

**EXPLORATION OF PHYSICAL, PSYCHOLOGICAL AND SOCIAL EFFECTS OF
GIGANTOMASTIA ON THE MENTAL HEALTH OF WOMEN IN NAIROBI COUNTY
-KENYA**

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A Thesis submitted in partial fulfillment for the award of Masters of Arts in Counselling
Psychology (Youth), Tangaza University

February 2025

DECLARATION

This research proposal is my original work. It has not been submitted to any other University for any academic award.

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ABSTRACT

Gigantomastia is one of the breast abnormalities that affect women globally. It is characterized by massive breast growth which inconveniences the people having the condition due to the excessive weight. The women with this condition are subjected to stigma, rejection, and isolation. Studies on this topic have been conducted particularly in the field of clinical medicine in Western Countries and some parts of West Africa. The findings of these studies revealed a lack of awareness of the condition despite its physical, psychological and social impact on women. This position can be replicated in Kenya because there is no empirical study published on gigantomastia apart from scanty information captured in gray literature. The study aimed to understand the physical, psychological and social effects of gigantomastia on the mental health of women in Nairobi County -Kenya. Cognitive adaptation theory was used in this study. The research adopted a descriptive research design. Snowball sampling technique was used to obtain the sample size. The respondents included women located in Nairobi County. The sample size consisted of 50 participants drawn from Nairobi County in Kenya. Data was conducted using an interview guide. Qualitative data was analyzed by the use of thematic analysis and presented in themes related to the study objectives. The findings of the study indicated, the physical effects of gigantomastia were; large and heavy breasts, physical pain, challenge getting appropriate clothes, challenges doing physical activities and posture. The psychological effects were; self-esteem and negative body image, intense negative feelings and emotions, loss of interest of social activities and unhealthy coping mechanisms. The social effects were; difficulties with social interaction, labelling and social stigmatization, body images and sexualization issues and social support. The beneficiaries of this study will include the parents, scholars/researchers, medical practitioners/psychologists and the Ministry of Health. The study recommends establishment of multidisciplinary approach to support women living with gigantomastia to improve the quality of life. It suggests areas for future studies such as the impact of gigantatomastia on the academic performance of adolescents and its effects on the maternal health of women from the Kenyan context.

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LIST OF ABBREVIATIONS AND ACRONYMS

NAMH: The National Alliance on Mental Health

SDH: Social Determinants of Health

SPSS: Software Package for Social Sciences

WHO: The World Health Organization

OPERATIONAL DEFINITION OF TERMS

ANXIETY:	Feeling of worry or uneasiness about something with an uncertain outcome or due to what is about to come.
GIGANTOMASTIA:	Massive enlargement of breasts, disproportionate to the rest of the body.
MACROMASTIA:	Massive breast.
MENTAL HEALTH:	The state of physical, psychological (mental), social wellbeing and not just the absence of disease.
PHYSICAL:	The form or shape of the human body.
PSYCHOLOGICAL:	Psychological effects are those things that affect the mind, especially as a function of awareness, feeling, or motivation.
SOCIAL:	This refers to anything relating to the human society.
SELF AWARENESS:	It is the ability of a person to understand the way he or she feels and the reasons why the individual behaves in a particular manner.
SELF ESTEEM:	It is an overall opinion one has over himself or herself, how one feels about their abilities and limitations.
SOCIAL:	It's the act of relating to activities in which you meet and spend time with other people.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the background of the study, statement of the problem, objectives, research questions, significance, the scope and assumptions of the research. The aim of the research was to explore physical, psychological and social effects of gigantomastia on the mental health of women and will be anchored on the cognitive adaptation theory.

1.2 Background of the Study

A female breast is a multi-functional organ that manifests femininity. It enhances the beauty, nurtures newborns and helps to create a bond between the mother and the baby. It is an important physical asset and a major feature that differentiates a male from a female (Agbenorku & Agbenorku, 2011). The development of a woman's breasts usually starts between the ages of 7 and 13 as a result of an increase in oestrogen levels (Agbenorku, 2012). This proceeds for the next 18 months to nine years before the breasts are fully developed. Even after reaching maturity, the female breast will undergo metamorphosis due to the influx of hormones from the onset of puberty to menopause (Gusterson & Stein, 2012).

At the time of breast growth, several procedures or factors may occur leading to growth abnormality (Agbenorku, Otupiri & Fugar, 2013). Moreover, there are a series of changes that a woman undergoes in her lifetime that result in variation in breast size, form and how they appear physically. The changes are associated with the hormonal imbalances at the various stages of adolescent development. Apart from the hormonal defects, other factors may go wrong resulting in breast developmental abnormalities. Some of these abnormalities may not be detected in the early stages of breast development until it is fully grown or on one set of pregnancy. These factors

include genetic, environmental and exposure to infectious agents. However, in the absence of these abnormalities, the breasts attain full growth at puberty (Ravichandran & Naz, 2016). The above-mentioned conditions stimulate abnormal growth of breasts such as amusia, hypoplasia, polythelia, tubular breast and macromastia (Raphael, 2017).

This study will be confined to gigantomastia, which is a state of extreme breast development. A Scholar named Palmuth cited this condition in 1648 of a sick person whose breast had over grown weighing 64 kilograms and named it gigantomastia (Yang, 2015). Since then, scholars have cited this health issue as breast expansion that needs to be reduced by at least 1,500g per breast in order to attain the normal state (Yang, 2015). Agrawal and Kriplani 2002; Vohra, Desai, and Shah, 2015 defined gigantomastia as an increment of the breast with a weight which is more than 600 grams thus leading to uncomfortableness. Moreover, the stretching of the overlying skin causes ulceration. So far, twenty-seven and a half kilograme per breast is the biggest documented expunged breast tissue weight (Yang, 2015).

Other terms used synonymously with gigantomastia are macromastia and hypertrophy. The condition is also called gestational macromastia or gigantomastia when it occurs during pregnancy. When this condition occurs during puberty, it is referred to as juvenile or virginal breast hypertrophy or adolescent macromastia. The prevalence of gigantomastia is estimated to occur in 1 out of every 28,000 to 100,000 people (Benna, Naser, Fertani, & Ayadi, 2018).

According to the available literature, the real cause of gigantomastia is not yet established. However, the cause is thought to be triggered by increased hormonal level in the blood or amplified hormonal sensitivity (Türkan, Gökgöz, Taşdelen, & Dünder, 2016). The hormones include: prolactin, oestrogen, and progesterone. This proposition is evidenced by the fact that at the earliest period of pregnancy, an excessive increase in breast size is observed. Additionally, Kim et al.'s

(2018) study results showed that most patients with gigantomastia are women, a period characterized by the production of the diverse hormones.

Prolactin hormone was first thought to be the cause because it has been empirically studied and proved to be at a high level in most patients with gigantomastia (Reis et al., 2018). However, other hormones such as thyroxine and human placental lactogen are also considered as contributors to the occurrence of gigantomastia. Taking certain medications or some conditions such as autoimmune diseases have been shown to cause gigantomastia (Zingaretti, 2018). This is in tandem with study findings on the effects of D-penicillamine used in patients with rheumatoid arthritis who eventually develop gigantomastia (Desai, 2018). Medicines such as cyclosporine and hereditary factors are associated with the development of gigantomastia.

Gigantomastia causes physical, social, and social distortions to the persons living with the condition. Breast enlargement causes general physical body discomfort to an extent of causing abnormalities in the upper spine to arc forward, a state called kyphosis (Saariniemi, 2011). Agbenorku et al's (2013) study indicated that women with gigantomastia suffer socially as a result of low self esteem in regard to physical being. The social consequences caused by gigantomastia are depression and anxiety. Muddled manner of eating have also been observed in many teenagers with gigantomastia. On the other hand, the social consequences include stigma , isolation and struggles in socializing (Vohra, Desai, & Shah, 2015).

Gigantomastia affects 100, 000 women worldwide (Chetty, 2016). But it is of great concern that these numbers do not include any cases in Kenya due to a lack of empirical evidence. The available cases are captured in Gray Literature and justifies the significance of this study. The study findings have also articulated the possible causes of gigantomastia. But the researchers have not settled on a specific cause and as such this study intends to foster consensus among the researchers.

Other study findings spell out the physical, psychological and social effects of gigantomastia on mental health (Dikmen & Dissiz, 2021). But there is no evidence of the strategies to minimize the stigma associated with these effects and this current study will attempt to address them. Despite this incidence and adverse effects of gigantomastia on women the level of awareness is low. This resonates more with developing countries, particularly Kenya. The breast abnormality is not recognized until it is fully grown or at the onset of pregnancy. This is attributed to a lack of knowledge on self-breast examinations like the one conducted on breast cancer. In the same vein, other breast diseases such as breast cancer are well studied compared to health education for gigantomastia cases.

Although no studies have been conducted locally on gigantomastia and its effects on mental health, Monah (2018) explored on the impact of social exclusion of people with disabilities in Kenya. The study findings postulated that exclusion impacts on the mental health due to discrimination, lack of recognition and low awareness on their support services. These findings are in tandem with the above studies highlighted in the study. Therefore, this current research work aims at exploration of physical, psychological and social effects of gigantomastia on the mental health of women in Nairobi County -Kenya.

1.3 Statement of the Problem

Gigantomastia is an unusual medical problem characterized by intensive breast growth (Agrawal & Kriplan, 2012). It manifests itself at the onset of puberty or during pregnancy. Culturally, the female breast is a sign of women's beauty. It is supposed to be of normal size and shape (Otipiri & Fugar, 2013). Any deviation from the acceptable standards results in unattractiveness (Yang, 2015). The acceptable breast size ranges from 250ml to over 1,000 (Moschella, Cordova & Toia, 2016). The condition is not recognized until the breast is fully grown due to a lack of information

(Rezai et al, 2015). This hinders identification of warning signs for early intervention like in the cases of breast cancer where there a lot of written information. However, some of the early warning signs include: massive or rapid breast growth as compared to the peers and weighty breasts that make the young woman uncomfortable. The conditions are not seen as life-threatening which justifies the lack of attention in terms of information materials to sensitize the young adults and caregivers.

Gigantomastia causes physical impairment that inconveniences women (Yang, 2015). It has physical, intense psychological and social problems that incapacitate women from participating in school activities and social relations (Ravichandra & Naz, 2016). These problems foster insecurity, deflate one's ego and erode self-esteem affecting the mental health of the patient (Kim et al, 2018). Despite the effect gigantomastia has on the social health of women, there is a low level of awareness that hinders the women from detecting their extraordinary breast abnormality for psycho social support (Chacha, 2018). It is of concern that despite the effects of gigantomastia on women, there is no study carried out in Kenya to ascertain the physical, psychological and social effects of gigantomastia on the mental health of women. The available information is scanty, captured in gray literature and on televised video clips only.

1.4 Purpose of the Study

The study sought to contribute to building awareness of gigantomastia and its effects on the mental health among women living with this condition.

1.5 Objectives of the Study

1.5.1 General Objective of the Study

To explore the physical, psychological and social effects of gigantomastia on the mental health of women in Nairobi County, Kenya.

1.5.2 Specific Objectives of the Study

The objectives of this study were:

- i. Determine the physical effects of gigantomastia on the mental health of the women in Nairobi County, Kenya.
- ii. Establish the psychological effects of gigantomastia on the mental health of women in Nairobi County, Kenya.
- iii. Find out the social effects of gigantomastia on the mental health of women Nairobi County, Kenya.

1.6 Research Questions

The study was guided by the following research questions:

- i) How do the physical effects of gigantomastia impact the mental health of women in Nairobi County?
- ii) What are the psychological effects of gigantomastia on the mental health of women in Nairobi County?
- iii) What are the social effects of gigantomastia on the mental health of women and in Nairobi County?

1.6 Significance of the Study

The study sought to establish the effects of gigantomastia on women's mental health in Nairobi County. The insights could facilitate the creation of awareness on the level to which gigantomastia

affects women and how to overcome challenges associated with it. The following groups could benefit from the study's findings:

The parents or caregivers

The findings of this study could help parents or caregivers to have a better understanding of the negative effects associated with gigantomastia and be able to provide holistic care to their clients.

Academicians

The study's findings could be beneficial to scholars who may be interested in replicating them to other areas. This study could contribute researched and verified ideas suitable for solving gigantomastia problems of women.

The Government

The current study could benefit the government agencies in designing modalities for engagement with key stakeholders in policy development and execution. The ideas raised by this study are believed to be important in providing crucial information to aid in the development of policy guidelines in support of the women living with gigantomastia in terms of the provision of medical schemes. The government could train physicians to conduct operations in level five hospitals spread across the counties. Funds could also be dedicated for conducting further study in this area to bring out insights on how to manage the condition.

1.7 Scope and Delimitation of the study

This research is delimited to Nairobi County and the respondents were drawn from the various wards. The choice of one county, leaving the other 46 counties, is restrictive since the study topic impacts on mental health of women across the country. Further, the selection of the topic gigantomastia instead of others which affect the mental health of women was also a deterrent.

1.8 Assumption of the Study

This study was based on the following assumptions.

- i. Participants of this research were hoped to provide reliable and accurate responses regarding the topic of study since they live with the condition being studied.
- ii. By using the cognitive adaptation theory, it was assumed that people can be resilient and maintain high self-esteem despite the studied health condition.

1.9 Chapter Summary

In this chapter the study has presented the definition of gigantomastia, its prevalence and the effects it has on women. This is followed by the statement of the problem, which highlights difficulties experienced by women having gigantomastia and the gap in the literature regarding the disorder that this study intends to fulfill. Moreover, the research presents the purpose, objectives and questions that will guide the study. This is preceded by the significance of the study which entails stakeholders who will benefit from the results of this study. Finally, the scope of the study and assumptions are discussed in this chapter. The next chapter focuses on literature review, theoretical and empirical reviews, research gaps, conceptual framework among others areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this study, the researcher will review scholarly journals, books and gray literature to bring out additional knowledge on the topic being studied. This will avert duplication of knowledge and time wastage. The subsections that will be contained in this chapter include; a theoretical and empirical reviews, research gaps, conceptual framework and summary of the chapter.

2.2 Theoretical Literature Review

This refers to an examination of self-formulated theories to align them to the study variables. The study was being anchored on Cognitive Adaptation Theory, developed to address health problems such as depression, anger control, pain management, and adjustment to physical health problems.

2.2.1 Cognitive Adaptation Theory

In Taylor's 1983 scholarly work regarding adjustment of threatening life events, the theory of Cognitive Adaptation is explained. It shows how people respond to a threatening event such as chronic illness. Gigantomastia could be part of the threatening events.

Initially, Taylor (1983) argued that successful adaptation to victimization is a process which involves a series of slightly positive self-relevant cognitive distortions. An attempt to address this state involves three stages: search for meaning whereby the individual focuses on maintaining an optimistic attitude to achieve or uphold a positive attitude towards the occasion or life, regain mastery of one's life and the refurbishment of self-worth (Ratelle et al., 2004).

However, there were a lot of criticism of the initial theory. For instance, in 1994, Taylor and Brown's argument that correct personal and collective knowledge are important for social well-

being, was to the contrary. They contended that individual's understanding of these areas are definitely prejudiced and that these optimistic impressions endorse social well-being. Taylor postulates that people can manage events jeopardizing them by devising some optimistic impressions aimed at protecting their social well-being. This form of reasoning can be viewed not as delusional or inaccurate but a sign of mental well-being as they create a conducive environment for emotional, intellectual, physical and social well-being. According to Taylor, a human being resumes normality after a life threatening event. For example, in a case of loss of life of a family member, there is a tendency of adapting new reality that brings about general well-being (Czajkowska, 2017).

2.2.1.3 Assumptions of Cognitive Adaptation Theory

One of the assumptions of the cognitive adaptation theory is that products of our thinking are the main determinant of our personalities. Equally, reasoning is a common explanation of this rational process. Therefore, this theory challenges the behaviorism theory that contends that human behavior is a result of simple cause and effect. Another assumption of the theory is that worrying events affect how people think about themselves and their environment. Also, the theory assumes that everyone is a custodian of his or her own life and that better things are likely to happen to him or her more than bad things. Finally, the theory assumes that people can successfully adjust by finding ways to regain a sense of self mastery, reverence and confidence (Fritscher, 2020).

2.2.1.4 Strength of Cognitive Adaptation Theory

The key strength of the cognitive adaptation theory is the recognition that people can be resilient, maintain satisfactory levels of self-confidence and fortitude. This has helped the young people master stages of human development. It has therefore been used to understand adaptation to developmental challenges such as transition to emerging adulthood. This theory can be useful in

enabling the female youth in understanding how to adjust with changes associated with various stages in life such as gender roles and relationships (Helgeson, Reynolds, & Siminerio, 2014).

2.2.1.5 Application and Justification of Cognitive Adaptation Theory

This theory can be applied in this study because, to be a young woman with larger breasts than normal, is traumatizing. The large breasts can hinder the person from adopting a comfortable sleeping position for example. Therefore, this theory can propel an individual to adapt to the unique physical effects of gigantomastia by adjusting to the situation. The young woman in high school or university may be mocked by being called a mother and harassed by peers because of her physical condition caused by gigantomastia. For such a lady to survive and live fully, in face of adversity, she needs to develop resilience to boost her self-esteem and be optimistic to confront the challenge. According to cognitive adaptation theory, the young adult learns to use defense mechanisms such as projection and displacement to overcome the negative effects emanating from gigantomastia.

The cognitive adaptation theory further explains how a person affected socially by the effects of gigantomastia can overcome the stigma and victimization. The large breasts can lead to inaccurate thoughts or negative perceptions of self-regarding beauty that contribute to emotional distress and mental concerns. The negative perceptions can cause distress and result in suicidal thoughts. In the long run, the negative thoughts of gigantomastia can lead to trauma, depression, anxiety, low self-esteem, or disordered eating habits. However, the cognitive adaptation theory spells out the aspect of unleashing one's potential and the use of a positive attitude to cope with challenging situations in a healthy manner as opposed to being pessimistic.

The theory can equally be applied in explaining the social effects of gigantomastia. Some of the behaviors exhibited by people living with gigantomastia range from having difficulty in

maintaining close relationships with their peers or family members. The situation is attributed to the negative societal perception of people with gigantomastia. To diffuse the position, the proponent of social cognitive adaptation theory stipulated that young adult needs to build a positive image of the self to live a meaningful life.

2.3 Empirical Literature Review

2.3.1 Physical Effects of Gigantomastia

Gigantomastia affects how the body organs operate. In regard to this, different researchers have brought forth varied view and definitions of the effects of gigantomastia on young female adults. For example, in 2003, Chrominiski and others asserted that when the large breasts cause pain and other physical problems, the condition is called symptomatic macromastia. In extreme cases individuals living with this condition develop hand and figure numbness and grooves on their shoulders due to weight of their bra straps. They also face challenges in finding the right sizes of their cloths.

Statistics by Lapid et. al. (2013) indicate that the reason why women suffering from gigantomastia undergo a breast reduction are back, neck, shoulder and bra grooving pains hence lowering the patient's self esteem. Lapid et. al. (2013) conducted a systematic literature review with data drawn from 164 publications using the databases of Medline (search engine PubMed) and Web of Science.

One of the physical distresses caused by the extremely large breasts is poor posture which causes the upper spine to curve forward resulting in kyphosis (Traore et al., 2015). A typical case study of gestational macromastia conducted in India by Vohra, Desai, and Shah (2015) revealed that gigantomastia causes swelling in the breast connective tissues and this negatively impacts lactative period. The intensive and fast increase of breasts can lead to high levels of body heat hence leading

to extraordinary physical body health problems such as itching, skin peeling, suppression of milk supply and mastitis (Traore et., 2015).

The findings agree with a study conducted in Zambia by Musa, Malumani, and Teyangesikayi (2018) which re-affirm the same physical effects of gigantomastia can be life-threatening in some isolated cases. According to Wilson (2018) other than an excessive overgrowth of breast tissue in one (Unilateral) or both breasts (bilateral), other symptoms of gigantomastia include infectious or abscesses and loss of nipple sensation (Spencer et al, 2020). Further researches carried out by Poojar et al. (2018), in India, articulated the disabling effects of gigantomastia that have effects on physical mobility such as manual work and sports. The compression from the breasts can also cause chest wall uneasiness and respiratory issues thus resulting in sleep disorders.

2.3.2 Psychological Effects of Gigantomastia

Psychological effects are those things that affect the mind, especially as a function of awareness, feeling, or motivation (Aseey, 2012). Apart from physical complications, a person with gigantomastia suffers trauma, depression, low self-esteem, anxiety, shame, and deflated ego due to their physical appearance. A study conducted by Mendle, Turkheimer and Emery (2011) revealed that girls who develop big breasts early are at higher risk of eating disorders, drug abuse, and depression. Wolfswinkel et al. (2013), contend that women with breast hypertrophy suffer from significant emotional distress. The authors argue that changes which occur during adolescent stage, are understood relationships, new roles and low level of of human sexuality awareness lead to emotional volatility.

According to a study conducted by Kluwer and Williams (2014) on the impact of gigantomastia among teens on mental health, it revealed that large breasts have a significant effect on mental health. The large breasts affect the adolescent girl's self-esteem, emotional well-being and social

functioning negatively. This is in tandem with Dr. Labow who argues that patients suffering from breast asymmetry have poorer emotional well-being and lower self-esteem than their female peers (Nuzzi, et al., 2014).

Another survey conducted by Rezai et al (2015), in Guinea, revealed that women with macromastia had a higher risk of disordered eating thoughts and behavior than normal teenagers. This study further revealed that women with macromastia have impaired health-related quality of life, lower self-esteem and more breast-related symptoms, in comparison with their peers. Unfortunately, women often internalize these stressors and fail to seek appropriate help since early identification and professional guidance may help to improve the quality of life in this population.

Stokes (2018) elucidated five ways in which women's breasts can impact their mental health. Firstly, large breast size causes depression and unhappiness which he claims affected 70% of the women in this study. The level of dissatisfaction forces some to undergo breast reduction to elevate their self-image. Body dysmorphia is another effect of large breasts. This is a mental illness characterized by an obsessive focus on flaws in appearance. The other impact of large breasts on mental health is adolescent insecurity and deflated self-esteem. A similar study conducted by Sarwer, Brown, and Evans (2018) affirmed that large breasts take emotional tolls on women including suicide risks and a high rate of psychiatric hospitalization.

2.3.3 Social effects of Gigantomastia

Social effects are those related to the environment and biological factors on individual social aspects. Some of the common effects of gigantomastia include isolation, inability to participate in school activities, have relationships, cannot get proper fitting clothes, the right size of bra, strange glares, comments from the members of the public, stereotypes, and stigma. According to Long and Vasconez (2010), apart from undergoing difficulties of social stigma and sexual harassment,

patients can develop a poor self-image and low self-esteem. Furthermore, the study findings amplify that patients ubiquitously report difficulty in finding clothes that fit properly forcing them to customize/make alterations that aggravate their feelings of unattractiveness (Long & Vasconez, 2010).

Saarimiemi (2011) conducted a similar study on gigantomastia and spelt out its social consequences on the victims such as dissatisfaction with body image, difficulties to form intimate relations, inability to participate in sports and social activities. These consequences are replicated in another study findings by Agbenorku (2012), citing worry, and isolation as a result of gigantomastia. Agbenorku affirmed the findings that women with gigantomastia suffer from mental health as an outcome of how they perceive themselves in regards to their physical appearances and fun made by their peers about them.

Similarly, research findings by Naik et al. (2015), on gigantomastia complications revealed that this rare condition is particularly detrimental in developing countries as it prevents breastfeeding, which is crucial for the development of the infant. This happens because the breasts are too big and due to ulceration and mastitis it is not appropriate to breastfeed. Therefore, effective contact between the mother and baby is prevented making bonding difficult (Naik, Diwakar, Patre, & Singh, 2015).

According to Chacha (2018), women with large breasts often feel uncomfortable with their image and thus avoid interacting with people for fear of being judged and personal insecurities. The author alludes that this is because beauty for women is an integral part of existence necessitating them to be conscious of their looks. It is for this reason that, some women given a chance may want to undergo breast reduction for aesthetic reasons.

2.4 Mental Health

According to WHO, mental health is a state of well-being that enables individuals to cope with life's challenges, realize their potential, learn, and contribute to their communities. Mental health encompasses one's overall mental functioning and well-being, which may or may not include serious symptoms indicative of mental disorders (WHO, 2014).

Mental health influences a variety of outcomes for individuals and communities such as healthier lifestyles; better physical health; improved recovery from illness; fewer limitations in daily living; higher education attainment; greater productivity, employment and earnings; better relationships; more social cohesion and engagement and improved quality of life (WHO, 2009). It encompasses physical, psychological and psychosocial well-being and affects how we think, feel, and act.

Mental health is crucial at every stage of life, from childhood and adolescence to adulthood. An individual's mental health is greatly determined by their social context. The Social Determinants of Health (SDH) framework acknowledges that a person's demographics and environment overall health, including mental health (Kumar & Huang, 2021). Gender is an important social characteristic that influences mental health. Since women are more likely to experience social, economic, and environmental stressors, mental disorders are more common in women (WHO, 2014).

Women's concerns with mental health extend across the life cycle and cannot be confined to reproductive functioning. In attempting to differentiate women's mental health concerns from those of men, it might be argued that they could be defined as including, but not being limited to, conditions, diseases or disorders which are unique to women; occur more commonly in women; have different risk factors for women; or follow a different course in women relative to men.

However, this approach omits those mental health conditions shared by men and women but for which women may receive different forms of treatment even when the same symptoms are manifested (Mastroianni, Faden & Federman, 1994).

At the present time, an accurate needs assessment of women's mental health, an essential element in effective health promotion, remains hampered by inadequate sources of data, an overly biological, individual focus in research and theoretical models which often neglect to consider how women's low social status and material circumstances intersect with their family roles and their participation in paid employment in determining mental health outcomes. The omission of these social factors from studies of women's vulnerability to mental health problems, amounts to a form of selection bias which precludes the very possibility of examining how gender inequalities might determine women's emotional well-being (Musau, 2023)

According to Mental Health Report Kenya (2020), all individuals, mental, physical and social health are closely interwoven, vital strands of life. Therefore, mental health is crucial to the overall well-being of individuals, societies and countries. Unfortunately, in most parts of the world, mental health and mental disorders are not accorded anywhere the same importance as physical health. Rather, they have been largely ignored or neglected. However, according to the WHO (2014), in developing countries like Kenya, mental health is usually not viewed as a major health concern.

2.5 Research Gaps

The reviewed literature has shown several physical effects of gigantomastia such as breast pain, back pain and ulcers in the breasts. None of these physical effects have been shown to affect the mental health of the patients a gap in literature this study intends to fulfill. Moreover, these researches have been done in locations outside Nairobi, therefore there is a need to confirm

whether there are other physical effects of the condition. Also reviewed in the literature are social effects of gigantomastia such as difficulty in maintaining close friendships. However, the literature reviewed was conducted outside Nairobi and probably environment and society can influence how a person behaves. As such, there is need to find out how gigantomastia patients in the Kenyan context relate to families and other people. But there is scanty information on how psychological and social impact on the mental health, a gap in research this study intends to fulfill.

2.5 Conceptual Framework

A conceptual framework is a diagram that shows how the independent variables are associated with dependent variables in a study (Kothari, 2010).

Independent variables

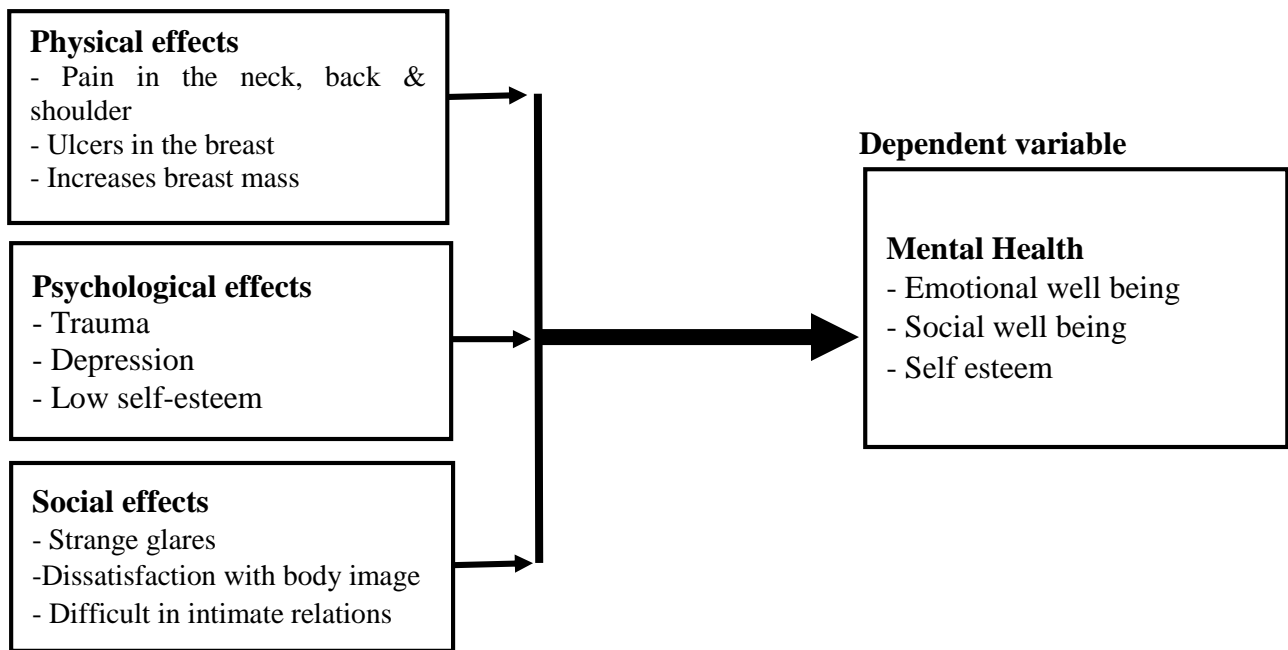


Figure 2.1 Conceptual Framework
(Source, Author 2022)

The conceptual framework shows the relationship between the dependent and independent variables. The independent variables in the study are physical, psychological and social effects while mental health is the dependent variable.

2.6 Summary of Chapter Two

In this chapter, a single theory related to the study variables was reviewed and the application to this study was explained. An empirical literature review related to the physical, social, and social effects of gigantomastia was also done. In addition, literature related to mental health has been reviewed and research gaps identified while reviewing empirical literature have been tabulated. A conceptual framework linking the independent ones with dependent variables has also been presented. The next chapter presents the methodology that was used in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the study methodology, research design and procedures adopted in carrying out the study. It focused on the research location, target population, sampling and sampling technique, data collection, reliability and validity of the data collection instrument, data collection procedures and data analysis and presentation.

3.2. Epistemological underpinnings of the study

The two epistemological schools of thought are: positive (realism) and phenomenological (or normative, interpretive). Positivism seeks to discover precise causal relationships through statistical analysis. Unlike positivism, phenomenologists hold that understanding social reality must be grounded in people's experiences (Akhtar, 2016). This study used phenomenology to explore the experiences of people living with gigantomastia.

3.3 Research Design

Research design is a blueprint for the collection, measurement, and data analysis (Information Resources Management Association, 2021). Newing (2011) notes that, a research design is the overall strategy and process that one chooses to integrate the different components of the study in a coherent and logical way thus ensuring that the research problem is addressed effectively. It is a plan of how one goes about answering the research questions and gives the highlight on how the study will be implemented (Thomas, 2010).

This study was qualitative in nature. The researcher intended to apply a descriptive research design. Descriptive research design is a method of collecting data using a representation of a groups of people or objectives to be studied (Miksza & Elpus, 2018). The researcher decided to use

descriptive research design because, the design is used when the researcher can engage in a field survey by approaching the population of interest in order for the respondents to explain certain features about the problem under study (Mugenda & Mugenda, 2003). Further, it helps to gain new insights, discover new ideas and for increasing knowledge of the phenomenon since it uses a preplanned design for data collection. Therefore, the choice of this design is informed by the fact that the study seeks to explore the physical, psychological and social effects of gigantomastia on mental health among women.

3.4 Location of the Study

The research was conducted in Nairobi County, Kenya.

3.5 Target Population

Population is a whole group of persons or objects to which a researcher wishes to generalize the findings of a study (Barbazettes, 2005). It is basically the entire group of individuals, events or objects having a common observable characteristic. Cooper and Schindler (2014) define a population as the total collection of elements about which one wishes to make inferences. Mugenda and Mugenda (2003) argue that target population in statistics is the specific population about which information is desired.

The study targeted women who are living with gigantomastia in Nairobi County. According to Benna, Naser, Fertani and Ayadi (2018), the prevalence of gigantomastia is estimated to occur in 1 out of every 28,000 to 100,000 people. Therefore, the researcher aimed at interviewing 50 women with gigantomastia in Nairobi County.

3.6 Sampling

According to Cooper and Schindler (2006), a sample is a subject of the population which constitute all the individuals with common observable characteristics. Sampling refers to the process of obtaining information about an entire population by examining only a part of it. It is the process of selecting a sufficient number of elements from a population for the purpose of the study. The sample size for the study was 50 women who fitted in the classification for the standard breast volume above 1000ml (Moschella, Cordova & Toia, 2016).

3.6.1 Sampling Technique

Kothari (2004) suggests that, a sampling technique refers to the method of selecting a sample. Snowball sampling technique shall be adopted for the current study to select the sample size. The technique is used in both medical and social science to source for respondents (Kirchherr & Charles, 2018). Snowball is a non-probability sampling method in which the samples with unique characteristics are rare.

Information from QuestionsPro.com (2022) indicates that snowball sampling is the only way of collecting data where there is no sampling frame. It facilitates the researcher to locate respondents with unique conditions within the population. Thus the first participant was requested to refer the researcher to other participants since the chances for knowing each other is high. Each new recruit was requested to provide more data for referral and the trend was repeated until the expected sample size was obtained (Naderifar, Goli, & Ghaljaei, 2017).

3.6.2 Size Determination

According to Kothari (2004), size of a sample refers to the number of items to be selected from the universe to constitute a sample. A sample is a carefully selected subgroup or subset that is a

representative of the population under study (Teddlie & Yu, 2007). Choosing a sample size is basically to determine the number of observations or replicates to include in a statistical sample.

The sample size is an important feature of any study in which the goal is to make inference about a population from a sample (Emmel, 2013). The study targeted 50 women aged between 18 and 35 with gigantomastia condition. The researcher decided to conduct the study on 50 women based on the recommendation that qualitative samples frequently fall below 50 (Bekele & Ago, 2022).

3.7 Research Instrument

The study used an interview guide as the data collection instrument. According to Wang (2015), the advantage of using an interview guide is that it collects more insights information than questionnaires and other instruments may not be able to collect. The interview guide gave the respondents the space and freedom to express their views, opinions and perceptions of a subject matter without being limited to the specific wordings used in other standard research instruments (Creswell & Creswell, 2017).

The interview guide consisted of semi-structured questions that outlined in a way that it enabled the researcher collect information based on the demographics of the respondents on the first part. The information received was easily grouped according to the themes in line with the study variables. Thus, the interview questions asked were formulated in order to yield the intended results covering the research phenomena and in a way that gave the participants opportunities to raise questions or issues (Bryman & Bell, 2011).

The questions asked covered the physical, psychological and social effects of gigantomastia. Probing questions, follow up questions and interpreting questions enabled the researcher get the correct information from the respondents.

3.8 Pilot Study

The researcher conducted a pilot test prior to the main study. Three persons with gigantomastia were randomly selected from Nairobi County and requested to answer the interview questions. This enabled room for amendments in the interview guide. Further, it helped inform and improve the design, process, and preparedness of the main research.

3.9 Reliability and Validity

3.9.1 Validity

Validity in qualitative research is related to verification of data collection instrument. It is the accuracy and meaningfulness of the research instrument (Mugenda & Mugenda, 2003). Validity of the semi structured interview guide was ensured through a pilot test that was conducted by the researcher. Whereby, 3 persons with gigantomastia were randomly selected by the researcher and interviewed. This ensured that the instructions were clear and all possible comments on the questions were captured. Prior to the pilot test, the researcher consulted an expert and a peer opinion on the semi structured interview guide on the suitability of the outlined questions. Suggestions for improvement were highly considered.

3.9.2 Reliability

Regarding the consistency, the study was built on semi-structured interview questions, meaning that the interviews followed a structure (Bryman & Bell, 2011). Further, a pilot study of the tool was undertaken to test whether the questions were clear and could be easily understood and interpreted. The pilot study enabled the researcher improve the content of the questions and also to estimate the time required per respondents during the interview. The pilot testing conducted through a random selection of peers, thereafter issues arising in the interview exercise were clarified and this ensured that the results obtained were credible.

3.10 Data Collection Procedure

The researcher obtained permission to carry out the research from Tangaza University and the National Commission for Science, Technology and Innovation (NACOSTI). This was followed by recruitment of the research assistant.

The researcher then applied the snow balling sampling technique to recruit participants. The participants who had shown interest in the study were contacted by the researcher for the purpose of scheduling the date and time for the interview. According to Hooley et. al. (2012), the technological changes and growth of the Internet have developed opportunities for online interviewing in qualitative inquiry and have reduced the problems related to face to face interviews. Therefore, data collected virtually using a zoom which is an enterprise video communication platform (Zoom, 2021).

The researcher opted for virtual interview because in the recent studies, it has been shown that participants found many benefits with using zoom for interviews and perceived it as a highly preferable platform. Further, it is easier to reach out to the sample and the costs are low.

The researcher created a zoom link that was sent to the participants in good time. Every interview was expected to take a maximum of 30 minutes that was conducted in a language that the participant understood. The interview was recorded and later transcribed before being analyzed.

Participants were required to register ahead of time by contacting the researcher. This provided the researcher with a list of people to review prior to the meeting. Each registered person was to receive an individual link to join the meeting and after the meeting. The individual link received after registration is only for the person that registered. It cannot be used for multiple people to access

the meeting. Further, the individual link was encrypted with a password that shall only be shared to the participant.

The researcher discussed with the potential participants on the safety of using zoom platform for the interview. There were several alternatives to communicate that the participant was to use at their comfort: audio-only option or video option. They were also allowed to use online chat/message texting if need be. Once the researcher has helped with this process and provided options for communication, the researcher respected the participant's choice. The researcher was also ready to assist participants that were not conversant with zoom platform. This involved offering coaching prior to the interview date.

3.11 Data Analysis Techniques

Data processing and analysis is essential to ensure that all relevant data is gathered for the purpose of attaining the objectives of the study. In the current study, the data obtained from the respondents was analyzed by use of thematic data analysis. This technique is useful for qualitative phenomenological data. It allows for subjective recognition of the respondent's feelings, perceptions and experiences (Guest & Navey, 2012). According to Lewis, Thornhill and Sanders (2016), data processing and analysis is the use of information with the point of deciding reliable results and outlining the important elements. On the same line, Maguire and Delahunt (2017) stipulated that thematic analysis can be conducted at both latent and semantic levels. The latent level deals the understanding, assumptions, ideologies and conceptualization that inform the semantic content. While the semantic level the researcher focuses on the explicit meaning of the data only without further analysis of the data. The study embraced the semantic level of data analysis which is informed by systematic thematic approach. The collected data was analyzed using thematic analysis. This involved categorizing generated answers into outstanding themes, identifying

emerging patterns in the data, identify the relationship between and finally reporting in a narrative form.

3.12 Ethical Considerations of the Study

Being a researcher, ethical responsibility is included as an important factor. Specifically, within interview settings where the researcher has a duty of care towards the interviewee (Eike, 2010). The ethical considerations are focused on role the values have within the research process and if any of these will be of concern.

Even though the interviews within this study were conducted through the digital tool of Zoom, the researcher made sure that the participants were comfortable throughout the process. The researcher notified the respondents that they could leave the interview session or not answer the given questions.

Furthermore, the anonymity of the interviewee was clearly explained in the beginning of each interview session, where the researcher stated that the participant was only be identified by a given number in the analysis of data. They were reminded that all the information received was treated with confidentiality and used strictly for academic purpose.

Participants were educated about the potential risks and the significance of safeguarding their privacy. Participants were notified about the recording and also helped in understanding the privacy settings of the zoom platform that can effectively prevent unintentional data exposure.

The researcher implemented strong passwords. The researcher also ensured that meetings were password-protected to prevent unauthorized access. The passwords used were complex and shared solely with legitimate and registered participants.

The researcher made meeting settings secured. This was done by, utilizing security features like waiting rooms (if need be), password protection, and use of end-to-end encryption which can further prevent unnoticed meeting capture. Choosing platforms that offer end-to-end encryption adds an extra layer of security by restricting access to meeting content only to participants. The participants were also informed and explicitly consented to any recording, which was achieved through clear communication during the meeting.

3.13 Summary of Chapter Three

The study was concerned with exploration of physical, psychological and social effects of gigantomastia on women in Nairobi County, Kenya. The chapter has highlighted the research methodology for the study with focus on the process of data collection process. Chapter four shall present the research findings of the study.

CHAPTER FOUR

FINDINGS

4.1 Introduction

This chapter presents the findings of the study drawn from the three objectives. The study was to determine the physical effects of gigantomastia, to establish psychological effects of gigantomastia and to find out the social effects of gigantomastia on the mental health of women in Nairobi County. The chapter further describes the themes that were identified as part of the thematic analysis process, with extracts from the interviews in light of the main themes and sub themes that emerged from the study. The chapter also outlines the demographic characteristics of the participants.

4.2 Demographic information of the participants

Table 4.1: Participant's Demographics

Respondents	Age	Marital status	Occupation	Number of Children
P/001/2024	39	Single	Sales and marketing	
P/002/2024	26	Single	Radiographer	
P/003/2024	40	Single	Self employed	1
P/004/2024	42	Separated	Accountant	4
P/005/2024	38	Married	Civil servant	1
P/006/2024	29	Single	Student	
P/007/2024	24	Single	Student	
P/008/2024	40	Single	Hospitality	
P/009/2024	40	Single	Self-employed	
P/010/2024	32	Married	Teacher	
P/011/2024	50	Married	Officer of the Government	1
P/012/2024	29	Single	Software Engineer	
P/013/2024	33	Married	Business woman	3

P/014/2024	29	Separated	IT specialist	1
P/015/2024	37	Married	Lab Technician	1
P/016/2024	20	Single	Student	
P/017/2024	31	Married	Agronomist	2
P/018/2024	26	Single	Radiographer	
P/019/2024	39	Separated	Agronomist	1
P/020/2024	30	Single	Teacher	1
P/021/2024	19	Single	Student	
P/022/2024	34	Single	Program Leader	
P/023/2024	35	Married	Accountant	3
P/024/2024	40	Married	Business	5
P/025/2024	45	Married	Business Woman	
P/026/2024	32	Single	Tour and Travel Agency	
P/027/2024	30	Single	Medical Officer	
P/028/2024	36	Married	Business	2
P/029/2024	50	Separated	Communication Consultant	
P/030/2024	40	Married	Teacher	2

Table 1 above outlines the demographic characteristics of the participants. The study engaged 30 participants whose age ranged between 19 and 50 years. Among the 30 participants, 15 were single, 11 were married and 4 indicated that they were separated.

The participants comprised of; 2 Accountants, 2 Agronomists, 2 Radiographers, 3 Teachers, 4 Students, 6 were Self-employed, a Civil servant, a Communication Consultant, a Hospitality field, an IT specialist, a Lab Technician, a Medical Officer, an Officer of the Government, a Program Leader, a Sales and marketing Officer, a Software Engineer and Tour and Travel Agent.

The anonymity of the participants was ensured by concealing their identity through the assigning of labels from P/001/2024 to P/030/2024.

4.3 Results

The results are presented as per the research objectives. The research objectives included: to determine the physical effects of gigantomastia, to establish psychological effects of gigantomastia and to find out the social effects of gigantomastia on the mental health of women. The study focused on women in Nairobi County. The following section presents the emerged themes and sub themes from the participants' responses of the questions as per the research objectives.

4.4 The physical effects of gigantomastia on women

The first objective of the current study was to explore the physical effects of gigantomastia on the mental health of women in Nairobi County. The main purpose was centered at participants expressing their experienced physical effects of gigantomastia. Five main factors emerged in relation to the physical effects: large and heavy breasts, physical pain, challenges finding appropriate clothes, difficulties doing physical activities and sleep difficulties.

4.4.1 Large and Heavy Breasts

Large breast was the most verbalized by all (30) the participants in the study. The participants complained of large and heavy breasts. They indicated that at some point in their life their breasts grew large in size and never stopped growing as indicated in the enlisted extracts from the participants:

“Gigantomastia has caused an abnormal enlargement of my breasts, resulting in significant physical discomfort and strain on my body. By the way, I know when you have this condition, your breasts are larger than the normal size” (P/002/2024).

Another respondent alluded that the breasts were not only a burden, but also a source of pain in her life:

“Breast are good, but when they grow bigger than usual, they rob your source of self-consciousness, they become an embarrassment and also pain even. Gigantomastia, a condition that turns boobs into breasts of burden because of how large and heavy they become” (P/003/2024).

The excessive growth heightened the state of anxiety, makes a person feel less in control of their lives and more vulnerable as narrated below:

“My condition of excessive breast growth, which may have occurred spontaneously during puberty, in campus, my breasts began growing bigger and heavier overnight. I moved from a size 38C to size 42GG bra. The condition made my breasts so big and heavy for me. It interfered with my day to day activities. I couldn’t even wash properly because of how large my breasts were” (P/005/2024).

The unpredictability of the symptoms can be distressing. They impacted negatively on the daily responsibilities, hinders one from running personal errands and demands significant changes in life style:

“I stopped socializing. And then, you know, when you gain weight, they become larger. That's also a problem. So I stopped interacting but the problem is that I had gained weight and my breast was so large. I never went home for 1 year” (P/009/2024).

Yet another respondent affirmed the level of discomforts experienced due to the massive breast load as indicated below:

“This is the condition where your breast enlarge and they grow, and they just don't stop. They keep growing. So, it's like an abnormal growth of, your breast tissues. So, in the

physical part, first of all, these breasts are heavy. They grow big and they get heavy and the heaviness is a burden” (P/017/2024).

Some respondents went ahead to do comparisons on their breast size with their counterparts and ended up feeling low and unattractive.

“People have large breasts. But then when you look at photos of them, they're not as large as yours. Yes. People have large, but then they're just like it's not as large as mine. So your boobs, your breasts are just large, so you look fat. So you boil it down to your physical attributes. When I was younger and you look at older, mine look bigger and larger” (P/019/2024).

The findings of the study revealed how giving birth accelerated breast growth which demanded abrupt change of the bra to support unpredicted breast load.

“My situation worsened when I had my daughter, about 12 years ago going to 13, from 2011. My bust significantly grew, and also my weight increased. I think that was size 8 or 10, but my bust was already double “D”. It didn't show so much then, because I was smaller, but the bigger I got, the bigger they grew. After the birth of my daughter, I don't know what happened, they just grew and grew. I came from being that size, a cup “D”. I was at 30, I think, 32 “D”. I became a 34 “E” or whatever. At some point I think I was almost size 38” (P/029/2024).

Lack of awareness of gigantomastia resulted to labelling of some respondents and were associated with promiscuity. According to the school management, the breast size became a disciplinary matter which required parental involvement as narrated by one of the respondents:

“Most people don't know it's a condition, especially the young girls. For me, it started, I think, when I was in class 7. I had my mom even being called at school. “You know, your daughter is promiscuous because we can see her talking with boys, now look at even her boobs” (P/013/2024).

In a rejoinder, another respondent alluded that:

“I remember there was a time I was called in the headmaster's office and my parent was called to find out if I was pregnant because they realized that my breasts are too big for my age. My mom was shocked but she explained I'm not pregnant, and my mother tried to explain to them that it might be some genes. So from that time I was bullied up to class 8” (P/026/2024).

According to the research findings, some asserted that the big breasts made their bodies appear disproportional because the upper part of the body was larger than the lower one. This distorted the body image and deflated their self-esteem:

“Sometimes you just want to jog or probably walk but you need a lot of strength because afterwards you get back pains yet you're doing that exercise hoping you're going to reduce weight. You lose weight in other parts of the body but for the breast area it's still just the same” (P/005/2024).

Other two respondents expressed the predicaments of large breasts:

“Somehow it messes up with the esteem. I think majorly that's in with because you're not so comfortable your body frame because now personally the boobs are way bigger as opposed to my body size because I'm kind of I'd say like a medium-sized lady or medium to small yeah so the boobs were a bit conspicuous making me immoderate” (P/008/2024).

“The weight of the breasts became excessive and a load on the chest making it difficult to sit up because the upper body is bigger” (P/015/2024).

According to the research findings, the respondents asserted that the big breasts made their bodies unproportional. Some alluded that their upper part of the body was larger than the lower one. Even in marriage the breasts size became a challenge where husbands used derogatory language to their partners whenever an argument arose. They referred to them as people with big breasts as narrated by one of the respondents:

“I remember during my first marriage, my husband used to throw some bad words about my breasts. He would always focus on my big breasts. This comments deflated my self-esteem and made me feel low” (P/028/2024).

4.4.2 Physical Pain

Majority of the respondents also complained having unbearable pain on their backs, shoulders, chest and neck that forced them to take medication to ease the pain. These are supported by the following extracts from the interviews:

“I was diagnosed with back pain, which later migrated and affected my right leg that made it so painful and at times I experienced numbness” (P/003/2024).

“My legs used to swell a lot, I think, because of the weight. So, I used to have a very hard time with my legs. I also used to have back pain on the lower parts of the spinal cord. It used to be very painful and the pain was unbearable” (P/026/2024).

All the respondents complained of shoulder pains. Some reported that their shoulders were scorching and had wounds around the shoulders caused by the bra straps as reported by one respondents:

“I got black marks on my shoulders that hurt because the weight was too much”

(P/004/2024).

The issue of shoulder discomfort was a common phenomenon to majority of the respondents as affirmed by two other respondents:

I had a problem when my shoulder kept on dislocating and I visited my orthopedic surgeon, who performed surgery to reinforce my shoulder. That’s when he realized that the weight on my bust was the cause of the recurrent and painful dislocations. I was diagnosed with gigantomastia and recommended a breast reduction surgery immediately” (P/006/2024).

“My mother once noted that my recurring shoulder dislocations could be due to my enormous breasts. She suggested we visit a specialist and plan for a breast reduction surgery, but I dismissed her. It turns out her instincts were right. My doctor had been trying to figure my persistent, recurring shoulder dislocations, which started when I hit puberty. The first time I went under the knife was in the year 2002, as a teenager. In 2010, I was back in the hospital due to another dislocation, and that’s where my doctor pointed out that the weight of my enormous breasts was the cause of my constant dilemma” (P/020/2024).

The nerves around the neck area were seriously affected causing neck pains as one of the respondents expounded:

“I experienced severe back, neck and shoulder pains due to the weight of my breasts. The pain often radiates down my spine and affects my posture” (P/010/2024).

The friction between the breasts and the skin caused heat rash even during a cold weather as one respondent quoted:

“I used to get heat rash even when it is being cold. You can imagine getting a heat rash when it's cold, and you need to wear warm clothes” (P/019/2024).

It was worse for people who went to places with a lot of heat as one respondent alluded:

“I remember I once went to Dubai and because of the heat, I had a very bad rash. At first, I thought it was eczema. It was a really horrible rash under my breast. I tried applying cream, it didn't work and it was painful. Sometimes the skin ruptured and it was very uncomfortable” (P/027/2024).

The heat rashes caused a lot of pain and irritation under the breasts resulting to visiting doctors and at times taking a lot of medication, as one respondent reported:

“I tried running a marathon once, and the friction peeled the skin off my chest. I even went to a doctor and the doctor was like, what happened? It was a very large friction band. I remember having back pain and unexplained pain around my neck. Initially, I thought maybe it's stress because of work. But I'd get, like, debilitating neck pain” (P/030/2024).

4.4.3 Challenge Getting Appropriate Clothes

Due to the increase in size and weight of the breasts, finding fitting and appropriate clothes was a challenge. This was because whatever was in the market could not fit their breasts size as one respondent narrated:

“Because sometimes getting the right outfit is usually a problem when you have such a condition. You have to contend with what is in the market and sometimes what is available cannot conform to this condition” (P/003/2024).

Another respondent attested that:

“Whenever my friends went shopping, they left me behind as I couldn’t find a bra size that would fit. I changed to new bra cup sizes every two months had difficulty breathing and my bra was digging deep into my shoulders” (P/013/2024).

You can’t just walk in any shopping mall and get what one wants as one respondent was quoted:

“You feel embarrassed and sometimes ashamed. You can't just walk into a regular store and buy what you want. It affects you psychologically” (P/026/2024).

Some of the respondents reported how gigantomastia limited what they could put on. This forced them to import expensive bras as one respondent stated:

“I had a very stressful time buying bras because I could no longer go into a mall or buy off the rack. I'd either go to places before the good shops like Double D's. I've been a customer of a shop called Double Ds for a long time. Because they cater for people with my condition. And, I remember, I had to import my bras. Or if a friend was travelling back from the US or even a family member, I would make an order for like 6 or 7 bras. I spent quite a lot, close to KShs. 100,000/- I would feel, good because I would have a supply for a year or 2 years” (P/028/2024).

It was very difficult to get the right size of the bras forcing them to use two bras to hide and support their breasts. Some respondents were forced to wear bras bigger than those of their mothers. At times they would use wire bras which would hurt them as one respondent quoted:

“There are some bras that I wore that would hurt. There's a time I would wear this wired bra and I got a wound from that and it hurt because the weight was too much” (P/005/2024).

The respondents had a challenge finding clothes that would match the need of their bodies. In the process of trying to look neat some of the respondents' found ways of hiding their chests by wearing jerseys, big sweaters, scarfs, buggy clothes, big T-shirts and jumpers.

“Additionally, it was difficult getting new clothes and bras causing them to buy second-hand clothes that were pricy. Most people with big boobs do not get bras and clothes from shops, you are forced to go for second clothes which are also not easy to get. And one would ask them to call when they have your size” (P/013/2024).

The issue of not getting the proper clothes cut across to several respondents and they had to improvise to conceal their huge breast size:

“I could only shop in flea markets. I changed my wardrobe and started wearing baggy clothes, T-shirts and coats. Things got even worse when the bra started cutting into my shoulders and I had bruises. I prayed to God for answers because I was so frustrated and didn't know how I could be helped. I had bad shoulder and back pains” (P/013/2024).

“I always felt like I was not looking my best. Because I did public speaking, I would always put on a nice scarf to hide my big burst. I eventually had lots of scarfs that I would use to hide and feel a little more confident” (R029/2024).

“My self-esteem wasn't really affected as I'm naturally a very bubbly and outgoing person, though getting nice fitting dresses was a challenge, confining me to T-shirts and jeans” (P/008/2024).

Several respondents cited limitations to source for fashionable clothes due to the body shape:

“The biggest hurdle was when I would go shopping for a bra but never got my size to a point where I would sometimes throw a fit in a shop because I never understood the lack of accommodation. Even though like most women, I loved trendy fashion, I was reduced to a “T-shirt and jeans girl” because the clothes I desired never fit well” (P/011/2024).

“You are so self-conscious of your appearance. I would never remove my sweater since I joined form 2 up to when I went to college. That was between 2004 up to 2010. In 2010, is when I started removing my sweater. Before then I could never remove my sweater” (R022/2024).

“The outlook after dressing up, you are not so confident in yourself because you feel like your upper part of the body is much bigger than the other part of your body” (P/006/2024).

One of the respondents expounded that:

“After the surgery I felt like a new human being with a new lease of life. After the surgery, I, where my classmates could not recognize me. I had become smaller and I could now wear suits like the rest of them, getting fitting clothes was no longer an issue” (P/009/2024).

4.4.4 Challenges Doing Physical Activities

Majority of the respondents complained having to strain a lot while doing physical activities. They reported always being tired, having physical discomfort and that the weight of their breasts would put them down. This challenge was affirmed by several respondents as one of the narrated:

“I would strain while doing activities” (P/002/2024).

Some other respondents were not able to run in the field with the students even though their professions required to do so as cited below:

“Oh, it was very hard doing things like exercising and running, because the breasts are big, you can't run. As a teacher, I have to go to the field and train with my students and at times they're looking at you wondering why you are not doing the activities with them. It was very hard” (P/020/2024).

“I was also asked to have a boob top. But the breasts did not stop growing. Taking up sports became a burden because of the size of my boobs” (P/001/2024).

Because to the weight from their breasts they were not able to engage in physical exercises like swimming, gym and running even though they had deep desire to do so since they were young.

This elicited support from another respondent whose condition was a deterrent to her involvement in psychical activities:

“I was in class six, I was a long-distance runner, I cannot do that anymore. I was not able to take part in physical activities in high school. “I got tired easily and had to find somebody to do something for me and I was not disabled. I just had very humongous big boobs and my back was paining” (P/008/2024).

“Unfortunately, as much as I would have wanted to, I could not join my friends during school activities. With my bust growing almost daily, I could not run and I could not lift my hands. The slightest activity would affect my breathing and my life became largely sedentary” (P/003/2024).

In a situation where the respondents engaged in physical activities, it forced them to put a lot of effort which made them experience fatigue as one respondent narrated:

“Physically, you have to put extra effort on doing everything because of the extra weight. So, there's a lot of panting and sweating those results in a lot of fatigue and pain on the back and on the shoulders” (P/015/2024).

Additionally, for those who loved swimming, they were forced to swim with bras which is not part of a swimming consume. That was not pleasing as one respondent expressed:

“I loved swimming but it was not easy activity because of the size of my breasts. When swimming, you have to wear a swimming costume. You're not supposed to swim with bras, but for a long time, I used to. Most of my costumes don't fit and your breasts tends to fall and it was not physically appealing. So, I opted to wear a bra most of my teenage life so as to, you know, look better” (P/016/2024).

Furthermore, when the respondents engaged in physical activities they reported experiencing shortness of breath, panting, breathing difficulties, running out of breath, having a heavy chest and feeling of having asthmatic attacks as one respondent was quoted:

“I started having breathing problems. It was really tiresome and it felt like an asthma attack. I couldn't do much for myself” (P/007/2024).

Some of the respondents experienced skin irritation when involved in physical activities as one of the respondents cited:

“Sometimes because of the size of the breast, you can't even run. I tried running a marathon once, and the friction peeled the skin off my chest. When I went to a doctor and the doctor was like, “what happened?” (P/027/2024).

Because of the challenges associated by being physically active, the respondents stopped taking part in physical activities making some of them lazy. Some opted to sit down for long and that also had its consequences as one respondent was verbalized:

“You sit down and by the time you are getting up, you are tired” (P/013/2024).

Additionally, lack of exercises led to joint pains, numbness, swelling and at times blood clot. Yet when not done resulted sedentary life:

“I got tired easily and had to find somebody to do something for me and I was not disabled. I just had very humongous big boobs and my back was paining” (R008/2024).

“Simple tasks like walking and exercising had become a challenge and limited mobility”
(P/009/2024).

4.4.5 Posture

The strain from the upper body was the biggest contributor to the posture problem. Because, of the weight from the breasts, the respondents expressed a serious concern of their posture. Some of them leaned forward whether they were walking or sitting.

“Due to the weight of the breasts, my sitting posture was really bad because I used to bend. When you are sitting you are in a bending position as you're carrying a weight in front of you” (P/021/2024).

Majority of the respondents could not sit upright for long and at times would find a place to lean on because in the evenings they would experience a lot of back pain. The posture led to change of walking style as enlisted below:

“You can't walk with your back straight” (P/019/2024).

“It can also affect a woman's posture, resulting in the woman slouching her shoulders. The weight of the breasts could cause back problems. Depending on the weight they are exerting on the backbone, some women are immobilized and their activities are limited” (P/019/2024).

“My posture has significantly worsened leading to musculoskeletal issues” (P/011/2024).

The respondents continued to narrate their ordeals with the condition as indicated in their testimonies:

“You can't bend and when you bend you feel like you're running out of breath” (P/017/2024).

“I experienced severe back, neck and shoulder pains due to the weight of my breasts. The pain often radiates down my spine and affects my posture” (P/010/2024).

Furthermore, the respondents were scared of how their postures were forcing them to stand and walk in a particular style to hide the problem as expressed by one of the respondents:

“You have to make sure that you are standing in a certain way that does not show your posture” (P/029/2024).

4.4.6 Sleeping Difficulties

Sleeping was a challenge for some of the respondents. Though the respondents went to sleep tired, they woke up also very tired as one of the respondents stated. This is because sleeping with the load on their chests was difficult while others were forced to sleep with a bra which is not healthy. The respondents experienced difficulties in sleeping due to the breast load. They had literally plan on how to sleep so that the breasts do not fall when they were asleep.

“Sleeping was a process” (P/024/2024).

“Turning was a whole mess because of the weight of the breasts” (P/008/2024).

“Sleeping on one side was hurting and uncomfortable” (P/016/2024).

4.5 The Psychological Effects of Gigantomastia on Women in Nairobi County, Kenya.

The other objective of the present study was to explore the psychological effects of gigantomasia.

A thematic data analysis was carried out and the following themes emerged: low self-esteem and negative body image, intense negative feelings and emotions, loss of interest in activities they enjoyed doing, and eventually they employed unhealthy coping mechanisms.

4.5.1 Self Esteem and Negative Body Image

As the breasts continue to grow and increase in weight, the respondent’s body took a different shape. This change made majority of them perceive themselves negatively and others feeling they were not in the right body as one respondent articulated:

“The breast was so big and, you know, they’re falling, I started having body dysmorphia or rather feeling like I’m not in the right body. Due to lack of knowledge my aunties and mom used to tell me it's genetics. Your grandmother was also like that” (P/016/2024).

The state of negative body shape forced the respondents to resort to defense mechanism to cope with the situation as cited below:

“I became anti-social and sought refuge in food and so, I naturally gained weight. There was this time I went to my aunt’s place and she asked me why I had huge boobs, yet in my family, they had small boobs. I was wearing the same size with her” (P/009/2024).

The respondents had low self-esteem to the extent that some wished they could develop some condition like cancer so that their breasts could be cut off highlighted below:

“I remember there was a time I even said I would want to have cancer and they cut off my breasts because I did not like them” (P/001/2024).

The other respondent narrated that:

“My big personality, in hindsight, was a distraction away from the body image issues I was dealing with privately (P/004/2024).

Most of them expressed a serious issue of confidence. In the situation when the respondents went for job interviews it would hit back on their appearance as one respondent verbalized:

“I mean my physical appearance definitely would affect me mentally in the sense that you're always so asking yourself about the extra portion you are carrying” (P/006/2024).

“I always felt like I was not looking my best. Because I did public speaking, I would always put on a nice scarf to hide my big burst. I eventually had lots of scarfs that I would use to hide and feel a little more confident” (P/029/2024).

Additionally, in a scenario where others were hired and they were not, they felt that other people got the job because of pretty privileges. This made them feel disadvantaged and undeserving as per the extracts from respondents:

“It feels like when somebody else with a smaller chest is able to wear something comfortable, they look beautiful. But you feel less desirable because sometimes you look at people they're so pretty, and then you look at yourself, you feel so ugly. I Always hoped of becoming small, I worked out but you gonna die working out” (P/027/2024).

“Your self-esteem is somehow challenged. Because you tend to feel like you are not more deserving like other people are. In an event that needs to be attended, like an office event, and there is a clothing theme, you wonder if there is, something that will fit you in the theme (P/026/2024).

Majority of the respondents experienced rejection based on their physical appearance: They expressed the feelings of unworthiness and not being beautiful:

“I would never see my-self-worth. You dress, but still, you feel like, no. I don't look good. I am always doubting myself. The biggest thing that affected my self-esteem, was that I couldn't even believe in myself. Even after finishing school and going to the university, I couldn't even, get myself out there, like going for job interviews. I was really, affected in that way that you can't even believe in yourself” (P/017/2024)

“I learnt of my condition in Class Six when my class teacher body-shamed me as my breasts were bigger than any other female pupils. My classmates really laughed at me that day. This really affected my self-esteem. It just went down” (P/002/2024).

“I Always hoped of becoming small, I worked out but you gonna die working out” (P/027/2024).

It is everyone’s desire to look good and attractive but for the majority of the respondents this was only a wish. Due to the body shape, they had a limitation on what to wear and could only put on jeans with baggy T-shirts to accommodate their large breasts. The situation was worse for those in school. They were ghosted based on their appearance and they were never understood. This made them to withdraw from people as one respondent was quoted:

“My big breasts made me to be socially isolated and became emotionally distressed, this affected how I interacted with people and how I viewed myself” (P/010/2024).

The intense negative criticism and perception reached a situation where the respondents could not take them anymore as one respondent expounded:

“You have negative perceptions. Works on my psyche, I was at a point where it was like an obsession of, “how do I fix this thing?”. Sometimes I'd be like, if only I could cut these things off and then give to friends who maybe don't have and wished I could transfer to them” (P/030/2024).

Some were forced to even go for counselling because they perceived themselves negatively as one respondent stated:

“You can't even say 2 words because you're wondering, like, all these guys are looking at my breasts. I even had to see a counselor at some point to accept myself. To the extent that you're going to see a counsellor, you must have perceived yourself, negatively, less fortunate, I felt wasn't beautiful enough” (P/028/2024).

Furthermore, for some, counselling did not work as one respondent stated:

“I developed poor self-image and a confidence young I tried talking to a counselor to overcome my concerns about my appearance but it wasn't working for me” (P/007/2024).

4.5.2 Intense Negative Feelings and Emotions

Majority of the respondents had emotional instability and expressed feelings such as fear, sadness, shyness, anger, unworthiness, irritability and being less fortunate. As one respondent cited:

“It has taken a significant toll on my mental health contributing to persistent feelings of sadness, anxiety and low self-worth and also declining to my overall quality of life”
(P/011/2024).

This made majority of them desire being alone to the extent that some even crying in the toilets.

As one respondent stated:

“Everyone is enjoying swimming. But then me, I feel like if I wrap up in a costume people will look at me. I remember at one point, I got so upset, I cried in the toilet because I just wondered, like, what is this? Because the people are just wearing their costumes, even the big people. Because the bust is not so big. Somebody's just in a costume and they're big and they're happy” (P/027/2024).

Majority expressed having gone through episodes of depression. They were thinking a lot about themselves and were also worried about what their children would go through due to their condition.

“I also get stressed because I am human. I have a heart like any other person. So those things stress me. I also have fears about my children. How do the other children that they play with treat them because of my condition?” (P/001/2024).

When in public setting, a large number of the respondents experienced social anxiety because of their physical appearance. This made them feel uncomfortable especially when it seemed like everyone was looking at your chest. It also made them feel bad about their bodies as one respondent stated.

“I'll not entertain at times, if you get hard on me, I'll also get hard on you. I'll also start abusing you. Who do you think you are? And then I'll go down later and sit down and start crying and wondering what is wrong with my boobs?” (P/013/2024).

This staring from people created feelings of awkwardness, ugliness, embarrassment, inadequate, abnormal, insecure and feeling aged. It also made them become highly sensitive and worried about peoples' perception on their body shape as stated by two respondents:

“Because of negative emotions and anxiety, you constantly worry about what people are thinking about you. You are always constantly worried about your own self and you are just self-conscious” (P/006/2024).

“I felt unloved from a family of 6 ladies. We are 6 girls in a family, and it's only me who suffered that condition. So sometimes, I asked myself and or I would even ask God, ‘why me?’ “Why me only me in the family of 6?” You have that feeling of being unloved.” (P/023/2024).

Occasionally, majority of the respondents experienced mood swings, anxious and sadness as one respondent stated:

“My physical appearance has taken a significant toll on my mental health, contributing to persistent feelings of sadness, anxiety, and low self-worth. It has also led to a decline in my overall quality of life” (P/010/2024).

4.5.3 Loss of Interest of Social Activities

When growing up, most of the respondents used to be active and engaged in sports like swimming, cross country and other outdoor activities. As their bodies took a different shape, they lost interest in activities they used to enjoy as one respondent stated:

“I was a good swimmer growing up. I was very light. I was just young and light but my body started taking a different shape” (P/026/2024).

Additionally, some felt uncomfortable when people stared at them doing their activities as one respondent articulated:

“I was a hockey player once. I would engage in athletics. I would swim and play. But after that, I stopped doing all those things since it seemed like you were so unaware of your appearance. It seems as though everyone is focusing on you. People say really strange things in their remarks” (P/027/2024).

In situations where respondents would engage in sports like swimming, they complained of not fitting into costumes and feeling like they were wrapped in the costume. This was well vocalized by one of the respondents:

“You barely fit into a swimming costume but I must still fit into it and you don’t look good” (P/006/2024).

Some expressed serious desire to participate in social activities they used to enjoy such as hiking expeditions and other social activities. However, they had lost interest because when one engaged in them, they felt a lot of pain, got tired very fast. They were also shy and experienced feelings of insecurity as articulated by two respondents.

“I lost interest in social activities and intimate relationships due the feelings of shame and insecurity about my body” (P/009/2024).

“I have no interest because the moment you engage yourself you feel a lot of pain and a lot of weight and you get tired very fast (P/011/2024).

4.5.4 Unhealthy Coping Mechanisms

The respondents devised ways of living with the condition to help them accept themselves and cope with the situation. But majority accepted that it was challenging. They suffered from crowd phobia and confined themselves to the own secure space. Interactions with other people brought challenges though some respondents acted it out to avoid rejection. In situations where stress levels were high, the respondents had to devise coping strategies as shared below:

“I can say since I had it from a young age, I accepted it since I never thought it had a solution” (P/003/2024).

“I started focusing on the negative aspects of my situations. There was a time I became suicidal. I was just so stressed. I started punishing myself by not eating” (P/014/2024).

Living with gigantomastia was such a bad experienced that forced some of the respondent to have double personality in order to cope with daily hassles:

“I did very good public speaking, encouraging students. But what used to discourage me after that, what I am preaching is not what I am practicing. Because I will go back and hide” (P/001/2024).

“I used to mask a lot I would pretend that I’m confident and then someone will look at me and I’ll snap back. it reaches a point I got very defensive” (P/007/2024).

“Sometimes I would conform the people around me. It was probably because of my situation and the psychological effects it had on me” (P/010/2024).

On the same note, some of respondents had to modify their coping mechanism to bear with stigma and rejection: The aspect of behavior modification brought some solace to the respondents as narrated below:

“Imagine at class six, that is 12 years old. I had to develop a thick skin. So, that I would handle these abuses of, you've slept with a man” (P/008/2024).

“I was distanced and avoided myself from people apart from my family so as to avoid being stared at, or people making comments about my boobs. So I kept off completely. I became a loner. I separated myself from everything apart from myself and family” (P/010/2024).

However, a few respondents embraced positive coping mechanisms despite having the condition as indicated below:

“my self-esteem wasn't really affected as I'm naturally a very bubbly outgoing person and made myself a jean's girl. (P/008/2024)

“Even though like most women, I loved trendy fashions, I opted T-shirts and jean. The use of bra made me look better” (P/011/2024).

4.6 The Social Effects of Gigantomastia on the Mental Health of Women in Nairobi County, Kenya

The other objective of the current study was to explore the social effects of gigantomastia. A thematic analysis was carried out and the following themes emerged as the social effects of gigantomastia; difficulty with social interactions, social stigmatization and labelling, body image and sexualization and social support.

4.6.1 Difficulties with Social Interaction

Majority desired to live and do things the ordinary people do. They cited having thoughts that people were gossiping about the size of their breasts. Thus they became socially withdrawn and avoided public settings.

“I would do everything in public very fast and come back home, I just wanted to be in my own space. I didn't want to be around people, it really affected me” (P/005/2024).

“The lack of social interaction can lead to loneliness and exacerbate feelings of depression and anxiety and mental health issues in general. I had psychic disorders mainly related to sexuality, feeling of inferiority, and difficulty of social interaction. This was according to my doctor” (P/016/2024).

They were not able to socialize with people, preferred to be alone and developed social anxiety due to fear of being rejected and stigmatized as enlisted below:

“I developed social anxiety, at some point I would not leave in class. I began having depression at that point. So high school was very, very bad. Then I went into campus, same thing. I couldn't leave home” (P/022/2024).

“I did not feel interacting with people sometimes I did not feel like going to work but just to stay in the house the whole day” (P/023/2024).

“Because of our large breasts someone would think you are old yet you are only 15 or 16 years old. There are ways the society treats you, that are not normal, they are bad and shameful.” (P/027/2024).

“Sometimes when I was with my girl-friends I would feel like I was the only odd one because of my big boobs. People look at me and they are wondering how do they grow that big, and they ask you all sorts of questions. This discrimination” (P/029/2024);

“The big breasts just make you look old. So, when you tell someone that you have one kid, they are like no, no way. There’s no way you would only have one kid” (P/003/2024).

It was also very difficult to attend a church and praise God like one would desire. Some were opted to sitting down and clapping as one respondent expressed.

“Everybody’s eyes are on you because of the size of everything. You cannot jump and praise God. You just clap your hands (P/011/2024).

For some it was very uncomfortable being in the social groups and even in family settings where they belonged. People lacked empathy and understanding. They stared at them and this made them feel unworthy in front of people as expressed by several respondents:

“I was not comfortable in social groups even in families I felt I was not in the right place. I was not comfortable in any kind of social group, even in my family. I was just feeling out of place, uncomfortable, I was not ready to involve myself in in some of the team activities” (P/012/2024).

“The lack of understanding and empathy from some people has strained my relationships and it has created a sense of distance and some resentment” (P/001/2024).

“People look at me and they are wondering how do they grow that big, and they ask you all sorts of questions. This discrimination” (P/029/2024).

'I was not comfortable in any kind of social group, even in my family. I was just feeling out of place, uncomfortable, I was not ready to involve myself in in some of the team activities' (P/012/2024).

"I have lost interest in social activities and hobbies that I once enjoyed, such as swimming and attending public events, because I feel uncomfortable and self-conscious about my body" (P/030/2024).

In social gatherings people make insensitive comments about the large breasts. Some felt uncomfortable sitting next to them resulting to feeling of isolation and rejection;

"The society is very harsh you cannot even interact with people because all the time everyone is just telling you, you are too big to be with peers" (P/017/2024).

"I once attended a wedding and people commented "What did she come to do? Did she come to distract us, so that we can look at her boobs?" (P/013/2024).

There was situation where some respondents were exposed one to hostility and lack of respect as articulated by one of the respondents:

"I'll give you a really specific example. We once went on a school trip to Mombasa. My friends extend an invitation to me to join them. They arrived there earlier than I did. I was entering the nightclub. Suddenly, a guy approached me, grabbed my breasts, and gave me a strange look. I retaliated. This man attempted to use violence. I hurried over to the bouncer and told him that the man was attempting to be violent. And he said, "That's your problem" (P/015/2024).

All these made the respondents feel that they do not fit into social expectations causing then to feel embarrassed and unwanted.

***“There are ways the society treats you that are not normal, they are bad and shameful.
(P/027/2024).***

***“For most victims, it is a personal daily struggle they would rather keep to themselves
out of shame or embarrassment” (P/013/2024).***

Another respondent stated:

***“I presented psychic disorders mainly related to sexuality, feeling of inferiority, and
difficulty of social interactionmotional and social effects. The size of the breasts leads
to social embarrassment, resulting in anxiety, depression, and a negative body image”
(P/014/2024).***

4.6.2 Labelling and Social Stigmatization

Women with large breasts were made fun of, given names and labelled based on the size of their breasts. Some were given nick names that describe their breasts which impacted on the mental wellness.

***“I was bigger upper, and I was small. So, they used to call me Johnny Bravo Syndrome.
It didn't feel good, honestly. Called unproportional feels so bad. It's like, calling a blind
person blind it would hurt them” (P/028/2024).***

***“I felt judged, you don't know the characteristics of my boobs and how look, you judge
me. I felt judged honestly” (P/007/2024).***

Some were labelled, “girls with big boobs”. Others made weird and funny remarks about them. This made them feel awkward in front of people as expressed by two respondents.

“Probably you are passing down the road someone will make a very weird and mockery remarks” (P/026/2024).

“When I joined campus, it was hell on earth. I was stigmatized by other students who nicknamed me granny, because of my large breasts. I never had friends, as people choose friends according to those who resemble them and I did not look like them” (P/002/2024).

The aspect of labelling affected both young and old. It deflated their self-esteem which heightened their anxiety levels as narrated by one of the respondents:

“My college mates started poking and making fun at me and I became the laughing stock due to my humongous bust, and they gave me some funny names. I later learned was a medical condition called gigantomastia” (P/010/2024).

Constantly, unpleasant remarks were made on the respondents directed on their huge busts. These resulted to stigma and humiliation even at an early age. To counter the negativity, some had to develop defense mechanism to cope with situation.

“I was stigmatized while I was in primary school, this negatively affected my education” (P/014/2024).

“Along the way, I became a bully to deter any untoward advances or name-calling, no one was ever courageous enough to say anything to my face. My bosom used to draw a lot of attention. I would be talking to someone, but their eye level focused on my bust, which was uncomfortable” (P/011/2024).

The continuous insensitive comments from people made most of the respondents become sensitive about people’s perceptions. They became reference points and dehumanized due to their condition.

‘I remember even one time in the office, we're doing something, and somebody even referred it and said, ah, something about big boobs. I was the reference point’

(P/029/2024).

Additionally, their big breasts made them be labelled as people carrying breasts for the whole village and were associated with immorality. The comments came from strangers as well as acquaintances.

“Sometimes you are walking and strangers make nasty comments about you”

(P/006/2024).

“Others gave me funny nick names because they thought my big breasts were a curse from sleeping with other women’s husbands” (P/013/2024).

Lack of societal awareness contributed to stigma and labelling of people with gigantomastia as narrated by some of the respondents.

“It’s coming from a point of ignorance and that the society does not understand this condition like just any other but see it as a point of immorality” (P/008/2024).

‘You are passing and people start calling me names, telling me that I am carrying boobs of the whole village. Friends would always laugh and say You have aborted, that’s why your boobs are like that, she is always with men, and men are always touching her’

(P/015/2024).

Feelings of being judged negatively by friends and others was a major concern among the respondents. They were being judged as persons who are immoral and having procured abortions.

“Imagine a teenage girl who is young, who does not know anything and people in the community start saying she has aborted. The condition exposes a woman to name calling and attracts attention to your burst. These has psychological effects in the long run”
(P/016/2024).

Sometimes when some of the respondents devised ways to defend themselves from these kinds of treatment. But, they were further humiliated as one respondent quoted:

“I remember there was a time we fought with a boy, I was called in the head teacher’s office and my mother was called to find out if I was pregnant” (P/001/2024).

People continued to make fun of the respondents calling them un- proportional. But others proposed ways to help them reduce weight of their bursts as one respondent reported

“I was always thinking about them and how I could change. I was searching for anything connected to losing weight on Google sometimes and getting an all manner of results. For instance, you might be put on a diet that isn't real at all or advised to try eating ginger, and you would cling to them because they are the only things that are giving you hope at the moment” (P/030/2024).

Additionally, people continued to look at them with curious eyes wondering how their breasts grew that big as one respondent quoted:

“People look at me and they are wondering how do they grow that big, and they ask you all sorts of questions. This is discrimination” (P/029/2024).

4.6.3 Body Image and Sexualization Issues

Due to the weight of the breasts majority of the respondents had unproportional body shape. These affected their self-esteem and also made them to have negative body image as shared by two respondents:

“There are times I used to look at myself and did not like how I looked. Women who are going through this are sexualized. Someone merely wants have sex. And then they depart after having taken advantage of the fetish” (P/015/2024).

“You are so self-conscious of your appearance. I would never remove my sweater since I joined form 2 up to when I went to college. That was between 2004 up to 2010. In 2010, is when I started removing my sweater. Before then I could never remove my sweater” (P/022/2024).

Some had serious desires to take photos but could not because of how they looked like on the photos:

“That is why I don’t even like photos because when she looked at the photo, she felt she occupied a third of the photo” (P/025/2024).

While another respondent disliked mirrors because they visualized their body structure:

“I hated mirrors, I think I only started getting comfortable around mirrors around 2018 and 2019 but still would look at myself in sections” (P/022/2024).

“It was very hard to even appreciate how one looked like because even when you are walking you look like you have a haunch. “It was very hard you pitied yourself, you don’t love yourself, why would you love yourself? How would you love yourself with this kind

of weight and figure? You even walk like you are bending and have a haunch”
(P/024/2024).

Most of the respondents were highly sexualized and reported receiving attention from men. However, they felt that these people only wanted to play games with them as expressed below:

“Being an outgoing person, I decided the only way I would defend myself from men's vile comments was to embrace an aggressive personality. I would tell off anyone who dared comment anything about my appearance” (P/003/2024).

“These men were not giving me attention because they loved me but wanted something”
(P/028/2024).

Additionally, majority of the respondents were aware that these sexual comments were not made out of love. But men wanted to take advantage of the men as indicated below:

“I got a boyfriend then they broke up with me because I am fat” (P/027/2024).

“Some men would tell you. Oh, I love your breasts so you end up being in love with this person for the wrong reasons” (P/017/2024).

Another respondent stated:

“Curious men who wanted to touch my breasts and see if they were real. Once while on holiday abroad, I bumped into a guy who asked me if I had had implants” (P/020/2024).

However, the strategy of breast reduction brought solace to the respondents as it enhanced their body image:

“Reduction breast surgery has a positive impact on the health status and psychological function as well as on the sexual activity of patients and them” (P/001/2024).

“Body image dissatisfaction is one of the major factors that motivate patients to undergo plastic surgery. However, few studies have associated body satisfaction with reduction mammoplasty” (P/030/2024).

4.6.4 Social Support

Some participant acknowledged that the biggest support system was their family members and friends. They accepted them as they were and empathized with their condition which insulated them from feelings of rejection:

“Let me say, I have got a very supportive system of my parents, of a good friend. And I have... I have been trying to encourage myself. As much as it is very hard, I get those issues of mind, of the heart, of the body. I try to encourage myself. So let me say, I have tried to be a woman of substance as to where I am now. And the reason why I have a push for it is because I feel now... (P/019/2024).

In instances where some parents were not supportive due to lack of awareness they sort for forgiveness due to their ignorance on the condition.

“Even up to date my mother still apologizes she was coming from a point of ignorance and did not know what I was going through” (P/008/2024).

Although some of the respondents felt their families were supportive, they were uncertain of what they would be thinking or saying behind their backs as one of the respondents stated:

“I did not experience any negativity though I cannot know what they would say behind my back. I did not experience any challenges with my family members”. (P/011/2024).

Though they received support from the parents, some of the respondents were uncomfortable reciprocating with a hug due to the myth associated with it.

“So, you feel like I hugged my father and may be touched my boobs so it was uncomfortable” (P/027/2024).

Some of the participants experienced negative social support. To some their cousins made it worse by making provoking comments about the weight of their breasts.

“It was really irritating as one of my relatives came up to me and said, “You need to lose that weight on your chest. I did not experience any negativity though I cannot know what they would say behind my back. I did not experience any challenges with my family members” (P/011/2024).

The negative effects of gigantomastia contributed significantly breakup of marriages as narrated by one of the respondents:

“I was 22 when I was married. I believe my in-laws held me in low regard. They disgraced me, and I believe that is why my spouse became disheartened, thinking that perhaps wandering how large are those breasts” (P/001/2024).

On the same line, there were people received psychosocial support while other were discriminated against by their social circles as reported by one of the respondents:

“There are those who are positive and those who are negative. Those that are negative would murmur and others would be like, what are you carrying?” (P/013/2024).

4.7 Summary of the Chapter

This chapter described the results of the thematic analysis for each research objective. The themes identified in the analysis were described with supporting quotations from the interview transcripts. The main themes were; physical effects, psychological effects and social effects. The sub themes were: large and heavy breasts, physical pain, challenge getting appropriate clothes, challenges

doing physical activities, posture, sleeping difficulties, self-esteem and negative body image, Intense negative feelings and emotions, loss of interest of social activities, unhealthy coping mechanisms, difficulties with social interaction, labelling and social stigmatization, body images and equalization issues and social support. The next and final chapter provides a summary of the results and discusses the findings in depth.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter summarizes the results from the study and discusses the findings in relation to previous research mentioned in the literature review. The chapter also draws conclusions based on the findings to provide a clear indication of the purpose of the study. Furthermore, it provides recommendations for improvements on the current study and indicates future research that can be conducted to better understand the population.

5.2 Discussion of the Results

In this section, the findings for each objective are compared with the empirical studies. It examined whether the results are in tandem with previous research or there are discrepancies. Possible explanations for any difference from the previous studies are discussed as well in order to provide a clear picture of how this study compares to other research among this population. It also discusses other possible explanations for the findings that were discovered in the current study.

5.2.1 Physical Effects of Gigantomastia on the Mental Health

The first objective of the study was to determine the physical effects of gigantomastia on the mental health of the women in Nairobi County, Kenya. This objective aimed at determining how the physical conditions of gigantomastia affect the mental health of the respondents. Through their shared experiences and responses from the research questions, the findings revealed that gigantomastia affects mental health.

The insights from this study are in line with the findings of Kluwer and Williams (2014) that established that gigantomastia was associated with large heavy breasts and physical pain. The responses obtained from the participants corresponded with that of Chrominiski (2003) that

indicated that large breasts cause pain and other physical problems. Also the study findings of are in tandem with Lapid et al.((2013) that affirmed the reason why women suffering from gigantomastia undergo breast reduction is due to back, neck, shoulder pain. Traore et. (2015), stated that the massive and fast increase of breasts can lead to high levels of body heat hence leading to extraordinary physical body health problems such as itching, skin peeling, suppression of milk supply and mastitis. These findings collaborates with the responses obtained from the sample of the participated in this current study.

Participants also cited challenges in getting fitting clothes due to the size of the breasts. This corresponded with findings of Snodgrass and Sylvania (2012) which revealed the challenges women with gigantomastia faced in finding the right sizes of their clothes. Long and Vasconez (2010) further articulated the difficulty that confronted the women in search for fitting clothes forcing them to improvise. Others resulted in making alterations that aggravated in finding clothes their feelings of unattractiveness and psychological wellbeing (Long & Vasconez, 2010).

Additionally, the study findings revealed the challenges participated encountered when involved in physical activities such as painnad breathing problems. The challenges corresponded with the by carried out by Poojar et al. (2018). The same study articulated the disabling effects of gigantomastia that impacted on physical mobility such as manual work and sports. On the other hand, Traore, et al. (2015) found out that one of the physical distresses caused by the extremely large breasts is poor posture which causes the upper spine to curve forward resulting in kyphosis that resulted to sleeping difficulty.

5.2.2 Psychological Effects of Gigantomastia

The second objective of this study was to find out the psychological effects of gigantomastia on the mental health of women in Nairobi, Kenya. Questions from the interview schedule that

pertained to this objective inquired about participants' experience on psychological effects with regards to gigantomastia on mental health. This conclusion corresponded with the testimonies by the participants on this current study.

The study findings revealed feelings of unworthiness to develop positive body image, persistent feelings of sadness and anxiety. These feelings collaborated with the conclusions from statistics by Lapid et al. (2013) which posited that the reasons why women suffering from gigantomastia undergo a breast reduction. The reduction was meant to relieve of are that back, neck, shoulder and bra grooving pains that deflated the patient's self esteem and body image. Further a study by Mendle, Turkheimer and Emery (2011) revealed that girls who develop big breasts early were at higher risk of eating disorders, drug abuse, and depression. Wolfswinkel et al. (2013), confirmed that women with breast hypertrophy suffer from significant emotional distress. The intense

negative feelings and emotions- psychological effected the mind, especially as a function of awareness, feeling, or motivation as indicated by Aseeyn (2012). The study further amplified that, apart from physical complications, a person with gigantomastia suffers trauma, depression, low self-esteem, anxiety, shame, and deflated ones ego due to their physical appearance.

One the same line, participants indicated of loss of interest in social activities and unhealthy coping mechanisms. These findings correlates to a survey by e t al. (2015) that revealed that , revealed that women with macromastia had a higher risk of disordered eating thoughts and behavior than normal teenagers. The study further revealed that women with macromastia have impaired health-related quality of life, lower self-esteem and more breast-related symptoms, in comparison with their peers. Unfortunately, women often internalize these stressors and fail to seek appropriate help since early identification and professional guidance may help to improve the quality of life in this population. A study by Stokes (2018) explained five ways in which women's

breasts can impact their mental health. Firstly, large breast size causes depression and unhappiness which he claims affected majority of the women in this study. He indicated that, the level of dissatisfaction forces some to undergo breast reduction to elevate their self-image.

5.3.2 Social Effects of Gigantomastia

The third objective aimed to understand the social effects of gigantomastia on the mental health of women in Nairobi, Kenya. The participants reported difficulties with social interaction, labeling and social stigmatization, body images and sexualization issues and social support. According to their narrations of the participants revealed that people within their social circles discriminated against them resulting to stigma and loneliness.

For some participants, close friends withdrew from them. While for others, close relations such as spouses made them feel uncomfortable and worthless by making unpleasant remarks about their condition. Some participants expressed anger and frustration. They revealed that there was permanent destruction of family relations such separations. Moreover, escalated to high emotional levels which severed the relationship leading to divorce.

A study by Vasconez (2010), indicated that, apart from undergoing difficulties of social stigma and sexual harassment, people can develop a poor self-image and low self-esteem. In addition, Saarimiemi (2011) conducted a similar study on gigantomastia and spelt out its social consequences on the victims such as dissatisfaction with body image, difficulties to form intimate relations, inability to participate in sports and social activities. These consequences are replicated in another study findings by Agbenorku (2012), citing worry, and isolation as a result of gigantomastia. Agbenorku affirmed the findings that women with gigantomastia suffer from mental health as an outcome of how they perceive themselves in regards to their physical

appearances and fun made by their peers about them. The insights of the these study correspond to the findings of this current study.

Another study which was utilized to understand this objective was by Chacha (2018), he learnt that, women with large breasts often feel uncomfortable with their image. They avoid interacting with people for fear of being judged and personal insecurities. The author alluded that the avoidance of interactions is due to the importance women place on their appearance. According to them, beauty is an integral part of their existence. It is for this reason that, some women given a chance may want to undergo breast reduction for aesthetic reasons to boost their self esteem and beauty. This line of thought blends with narrations of some of the participants in this study.

5.3 Conclusion and Summary

In this section, general conclusions were drawn in regards to each objective. These conclusions take into consideration critical analysis which has been conducted based on the results from the study. These conclusions provide the basis for understanding the impact for the current study and how the main research question can be answered.

5.3.3 Physical Effects of Gigantomastia

The first objective wanted to determine the physical effects of gigantomastia on the mental health of the women in Nairobi County, Kenya. The findings in the study revealed that the participants with large and heavy breasts, experienced physical pain, and had challenge getting appropriate clothes resulting to unattractiveness which deflated their self –esteem. They also had challenges doing physical activities leading to stress, distorted body shape which affected their body image and sleeping difficulties The conclusion for this objective was that, women suffering from gigantomastia had vast experiences based on the physical effects which consequently impacted on their mental wellness.

5.3.2 Psychological Effects of Gigantomastia

The second objective aimed at establishing the psychological effects of gigantomastia on the mental health of women and young in Nairobi County, Kenya. The findings showed that this population experienced a mix of emotions and mental health symptoms as a result of gigantomastia. This was evidenced in negative themes that were articulated in this study. They included: negative self-esteem and negative body image, intense negative feelings and emotions, loss of interests of social activities and unhealthy coping mechanisms. This study concluded that women in Nairobi Kenya experience psychological issues due to gigantomastia that also affects their mental health.

5.3.3 Social Effects of Gigantomastia

The third objective sought to establish the social effects of gigantomastia on the mental health among women in Nairobi County, Kenya. The findings for this objective had overall shown that, difficulties with social interaction, labelling and social stigmatization, body images and sexualization issues and social support were the social factors experienced by the participants. The conclusion for this objective was that gigantomastia socially affected women in Nairobi Kenya in a variety of ways such stigma and isolation.

5.3.4 Summary

This chapter discussed the findings of the study derived from the three objectives. It further revealed the physical, psychological and social effects of the gigantomastia on the mental health in Nairobi County. It further provided a comprehensive analysis of the results in line with the previous research emanating from literature review.

The chapter also highlighted the physical, psychological and social effects of gigantomastia and its impact on women mental health from the Kenyan context. The final chapter will present the summary, conclusions, recommendations and suggested areas for future study.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The purpose of the study was to explore the physical, psychological and social effects of gigantomastia on the mental health of women in Nairobi County, Kenya. It employed qualitative research method. A snowball technique was used to obtain a sample consisting of 50 respondents. The data was collected by use of interview guide and analyzed through thematic analysis.

6.2 Summary of the Findings

The findings of this study provide a compelling evidence that gigantomastia significantly impacts the mental health of women through interconnected physical, psychological and social pathways.

The physical effects observed in the study include back, neck, and shoulders. These identified findings serve as primary reasons why women seek breast reduction intervention.

Similarly, the challenges of inability to participate in physical activities, difficulties in finding proper fitting clothes resulting in the feelings of unattractiveness, postural problems and breathing difficulties impacted severely on the mental health of women living with gigantomastia.

However, the study uniquely demonstrated how the physical symptoms directly contribute to the deterioration of mental health, creating a cycle where physical discomfort reinforces psychological distress.

On the other hand, the psychological effects of gigantomastia documented in this research corroborate with previous studies revealing severity of the mental health impact in the Kenyan context. These manifest in terms of low self- esteem, body dysmorphia and depression reported by the participants.

The study revealed that women with breast hypertrophy suffer significantly from emotional distress. The extreme psychological responses include suicidal ideation captured in some participants' extracts. These are serious mental health risks associated with gigantomastia. Equally, the loss of interest in the previously enjoyed activities and development of unhealthy coping mechanisms reflect patterns identified in the past studies. Additionally, inadequate of conventional counselling approaches highlighted by the participants seem to suggest the need for specialized psychological interventions that address the unique challenges of living with gigantomastia.

On the same line, the social effects captured in the study demonstrate how cultural and social contexts amplify the impact of gigantomastia on mental health. The labelling and stigmatizations experienced by the participants, particularly the accusations on their bodies and sexuality in the Kenyan context of promiscuity and immorality reflect broader societal attitudes towards women's. These findings extend beyond previous research. They illustrated how social stigma directly contribute to mental health deterioration. The aspect of sexualisation and unwarranted attention described by the participants align with other scholars who conducted similar studies. But this study revealed the psychological trauma associated with such experiences. The variability in the social support from the protective family relationships to destructive in-law attitudes highlighted critical role of the social networks in mediating the mental health impact of gigantomastia.

6.3 Conclusion on the Findings

This study concludes that gigantomastia represents a significant public health concern that requires a comprehensive intervention strategies addressing physical, psychological and social dimensions simultaneously. The findings reveal that the conditions impact on the mental health is not merely a consequence of physical discomfort but results of from complex interaction between bodily

experiences, psychological responses and social reactions. The absence of awareness and specialized support services in Kenya as evidenced particularly by the participants the participants' struggles to access appropriate care and understanding accelerates the mental health impact. The research demonstrated that gigantomastia affects women across all socio-economic levels and professions, challenging assumptions that it primarily affects specific populations.

The study's findings also underscored the need for early identification and intervention programs to prevent the escalation of mental health problems associated with gigantomastia. Ultimately, addressing gigantomastia requires a holistic approach that recognizes it as both medical condition and a social justice issue requiring coordinated efforts from healthcare systems, education institutions and community organizations to support the affected women and improve their quality of life.

6.4 Recommendations

6.4.1 Recommendations to Women Living with Gigantomastia

Based on the findings of this study, the following recommendations were advanced in order to improve the quality of life of women living with gigantomastia:

- 1.** The Ministry of Health should establish specialized clinics for gigantomastia diagnosis and treatment while developing clinical guidelines for early detection and management.
- 2.** The healthcare facilities should be equipped with trained personnel capable of providing pain management and surgical interventions when necessary.
- 3.** The government should include gigantomastia treatment in the national health insurance schemes to ensure accessibility and affordability.

4. Healthcare facilities should integrate mental health screening and psychological assessments into routine care for women with gigantomastia to ensure early identification and intervention of depression, anxiety and other psychological complications.
5. Training programs should be developed for health worker, counsellors and mental health professionals to enhance their capacity to provide specialized psychological support for women living with gigantomastia.
6. Public awareness campaigns should be implemented to educate healthcare workers, families, communities and caregivers about the condition's signs, symptoms and its psychological impact. This will promote understanding and reduction of stigma associated with gigantomastia.
7. Support groups and peer counselling networks should be established to provide platforms for women with gigantomastia to share experiences, receive emotional support and develop health coping mechanisms.

6.4.2 Recommendations for Further Studies

Since this study was exploratory in nature, it provides the groundwork for many options for further research. Primarily, further research could be used to understand the physical, psychological and social effects of gigantomastia on the academic performance of adolescents with gigantomastia. The study can also be conducted to explore the effects of gigantomastia on the maternal health of women living with the condition.

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APPENDICES

Appendix 1 - Letter of Introduction

Lucinda Gitura Mugaa
P. O. Box 9420 -00100,
Nairobi.

2nd August 2023

Dear Sir/Madam

RE: REQUEST TO COLLECT DATA

I am a postgraduate student at the Institute of Youth Studies- Tangaza University.

I am currently doing a research study to fulfill the requirements for the award of the degree of Master of Arts in Counselling Psychology. My research topic is **“exploration of physical, psychological, and social effects of gigantomastia on the mental health of women in Nairobi County-Kenya.”**

You were recommended by someone that participated in this study. Data shall be collected through interview that will be done online via zoom. A meeting schedule and the link shall be sent to you in good time.

Your response will be treated with utmost confidentiality and will only be used for academic purposes.

Thank you in advance.

Yours faithfully

Lucinda Gitura Mugaa

Appendix 2: Participant Consent

The purpose of this consent form is to give you the information you will need to help you decide whether or not to be a participant in the study.

Feel free to ask any questions about the purpose of the research. This process is called informed consent. Once you understand and agree to be in the study, I will request you to sign your name on this form. You should understand the general principles which apply to all participants in the study:

- Your decision to participate is entirely voluntary.
- You may withdraw from the study at any time without necessarily giving a reason for your withdrawal.

Participant's Statement:

I understand that my participation in this study is voluntary and that I may choose to withdraw any time. I freely agree to participate in this research study. I understand that all efforts will be made to keep information regarding my personal identity confidential.

Participant's Signature: _____

Date: _____

Appendix 3- Interview Guide

This interview guide is aimed at collecting data on **the Physical, Psychological and social effects of Gigantomastia on Mental Health of Women in Nairobi County, Kenya**

Introduction;

- Greetings
- Self-introduction
- Briefing on the purpose of the interview
- Assuring of confidentiality

Section A: Demographic Information

1. Participants Age:

2. Marital status:

3. Occupation:

Section B:

a) Questions on Physical Effects of Gigantomastia

1. How would you explain the physical effects of gigantomastia?

- Do you experience and physical pains?
- Do you have any change of colour on your breasts?
- Do you have any other condition that has developed due to the weight of the breasts?

2. How has gigantomastia affected your day to day physical activities?

3. How has your physical appearance affected your mental health?

b) Questions on Social Effects of Gigantomastia

1. How would you explain the social effects of gigantomastia?
 - Do you experience any mood swings?
 - Have you developed any mental disorder due to gigantomastia?
2. How do you perceive yourself?
 - What are the things that you have lost interest in since you developed gigantomastia?
3. How has your mental health affected due to gigantomastia

c) Questions on social effects of Gigantomastia

1. How would you explain the psycho-social effects of gigantomastia?
 - How do you feel when people look at you?
 - How do you perceive your body image?
2. How would you describe your relationship with people around you? E.g. friends and family members.
3. How has your relationship with the people around you affected your relationship?

d) Would you like to add anything?

Conclusion:

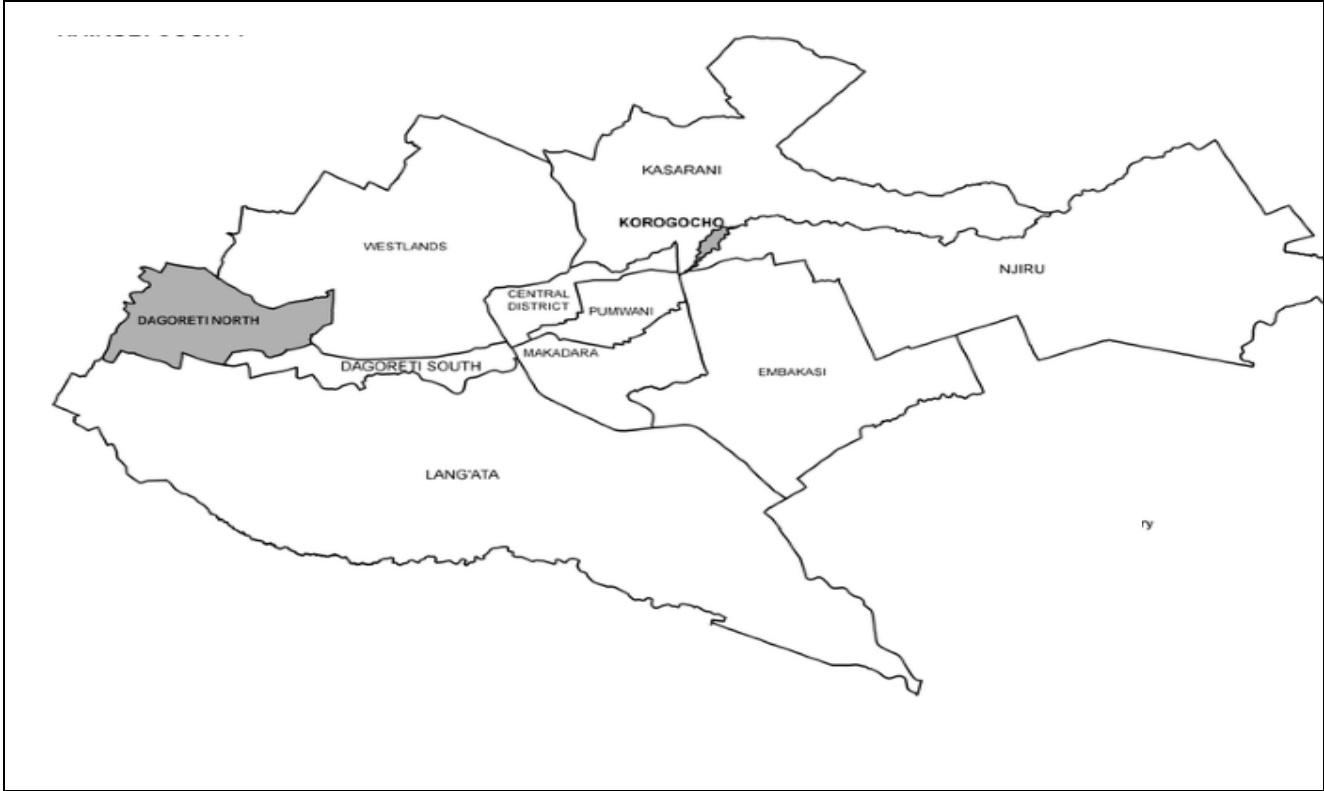
Thank you for accepting to participate in the study.

Appendix 4 -Classification for Standard Breast Volume

Breast size	Classification
250ml – 400ml	Normal size
400ml – 600ml	Mild breast hypertrophy
600ml – 800ml	Moderate breast hypertrophy
800ml – 1000ml	Severe breast hypertrophy
Over 1000ml	Gigantomastia

Source: (Moschella, Cordova, & Toia, 2016)

Appendix 5: The Map of Nairobi County



Appendix 7: Plagiarism Report



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Submission ID trn:oid::1:3021079906

Lucinda Gitura Mugaa

EXPLORATION OF PHYSICAL, PSYCHOLOGICAL AND SOCIAL EFFECTS OF GIGANTOMASTIA ON THE MENTAL HEALTH OF Y...



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