, the specific factors leading to poverty and anxiety among females-heading urban refugee households in Nairobi County require further investigation. The research done in the past has shown that poverty is a causal component that can also be an outcome issues to do with mental well-being. The recognition of addressing issues to do with mental health is vital for enhancing the quality of living among individuals who live below poverty line. The link between poverty and anxiety requires further investigation, with limited research directly exploring this connection among females-heading urban refugee households in Nairobi County, Kenya.

The study was done in Nairobi as it has a population of 80,000 (UNHCR 2021) refugees where the sample was drawn from. The study specifically explored the factors contributing to poverty and anxiety levels among these households, as well as the challenges they faced in accessing healthcare services for their mental health needs. The research was undertaken with the objective of expanding the knowledge base on the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. This helps in understanding how poverty affects the daily lives of females heading households and how it affects their mental health specifically anxiety. The recommendations are also given on what can be done to improve the well-being of this vulnerable group.

1.4. Objectives of the Study

One general objective and three specific objectives guided this research.

1.4.1 General objective

The general objective of this study was to determine the relationship between poverty and anxiety levels among Females heading urban refugee households in Nairobi County, Kenya.

1.4.2 Specific objectives

The study was guided by the following specific objectives, namely to;

1. Determine the levels of poverty and anxiety among females heading urban refugee households in Nairobi County, Kenya.
2. Investigate the influence of poverty on the anxiety levels of females heading urban refugee households in Nairobi County, Kenya.
3. Examine the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya.

1.5. Hypotheses

The study sought to test the following hypothesis:

HO_1: There will be no statistically significant relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya ($p > 0.05$).

Ha_1: There will be a statistically significant relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya ($p \leq 0.05$).

1.6. Significance of the Study

Studying the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya was significant for several reasons;

The study shed light on the complex and often hidden challenges that females heading urban refugee households face in matters related to poverty and mental health. It was critical to understand this because it will help with the development of targeted interventions by not only counselors but also other healthcare professionals that address the needs of this population effectively.

The study is also useful when it comes to the creation of policies and key programs targeted at improving the well-being of females heading urban refugee households. The findings of this study are important in developing policy interventions to address poverty and anxiety in females heading urban refugee households, which can also be applied in other settings that are similar to this.

The study on the relationship between poverty and anxiety levels among females heading urban refugee households was important because it provided a deeper understanding of the specific issues faced by this population. The study added to the existing literature on relationship between poverty and anxiety which can further be studied in different population.

1.7. Scope/Delimitation of the Study

The scope of the study encompassed all issues covered during the research and defined the boundaries of the study (Chetty, 2020). The researcher investigated the relationship between poverty and anxiety levels among females heading urban refugee households. The research gathered quantitative data through questionnaires. The quantitative data included measurable aspects such as income levels and anxiety scores. Those included in the study were 379 female-

led refugee households from six African nations (Burundi, DRC, Ethiopia, Rwanda, Somalia, South Sudan) residing in Nairobi. A validated poverty assessment tool was used to measure levels of poverty, and the Hamilton Anxiety Rating Scale (HAM-A) was employed to evaluate anxiety. Additionally, cognitive model theory and social exclusion theory were utilized to understand the relationship between poverty and anxiety among females heading urban refugee households.

Delimitations in the study referred to specific definitions and boundaries established by the researchers to ensure the achievability of the study's goals and objectives (Theofanidis & Fountouki, 2018). These delimitations helped the researchers focus their efforts and set realistic parameters for their work.

The research was delimited to females heading urban refugee households in Nairobi County, Kenya, specifically those coming from Somalia, South Sudan, DRC, Ethiopia and Rwanda. Households headed by men were not included in the study. Additionally, other types of mental health conditions apart from anxiety were excluded from the research study. This study exclusively examined the link between poverty and anxiety, excluding other potential contributors to anxiety.

1.8. Assumptions of the Study

An assumption is something that has been accepted as true and plausible by researchers and peers and this is done by lack of any evidence (Saunders et al., 2019). In this study, it was presumed that:

1. All respondents in the research provided reliable and authentic information.
2. The selected females heading urban refugee households have experienced increased anxiety levels

3. All participants selected for this research represented a true sample of the females heading urban refugee households who have experienced anxiety due to poverty levels.

1.9. Chapter Summary

This chapter introduced the study exploring the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. It outlined the background of the study, statement of the problem, research objectives, hypotheses, significance, scope, and assumptions. The study aims to provide a deeper understanding of the key challenges faced by females heading urban refugee households in terms of poverty and anxiety. The next chapter reviews the literature on poverty and anxiety levels among populations of women refugees.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter delves into relevant theoretical and empirical research on female refugees and poverty. It examines how poverty can increase the risk of mental illness and explores the disparity in anxiety levels between those living in poverty and those who are not. The chapter also looked at various literatures, critiques existing literature about topic under study, looked at research gaps, conceptual frameworks and the general chapter summary.

2.2. Theoretical Framework

The most crucial component of any research study is the theoretical literature review since it offers an in-depth comprehension regarding the existing field being investigated. This study theoretical literature review is crucial in locating pertinent theoretical frameworks that will direct the investigation. Mvumbi and Ngumbi (2015) state that a theoretical frame puts forward an appropriate theory the researcher uses to explain empirical observations made in the study. This study will use theoretical frameworks consisting of two mental health theories which are CBT; Cognitive behavioral theory of mental illness developed by Beck (1964) and the Social Cognitive Theory (SCT) by Bandura (1960).

2.2.1. Cognitive model theory

Beck's (1964) Cognitive Model is a theoretical framework that illuminates the link between poverty and anxiety among females heading urban refugee households. According to this theory, it suggests that individuals' perceptions shape their emotional and behavioral responses (Beck,1964).

Later, Beck (1976) discovered that people's interpretation of a situation, rather than the situation itself, determines their mindset. Beck's (1976) model of cognition proposes three levels: core beliefs or schemas, dysfunctional assumptions, and negative automatic thoughts (NATs). According to the cognitive model theory, people's ideas and attitudes about their financial status have an impact on how anxious they feel.

According to a study by Beck (1976), people tend to have higher levels of anxiety when they believe that their financial situation is unstable, unexpected, and beyond their control and or influence. This is because they believe that their security and well-being are in danger. The Cognitive Model theory also emphasizes how anxiety level is shaped by unfavorable thoughts and unreasonable beliefs.

In the context of females heading urban refugee households, poverty can have a serious influence on women's belief system, overall attitude and emotional experiences. Discrimination and restricted access to resources by these households, particularly in urban refugee communities, frequently experience higher levels of poverty (Danso, 2002). This instilled feelings of insecurity, powerlessness, and anxiety, can exacerbate poverty and anxiety levels.

Although the cognitive model theory offers a helpful framework for grasping the connection between poverty and anxiety, it has certain drawbacks. This approach does not take into consideration more extensive structural and systemic causes of poverty, like political instability and prejudice (Blank, 2003). This theory does not consider how society and cultural norms affect people's views and attitudes.

The cognitive model theory offers a thorough grasp of the cognitive processes and ideas that influence impoverished people's anxiety levels. Its focus on negative ideas and irrational beliefs and encouraging resilience and helpful coping mechanisms, this theoretical framework can

guide treatments aimed at lowering poverty and anxiety levels in females heading urban refugee households. However, its limits as well as the part that larger structural and systemic issues play in determining levels of poverty and anxiety must be taken into account.

The cognitive model theory provided a helpful framework for understanding the connection between poverty and anxiety, however it did not fully address the broader structural and systemic causes of poverty, such as political instability and discrimination (Blank, 2003). This limitation necessitated the incorporation of an additional theory to provide a more comprehensive understanding of the research problem.

2.2.2. Social Exclusion Theory (SET)

The term "Social Exclusion" emerged in the 1970s, coined by French policymaker René Lenoir. It initially described marginalized groups on the fringes of French society, but over time, academics like Daly (2006) have expanded the concept to encompass various aspects of social marginalization. Social exclusion theory provides an understanding of the complex and interrelated factors that contribute to poverty and the impact of poverty on individuals, particularly in the case of this study the refugee urban households headed by women.

Social exclusion theory looks at the various dimensions of poverty and social exclusion, including economic, social, political and cultural dimensions (Daly, 2006). Poverty and social exclusion go beyond the look of lack of resources and income. It also looks at the lack of access to power, status and basic human rights that prevent individuals from participating fully in society (Saraceno, 2001). Social exclusion theory does not look at poverty as a one individual problem or trait but rather as a relational and interactive issue. According to this theory, social, economic, and political institutions and systems, as well as the interconnections among them, are the root causes of poverty and social exclusion.

According to social exclusion theory, these structures continually produce and replicate poverty and social exclusion, therefore sustaining the cycle of these problems. Social exclusion theory is a helpful framework for comprehending the connection between poverty and anxiety in the context of females heading refugee urban households in Nairobi County, Kenya. The systemic issues include a lack of opportunity to go to school, lack of employment possibilities, and housing contribute to the poverty of female-heading urban refugee households in Kenya (Saraceno, 2001). These interwoven structural variables cause social exclusion, which both causes and maintains poverty.

The cultural and political aspects of poverty and social exclusion are also highlighted by social exclusion theory. Sexism frequently prevents women from achieving political and economic power, which perpetuates women's poverty (Smith, 2015). The cultural values and beliefs can also contribute to social isolation, and females-heading urban refugee households in particular may experience prejudice and exclusion because of their ethnicity, religion, and cultural heritage. Davies (2014) posits the theory of social exclusion, which suggests poverty's reach extends beyond economic hardship, affecting individuals socially and psychologically. High levels of anxiety are linked to poverty and social isolation, which is made worse by inaccessibility to essential services and support and community networks (Mezzina et al., 2022). These factors can contribute to a sense of fear, which can significantly impact an individual's overall health and their well-being. These effects may manifest in both physical and mental health issues, heightened levels of stress, and a potentially reduced life expectancy.

In summary, social exclusion theory offers a thorough structure for comprehending the relationship between poverty and anxiety in females heading refugee urban households in Nairobi County, Kenya. Therefore, this theory highlights the complex and interrelated factors that

contribute to poverty and social exclusion, including systemic, cultural and political factors and the effects of poverty on individuals leading to anxiety.

2.3. Empirical Literature Review

An empirical literature review is where a researcher examines what other researchers reported on their previously published studies or findings (Hannah, 2019). In this study, the researcher's empirical literature review will focus on studies that other researchers have conducted about the poverty levels among female refugees and or relations between poverty and anxiety and other mental illnesses among female refugees.

2.3.1. Levels of Poverty and Anxiety Among Female Refugee

Poverty is one of the major issues that affects refugees all over the world, especially female refugees and more so the households that are headed by females. The female refugees mostly are disadvantages because of their gender (Macarena et al., 2021). The challenges related to poverty that female refugees face is; lack of education opportunity, insufficient healthcare, few educational opportunities, gender-based violence, lack of social support and also lack of employment opportunities (WHO, 2022). Poverty can also lead to mental illnesses like anxiety for the female refugees (Bohland et al.,2023). Refugees face a significantly higher risk of developing mental health problems compared to the general population (Fazel et al., 2005). This is due to the stress and the negative emotions they go through when relocating to other countries (Bohland et al.,2023). The process refugees endure of abandoning their lives in their countries and then starting afresh in a foreign country can be distressing, and could lead to various mental health issues (Fazel et al., 2005).

According to OXFAM International (2020) women suffer from different forms of economic inequalities and a good example is that globally, women on average earn 24% less than men who are doing the same job. A greater percentage of women in the world are in the informal sector, and this is highlighted more in the fact that 75 out of 100 women in countries that are developing are in the informal sector (Sethuraman, 2008). One of the biggest problems is that refugees face poverty, which often affects more female refugees than men.

According to the United Nations High Commissioner for Refugees (UNHCR, 2022), the majority of refugees worldwide consist of women and children, and this is due to the fact that women frequently have limited access to resources, educational chances, and employment opportunities. The increased caregiving duties that women refugees might have may restrict their capacity to work or get education opportunities.

According to Agwaya and Muirura (2019), the degree of poverty among female refugees varies according to both their host nation and their country of origin. According to a study by the International Rescue Committee (2019), 89% of Jordanian women who were refugees from Afghanistan, Syria, and Somalia lived in poverty. The study also discovered that Jordanian refugee women had less access to employment and educational possibilities, which increased their poverty levels.

In Africa, the results of women refugees living in poverty is worse, according to a study by Napier et al. (2018), they found out that 96.2% (those earning less than $1.9 per day) of women refugees and asylum seekers in Durban, South Africa live in poverty. They draw the conclusion that there is severe food insecurity among black women refugees and asylum seekers in Durban city A similar research by Refugee Studies Centre (2019) at the University of Oxford discovered that the poverty rate among Somalian women refugees residing in Kenya was 99 percent.

According to WHO (2017 over 260 million people suffer from anxiety globally, and women represent 170 million of that number. In female refugees, anxiety is a common mental well-being related challenge. The World Health Organization (WHO, 2018) highlights a higher prevalence of mental health concerns like anxiety and hopelessness among refugees. The women refugees encounter particular difficulties that might cause anxiety, such as prejudice, trauma, sexual abuse and isolation. It might be challenging for female refugees to control their anxiety because of not having sufficient accessibility to mental health care.

Research published in the International Journal of Translational Medical Research and Public Health (Armstrong-Mensah et al., 2023) found that female Syrian refugees in neighboring countries experience elevated anxiety due to their living conditions and limited access to healthcare. A similar Journal of Immigrant and Minority Health study linked war and displacement with high anxiety levels in female Iraqi refugees residing in the US (Pampati et al., 2017).

According to a report by WHO (2018), more refugees than the general population experience anxiety disorders after being in the host nation for more than five years. The report's findings suggest that among long-term refugees, the prevalence of anxiety and depressive disorders is frequently reported to be 20% or higher. However, it is key to understand there is considerable variation in these estimates, with rates ranging from 4.4% to 86% for PTSD, 20.3% to 88% for anxiety disorders, and 2.3% to 80% for depressive disorders.

In Africa, there have been studies that show refugees have high levels of anxiety. According to a publication in the Journal of Traumatic Stress, female DRC refugees residing in Tanzania showed high levels of anxiety as a result of their trauma and displacement experiences (Mels et al., 2014).

Another study related to that conducted in Ethiopia showed that female Eritrean and Ethiopian refugees who were residing in Ethiopia and experienced violence, discrimination, and displacement exhibited high levels of anxiety (Yonas., 2013). In Kenya, according to Hossain et al. (2020)) female Somali refugees residing in the Dadaab refugee camp in Kenya reported high levels of anxiety. According to the study, it was challenging for the female refugees to manage their anxiety because there was little access to mental health treatments in the camp.

Nyachieng'a (2012) also reports that refugees in Dadaab camp suffer from various mental health issues, including anxiety, depression, and post-traumatic stress disorder (PTSD). The study highlights the lack of adequate mental health services in the camp, leading to many refugees going untreated. A 2018 study by the United Nations High Commissioner for Refugees (UNHCR) identified anxiety as one of the most common mental health conditions among Somali refugees in Dadaab camp. The study further emphasized the need for increased access to mental health services for this vulnerable population.

These studies collectively demonstrate the critical need for enhanced mental health support for female Somali refugees in Dadaab camp. The limited availability of mental health treatments in the camp exacerbates the challenges faced by these women in coping with their anxiety and other mental health issues.

As a conclusion, female refugees experience difficulties like poverty and anxiety, which may be harmful to their mental health. Poverty is a huge problem since they often struggle to meet their most basic needs, which can cause anxiety and stress. Their experiences with discrimination, trauma, and solitude, female refugees frequently suffer from anxiety. It is crucial that decision-makers and organizations address the particular difficulties experienced by female refugees and give them access to assistance for mental health, employment, and healthcare.

2.3.2. Influence of Poverty on Anxiety Levels

Anxiety disorders affect millions globally, while poverty, a widespread socioeconomic issue, can significantly increase the risk of developing them. Poverty effects are not only limited to homelessness, poor living, standards, food insecurities, a lack of quality education, but can also result into serious mental health challenges (APA, n.d.). Psychological well-being has generally not been viewed as fundamentally important by financial specialists and strategy creators, and as of not long ago, emotional well-being had not been assessed as an antipoverty necessity (Ridley, 2020).

According to Knifton and Inglis (2020), the mental health of people can be shaped by factors like societal conditions, environmental conditions, and economic conditions. Multiple studies have established a clear connection between poverty and anxiety, as the following sections will explore.

Poverty can cause mental illnesses including anxiety by several ways. Alloush (2018) states that some of the drivers of poverty is when people lose their employment for one reason or the other which leads to their income declining and consequently, mental illness follows. It's likely that when one's income or wealth increases, mental illnesses decline. McLaughlin et al. (2010) identified in their systematic review that individuals coming from low-income homes are twice as likely to experience anxiety disorders than people from high-income families.

Another study conducted by Burroughs et al. (2021) discovered a reciprocal link connecting poverty and anxiety, indicating that the two are closely intertwined. Anxiety causes poverty, but poverty can also cause anxiety. According to the study, individuals grappling with anxiety disorders tend to have a higher probability to experience money problems because of absenteeism, decreased productivity at work, and medical expenses.

A Scotland study by Cheong et al. (2019) found out that 23 men out of 100 and 26 women out of 100 who live in poverty-stricken regions had high levels of mental illnesses compared to 16% of men and 12% of women that live in areas least stricken with poverty. According to Knifton and Inglis (2020), inequalities in mental health begin at an early age, and this was shown by more than 8% of 4-year-old from poor families showing abnormal social behavior compared to only 4% of the same age group who come from less poor families; and by the age of seven the gap had increased by more than 10%.The study yielded results similar to those found by Mackenbach et al. (2018) where they concluded that there is a socioeconomic inequality in mental health between families that had high poverty levels compared with ones that had low ones.

Africa grapples with a significant poverty burden, impacting a vast majority of its population. A well-documented association exists between poverty and mental health issues, particularly anxiety disorders.

Ohrnberger et al. (2020) discovered in their study that poverty does indeed contribute to mental illnesses. They demonstrated that poverty is linked to limited access to basic necessities like healthcare, coupled with inadequate living conditions. In addition, Njaka et al. (2022) study in Nigeria identified a connection between poverty and anxiety, with anxiety symptoms worsening poverty through decreased work productivity, absenteeism, and healthcare expenses.

Poverty is a significant issue that affects a large percentage of the population in Kenya. Ndetei et al. (2021) conducted a comprehensive study that demonstrated a direct correlation between poverty and the likelihood of developing anxiety disorders in Kenya. Their findings showed that poverty is closely associated with inadequate living conditions, such as overcrowded housing, limited access to clean water and healthcare, and persistent food insecurity. These factors contribute to chronic stress, which accelerates the onset of anxiety disorders and other mental

health challenges. The study also emphasized that the stress of poverty tends to disrupt familial and social support systems, further compounding the mental health crisis in impoverished communities.

Memiah et al. (2019) expanded on this by highlighting the disparities in accessing mental health care services between low-income and higher-income families in Kenya. Their study found that individuals from low-income households are significantly less likely to seek mental health care, citing financial constraints, limited availability of services, and societal stigma surrounding mental health as barriers. This lack of access exacerbates untreated anxiety disorders, creating a vicious cycle where mental illness perpetuates poverty by reducing an individual's ability to work and earn income. Memiah et al.'s findings underscore the critical need for mental health interventions that are affordable and accessible to low-income populations.

These conclusions were supported by, McDaid et al. (2019) emphasized the profound influence of social, economic, and physical environments on mental well-being. Their research suggests that individuals living in impoverished conditions are disproportionately exposed to factors that undermine mental health, such as violence, lack of education, unemployment, and environmental hazards. These conditions not only increase the risk of developing anxiety but also create barriers to recovery.

McDaid et al. (2019) argued that effective poverty alleviation efforts must incorporate mental health services to break the cycle of poverty and poor mental health. Their research aligns with global studies that show how addressing social determinants, such as housing, education, and income, can significantly reduce the prevalence of anxiety disorders among disadvantaged populations (Patel et al., 2018).

In conclusion, anxiety levels are significantly impacted by poverty due to factors like ongoing stress, inaccessibility of quality mental health care, and other social and economic challenges. People who live in poverty have higher chances of acquiring anxiety disorder. The connection between poverty and anxiety is bidirectional in nature, both of these issues can contribute to one another. Therefore, addressing poverty is key to lowering the prevalence of anxiety disorders. The goal of eliminating poverty and expanding mental health services accessibility to people coming from low-income places should be pursued by policymakers and healthcare professionals.

2.3.3. Relationship Between Poverty and Anxiety Levels

Poverty and mental health conditions like anxiety are very much intertwined, especially when you consider vulnerable populations like female refugees. Female refugees more often than not go through substantial hardships which are related to forced migration, traumatic experiences, and post-resettlement difficulties that affects their mental health (Fazel et al., 2005). Displaced persons frequently live in extreme poverty conditions due to limited opportunities and resources in their host countries.

Global research consistently shows a link between socioeconomic status and anxiety and other mental health issues among refugees. Turrini et al. (2017) conducted an analysis of 29 studies examining common mental health disorders among refugees resettled in developed nations. The analysis revealed a strong association between low socioeconomic status, unemployment, and poverty, and high levels of anxiety. Turrini et al. (2017) further revealed that refugees with lower incomes were 1.4 to 3 times more likely to experience mental health disorders compared to those with higher socioeconomic status.

A Canadian study by Beiser and Hou (2006) identified a strong correlation between poverty levels and PTSD among Southeast Asian refugees. Notably, this link persisted even decades after resettlement. In the study, for every $10,000 increase in household income there was an average 4-point decrease in PTSD symptoms as measured by the HSCL-25 scale. The researchers suggested that an increase of income could in turn reduce PTSD by decreasing anxiety related to unmet basic needs. Building on these findings, other studies report a heightened vulnerability to mental health problems among female refugees. Financial difficulties and poverty are cited as key contributors to this disparity. A review of the literature by Li et al. (2016) identified a consistent trend across multiple studies: anxiety and depression were more prevalent among female refugees compared to males. They noted that women more than men face more socioeconomic marginalization which can worsen trauma-related mental illnesses.

In the African context, several researches done also show a connection between low income and anxiety among refugee women. Njaka et al. (2022) study in Nigeria identified a connection between poverty and anxiety, with anxiety symptoms worsening poverty through decreased work productivity, absenteeism, and healthcare expenses. Adaku et al. (2016) conducted a study in northern Uganda specifically examining anxiety and depression among South Sudanese refugee women. It reported 80% income insufficient to cover needs, and this group showed more mental distress. Anxiety symptoms were higher in women who were unemployed or relied on inadequate informal jobs and financial stress was a major predictor of anxiety.

In Kenya, the intersection of poverty, income, and anxiety among urban refugees, particularly women, is well-documented, though more research is needed to quantify these relationships. Hyojin et al. (2019) conducted an in-depth study of Somali refugees in Nairobi, revealing that daily struggles to meet basic needs such as food, water and shelter were central contributors to

mental and physical health challenges. The study found that financial insecurity and lack of opportunities created chronic stress, which manifested in increased rates of anxiety, depression, and other behavioral health problems. This research aligns with findings from global studies on the refugee population, which emphasize the vulnerability of displaced individuals to mental health issues due to their unstable economic conditions (Silove et al., 2017).

Pavlish (2005) also highlighted the impact of poverty induced anxiety among Somali refugee women in Kenya, detailing the extreme financial stress these women faced as heads of households. The study found that the continuous worry about basic survival such as feeding children and paying rent often forced women to forego their own nutritional needs to provide for their families. This financial strain led to psychosomatic symptoms, including headaches and gastrointestinal problems, which are commonly associated with prolonged anxiety and stress (Laban et al., 2008). Pavlish's research emphasized that for female refugees, the anxiety stemming from poverty not only affected their mental well-being but also had direct physical health consequences, underscoring the need for comprehensive mental health services within refugee support frameworks.

A similar study by Hadley and Sellen (2006) noted that food insecurity among refugee households in Kenya was strongly correlated with anxiety, particularly in females-heading households where the burden of care was highest. The women reported being constantly overwhelmed by the pressure to provide for their families in the face of insufficient resources, a situation that exacerbated feelings of helplessness and heightened their susceptibility to mental health issues. This research supported the notion that poverty, in conjunction with gender-specific vulnerabilities, significantly worsened mental health outcomes for female refugees.

Additionally, studies like that of Kaiser et al. (2017) found that Somali women refugees in Nairobi often experienced social isolation, which compounded the psychological burden of poverty. The isolation was attributed to language barriers, cultural differences, and gendered restrictions on mobility and economic participation, all of which heightened their anxiety. The cumulative effect of these stressors made them more vulnerable to anxiety disorders, often worsening over time as financial conditions remained stagnant or deteriorated.

Despite these studies, there remains a notable gap in the literature when it comes to directly quantifying the relationship between income levels and anxiety symptoms in females heading refugee households in Kenya. The qualitative research has established the connection between poverty, unemployment, and anxiety, the lack of specific quantitative data limits the ability to make precise recommendations for policy interventions. The future research could benefit from longitudinal studies that explore the evolving relationship between income changes and mental health outcomes in these vulnerable populations (Porter & Haslam, 2005). Moreover, targeted interventions aimed at addressing both economic empowerment and mental health support for females heading refugee households are crucial for breaking the cycle of poverty and anxiety.

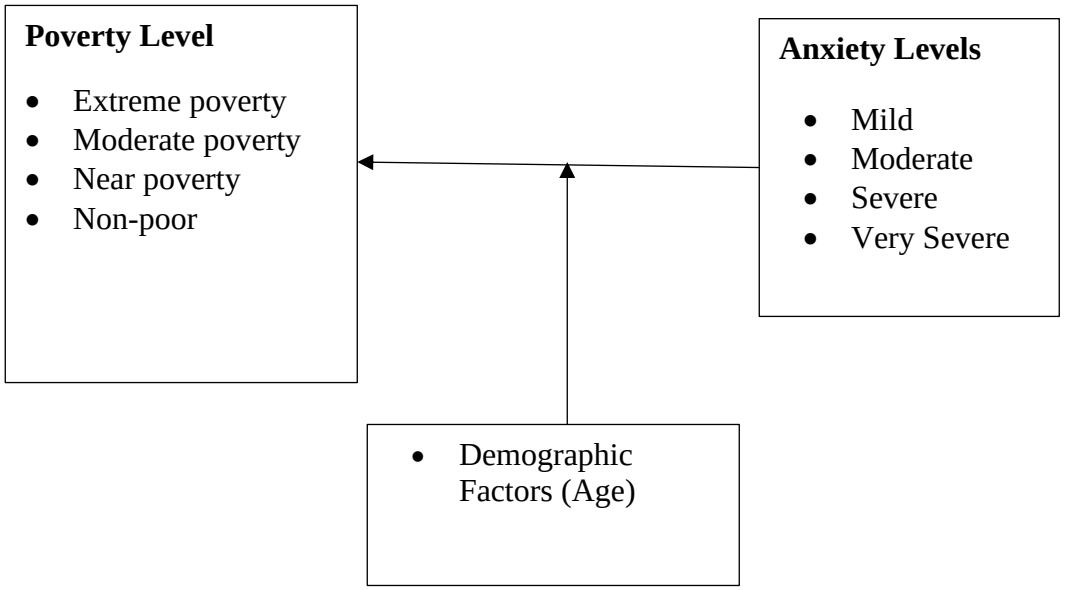
2.4. Research Gaps

The literature review and analysis provided a comprehensive summary on the relationship between poverty and anxiety levels. However, several gaps in the literature required addressing. The review presented examples of studies on poverty and anxiety levels among female refugees conducted in other countries, there was limited research directly addressing urban refugee households in Nairobi County, Kenya. The review highlighted the challenges faced by female refugees, such as poor access to healthcare, education, and social support, but further research was needed to determine the specific causes of anxiety among female refugees in Nairobi County. This

study aimed to quantitatively examine associations between income and anxiety in females heading refugee households in Kenya to strengthen understanding of this relationship and better address refugee mental health needs within the scope of urban refugees in Nairobi County.

2.5. Conceptual Framework

According to Devi (2017) a conceptual framework "is a diagrammatic research tool which assists the researcher in developing awareness and understanding of the situation under investigation, and help to communicate it." The study proposes the following conceptual framework.



Source: Author

Figure 1: Conceptual Framework

The (IV) was the poverty level. According to Bhandari (2022) an independent variable "is the cause and its value is independent of other variables in the study."

The dependent variable (DV) in a study according to Bhandari (2022) “is the effect and its value depends on changes in the independent variable”. The DV was the anxiety levels. Anxiety levels can be absent, mild, moderate severe, and very severe.

The Mediating Variable (IV) were analyzed to see if they influence the poverty-anxiety relationship.

2.6. Chapter Summary

This chapter delved into relevant scholarly literature on poverty, anxiety levels, and the connection between the two. It also explored the conceptual and theoretical framework that underpinned the understanding of this relationship. The literature focused on the relationship between poverty and anxiety, and two theories discussed in the chapter were the Social Exclusion Theory and the Cognitive Model Theory. The next chapter will look at research methods for the proposed study.

CHAPTER 3

METHODS

3.1. Introduction

This chapter outlines the research design and methodology. It details the study type, the research location, the target population, the sampling approach used to select participants, the data collection tools and instruments, the data gathering procedures, and the methods employed for data analysis. Additionally, the chapter addresses and incorporates ethical considerations.

3.2. Research Design

The study adopted a quantitative research method to collect and analyze data. The use of numerical measures was essential as it provided a more comprehensive picture of the relationship between poverty and anxiety. The study utilized a correlational survey design with a cross-sectional approach. This design was chosen because it enabled data collection at a single point in time, allowing the researcher to examine the relationship between poverty and anxiety among females heading urban refugee households in Nairobi County, Kenya. The cross-sectional approach was deemed appropriate for this study as it provided a snapshot of the current situation, which aligns with the research objectives. The data collected was statistically analyzed to provide meaningful insights into the relationship between poverty and anxiety among female-heading urban refugee households.

The cross-sectional nature of the study may not account for changes over time, it offers several advantages for this particular research. It allows for the efficient collection of data from a large sample size, which is crucial for establishing correlations between variables. Additionally, it provides a cost-effective means of gathering data, which is particularly important given the

resource constraints often associated with refugee-focused research. The study proposed two hypotheses, which were tested for support or rejection after the researcher collected and analyzed the data.

3.3. Location of the Study

The research was carried out in Nairobi County, Kenya's capital city, focusing on Kawangware, Kayole, and Eastleigh - areas with the highest concentration of urban refugees. Nairobi County was chosen by the researcher because of its established infrastructure, accessibility to the necessary officials, and availability of resources needed for the research. Nairobi County has a refugee population of 80,000 (UNHCR, 2021), which made it an excellent location because the large population offered a diverse sample for the study, enabling a more thorough analysis of the relationship between poverty and anxiety levels among females heading urban refugee households. Nairobi County also has the majority of government offices, as well as other institutions like NGOs which offered the assistance needed to complete the research successfully.

It is important to note that while Nairobi County offers many advantages as a research location, it also presents certain limitations. The large and diverse population might produce a sample that is more complex, potentially making it challenging to generalize the findings to other populations. This limitation will be addressed in the discussion of the study's findings.

3.4. Target Population (N)

In a research study, the target population encompasses a group of individuals, articles, cases, or elements in the real world that share specific characteristics (Mvumbi & Ngumbi, 2015). The intended participants for the research were the females heading urban refugee households in Nairobi County, Kenya. This population was chosen because it was a vulnerable group facing

multiple challenges such as poverty and anxiety, which are the main focus of this research. According to statistics from UNHCR (2021), there are 80,000 refugees in Nairobi, with women making up 48.2% or approximately 38,560. To ensure that the findings are meaningful to this study, the study only considered those women who are over the age of 18, which is 31.2% of all refugees, or approximately 24,960 women. These refugees are primarily from Somalia (54%) South Sudan (24.6%), DR Congo (9%), Ethiopia (5.8%), and other nations (6.6%) (UNHCR, 2021). This target population offered the study several advantages, including a large sample size, access to a diverse group of people from various countries, and the opportunity to examine the different challenges faced by females-heading urban refugee households. The researcher discussed accessibility of the female refugees with the heads of the urban refugee organizations where data was collected.

3.5. Sampling Design

The selection process for participants, known as the sampling design, plays a critical role in research. It ensures the chosen sample accurately reflects the target population. Penn (2006) explains that the sampling design involves a deliberate procedure for choosing a subset of participants from a larger population. The chosen participants possessed characteristics that accurately reflected to the overall population. This section explored the development of the sampling frame, the chosen sampling techniques (multi-stage random sampling and stratified random sampling), and the rationale behind the sample size.

3.5.1 Sampling Frame

Sampling frame simply refers to specific source that we draw our sample from (Mackinnon, 2020). This study, used the latest UNHCR statistics that lists the source of all refugees found in Nairobi County.

Table 1: *Study Population Distribution*

Refugee Country	Population	Percentage (%)
Somalia Refugees	13,805	54
South Sudan Refugees	6,289	24.6
DRC Refugees	2,301	9
Ethiopia Refugees	1,483	5.8
Others	1,687	6.6
Total	**25,565**	**100**

Source: UNHCR (2021)

3.5.2. Sample size determination

This study employed the Krejcie and Morgan formula to determine an appropriate sample size. This formula ensures the chosen number of participants (the sample size) adequately represents the target population - females-heading urban refugee households in Nairobi County. The formula minimizes margin of error, resulting in a high degree of confidence that the sample reflects the larger population. The equation utilizes a 95% confidence interval and an estimated margin of error of 5%.

$$\mathbf{S} = \frac{x^2 NP(1-P)}{d^2(N-1)+x^2 P(1-P)}$$

Where:

S = the required sampling size

X² = the table value of Chi-Square for 1 degree of freedom at the desired confident

N = the population size

P = the population proportion (0.05) for maximum sample size

1-p = estimate proportion of failure

d^2 = square of maximum allowance for error between the true proportion and sample proportion which is 5%

$$S = \frac{1.96^2 \times 24{,}960 \times 0.5(1-0.5)}{0.05^2 \times 24{,}960 + 1.96^2 \times 0.5(1-0.5)} = \frac{24552.626}{64.8729} = 379$$

The study involved a total of 379 participants where there was attrition or some data missing, the researcher applied the necessary statistical methods to minimize bias. However, the researcher followed up and tracked the participants to reduce the attrition rate.

3.5.3. Sampling techniques

Sampling is the process of selecting subjects to represent the main population of our study to ensure representation (Oladipo, et al., 2015, p. 11). According to Penn (2005, p. 167), "a whole population is divided into a number of mutually exclusive sub-population." For this study, a multi-stage random sampling and stratified sampling techniques were applied.

The first stage involved selecting three constituencies from the 17 in Nairobi County through simple random sampling. In the second stage, a random sample of informal settlements within each constituency where urban refugee agencies have outreach offices was selected using a random sampling method. This guaranteed an equal opportunity for selection of the various countries.

The population of females heading urban refugees was stratified into groups based on the countries of origin. The stratification was done using the UNHCR statistics that list the source of all refugees found in Nairobi County. The strata were: Somalia (54%), South Sudan (24.6%), DR Congo (9%), Ethiopia (5.8%), and others (6.6%). In each stratum, participants were chosen using a simple random sampling technique. The number of participants selected from each stratum was proportional to its size in the overall population.

This stratified random sampling approach ensured that the sample accurately represented the diverse refugee population in Nairobi County. It allowed for the inclusion of refugees from different countries of origin in proportions that reflect their presence in the overall refugee population. This strategy assisted the researcher in making generalizations about the data to a larger population and in reaching insightful conclusions.

3.6. Research Instrument

In research, a tool used by researchers to collect, measure, and analyze data is called a research instrument (Collins, 2021, p. 45). The study used standardized questionnaires as instruments of data collection. The choice of a questionnaire was made because it offered an affordable, very fast, and also effective method of gathering information from the sample (McLeod, 2018, p. 32).

The questionnaire consisted of two parts. The first section focused on gathering demographic data from the participants. The key demographic information that the researcher sorted were their age, country of origin, education level, and religion. The second section had two scales to measure poverty and anxiety.

The first scale was the HAM-A anxiety scale developed by Hamilton (1959). The HAM-A consists of 14 items that assess both psychological and somatic symptoms of anxiety, with ratings from 0, indicating the absence of symptoms, to 4, indicating severe symptoms. It is a widely used and reliable tool for assessing anxiety levels. The higher scores on the tool indicate higher levels of anxiety. The HAM-A is scored by summing the scores for each of the 14 items, with a total score range of 0-56. Scores of 17 or less indicate mild anxiety, scores between 18-24 indicate mild to moderate anxiety, and scores of 25-30 indicate moderate to severe anxiety.

The second scale was the Multidimensional Poverty Measuring Scale developed by Mensikovs et al. (2020), which generally measures the resources of respondents. The resources were categorized into economic resources, human resources, social resources, physical resources, etc. The poverty scale results were analyzed and interpreted based on a predetermined threshold to determine the poverty level of each participant. The predetermined threshold was set at the 40th percentile of the total score distribution, as recommended by Mensikovs et al. (2020). The participants scoring below this threshold were categorized as living in poverty.

The researcher sought permission from the individuals by contacting them via cell phone numbers provided by the agencies that work with the refugees before the research was done. The participants who could not understand English, translation of the questionnaires was arranged through trained research assistants who were fluent in the relevant languages.

3.7. Validity and Reliability

The quality of research hinges on the validity and reliability of its instruments. These qualities ensure the accuracy and consistency of the findings.

3.7.1. Validity

Research validity refers to how well a measurement tool reflects the concept it's designed to assess (Glen, 2018, p. 78). In this study, the researcher focused on two types of validity: content validity and construct validity. Content validity ensures the study's measures accurately capture the intended concept (anxiety and poverty levels in females heading urban refugee households in Nairobi). To achieve this, the researcher conducted a literature review to identify appropriate measures, such as the HAM-A scale for anxiety and the Multidimensional Poverty Measuring Scale.

The HAM-A scale has been widely used in research and clinical practice, demonstrating good content validity. In a study by Maier et al. (1988), the HAM-A showed high correlations with other anxiety measures, supporting its construct validity. The Multidimensional Poverty Measuring Scale, developed by Mensikovs et al. (2020), has shown good content validity through expert reviews and pilot studies in various cultural contexts.

Construct validity focuses on whether the chosen measures truly reflect the underlying concept or theory being studied. The construct validity of the HAM-A and poverty measuring scale was evaluated by comparing the results to other measures of anxiety and poverty levels. The previous studies have shown that the HAM-A correlates well with other anxiety measures, with correlation coefficients ranging from 0.63 to 0.75 (Maier et al., 1988). The Multidimensional Poverty Measuring Scale has demonstrated good construct validity, with factor analyses supporting its multidimensional structure (Mensikovs et al., 2020).

After ensuring content and construct validity, the researcher was confident that the measures used in the study accurately reflected the levels of anxiety and poverty among the target population and provided meaningful results.

3.7.2 Reliability

Glen (2018, p. 92) states that a research instrument is said to have reliability "if it is able to measure with stability or consistency and research findings are repeatable. In this study, the test-retest reliability was considered. Test-retest reliability refers to where a researcher measures a construct and assumes that it is consistent across all times (Glen, 2018, p. 93).

In this study, test-retest reliability was employed to evaluate whether the HAM-A anxiety scale and the Multidimensional Poverty Measuring Scale consistently captured the underlying concepts

they were designed to measure. The measuring instruments were administered twice to the same group of participants, with at least one week in between administrations, to assess their coefficient stability. The Pearson product-moment correlation coefficient was employed for this purpose.

The previous studies have reported good test-retest reliability for the HAM-A scale. Maier et al. (1988) reported a test-retest reliability coefficient of 0.86 over a one-week interval. The Multidimensional Poverty Measuring Scale, Mensikovs et al. (2020) reported test-retest reliability coefficients ranging from 0.78 to 0.85 for different dimensions of the scale over a two-week interval.

In view of the sample size of the study, a sufficiently large sample size was chosen to guarantee the generalizability and reliability of the findings. The test-retest reliability results from the pilot study (described in section 3.8) were used to confirm the reliability of the instruments for this specific population.

3.8. Pre-testing of Instruments

The test-retest technique of measuring the reliability of the instrument was used to see whether there was any bias and to achieve the required outcomes. The researcher conducted a pilot study to determine how valid and reliable the instruments were. The pilot was conducted at Kawangware. The participants were chosen at random from a convenient sample and given study instruments to complete.

The study instruments were administered twice to the same group of participants, with one week in between administrations. This was done three weeks before the main data collection. A total of 30 participants were involved in the pilot study, representing approximately 8% of the main study sample size.

The pilot study's results underwent descriptive analysis to evaluate the instrument's consistency in yielding similar findings. To determine test-retest reliability, the researcher compared the scores obtained from the first and second administrations to ascertain consistency of the instruments. The Pearson product-moment correlation coefficient was calculated for each scale.

The HAM-A scale, the test-retest reliability coefficient was 0.84, indicating good reliability. For the Multidimensional Poverty Measuring Scale, the test-retest reliability coefficients ranged from 0.76 to 0.83 for different dimensions of the scale. These results were deemed satisfactory, aligning with the reliability coefficients reported in previous studies. The instruments were approved for use in the main study based on these results.

3.9. Data Collection Procedure

The researcher first obtained a letter from Tangaza University College before seeking a permit from the Director NACOSTI, Nairobi. The researcher trained three research assistants on the process of data collection, ethics to be observed, and the interpretation of the questionnaires. The next step involved making appointments with the females heading urban refugee households from Somalia, South Sudan, DRC, Ethiopia, and other regions. These appointments were made directly with the female heading households, not with the households in general. This approach ensured that the intended participants were available and willing to participate in the study.

Prior to data collection, all ethical considerations were discussed with the participants. This included explaining the purpose of the study, the voluntary nature of participation, the right to withdraw at any time, and the measures taken to ensure confidentiality and anonymity.

To accommodate the schedules of the respondents, the data collection process took place between 9:00 AM and 3:00 PM. The research assistants distributed the questionnaires to the

participants. The once who did not understand English, trained interpreters assisted in translating the questions. The use of interpreters was necessary to ensure accurate communication and understanding of the questions. However, it is acknowledged that this approach may have introduced some limitations, such as potential loss of nuance in translation or the influence of the interpreter's presence on participants' responses. These limitations will be addressed in the discussion section of the study.

The completed questionnaires were collected once the respondent finished them. All data collected was stored securely to maintain confidentiality. The researcher debriefed participants to address any potential emotional distress that may have arisen during the study. This debriefing included providing information about local mental health resources and support services available to refugees.

3.10. Data Analysis

Calzon (2021) defines data analysis as "the process of collecting, modeling, and analyzing data to extract insights that inform decision-making. “The researcher employed a combination of descriptive and inferential statistical methods to gather its findings. To conduct a comprehensive analysis and present the data in a clear manner, the study utilized the IBM SPSS Statistics 21 software. The results were presented using various formats such as tables, figures, numerical values and percentages.

Table 2: *Data Analysis Matrix*

	Objective	Type of Analysis	Variable Type	Statistical Test
1.	To determine the level of poverty and anxiety among females heading urban refugee households in Nairobi County, Kenya.	Descriptive Statistics	Categorical, Ratio, Numerical	Frequency of demographic variables, Mean and Standard deviation of the study instrument
2.	To investigate the influence of poverty on the anxiety levels of Females heading urban refugee households in Nairobi County, Kenya.	Inferential statistics	Numerical	Multiple linear regression
3.	To examine the relationship between poverty and anxiety levels among Females heading urban refugee households in Nairobi County, Kenya.	Inferential Statistics	Numerical	Pearson's correlation coefficient

The study objective of determining the level of poverty and anxiety, for the levels of poverty and anxiety, descriptive statistics was used to summarize these levels. This involved determining the frequency of demographic variables and calculating the mean and standard deviation of the study instrument. The collected data was presented through tables, figures, illustrating numerical values, and percentages. Descriptive statistics was of great help in analyzing this objective by providing a summary of the data collected on poverty levels.

The second study objective of investigating the influence of poverty on the anxiety levels, regressions analysis was used to investigate the influence of poverty to anxiety levels. The multi-linear regression was used to determine up to which extent does poverty influence anxiety levels of the females heading urban refugee households. The third and last objective of investigating the

relationship between poverty and anxiety, inferential statistics was used. The researcher conducted a correlational analysis to examine how poverty and anxiety levels are related. The researcher employed Pearson's correlation coefficient to assess the strength and direction of the linear relationship between these two numerical variables (poverty and anxiety levels). Through this analysis, the researcher was able to get insights into which degree of poverty and anxiety levels are associated with females heading urban refugee households.

3.11. Ethical Considerations

According to Adhikari (2020, p. 56), ethics in research refers to the standards and guidelines of conduct for scientific researchers to responsibly conduct research. The researcher obtained informed consent from all study participants. All participants were adults (18 years and above), so assent from minors was not required for this study.

The researcher prioritized the privacy and confidentiality of participant information by taking necessary measures. All information gathered in the study was stored safely, and only authorized persons had access to it. The primary language was English for the questionnaires; however, translation by trained research assistants was arranged for participants who could not understand English. This ensured that all participants fully understood the nature of the study and what their participation entailed.

Participants were informed of their right to terminate their participation in the research at any time without any negative consequences. The researcher debriefed participants to address any potential emotional distress that may have arisen during the study. This debriefing included providing information about local mental health resources and support services available to refugees.

The researcher undertook the necessary measures to obtain permission from the pertinent institutions in order to carry out this study. The initial stage involved obtaining approvals and clearances from the Ethics Committee at Tangaza University College. The researcher then obtained approvals from NACOSTI, and after the approval, the researcher conducted field research after getting permission from relevant necessary officials at urban refugee agencies.

The researcher highlighted who would benefit from the study and how, and also clearly pointed out the confidentiality of the shared information and how it is protected. The researcher ensured referenced materials were cited accurately. Additionally, a plagiarism check was conducted to adhere to the academic standards and requirements.

The study generated data that was securely stored for convenient access both during the analysis and after ending it. The original data is kept for at least one year after the final work is submitted, as this is essential for maintaining the reliability of the study's conclusions.

3.12. Envisaged Impact of the Study

The researcher aimed to understand the effects of poverty not only on the level of anxiety but also on the level of mental health among females heading urban refugee households in Nairobi County at the end of the study. Mental health concerns have been on the rise, hence this study is helpful in informing policies and programs.

The study's findings can be instrumental in developing strategies to promote mental health and mitigate the negative consequences of poverty on mental wellbeing. This benefits both the general population and the refugees living in urban areas. The findings from this study can inform:

- The development of targeted mental health interventions for females heading urban refugee households.
- The creation of poverty alleviation programs that take into account the mental health needs of this population.
- Training programs for mental health professionals working with urban refugee populations.
- Public awareness campaigns about the relationship between poverty and mental health in refugee populations.

Stakeholders like the State Department of Gender and Affirmative Action under the Program of Social Economic Empowerment, NGOs, psychological counselor training institutions, and practicing psychological counselors can use these findings to develop mechanisms for sensitizing the public about mental health and help create awareness that could reduce its impact.

3.13. Chapter Summary

The study used a quantitative research method with a cross-sectional approach and a correlational survey design. The study's population was the females heading urban refugee households in Nairobi County, with a sample size of 379 selected using multi-stage random and stratified sampling techniques. The sample was drawn by selecting 3 constituencies from 17 in Nairobi County, a random sample within each constituency, and stratifying the females heading urban refugee population into groups based on countries of origin, with a random sample drawn from each stratum.

CHAPTER 4

RESULTS

4.1. Introduction

This chapter delves into the study's findings, which explored the relationship between poverty and anxiety among females-heading urban refugee households in Nairobi County, Kenya. It begins by examining the response rate and its impact on the generalizability of the results. Secondly, the reliability and validity of the poverty and anxiety measurement scales were assessed. The demographic characteristics of the participants are presented. A comprehensive analysis using descriptive statistics, regression analysis, and correlation analysis is employed to provide a nuanced understanding of the connection between poverty and anxiety levels within the target population.

This chapter concludes by evaluating the proposed hypothesis and acknowledging the study's limitations. The research findings add to the current knowledge base by addressing a previously unidentified gap in the literature, the unique challenges faced by females-heading urban refugee households in Nairobi County, Kenya.

4.2. Response Rate

This study targeted females-heading urban refugee households in Nairobi County, Kenya, encompassing those from Somalia, South Sudan, the Democratic Republic of Congo (DRC), Ethiopia and Rwanda. The total population was estimated at 25,565. A sample size of 379 participants was determined using the Krejcie and Morgan (1970) formula. However, during the data collection process, some respondents either declined to participate or provided incomplete responses, resulting in a slightly lower response rate.

The study achieved a high response rate of 95.8% of the 379 questionnaires distributed, 363 were successfully completed, returned, and deemed usable for analysis. This can likely be attributed to the researcher's experience working with refugee populations, efforts to build rapport with participants, and ensuring a respectful and culturally sensitive data collection process.

The non-response rate was 4.2%, some participants declined to participate in the study while others provided incomplete responses leading to exclusion in the analysis of data. The high response rate attained in the study is an advantage to the study as it reduces the potential for non-response bias. Non-response bias occurs when there are systematic differences between those who responded and those who did not, potentially leading to biased estimates of the population parameters (Peytchev, 2013). The high response rate of 95.8% enhances the generalizability of the findings to the target population of females heading urban refugee households in Nairobi County, Kenya. This suggests the sample characteristics likely reflect the broader population.

4.3. Reliability of Scales used in the Study

Prior to the main data collection, a pilot study was conducted to assess the reliability and validity of the two chosen instruments: The Hamilton Anxiety Rating Scale (HAM-A) and the Basic Needs Measuring Scale. Internal consistency reliability of the scales was evaluated using Cronbach's alpha coefficient. The HAM-A scale yielded a high alpha of 0.89, and the Basic Needs Measuring Scale also demonstrated strong reliability with an alpha of 0.87.

Beyond reliability, the study addressed construct validity to ensure the scales accurately captured the intended concepts. Content validity was established through a thorough literature review, confirming that the scale items aligned with poverty and anxiety measurement.

Additionally, a psychologist's expertise was sought to validate the scales' appropriateness for the target population.

To further strengthen construct validity, the study compared findings from the chosen scales to established measures of poverty and anxiety. The HAM-A was compared with the Beck Anxiety Inventory (BAI), showing a strong positive correlation ($r = 0.81$, $p < 0.001$). The Basic Needs Measuring Scale was compared with the Multidimensional Poverty Index (MPI), demonstrating a significant correlation ($r = 0.76$, $p < 0.001$). These results bolster confidence that the scales captured the intended concepts.

The researcher ensured the selected measures were appropriate for the target population and effectively assessed the underlying constructs of poverty and anxiety levels among females heading urban refugee households. This focus on reliability and validity strengthens the foundation for meaningful analysis and interpretation of the collected data, as it increases confidence that the data accurately reflects the target population's poverty and anxiety levels.

4.4. Demographic Details of the Respondents

Table 3 presents the demographic characteristics of the participants, for consistency and clarity, all percentages are rounded to one decimal place.

The analysis of age distribution among participants (Table 3) revealed that the largest group (44.9%) fell between 31 and 40 years old. The second largest group (28.7%) was comprised of those aged 18 to 30. Participants aged 51 and above constituted the smallest group (4.7%).The age of the participants is a relevant factor as it can shed light on the participants' life stages and experiences, which may influence their poverty and anxiety levels.

Country of Origin: The largest group of respondents was from Somalia (49.9%), followed by South Sudan (25.9%), DRC (16.3%), Ethiopia (2.8%), and Rwanda (3.0%). A small proportion of respondents (2.2%) was from Burundi. The country of origin is a crucial demographic variable as it accounts for the diverse cultural backgrounds, experiences, and challenges faced by the respondents, which may contribute to their overall well-being and mental health.

Religious Affiliation: The majority of the respondents were Muslim (62.4%), while 37.6% identified as Christian. There was no respondent who reported belonging to any other religious groups. A person's religion can significantly impact their worldview, coping strategies, and social support networks. These factors may in turn influence how they experience poverty and anxiety.

Educational Level: Analysis of educational attainment (Table 3) showed that secondary education was the most common level (32.2%), followed by primary education (47.1%) and vocational training (18.5%). A smaller proportion of respondents had obtained a bachelor's degree (2.2%), while none had completed postgraduate studies. Education level is an essential demographic variable as it is often linked to employment opportunities, socioeconomic status, and access to resources, which can directly impact poverty levels and mental well-being.

Marital Status: Regarding marital status, the majority of the respondents were single (43.5%), followed by married (19.3%), divorced (18.5%), and widowed (18.7%). Marital status can influence an individual's social support system, financial stability, and overall well-being, which may contribute to their experiences of poverty and anxiety.

The selection of demographic variables in this study was guided by their established connections to poverty and anxiety levels among female-headed urban refugee households.

Examining these characteristics aimed to create a holistic understanding of the target population and potential contributing factors to their experiences of poverty and anxiety.

Table 3: *Demographic Characteristics of Respondents*

Demographic Characteristic		Frequency	Percentage (%)
Age	18-30 years	104	28.7
	31-40 years	163	44.9
	41-50 years	79	21.8
	51 or more	17	4.7
Home Country	Somalia	181	49.9
	South Sudan	94	25.9
	DRC	59	16.3
	Ethiopia	10	2.8
	Rwanda	11	3.0
	Burundi	8	2.2
Religion	Christian	131	37.6
	Muslim	217	62.4
Educational Level	Primary	171	47.1
	Secondary	117	32.2
	Vocational Training	67	18.5
	Bachelor's Degree	8	2.2
Marital Status	Married	70	19.3
	Single	158	43.5
	Divorced	67	18.5
	Widowed	68	18.7

4.5. Results Related to Level of Poverty and Anxiety among Females Heading Urban Refugee Households

This study's initial objective was to assess the poverty and anxiety levels of females heading urban refugee households in Nairobi County, Kenya. Descriptive statistics were employed to analyze data collected using the Basic Needs Measuring Scale and the Hamilton Anxiety Rating Scale (HAM-A).

4.5.1 Level of Poverty among Females Heading Urban Refugee Households

A Basic Needs Measuring Scale was used to assess the poverty levels of the respondents as shared in the table below. The scale encompasses 10 items assessing various poverty dimensions, including employment status, income level, access to safe water and sanitation, housing quality, and educational opportunities.

Table 4: *Poverty Level of Respondents*

Demographic Characteristic (%)		Frequency	Percentage
Employment Status	Employed full-time	49	13.5
	Employed part-time	173	47.7
	Unemployed	123	33.9
	Retired	9	2.5
	Disabled	9	2.5
Monthly Household Income	Less than 5,000	168	46.3
	5,000 to 10,000	126	34.7
	10,000 to 20,000	68	18.7
	20,000 to 30,000	1	0.3
Accessibility to safe drinking water	Yes	222	61.2
	No	141	38.8
Connection to sanitation system	Yes	220	60.6
	No	143	39.4
Number of Rooms at residential area	One room	250	68.9
	Two rooms	111	30.6
	Three or more	2	0.6
Source of fuel for cooking	Electricity	4	1.1
	Gas	227	62.5
	Wood	59	16.3
	Kerosine	73	20.1
Means of transport owned or rented	Own	1	0.3
	Rent	5	1.4
	No transportation	357	98.3
Household Ability to meet daily basis food	Yes	130	35.8
	No	233	64.2
Receiving assistance from NGO/Government	Yes	81	22.3
	No	282	77.7
Any Children under 18 not attending school	Yes	115	31.7
	No	248	68.3

Source: Author

The results showed that the majority of the respondents (81%) had a monthly household income of less than 10,000 Kenyan Shillings (approximately 90 USD), indicating a high level of

poverty. In terms of employment status, only 13.5% reported being employed full-time, which suggests that most of the respondents faced challenges in meeting their daily needs.

Regarding access to education, 31.7% of the respondents reported having at least one child under the age of 18 who was not attending school, indicating a lack of access to educational opportunities. The analysis revealed a critical gap in access to a fundamental human right: safe drinking water. 38.8% of respondents lacked access to this essential resource. The consequences of this issue are far-reaching, as unsafe water can lead to numerous health issues, which can further exacerbate the already difficult living conditions.

Basic sanitation facilities, 39.4% of the respondents were not connected to a toilet system. This lack of access to proper sanitation not only poses health risks but also compromises the privacy of individuals, specifically women and girls.

Housing conditions were also found to be substandard, with a significant 68.9% of the respondents residing in dwellings with only one room. The data revealed that overcrowding and inadequate living spaces were realities for these families, potentially impacting their physical and mental health, as well as their overall well-being.

The study also revealed that 16.3% and 20.1% of the respondents relied on wood and kerosene respectively for cooking fuel. This practice not only contributes to indoor air pollution but also puts a strain on already limited financial resources, as these households are forced to allocate a significant portion of their meager incomes to procure fuel. 31.7% of the respondents had at least one child under the age of 18 who was not attending school. This statistic highlights the lack of access to educational opportunities, a fundamental right that should be afforded to every

child. If children are not able to access education, these children may face challenges in breaking the cycle of poverty.

Another significant finding was that 77.7% of respondents reported no assistance from government or NGOs. This lack of access to crucial support systems and resources may hinder their ability to meet basic needs and improve their circumstances.

The results from the Basic Needs Measuring Scale underscore the multidimensional nature of poverty and the challenges faced by females heading urban refugee households in Nairobi County. These findings highlight the critical need for holistic interventions and support systems. The efforts should address not only financial hardship but also the broader issues of limited access to essential life necessities, including safe water, sanitation, adequate housing, and education.

4.5.2 Level of Anxiety among Females Heading Urban Refugee Households

The study used the Hamilton Anxiety Rating Scale (HAM-A) to assess the levels of anxiety among the respondents, who were females heading urban refugee households in Nairobi County, Kenya. The results revealed a high prevalence of anxiety within this vulnerable population, with 68.1% of the respondents exhibiting moderate to severe levels of anxiety, additionally only 31.9% reported mild or no anxiety symptoms, highlighting the pervasive nature of this mental health issue.

The distribution of anxiety levels among the respondents was particularly concerning. As illustrated in Table 5, 34.2% of the respondents experienced severe anxiety, while an additional 33.9% reported moderate levels of anxiety. These findings paint a grim picture of the psychological distress endured by these households, which can have far-reaching consequences on their overall well-being and ability to cope with the challenges of daily life.

Table 5: *Distribution of Anxiety Levels among Respondents*

Anxiety Level	Frequency	Percentage (%)
No Anxiety (0-7)	52	14.9
Mild Anxiety (8-15)	59	17
Moderate Anxiety (16-24)	118	33.9
Severe Anxiety (25-30)	119	34.2

Source: Author

The most commonly reported symptoms of anxiety among the respondents were anxious mood (78.2%), tension (74.7%), and insomnia (72.1%). These findings are particularly worrying as they suggest a pervasive sense of worry, apprehension, and restlessness, coupled with disrupted sleep patterns, which can further exacerbate the already precarious mental health of these individuals.

A significant proportion of the respondents experienced fears (64.9%), intellectual difficulties (62.4%), and depressed mood (58.9%). The high prevalence of these symptoms underscores the multifaceted nature of anxiety experienced by females heading urban refugee households, affecting not only their emotional state but also their cognitive functioning and overall outlook on life.

4.6. Influence of Poverty on Anxiety Levels of Females heading urban refugee households

To examine the influence of poverty on anxiety levels, a multiple linear regression analysis was conducted. Poverty levels were measured using the Basic Needs Measuring Scale, which

assesses access to essential resources and living conditions. Anxiety levels, as measured by the HAM-A, served as the dependent variable

Table 6: *Multiple Linear Regression Analysis for the Impact of Poverty on Anxiety Levels*

Model	**Unstandardized Coefficients**	**Standardized Coefficients**	**t-value**	**Sig.**
	B	Std. Error	Beta	
Constant	9.215	1.674	-	5.504
Poverty Level	1.281	.132	.491	9.690

Source: Author $R = 0.491$, $R^2 = 0.241$, Adjusted $R^2 = 0.239$ $F(1, 346) = 93.914$, $p < 0.001$

The regression analysis revealed a significant positive association between poverty levels and anxiety scores ($\beta = 0.491$, $p < 0.001$). This indicates that higher poverty levels correlate with increased anxiety levels among females-heading urban refugee households in Nairobi County.

The coefficient of determination (R^2) of 0.241 suggests that poverty levels explain approximately 24.1% of the variance observed in anxiety scores. The F-statistic ($F(1, 346) = 93.914$, $p < 0.001$) confirms the overall statistical significance of the regression model.

4.7. The relationship between poverty and anxiety levels among females heading urban refugee households

To further explore the relationship between poverty and anxiety levels, a Pearson's correlation analysis was conducted using scores from the Basic Needs Measuring Scale (poverty

levels) and the Hamilton Anxiety Rating Scale (anxiety levels). The results of the Pearson's correlation analysis are presented in Table 7.

Table 7: *Pearson's Correlation Analysis for the Relationship between Poverty and Anxiety Levels*

Variables	**Poverty Level**	**Anxiety Level**
Poverty Level	1	.491**
Anxiety Level	.491**	1

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

The results show a moderate positive correlation between poverty levels and anxiety levels ($r = 0.491$, $p < 0.001$). This indicates that as poverty levels increase, anxiety levels also tend to increase, and vice versa.

4.8. Testing of the Hypothesis

The study proposed the following hypotheses:

H_0: There will be no significant relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya.

H_1: There will be a significant relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya.

Based on the results from both the Pearson's correlation analysis and multiple linear regression analysis, we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). Both statistical analyses revealed a significant positive relationship between poverty and anxiety

levels among female-heading urban refugee households in Nairobi County, Kenya ($r = 0.491$, $p < 0.001$; $\beta = 0.491$, $p < 0.001$).

These findings align with previous research suggesting a connection between socioeconomic disadvantage and mental health outcomes (Ridley et al., 2020). The results highlight the potential impact of poverty on the psychological well-being of females-heading urban refugee households and underscore the need for comprehensive interventions that address both economic and mental health challenges faced by this population.

4.9. Limitations of the Study

This study provides valuable insights into the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya, it is essential to acknowledge some limitations.

The Geographical Limitation: The study was conducted exclusively in Nairobi County, Kenya, which may limit the generalizability of the findings to other urban settings or regions where females heading refugee households reside. The socioeconomic and cultural contexts may vary across different geographical locations, potentially influencing the relationship between poverty and anxiety levels.

Cross-sectional Design: This study utilized a cross-sectional design, meaning data collection occurred at a single point in time. The design is valuable for identifying associations, but cannot establish causality or explore how variables might change over time. The use of longitudinal studies or experimental designs in future research could provide more definitive evidence regarding the causal mechanisms influencing the relationship between poverty and anxiety levels.

Self-reported Data: The study's dependence on self-reported data introduces potential biases. Social desirability bias and recall bias may have influenced participant responses. The participants might have provided answers they believed to be more favorable socially, or they might have struggled to accurately remember specific experiences or situations.

Unaccounted Variables: The study focused on the relationship between poverty and anxiety levels, there may be other variables that were not accounted for in the research design. The factors such as trauma exposure, social support systems, cultural beliefs, and access to mental health services could potentially influence the relationship between poverty and anxiety levels among females heading urban refugee households.

Instrument Limitations: Although the study utilized standardized scales (HAM-A and Basic Needs Measuring Scale) to assess anxiety levels and poverty, respectively, these instruments may not fully capture the complex and multidimensional nature of these constructs within the specific cultural and contextual settings of females-heading urban refugee households.

Despite these limitations, the study provides valuable insights and contributes to the existing body of knowledge regarding the challenges faced by females-heading urban refugee households in Nairobi County, Kenya. The findings highlight the need for targeted interventions and support systems to address both poverty and mental health issues within this vulnerable population. The future research should aim to address these limitations by employing longitudinal designs, incorporating additional variables, and exploring alternative data collection methods to enhance the validity and generalizability of the results.

The study is subject to limitations inherent in self-reported data, it offers valuable insights and strengthens the existing knowledge base on the association between poverty and anxiety in

vulnerable populations. The future research could address these limitations by adopting longitudinal designs, integrating qualitative methods, and broadening the scope to encompass a wider range of mental health conditions and populations.

4.10. Chapter Summary

This chapter presented the findings obtained from the comprehensive data analysis conducted to investigate the relationship between poverty and anxiety levels among females-heading urban refugee households in Nairobi County, Kenya. The study achieved a high response rate of 95.8%, minimizing the potential for non-response bias and enhancing the generalizability of the results. This chapter presents a comprehensive analysis of the study's findings, highlighting the alarmingly high levels of poverty and anxiety among the target population, as well as the significant positive relationship between these two variables. The results underscore the urgent need for interventions addressing both economic and mental health challenges faced by females-heading urban refugee households in Nairobi County, Kenya.

CHAPTER 5

DISCUSSIONS

5.1. Introduction

This chapter discusses the key findings of the study in relation to the existing literature and theoretical frameworks. It provides an in-depth analysis of the results obtained for each research objective, highlighting the key implications and significance of the findings. Additionally, the chapter explores potential improvements to the theoretical frameworks and concludes with a summary. The level of poverty and anxiety among females heading urban refugee households in Nairobi County, Kenya will be presented in relation to existing literature.

5.2. Levels of poverty and anxiety among females heading urban refugee households

The first objective of this study was to determine the level of poverty and anxiety among females heading urban refugee households in Nairobi County, Kenya. The findings revealed a distressingly high prevalence of both poverty and anxiety within this vulnerable population, aligning with existing literature on the challenges faced by refugees, particularly females heading households (UNHCR, 2021; Women for Women International, 2021; Fazel et al., 2005; WHO, 2018).

5.2.1 Poverty Levels

The results from the Basic Needs Measuring Scale painted a picture of the economic deprivation faced by the respondents. 68.4% of the females heading urban refugee households had a monthly household income of less than 10,000 Kenyan Shillings (approximately 90 USD), indicating a lack of financial resources.

The study's findings align with observations documented in various reports and studies. The United Nations High Commissioner for Refugees (UNHCR, 2021) emphasizes the prevalence of poverty and the scarcity of economic opportunities for refugees, especially those residing in urban areas. Similarly, Mensikovs et al. (2020) highlight the challenges faced by vulnerable populations in accessing basic necessities.

The study revealed that 68.9% of the respondents lived in a house with only one room, suggesting overcrowding and poor living conditions. These findings are consistent with the Social Exclusion Theory (Lenoir, 1970s), which recognizes the multidimensional nature of poverty and the systematic barriers that prevent individuals from fully participating in society (Davies, 2014; Saraceno, 2001). The lack of adequate housing not only poses health risks but also impacts the overall well-being of these households, particularly women and children (UN-Habitat, 2015).

Access to essential services was also lacking in the study. 31.7% of the respondents reported having at least one child under the age of 18 who was not attending school, highlighting the lack of access to educational opportunities. These results echo the concerns raised in a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2019), which highlights various obstacles hindering access to education for refugee children, such as financial limitations, language barriers, and discrimination.

Additionally, the study found that 38.8% of the respondents did not have access to safe drinking water, and 39.4% were not connected to a toilet system. These findings underscore the severe deprivation and lack of basic amenities faced by females heading urban refugee households, which can have far-reaching consequences on their overall well-being and quality of life. The World Health Organization and UNICEF (2021) emphasize that the lack of access to safe water

and sanitation facilities not only poses health risks but also compromises the privacy of individuals, particularly women and girls.

The high levels of poverty observed in the study are consistent with existing literature, which suggests that refugees, particularly those in urban settings, often face significant economic challenges and limited access to resources (Armstrong-Mensah et al., 2023; Lund et al., 2010; Naja et al., 2016; Ridley et al., 2020). The intersectionality of poverty and the unique challenges faced by females heading households further exacerbate the vulnerability of this population.

5.2.2 Anxiety Levels

The study's findings on anxiety levels among the respondents were particularly concerning. The results revealed that 68.1% of the respondents exhibited moderate to severe levels of anxiety, with 34.2% experiencing severe anxiety using Hamilton Anxiety Rating scale (HAM-A), only 31.9% reported mild or no anxiety symptoms.

These findings align with various reports and studies on mental health among refugee populations. The World Health Organization (WHO, 2018) highlights the increased risk of mental health conditions, including anxiety disorders, among refugee populations due to the traumatic experiences associated with forced migration and the challenges of resettlement.

In the study, the most commonly reported symptoms of anxiety among the respondents were anxious mood (78.2%), tension (74.7%), and insomnia (72.1%). These findings suggest a pervasive sense of worry, apprehension, and restlessness, coupled with disrupted sleep patterns, which can further exacerbate the already precarious mental health of these individuals. The prevalence of anxious mood and tension among the respondents aligns with the Cognitive Model Theory (Beck, 1976), which posits that individuals' perceptions and beliefs about their

circumstances can shape their emotional and behavioral responses, contributing to the development of anxiety disorders.

Additionally, the study found that a significant proportion of the respondents experienced fears (64.9%), intellectual difficulties (62.4%), and depressed mood (58.9%), highlighting the multifaceted nature of the anxiety experienced by this population. The presence of fears and depressed mood among the respondents is consistent with the Tripartite Model of Anxiety and Depression (Clark & Watson, 1991), which suggests that negative affect (e.g., fear, sadness) is a shared component of both anxiety and depressive disorders.

The high prevalence of anxiety among females heading urban refugee households in Nairobi County, Kenya, as observed in the study, is consistent with existing literature. The various studies suggest that refugees are at a higher risk of developing mental health conditions, including anxiety disorders, due to the traumatic experiences associated with forced migration and the challenges of resettlement (Fazel et al., 2005; Nickerson et al., 2011; WHO, 2018)

5.3. The Influence of poverty on the anxiety levels of females-heading urban refugee households

This study's second objective examined the influence of poverty on anxiety scores among females heading urban refugee households in Nairobi County, Kenya.

The multiple linear regression analysis yielded a significant positive association between poverty levels and anxiety scores. This indicates that as poverty levels increase, so do anxiety levels within this population.

The coefficient of determination (R^2) of 0.241 indicates that poverty levels account for approximately 24.1% of the variance observed in anxiety scores among the participants. This

aligns with prior research, which consistently highlights the detrimental effects of poverty on mental health, including the increased risk of developing anxiety disorders (McLaughlin et al., 2010; Burroughs et al., 2021; Knifton & Inglis, 2020; Ohrnberger et al., 2020).

The chronic stress, insecurity, and lack of access to resources that accompany poverty can create an environment conducive to the development of anxiety symptoms. The daily struggles to meet basic needs, such as food, shelter, and healthcare, can lead to a constant state of worry and apprehension, and hence increase anxiety levels (Lund et al., 2010; Patel & Kleinman, 2003).

The lack of access to essential services, such as education and healthcare, further compounds the impact of poverty on mental health (Knifton & Inglis, 2020; Ohrnberger et al., 2020). The limited educational opportunities can hinder individuals' ability to develop coping mechanisms and resilience, making them more vulnerable to the negative effects of poverty on mental health (Baer et al., 2013). Similarly, inadequate access to healthcare services can prevent individuals from receiving proper diagnosis and treatment for mental health conditions, perpetuating the cycle of poverty and mental illness (Knifton & Inglis, 2020).

The study's results align with the Social Exclusion Theory, which recognizes the multifaceted nature of poverty and its impact on individuals' well-being (Daly, 2006; Saraceno, 2001).

The systematic barriers and lack of access to essential services faced by females heading urban refugee households can contribute to increased levels of anxiety and perpetuate the cycle of poverty and social exclusion. The intersectionality of poverty, gender, and refugee status creates a complex web of vulnerabilities that can exacerbate the impact of poverty on mental health (Armstrong-Mensah et al., 2023; Women for Women International, 2021).

The findings support the Cognitive Model Theory, which suggests that individuals' perceptions and beliefs about their circumstances can influence their emotional and behavioral responses (Beck, 1976). The poverty and deprivation experienced by females heading urban refugee households may contribute to the development of negative cognitions and irrational beliefs, leading to heightened levels of anxiety. These households may perceive their situations as helplessness, which can further exacerbate anxiety symptoms (Baer et al., 2013; Saraceno, 2001).

The impact of poverty on mental health is not limited to the individual level but can also have broader societal implications. Mental health issues, such as anxiety disorders, can hinder an individual's ability to work and engage in productive activities, perpetuating the cycle of poverty and limiting economic growth (Knifton & Inglis, 2020; Lund et al., 2010). Additionally, the costs associated with treating mental health conditions can place a significant burden on already strained healthcare systems, particularly in resource-poor settings (Ohrnberger et al., 2020; Patel & Kleinman, 2003).

5.4. The relationship between poverty and anxiety levels among females heading urban refugee households

The third objective of the study was to examine the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya.

To achieve this objective, Pearson's correlation analysis was conducted between the scores obtained from the Basic Needs Measuring Scale (poverty levels) and the Hamilton Anxiety Rating Scale (anxiety levels).

The results of the Pearson's correlation analysis revealed a strong positive correlation between poverty levels and anxiety levels among females-heading urban refugee households (r =

0.491, $p < 0.01$). This finding indicates that as poverty levels increase, anxiety levels also tend to increase, and vice versa. The correlation coefficient of 0.491 suggests a moderate to strong relationship between the two variables, further reinforcing the significant association between poverty and anxiety levels within this vulnerable population.

The findings of this study also highlight the need to consider the unique challenges faced by females-heading households within the refugee community. The women in these households often bear the brunt of caregiving responsibilities, gender-based discrimination, and limited economic opportunities, which can compound the impact of poverty on their mental well-being (Armstrong-Mensah et al., 2023; Women for Women International, 2021). The intersectionality of poverty, gender, and refugee status creates a complex web of vulnerabilities that must be addressed through targeted interventions and support systems.

The strong positive correlation between poverty and anxiety levels observed in this study has significant implications for policy and practice. It underscores the need for a holistic approach that addresses both economic and mental health challenges simultaneously. Based on the findings, we suggest that interventions aimed at poverty alleviation, such as access to sustainable livelihoods, vocational training, and microfinance opportunities, can provide a sense of financial security and empowerment, which can positively impact mental well-being (UNHCR, 2021; Women for Women International, 2021).

However, the results indicate that poverty alleviation strategies alone may not be sufficient to address the mental health needs of females heading urban refugee households. We propose that the integration of mental health services, including counseling, psychotherapy, and community-

based support systems, is crucial for addressing the high prevalence of anxiety and other mental health conditions within this population (Patel & Kleinman, 2003; WHO, 2018).

The findings suggest that interventions should consider the unique challenges faced by females heading households, such as gender-based violence, discrimination, and disproportionate caregiving responsibilities (Armstrong-Mensah et al., 2023; Women for Women International, 2021). Addressing these intersectional factors through gender-sensitive programming and support services can help to alleviate the additional burdens faced by these households and promote overall well-being.

Based on the results, we recommend collaboration between various stakeholders, including government agencies, non-governmental organizations, and community-based organizations, for developing and implementing holistic interventions that address the interrelated issues of poverty and mental health (UNHCR, 2021; WHO, 2018).Adopting a multidimensional approach that considers the socioeconomic, cultural, and political factors contributing to the vulnerability of females-heading urban refugee households, these interventions can effectively promote sustainable poverty alleviation and improve mental health outcomes.

It is important to note that while the study's findings provide valuable insights into the relationship between poverty and anxiety levels, there may be other contributing factors that were not accounted for in the current analysis.

In conclusion, the findings of this study reveal a strong positive correlation between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. This relationship highlights the need for comprehensive interventions that address both economic and mental health challenges faced by this vulnerable population. Adopting a holistic

and intersectional approach that considers the unique needs and experiences of females heading refugee households, stakeholders can effectively promote sustainable poverty alleviation, improve mental health outcomes, and foster resilience within this marginalized community.

5.5. Improvements to Theoretical Frameworks

The findings of this study contribute to the existing body of knowledge and provide insights that can inform improvements to the theoretical frameworks used in understanding the relationship between poverty and anxiety levels among vulnerable populations.

The study did not directly inform or test these theories, the findings can be interpreted through their lenses, potentially offering avenues for future research and theoretical refinement. The Social Exclusion Theory, which emphasizes the multidimensional nature of poverty and the systematic barriers that prevent individuals from fully participating in society (Davies, 2014; Saraceno, 2001), could be further expanded to incorporate a more nuanced understanding of the specific challenges faced by females heading refugee households. This could include considerations of gender-based discrimination, cultural barriers, and the unique experiences of forced migration and resettlement.

The study did not explicitly test the Cognitive Model Theory proposed by Beck (1976), the findings on the prevalence of anxiety symptoms among the study population suggest potential avenues for adapting this theory to account for the unique experiences and cultural contexts of refugee populations. Incorporating a more culturally sensitive lens, future research could explore how this theory might better capture the complex interplay between poverty, trauma, and mental health outcomes among diverse refugee communities.

Additionally, the study's findings highlight the importance of intersectionality in understanding the relationship between poverty and anxiety levels. The future theoretical frameworks could integrate perspectives from intersectional theory (Crenshaw, 1989) to account for the compounding effects of multiple forms of oppression and marginalization experienced by females-heading urban refugee households.

The refining and expanding existing theoretical frameworks based on empirical findings such as those presented in the study, researchers and policymakers can develop a more comprehensive understanding of the complex issues faced by vulnerable populations. This ultimately informing more effective and culturally responsive interventions and support systems.

5.6. Chapter Summary

This chapter discussed the findings of the study in relation to existing literature and theoretical frameworks. The results revealed a high prevalence of poverty and anxiety among females-heading urban refugee households in Nairobi County, Kenya, as well as a significant positive relationship between poverty levels and anxiety levels.

The findings were analyzed through the lens of the Social Exclusion Theory and the Cognitive Model Theory. They provided insights into the multidimensional nature of poverty, the systematic barriers faced by vulnerable populations, and the influence of perceptions and beliefs on mental health outcomes.

Overall, this study contributes to the existing body of knowledge and highlights the importance of addressing both economic and psychological aspects in supporting the well-being of vulnerable populations.

CHAPTER 6

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

This chapter summarizes the key findings of the study, drawing conclusions based on the results and discussions presented earlier. It offers practical recommendations for policymakers, non-governmental organizations, and future researchers to address the challenges concerning poverty and anxiety levels faced by females heading urban refugee households in Nairobi County, Kenya. The chapter emphasizes the study's significance to the existing body of knowledge and identifies potential areas for future research to deepen our understanding of this complex issue.

6.2. Summary of the findings

The main objective of this study was to determine the relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. The study employed a quantitative research approach, utilizing a cross-sectional correlational survey design. The target population consisted of females-heading urban refugee households from Somalia, South Sudan, the Democratic Republic of Congo (DRC), Ethiopia, and Rwanda residing in Nairobi County. A sample size of 379 respondents was initially determined, but due to various factors, such as non-response or incomplete responses, the final sample size was 348 respondents, yielding a response rate of 91.8%.

The study utilized two standardized scales: The Hamilton Anxiety Rating Scale (HAM-A) and the Basic Needs Measuring Scale. The reliability and validity of these scales were established through pilot testing and rigorous statistical analyses. The data collection process involved administering questionnaires to the respondents, and the collected data were analyzed using

descriptive and inferential statistical methods, including multiple linear regression and Pearson's correlation analysis.

The study's initial findings paint a concerning picture of poverty among females heading refugee households in Nairobi County. A substantial majority (68.4%) of respondents reported monthly household incomes below 10,000 Kenyan Shillings (approximately 90 USD). This statistic highlights the widespread economic challenge faced by this population group. A significant portion of the respondents had challenges accessing basic necessities, including safe drinking water, sanitation facilities, and adequate housing.

Second, the study found a high prevalence of anxiety among the respondents, with 68.1% exhibiting moderate to severe levels of anxiety. The most commonly reported symptoms of anxiety included anxious mood, tension, and insomnia.

Third, the multiple linear regression analysis revealed a significant positive relationship between poverty levels and anxiety levels, indicating that higher levels of poverty were associated with higher levels of anxiety among the respondents.

Fourth, the Pearson's correlation analysis further confirmed a strong positive correlation between poverty levels and anxiety levels, reinforcing the significant relationship between these two variables.

6.3. Conclusions

The conclusions drawn from the findings of the study are

Poverty is a pervasive issue among females heading urban refugee households in Nairobi County, Kenya. The high levels of poverty observed in the study sample suggest that these

households face significant economic challenges and struggle to meet their basic needs, such as access to safe drinking water, sanitation facilities, and adequate housing conditions.

Anxiety is a prevalent mental health issue among females heading urban refugee households in Nairobi County, Kenya. The study's findings indicate that a substantial proportion of the respondents experienced moderate to severe levels of anxiety, highlighting the urgent need to address mental health concerns within this vulnerable population.

There is a significant positive relationship between poverty and anxiety levels among females heading urban refugee households in Nairobi County, Kenya. The study's results demonstrate that higher levels of poverty are associated with higher levels of anxiety, suggesting that economic deprivation and psychological distress are intertwined and can exacerbate each other.

The findings of this study align with and support existing theoretical frameworks, such as the Social Exclusion Theory and the Cognitive Model Theory. These theories provide a lens through which to understand the multidimensional nature of poverty, the systematic barriers faced by vulnerable populations, and the influence of perceptions and beliefs on mental health outcomes.

The study contributes to the existing body of knowledge by highlighting the intersectionality of poverty and anxiety levels among a specific vulnerable population, namely females heading urban refugee households in Nairobi County, Kenya. The findings underscore the need for a comprehensive and holistic approach to addressing the complex challenges faced by this population.

6.4. Recommendations

The recommendations based on the findings and conclusions of this study are:

6.4.1 Recommendations for Policymakers

- Develop and implement policies and programs that address the economic challenges of females-heading urban refugee households. These policies should focus on creating sustainable employment opportunities, providing access to affordable housing, and ensuring access to basic necessities such as safe drinking water and sanitation facilities.
- Enhance mental health services and support within existing refugee assistance programs. This can be achieved by collaborating with mental health professionals and non-governmental organizations to provide culturally appropriate and accessible mental health services, including counseling, psychotherapy, and support groups. While some refugee assistance programs may already include mental health components, the findings suggest that there is a need for increased focus and resources in this area to adequately address the high prevalence of anxiety among the study population.
- Adopt an intersectional approach to policymaking that recognizes the complex interplay of multiple factors affecting female-headed urban refugee households. The study findings indicate that these households face challenges related to gender, refugee status, and poverty. Therefore, policies should consider these intersecting factors to develop targeted and effective interventions.
- Allocate adequate funding and resources to support research and data collection efforts that aim to better understand the unique challenges faced by female-headed urban refugee households. This will inform evidence-based policymaking and facilitate the development of tailored solutions.

6.4.2 Recommendations for Non-Governmental Organizations (NGOs)

Collaborate with local communities and refugee populations to design and implement programs that address both economic and mental health needs. These programs should be culturally sensitive and emphasize empowerment, capacity building, and sustainable livelihood strategies.

Provide training and resources to community leaders, refugee representatives, and volunteers to enhance their ability to identify and support individuals experiencing mental health challenges, such as anxiety, within their communities.

Advocate for the rights and well-being of females-heading urban refugee households by raising awareness, promoting inclusivity, and challenging stigma and discrimination associated with poverty, mental health, and refugee status.

Foster partnerships and collaborations with government agencies, international organizations, and other stakeholders to create a coordinated and comprehensive approach to addressing the multifaceted challenges faced by female-headed urban refugee households.

6.4.3 Recommendations based on the limitations /Delimitations of the study

Based on the limitations and delimitations of the study, the following are the recommendations for researchers and academic institutions:

- Conduct longitudinal studies to investigate the long-term impacts of poverty and anxiety on females-heading urban refugee households, as well as the effectiveness of interventions over time.
- Explore the use of mixed-methods research designs that combine quantitative and qualitative approaches to gain a more comprehensive understanding of the lived

experiences, coping mechanisms, and resilience factors of females-heading urban refugee households.

- Expand the scope of research to include other mental health conditions, such as depression and post-traumatic stress disorder, and examine their relationship with poverty and other socioeconomic factors.
- Investigate the intersectionality of poverty, anxiety, and other social determinants, such as gender, age, and cultural background, to develop more nuanced and tailored interventions for diverse refugee populations.
- Collaborate with researchers from different disciplines, such as psychology, sociology, and anthropology, to foster interdisciplinary approaches and incorporate diverse perspectives in addressing the complex challenges faced by females-heading urban refugee households.

The implementation of these recommendations by policymakers, non-governmental organizations, and researchers can work towards creating a more inclusive and supportive environment for females-heading urban refugee households in Nairobi County, Kenya and potentially other similar contexts. Addressing the interrelated issues of poverty and anxiety through comprehensive and culturally appropriate approaches is crucial for promoting the well-being and empowerment of this population group.

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APPENDICES

Appendix A: Informed Consent Form

Participant Informed Consent Form

CUEA – Tangaza University College

Topic of Research: Relationship between Poverty and Anxiety Levels Among Females heading urban refugee households in Nairobi County, Kenya

- This study is being carried out as part of the requirements for my MA proposal in counselling psychology at Tangaza University College.
- It has been approved by NACOSTI
  This research study does not pose any known risks to participants and does not involve any form of deception. Participating in the current phase of the study typically takes around 10 to 20 minutes.
- The task requires a participant to answer a series of questions.
- The privacy and confidentiality of all participants are strictly maintained. Individual responses will not be disclosed; instead, the results will only be presented in a combined or summarized format.
- Participating in this study is optional, and there will be no financial or any other form of reward. If you choose to withdraw from the study, there will be no negative consequences for you, and you have the freedom to withdraw yourself and your data from the study whenever you wish.

Researchers Name: Grace Njoki Kariuki

Researchers Current Position: STUDENT IN MA COUNSELLING PROGRAMME

Address of the University College:

Tangaza University College, Langata, Nairobi, Kenya, 15055-00509,

Telephone number of the Program Leader:

Signed by researcher……...Date……...…

Statement to be signed by the participant

I confirm that the organizer has explained fully the nature of the project and the range of activities which I am asked to undertake and that I have received an information sheet. I confirm that I have had adequate opportunity to ask questions about this project.

- I understand that my participation is voluntary and that I may withdraw at any time during the project, without having to give a reason
- I agree to participate in this study.

Signed by participant (Optional) ……. Date…….

Appendix B: Demographic Characteristics of Respondents

Please select with a tick (√) the most suitable option for the question below:

Demographic Information Form
Location: Kawangware ☐ Kayole ☐ Eastleigh ☐
Age: a). (18 to 30) ☐ b) (31 to 40 years) ☐ c) (41 to 50) ☐ d) 51 or more ☐
Home Country: Somalia ☐ South Sudan ☐ DR Congo ☐ Rwanda ☐ Ethiopia ☐
Religion: Christian ☐ Muslim ☐ Other ☐
Education Levels. Primary ☐ Secondary ☐ Vocational Training ☐ Bachelor's Degree ☐ Master's Degree ☐ PhD ☐
Gender: MALE ☐ **FEMALE** ☐
Marital Status: Married ☐ Single ☐ Divorced ☐ Widowed ☐
Do you Have kids: YES ☐ **NO** ☐
Date, place, and hour of interview……..….

Appendix C: Multidimensional Poverty Measuring Scale

Mark only one response for every question given in this section.

No.	Question	Response Options
1.	Tell us about your employment status?	A. Employed full-time B. Employed part-time C. Unemployed D. Retired E. Disabled f. Other
2.	What is your monthly household income?	A. Less than 5,000 B. 5,000-10,000 C. 10,000-20,000 D. 20,000-30,000 E. More than 30,000
3.	Do you have access to safe drinking water?	A. Yes B. No
4.	Is your household connected to a basic sanitation system (such as a toilet or latrine)?	A. Yes B. No
5.	How many rooms are there in your current place of residence?	A. 1 B. 2 C. 3 D. 4 or more
6.	What is the primary source of fuel for cooking in your household?	A. Electricity B. Gas C. Wood D. Other
7.	Does your household own or rent a means of transportation (such as a car or bicycle)?	A. Own B. Rent C. No transportation
8.	Are all members of your household able to meet their basic food needs on a daily basis?	A. Yes B. No
9.	Is any member of your household receiving assistance from a government or non-government organization?	A. Yes B. No
10.	Are there any children under the age of 18 in your household who do not attend school?	A. Yes B. No

Source: Extracted from data Compiled by Mensikovs 2008, 2009 & 2011; Mensikovs and Vanags 2011.

Appendix D: Hamilton Anxiety Rating Scale (HAM-A)

Below is a list of phrases that describe certain feeling that people have. Rate yourselves by finding the answer which best describes the extent to which you have these conditions. Select one of the five responses for each of the fourteen questions

0 = Not present, 1 = Mild, 2 = Moderate, 3 = Severe, 4 = Very severe.

Points	1	2	3	4
1. Anxious Mood Worries, anticipation of the worst, fearful anticipation, irritability.				
2. Tension Feelings of tension, fatigability, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax				
3. Fears Of dark, of strangers, of being left alone, of animals, of traffic, of Crowds				
4. Insomnia Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors.				
5. Intellectual Difficulty in concentration, poor memory.				
6. Depressed Mood Loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing.				
7. Somatic (muscular) Pains and aches, twitching, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone.				
8. Somatic (sensory) Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness, pricking sensation				
9. Cardiovascular symptoms Tachycardia, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat.				
10. Respiratory symptoms Pressure or constriction in chest, choking feelings, sighing, dyspnea				
11. Gastrointestinal symptoms Difficulty in swallowing, wind abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness of				

bowels, loss of weight, constipation				
12. Genitourinary symptoms Frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of frigidity, premature ejaculation, loss of libido, impotence.				
13. Autonomic symptoms Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair.				
14. Behavior at interview Fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face, sighing or rapid respiration, facial pallor, swallowing, etc.				

Source: Hamilton , M. (1959)

Appendix E: Permission to Use Multidimensional Poverty Measuring Scale

From: <vladimirs.mensikovs@du.lv>

Date: Thu, May 23, 2024 at 7:38 PM

Subject: Re: Permission to Use your Poverty Measuring Scale

To: GRACE KARIUKI <gkariuki663@gmail.com>

Dear Grace Njoki Kariuki

Thank you for your attention to my research work. Of course, you can use

the results of my scientific research. I wish you great success.

Prof. Vladimir Menshikov.

> Dear Mensikovs,

> I am Grace Njoki Kariuki, a counseling psychology student at Tangaza

> University in Kenya. I have come across your multidimensional poverty

> measuring scale and find it relevant to my research study. I would

> like to request permission to utilize this scale in my study.

> My study aims to determine the relationship between poverty and

> anxiety levels among female-headed urban refugee households in Nairobi

> County, Kenya. The multidimensional poverty measuring scale aligns

> well with the objectives of my research, and its use will contribute

> to the validity and reliability of my findings.

> I assure you that a proper citation and acknowledgement of your work

> will be provided in my research paper. Additionally, I will be happy

> to share the results of my study with you upon completion.

> Thank you in advance for your consideration. I look forward to your

> response.

> Best regards,

> Grace Njoki Kariuki

> Counseling Psychology Student

> Tangaza University, Kenya

Appendix F: Letter of Authorization from Tangaza University College

TANGAZA UNIVERSITY COLLEGE

The Catholic University of Eastern Africa

OFFICE OF THE DIRECTOR OF RESEARCH & POSTGRADUATE STUDIES

E-mail: dir.pgsr@tangaza.ac.ke **Website:** www.tangaza.ac.ke

OUR Ref: DPGSR/ER/08/2023 **Date: 31st** August 2023

Grace Njoki Kariuki
Institute for Youth Studies
School of Arts & Social Sciences
Tangaza University College

Dear Grace,

RE: ETHICS CLEARANCE FOR GRACE NJOKI KARIUKI, REG. NO. 20/00825

Reference is made to your letter dated 25th August 2023 requesting for ethical clearance of your research proposal to carry out a study on "***Relationship between poverty and anxiety levels among female headed urban refugee households in Nairobi County***".

I am pleased to inform you that, your research proposal has been reviewed and you can apply for research permit from the National Commission for Science, Technology and Innovation (NACOSTI). This should be done before commencing the data collection. You are also advised to adhere to the code of ethics as regards the protection of human subjects during the entire process of your study.

This approval is valid for one year from **1st September 2023.**

Please, ensure that after the data analysis and final write up, you submit a soft copy of the thesis to the Director of Research & Postgraduate Studies – Tangaza University College for records purposes.

Yours sincerely,

Director - Research & Postgraduate Studies
31 AUG 2023
Sign:.....
TANGAZA UNIVERSITY COLLEGE

DR. DANIEL M. KITONGA (Ph.D.)
Director, Research & Post-Graduate Studies
Tangaza University College

CC: Dr. Alice Nzangi – Programme Leader, M.A. Counselling Psychology (IYS)

P.O. Box 15055 - 00509 Langata, Nairobi Kenya
Tel: +254 20 8097667 / 0732 897 000 / 0733 685 059 / 0722 204 724 / 0714 610 777
Email: inquiries@tangaza.ac.ke
Website: www.tangaza.ac.ke

Appendix G: Research Authorization from NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **270775**

Date of Issue: **26/September/2023**

RESEARCH LICENSE

This is to Certify that Ms.. Grace Njoki Kariuki of Tangaza University College, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: Relationship between Poverty and Anxiety Levels Among Female Headed Urban Refugee Households in Nairobi County, Kenya for the period ending : 26/September/2024.

License No: **NACOSTI/P/23/29771**

270775

Applicant Identification Number

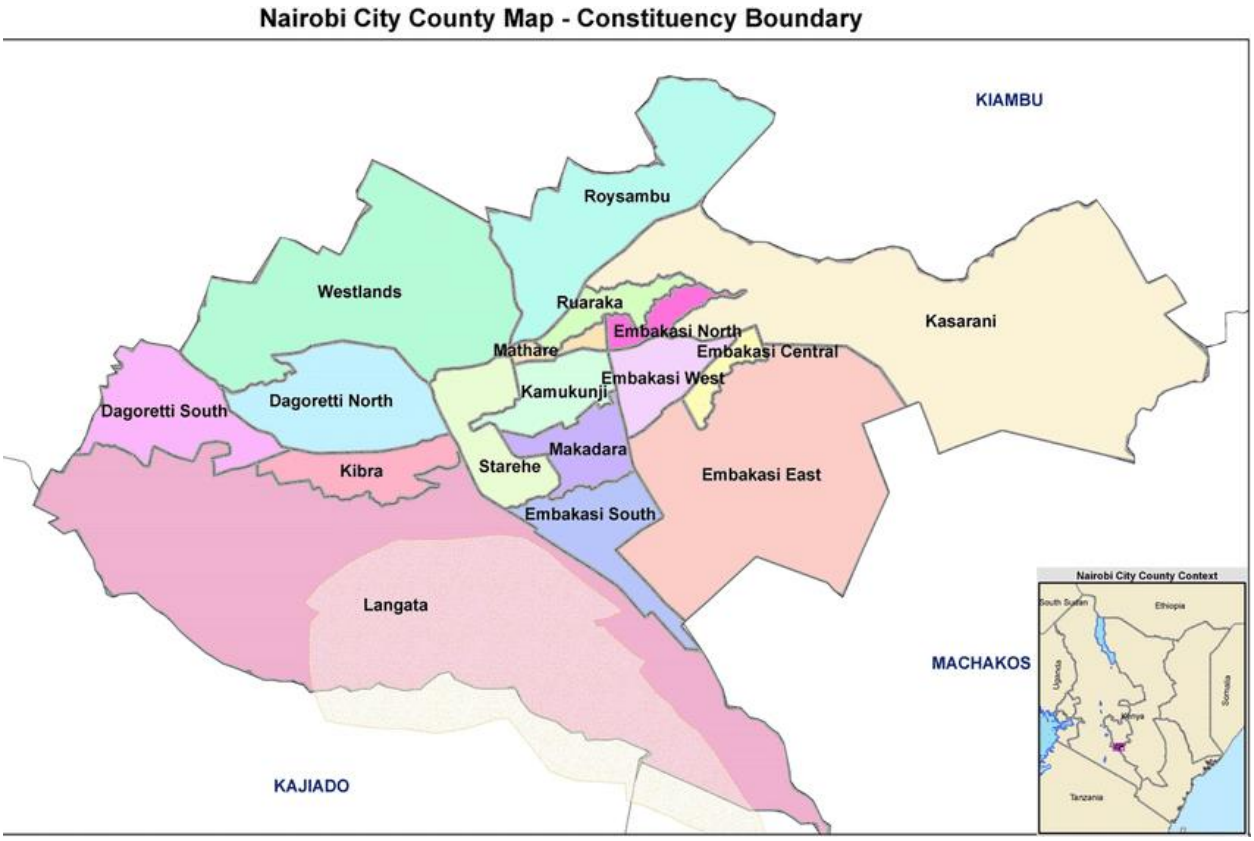
Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix H: Map of Nairobi County



Source: Orbital Geospatial Services