



University of Fort Hare
Together in Excellence

**DELAYS OF BREAST CANCER DIAGNOSIS AMONG WOMEN IN ST.
ELIZABETH REGIONAL HOSPITAL, EASTERN CAPE, SOUTH
AFRICA**

BY

MZAMELENI MTHINJWA

(200802282)

**A MINI DISSERTATION SUBMITTED TO THE FACULTY OF HEALTH
SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR A
MASTER OF PUBLIC HEALTH DEGREE**

University of Fort Hare
FACULTY OF HEALTH SCIENCES
Together in Excellence
UNIVERSITY OF FORT HARE

SUPERVISOR: DR N. NKUTU

CO-SUPERVISOR: DR F MASHAU

12 March 2025

DECLARATION

I, Mr Mthinjwa Mzameleni, student number 200802282, declare that the study with a title “***Delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital in the Eastern Cape, South Africa***” in submission for the degree of Master of Public Health at the Fort Hare University is my own work. All the sources used in this study were given due acknowledgements by means of citation and a complete reference list. I further declare that this work has not been submitted to any university before.

Name: Mzameleni Mthinjwa



Signature:

Date: 12 March 2025



University of Fort Hare
Together in Excellence

DECLARATION ON PLAGIARISM

I, Mr Mthinjwa Mzameleni, student number 200802282, declare that the content of this study is my own work. Where other author's work has been used, proper references have been given.

Name: Mthinjwa Mzameleni



Signature...

Date: 12 March 2025



University of Fort Hare
Together in Excellence

DECLARATION ON RESEARCH ETHICS CLEARANCE

I, Mr Mthinjwa Mzameleni, student number 200802282 and certificate Reference Number: **Ref#2021=06=04=MzameleniM**, declare that I am fully aware of the University of Fort Hare's policy on research ethics, and I have taken every precaution to comply with the regulations.

Name: Mthinjwa Mzameleni



Signature...

Date: 12 March 2025



University of Fort Hare
Together in Excellence

DEDICATION

I dedicate this study to my dearest late mother Mrs Malungile Nonzuku and my late sister Nomzamo Mthinjwa, I will always miss you. I learnt a lot from you, God took you from me so early. I always remember your encouragements and wishes. I wish you were here today to see my work. I will forever love you sister and my mother. May your soul rest in peace.



University of Fort Hare
Together in Excellence

ACKNOWLEDGEMENTS

I thank God almighty for the gift of life. Father, you have given me strength and courage to further my studies. Without your grace, I would have not made it to this point. Your grace is sufficient for me. You are worthy to be praised.

I would like to express my deepest gratitude to the following people:

- My supervisor Dr Nonyaniso Trustina Nkutu, you are the best supervisor. Thank you for your patience, assistance and tireless support. Without your support and supervision this study would not have been successful.
- Dr Funanani Mashau, my co-supervisor, thank you for your guidance towards the completion and preparation of the document.
- The Govan Mbeki Research and Development Centre (GMRDC) together with Dr Nonyaniso Trustina Nkutu for supporting me with supervisor linked bursary during my first year.
- My wife, Mrs Phumza Wetshe-Mthinjwa, thank you so much my love for allowing me to pursue my studies. I really appreciate the support and motivation you gave me throughout this period. I am blessed to have you in my life. Thank you for your love, support, prayers and believing in me.
- My children, Zinga, Alunamda, Ntsika, and my niece Asisipho for letting me to steal their quality time for my studies. I hope you will understand as you grow up and appreciate the value of education.
- The Eastern Cape department of health for giving me the permission to conduct research on confirmed breast cancer patients.
- The CEO of St. Elizabeth Regional Hospital, Ms Mngweba for allowing me to conduct my study in your institution.
- Operational manager of female surgical unit sister Mbuzi Ntombifikile Sweetness, who encouraged and recommended me to pursue my studies. Thank you for your sweetness and encouragement, you are a super manager.
- My colleagues at female surgical ward for your patience and understanding me during the time of this study.
- Prof TM Mothiba for analysing and coding my data. You did a very good work, thank you very much.
- Study participants at St. Elizabeth Regional Hospital in Lusikisiki, for consenting and agreeing to participate in this study.

ABSTRACT

Introduction: Breast cancer is the most frequently diagnosed cancer among females worldwide. Breast cancer has the highest incidence among all cancers and is the leading cause of cancer death for women worldwide. Noticeably there are women diagnosed with breast cancer at the late stages., and those women have a low survival rate. Delayed diagnosis from the time a breast abnormality is detected to the time of definitive diagnosis; either by the patient or by a healthcare provider may contribute to the negative outcomes, as well as expensive treatment options and higher recurrence rates. The same problem has been identified at St. Elizabeth Regional Hospital in Lusikisiki, in the Eastern Cape Province.

The aim and objectives: To assess factors contributing to delays of breast cancer diagnosis among women at St. Elizabeth Regional Hospital, Lusikisiki in the Eastern Cape Province, South Africa. To describe the strategies for the reduction of time to breast cancer diagnosis among women in St. Elizabeth Regional Hospital in Lusikisiki in the Eastern Cape Province, South Africa.

Methods: A qualitative approach was used for this study. The study used an explorative, descriptive and contextual design to identify the reasons for delay in breast cancer diagnosis, among women in St. Elizabeth Regional Hospital in Eastern Cape Province, South Africa. A non-probability purposive sampling technique was used. Ethical clearance was received from the University of Fort Hare Research Ethics Committee. Permission was then obtained from the Provincial Department of Health, and St. Elizabeth's Regional Hospital to continue with the study. The researcher obtained necessary permission from all participants after they had been thoroughly informed about the purpose of the interview. The researcher obtained consent from the participants to tape record the interview for accurate data collection purpose and permission for data analysis. The data was collected from 11 women with confirmed breast cancer diagnosis seen at St. Elizabeth Regional Hospital in Lusikisiki, Eastern Cape Province. A qualitative data was collected using a self-designed semi-structured interview guide by the researcher. Face-to face interview questions were administered by the researcher, probing was done until saturation was reached on 11 participants.

Data analysis: The qualitative data was analysed using thematic analysis. To organize the data into themes that identify factors associated with delays in breast

cancer diagnosis among women, the researcher utilized the eight steps of Tesch established in Creswell (2014).

Results: The main factors contributing to delays of breast cancer diagnosis among women in St Elizabeth Hospital include financial difficulties, lack of knowledge, lack of presentation to the health facility for consultation, fear of breast cancer and surgery, unreasonable turnaround time for investigation results, lack of oncology skills, and lack of referral to other institution for further investigation and management.

Conclusion: There should be oncology capacity building in regional hospitals receiving breast cancer patients from clinics and district hospitals, and continuous breast cancer awareness to reduce delays of breast cancer diagnosis.

Key words: Breast cancer, Delay, Diagnosis.



University of Fort Hare
Together in Excellence

LIST OF ACRONYMS

CBE - Clinical Breast Examination

CSSD - Central Sterile Services Department

COVID – Coronavirus Disease

FNA – Fine Needle Aspiration

FNAC - Fine needle aspiration cytology

HBM - Health Belief Model

KZN – Kwa Zulu Natal

LMICs- Low-middle-income countries

NDOH- National Department of Health

PHC – Primary Health Care

SBE – Self Breast Examination

SBU's - Specialist Breast Units

SOPD- Surgical Outpatient Department

UFHREC - University of Fort Hare Research Ethics Committee

WHO – World Health Organization



University of Fort Hare
Together in Excellence

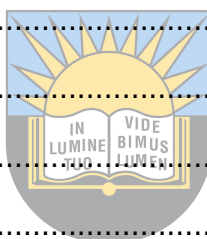
Table of Contents

DECLARATION	1
DECLARATION ON PLAGIARISM	i
DECLARATION ON RESEARCH ETHICS CLEARANCE	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
LIST OF ACRONYMS.....	vii
LIST OF FIGURES.....	xi
LIST OF TABLES	xi
CHAPTER 1: INTRODUCTION	1
1. 1. Introduction	1
1.2. Statement of the problem.....	1
1.3. Aim of the study	2
1.4. Objectives of the study.....	2
1.5. Research questions.....	2
1.6. Significance of the study	3
1.7. Delimitations of the study	4
1.8. Operational definitions of key terms or concepts	4
1.9. Theoretical framework: The health belief model	4
1.10. Conclusion	7
1.11. Chapter Outline.....	7
CHAPTER 2: LITERATURE REVIEW	9
2.1. Introduction	9
2.2. Factors associated with delayed diagnosis of breast cancer	10
2.3. Strategies to reduce time to diagnosis of breast cancer	14
2.4. Chapter Summary.....	15



University of Fort Hare
Together in Excellence

CHAPTER 3: RESEARCH METHODOLOGY	16
3.1. Introduction	16
3.2. Research Design	16
3.3. Research setting	16
3.4. Population	18
3.5. Sample and sampling procedure	20
3.5.1. Inclusion criteria	20
3.5.2. Exclusion criteria	20
3.6. Data Collection: Research instrument.....	21
3.6.1. Pilot interview	21
3.7. Trustworthiness.....	21
3.8. Ethical considerations	23
3.9. Data collection Procedure	26
3.10. Data management	27
3.11. Data analysis	27
3.12. Chapter Summary.....	29
CHAPTER 4: RESULTS	30
4.1. Introduction	30
4.2. Demographic data.....	30
4.3. Themes and sub-themes	32
CHAPTER 5: DISCUSSION AND CONCLUSION.....	53
5.1. Introduction	53
5.2. Discussion of findings	53
6. CONCLUSION	65
7. LIMITATIONS	65
8. RECOMMENDATIONS	65
REFERENCES.....	66



University of Fort Hare
Together in Excellence

ANNEXURES	75
ANNEXURE A: Ethics Research Confidentiality and Informed Consent Form	75
ANNEXURE B: Interview guide.....	78
ANNEXURE C: Application Letter to University of Fort Hare Research Ethics Committee.....	80
ANNEXURE D: Application for Institutional consent to conduct research study ...	82
ANNEXTURE E Eastern Cape Department of Health research approval	84
ANNEXTURE G: Institutional permission to conduct the study	86
ANNEXTURE H: UFH research ethics clearance certificate	87
ANNEXTURE I: Coding report	89



University of Fort Hare
Together in Excellence

LIST OF FIGURES

Figure 1.1: Health Belief Model of Breast Cancer	5
Figure 3.1: Study setting	17
Figure 3.2: Map showing St. Elizabeth's Hospital and some of the locations in the catchment area	18

LIST OF TABLES

Table 1 1: socio- demographic data	30
Table 2: Themes and sub-themes	33



University of Fort Hare
Together in Excellence

CHAPTER 1: INTRODUCTION

1. 1. Introduction

Breast cancer is the most frequently diagnosed cancer among females worldwide. Breast cancer has the highest incidence among all cancers and is the leading cause of cancer death for women worldwide (Torre et al., 2016).

Low-middle-income countries (LMICs) suffer a disproportionately high rate of breast cancer mortality compared to their share of incidence because of a delayed diagnosis (Agodirin et al., 2019). Delayed diagnosis can be categorized into patient delay and provider delay or health system delay (Tesfaw, Demis, Munye, & Ashuro, 2020).

It has been found that women who are diagnosed with late-stage breast cancer have a low survival rate (Maly et al., 2016). Delayed diagnosis from the time a breast abnormality is detected to the time of definitive diagnosis; either by the patient or by a healthcare provider, may contribute to negative outcomes, as well as expensive treatment options and higher recurrence rates (Maly et al., 2011).

Previous studies in Sub-Saharan Africa have quantified breast cancer delays and late presentation (Maghous et al., 2016; Obiorah & Abu, 2019). Over 50% of women diagnosed with breast cancer in most African countries present late and report to the hospital with advanced stage III and IV disease, a major reason for the poor survival rate (Moodley et al., 2016; Čačala & Gilart, 2017). The same problem has been identified at St. Elizabeth Regional Hospital in Lusikisiki, in the Eastern Cape Province.

1.2. Statement of the problem

The researcher has observed from clinical experience at St. Elizabeth that most breast cancer patients are diagnosed late and as a result have poor survival outcomes. The late diagnosis of breast cancer contributes to disease progression, which leads to more aggressive treatments and a worse prognosis among patients (Medeiros, Thulerab & Bergmanna, 2019). Considering the inequalities and the areas of low socioeconomic status, access to health services is a challenge and the delay in diagnosis of breast cancer represents an important factor of worse prognosis in patients with breast cancer (Ferreira et al., 2017).

There is a dearth of literature regarding studies enquiring about factors associated with breast cancer delays in the diagnosis of breast cancer in the Eastern Cape Province. This has motivated the researcher to conduct a study to determine factors associated with breast cancer diagnosis delays among women in St. Elizabeth's Regional Hospital and to identify strategies to reduce the time to breast cancer diagnosis among women and saving lives. It would be interesting to understand why there is delays in breast cancer diagnosis among women in St. Elizabeth Regional Hospital at Lusikisiki, Eastern Cape, South Africa.

1.3. Aim of the study

The aim of this study was:

To assess factors contributing to delays of breast cancer diagnosis among women at St. Elizabeth Regional Hospital, Lusikisiki in the Eastern Cape Province, South Africa.

1.4. Objectives of the study

The objectives of the study were:

- To assess the time on breast cancer diagnosis among women at St. Elizabeth Regional Hospital, Lusikisiki in the Eastern Cape Province, South Africa.
- To describe the strategies to facilitate prompt breast cancer diagnosis among women in St. Elizabeth Regional Hospital in Lusikisiki in the Eastern Cape Province, South Africa.



University of Fort Hare
Together in Excellence

1.5. Research questions

The research questions of the study were:

- What are the factors contributing to delays in breast cancer diagnosis among women at St. Elizabeth Regional Hospital, Lusikisiki in the Eastern Cape Province, South Africa?
- What are the strategies for reducing time to breast cancer diagnosis among women in St. Elizabeth Regional Hospital in Lusikisiki in the Eastern Cape Province, South Africa?

1.6. Significance of the study

The significance of this study would contribute to the participants and the society, to nursing practice, research, and profession. These aspects were briefly explained.

• Significance to the participants

The participants would get knowledge regarding breast cancer and will be empowered as to the importance of monthly self- breast examination and annual visits to general practitioners for mammograms for early detection of breast lumps.

• Significance to the society

The society would be empowered as to the importance of visiting the primary health care facilities in order to be checked for early detection of breast abnormalities and prevention of breast cancer.

• Significance to the nursing practice

Nurse practitioners and health care workers would use every opportunity to hold breast cancer awareness campaigns in order to empower women and girls on the importance of getting checked for breast abnormalities and to encourage all nurses to never allow their clients to leave without them being informed of the seriousness of breast cancer and their need to be checked.

• Significance to the research and profession

The participants would get free copies of study findings and report. The study would contribute to the body of knowledge and the profession would make it their responsibility to hold evidence- based practice for every one of their clients and patients through breast cancer education, awareness, and campaigns to reduce breast cancer diagnosis delays thus preventing morbidity and mortalities as a result of delays in breast cancer diagnosis. The results of this study would inform the Department of Health about factors affecting time to breast cancer diagnosis among women. The findings would also explore the strategies to reduce time to diagnosis of breast cancer among women and girls and create awareness of the benefits of early diagnosis of breast cancer among women.

1.7. Delimitations of the study

This study was only conducted among women with a confirmed breast cancer diagnosis attending St. Elizabeth Regional Hospital in Lusikisiki, Eastern Cape Province.

1.8. Operational definitions of key terms or concepts

Breast cancer is a malignant tumour of the breast, usually a carcinoma, rarely a sarcoma (Oxford Concise medical dictionary, 2010). In this study, breast cancer was the confirmed diagnosed breast cancer detected in the breast lobule, ducts, and breast tissues, which could metastasise to other parts of the body.

Delay: According to breast cancer prevention and control policy, a delay has been defined in terms of patient delay and provider delay (National Department of Health, 2017). In this study a delay of breast cancer diagnosis means the time taken from onset of symptoms and receiving a confirmed diagnosis of breast cancer.

Diagnosis: According to Collins English Dictionary (2014) diagnosis is the identification of disease by the examination of symptoms and signs and by other investigations. In this study diagnosis meant the confirmation of a breast cancer from the results of a diagnostic procedure conducted that is histology.

1.9. Theoretical framework: The health belief model

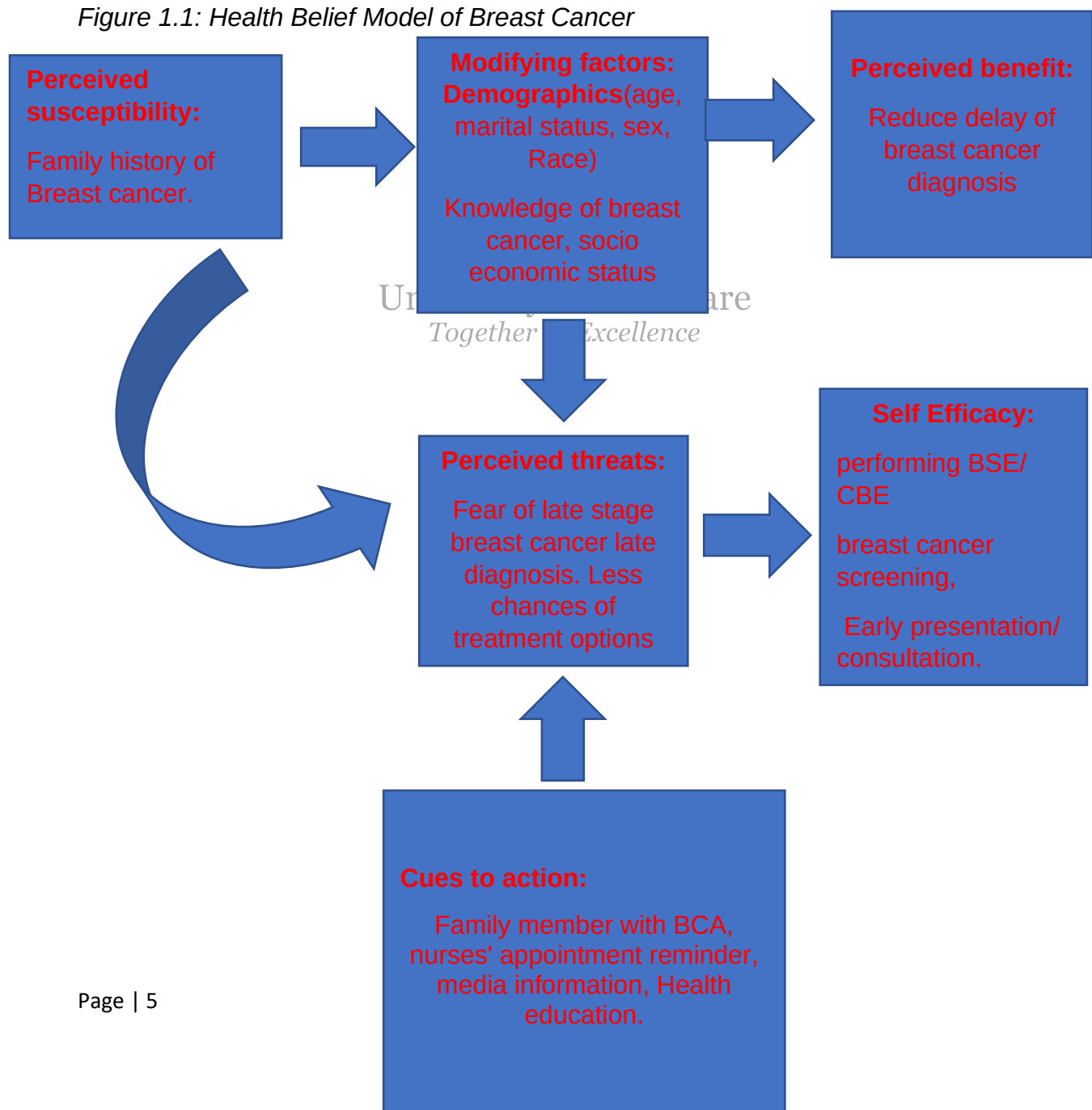
This study is guided by Health Belief Model (HBM). The health belief model assumes that people will engage in a health behaviour or take a recommended action when they believe that doing so can reduce a threat that is both likely and would have severe consequences (Glanz, Rimer & Viswanath, 2015). HBM is relevant to this study because women perform breast self-examination to detect breast cancer symptoms early and report the abnormalities to the health care provider to prevent late diagnosis of breast cancer. The health care provider should also promote access to health care.

According to Hajian-Tilaki & Auladi (2014), the health belief model emphasizes that health behaviour is affected by threats from health problems; for example, women perceiving susceptibility to breast cancer risk or believing that breast cancer is a serious disease are more likely to undergo breast clinical examination (BCE) and breast cancer screening programs (Hajian-Tilaki & Auladi, 2014). Similarly, women

perceiving greater benefits, with higher health motivation, and feeling less barriers to breast examination are more likely to perform breast self-examination (Hajian-Tilaki & Auladi, 2014).

Based on this model, Hajian-Tilaki & Auladi (2014) noted that the domain of health practice is driven by health belief attitudes. Health professional should provide health services to the woman with breast symptom or refer early to another health professional or health care facility that can provide the right services for early diagnosis. Hajian-Tilaki & Auladi (2014), concluded that positive attitudes toward perceived benefits, perceived confidence, and health motivation have a strong association with performing breast self-examination (BSE) and BCE. The health Belief model is shown in **figure 1.1** below.

Figure 1.1: Health Belief Model of Breast Cancer



1.9.1. Modifying factors

HBM alludes that modifying factors affect the health-related behaviours indirectly by affecting perceived seriousness, susceptibility, perceived benefits and barriers. Modifying factors include but not limited to demographics (age, sex, ethnicity, education, marital status), psychosocial factors (personality, knowledge of breast cancer, family history or previous exposure, social class, support), structural factors (distance to the health facility, transport, availability and access to health facility).

1.9.2. Perceived susceptibility

Perceived susceptibility may be explained as the extent to which an individual feels vulnerable to an illness (Wang, Chen, Xie & Zhang, 2019). Women who perceive that they are susceptible to breast cancer engage themselves in right behaviours to reduce risk being diagnosed with advanced breast cancer. Other women recognise the susceptibility of breast cancer but believe that it is unlikely to them. Women who feel they are not susceptible to breast cancer are likely to be diagnosed advanced breast cancer.



1.9.3. Perceived seriousness

The perceived severity of the consequences of illness is an explanation of the anticipated severity (Wang et al., 2019). When women perceive that late breast cancer diagnosis has a serious effect on their lives, that there are benefits to early diagnosis of breast cancer and that there are no barriers, they are most likely to present with early breast cancer symptoms at nearest health facility.

1.9.4. Perceives Threat

A combination of perceived severity and perceived susceptibility is known as perceived threat of a particular disease. The perceived threat of breast cancer depends on knowledge and awareness of breast cancer disease. HBM proposes that high perceived threats of a disease lead to the likelihood of engaging in good health behaviours. In terms of health-related behaviours, the value is to avoid sickness and the expectation are to prevent the condition to which people consider they might be at risk, through health actions (Glanz et al., 2015).

1.9.5. Cues to action

Cues to action is a construct not based on expectancy or value, maybe as diverse as medical symptom, doctor's recommendation, or media campaign (Glanz et al., 2015).

1.9.6. Perceived benefits

Perceived Benefits of taking early actions to prevent late diagnosis of breast cancer follow a woman's acknowledgement of the susceptibility and seriousness of breast cancer disease. The perceived benefits include high cure rates if breast cancer is diagnosed in early stages, access to more treatment options and reduced delays of breast cancer diagnosis.

1.10. Conclusion

This study sought to assess the factors affecting time to diagnosis of breast cancer among women and to explore the strategies to reduce time to diagnosis of breast cancer among women in St. Elizabeth Regional Hospital in Lusikisiki in the Eastern Cape Province, South Africa. The significance of the study, delimitations, operational definitions, theoretical frameworks were also given in this chapter.

1.11. Chapter Outline

This mini dissertation has five chapters which are outlined as follows:

Chapter 1: Introduction and background

This chapter introduced the research topic and discussed the motivation for this study, background to the study. The chapter also described the research problem clearly. The purpose of the study, research objectives and questions for the study were outlined; and clarified specific terms regarding the study. The significance of the study, delimitations, limitations and conceptual definitions were also given in this chapter.

Chapter 2: A literature review

Relevant literature was sourced and discussed in this chapter on the delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa.

Chapter 3: Research Methodology

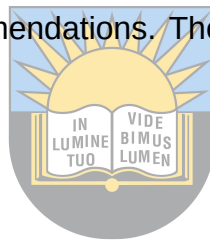
This chapter discussed the research process: research approach, research design, population, sample and sampling, access to the research site and research methods. The choice of the qualitative approach was discussed, and reasons for choosing the approach were given. Ethical considerations and principles were also ensured.

Chapter 4: Results: Data Presentation and Analysis

In this chapter, the results of the interviews were analysed and interpreted. Data collected from the participants were presented as categories and sub-categories.

Chapter 5: Discussions, Conclusions and Recommendations

In this chapter, the findings of the study were discussed, literature reviewed and summarized. The chapter also gave conclusions of the whole mini dissertation based on the findings as well as recommendations. The next chapter will review, analyse, and synthesize related literature.



University of Fort Hare
Together in Excellence

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The previous chapter provided an introduction and background to the study, and outlined the study aims and objectives. This chapter will review, discuss, analyse, and synthesize related literature to identify and describe what is already known around the phenomenon and what still the gap in knowledge is. A literature review is a search and selection of available works, describing the bigger picture that provides the background and create space for the current proposed research (Ridley, 2012). According to Richards (2020) literature review is an essential step in the research process to find out what is already known and what studies have been conducted on delays of breast cancer diagnosis among women. This literature review focused on contributing factors for delays of breast cancer diagnosis among women and the strategies that could be implemented to reduce time to diagnosis of breast cancer.

A Google search engine, Google Scholar, PubMed, and Medline were consulted, using the following key terms: breast cancer, delayed diagnosis, factors affecting time to diagnosis, and strategies to reduce time to diagnosis of breast cancer. The following was used as literature inclusion criteria: women diagnosed with breast cancer, breast cancer delayed presentation, and time to diagnosis of breast cancer, published in the English language between 2010 and 2021. Additional papers were identified by reviewing references of relevant articles and journals.

According to researcher's understanding, any woman with breast changes should report as soon as possible to the health care facility, any breast problem such as lumps, pain, nipple discharge, and enlarging breast are easily detected early through breast self-examination. The question was: What are the factors affecting time to diagnosis of breast cancer among women? And what can be done to reduce time to diagnosis of breast cancer among women? There is a dearth of published literature about this topic in Eastern Cape Province, although there are related studies conducted in other provinces here in South Africa and other countries.

Breast cancer is the most common cancer among women and a major cause of cancer deaths in women worldwide (Sung et al., 2020). Women with breast symptoms self-

present to primary healthcare facilities and referred to secondary or tertiary-level facilities if further diagnostic work-up and treatment are required (Moodley et al., 2018). In many low and middle-income countries breast cancer is diagnosed at an advanced stage (Rayne et al., 2019). Breast cancer is a public health problem, so it is important to determine the factors associated with delayed diagnosis of breast cancer (Perusquía & Bautista, 2018) and identify strategies to reduce those delays.

In South Africa, breast cancer mortality rates among socioeconomically disadvantaged patients are assumed to be high, although poorly reported (Joffe et al., 2018). This is partly due to more than 70% of women are being diagnosed with advanced-stage disease in rural and urban health care settings (Čačala & Gilart, 2017).

2.2. Factors associated with delayed diagnosis of breast cancer

A delay in diagnosis is divided into patient-linked, provider-linked, and system-linked factors associated with delays in breast cancer diagnosis among women.

2.2.1. Patient-linked factors

According to Pace et al. 2015, a patient linked diagnosis delay is the delay between a patient's onset of symptoms and first seeking care at a healthcare facility.

A long patient interval of more than three months has been associated with lack of identification of signs and symptoms as well as limited human resources and infrastructure (Perusquía & Bautista, 2018). According to Huo. 2015, in China patients who reside in rural areas reported more delays of breast cancer diagnosis than urban patients.

According to a qualitative study in the United Arab Emirates, more than 75% of breast cancer patients sought medical advice after experiencing signs and symptoms of the disease and many sought such advice late (Elobaid et al., 2016). The women had different reasons for a delay seeking advice; these included recognising symptoms, fear of societal stigmatization, and concerns regarding abandonment by the spouse because of breast cancer (Elobaid et al., 2016).

Car et al., 2016 invited Northwest London cancer care clinicians to identify and prioritize the main causes of delayed diagnosis of cancer. The study identified the following common problems leading to delayed diagnosis of cancer: Lack of patient awareness of cancer symptoms meaning that they did not attend for advice and investigation on time, patients' fears of the diagnosis of cancer meaning that they did not seek health advice early in the course of their illness,

Orsini et al. 2016 conducted a case control in France and observed that low socioeconomic status patients had a two-fold higher risk of late-stage breast cancer at diagnosis regardless of cancer characteristics and detection mode than patients with high socioeconomic status. One reason explaining those results could be that low socioeconomic status patients have less regular follow-up which can lead to later and poor diagnosis (Orsini et al., 2016). Socioeconomic status is one of the social determinants of health; women from rural areas do not have money to travel far to access health services such as clinical breast examination and mammograms. Women living in extreme poverty levels have high rates of late-stage presentation of breast cancer relative to women living in low poverty rates (Williams & Thompson, 2017).

Brinton et al. 2017 analysed data collected from a large case-controlled study of 1184 women to determine factors contributing to delays in the diagnosis of breast cancer in a lower-middle-income country. In this analysis, factors contributing to diagnosis delays were found among less-educated women (Brinton et al., 2017). Furthermore, it was noted that women with less than junior secondary schooling who delayed seeking care for breast symptoms for six months or longer were nearly more times the risk of more educated women who promptly sought assistance (Brinton et al., 2017). Educated women can recognize the symptoms and act early for prompt diagnosis compared to less educated women especially those living in poor socioeconomic conditions.

Tetteh and Faulkner, 2016 stated that women with breast cancer symptoms often present late in Sub-Saharan African due to sociocultural beliefs, and practices (Tetteh & Faulkner, 2016). These include the value devoted to the breasts as symbols of nurturance, and motherhood, which makes losing a breast to cancer devastating for most women, and cultural notions of who has access to the female body (Tetteh &

Faulkner, 2016). Most women in Sub-Saharan Africa seek traditional medicine and alternative treatments first and only report to the hospital when their breast cancer symptoms have worsened (Tetteh & Faulkner, 2016). This is because traditional medicine is considered affordable, readily accessible, trustworthy, and holistic involving the body, soul, and spirit (Tetteh & Faulkner, 2016).

A study conducted at two rural cancer referral centres in Rwanda is showed that a low level of education and seeing a traditional healer first were significantly associated with a longer patient delay before the diagnosis can be made in the health care facility (Pace et al., 2015). Traditional healers were unable to refer complicated cases of breast cancer, which contributed much to the advanced diagnosis of breast cancer. Having made more than five health facility visits before the diagnosis was associated with a longer system delay (Pace et al., 2015).

Cañcala and Gilart (2017) found that 33% of women with advanced cancers had seen a traditional healer before presenting to a health care facility, and one patient was a traditional healer herself (Cañcala & Gilart, 2017).

Maghous et al. (2016) did a study in 137 patients on factors influencing diagnosis delay of advanced breast cancer in Morocco at the National Institute of Oncology and found that diagnosis delay was associated with personal reasons in 96 (70.1 %) patients. Several factors were projected as follows: symptoms not considered serious in 66 (55.9 %) patients; traditional therapy was applied in 15 (12.7 %) patients and fear of cancer diagnosis and/or treatment in 14 (11.9 %) patients (Maghous et al., 2016).

Pruitt et al. 2015 conducted a study at a teaching hospital in Ibadan, Nigeria about social barriers to diagnosis of breast cancer and found that the delays in diagnosis reflected a lack of education as well as the utilization of non-physician medical services such as pharmacists (Pruitt et al., 2015). Semi-structured interviews were done among 36 participants and most women did not know the cause of their breast cancer, but some believed it was caused by a spiritual affliction (Pruitt et al., 2015).

Factors that initially appeared to be associated with the advanced-stage disease were no high school education, lower household socio-economic status, higher parity, a lower score on self-reported knowledge and awareness of breast cancer, no hypertension, and HIV co-infection (Joffe et al., 2018).

A quantitative, descriptive cross-sectional design was conducted in Makwarani, Vhembe District in Limpopo Province, to determine the knowledge, attitudes, and breast cancer screening practices amongst 150 women in a rural South Africa community (Ramathuba, Ratshirumbi & Mashamba, 2015). It was found that health education on breast cancer screening practices is lacking, and the knowledge deficit contributes negatively to early detection of breast cancer and compound late detection (Ramathuba et al., 2015).

A study conducted in KwaZulu-Natal by Cañcalañ & Gilart (2017), found that forty percent of patients were not aware that the lump could be cancer, 40% did not understand the severity of their disease, 40% stayed away out of fear, 40% were afraid of losing a breast, and 34% had difficulty with the referral system and rural clinics (Cañcalañ & Gilart, 2017). Only a few patients had financial (8%) or transportation (6%) issues (Cañcalañ & Gilart, 2017).

Early diagnosis of breast cancer has not been successful because the public has scant knowledge about the disease, a large percentage of breast cancer cases are diagnosed late, and mainly rural Sub-Saharan Africa women's practice of breast self-examination is poor (Tetteh & Faulkner, 2016).

According to other studies (Akuoko et al., 2017; Brinton et al., 2017; Pace et al., 2015; Pace and Shulman, 2016), lack of knowledge and awareness of breast cancer, its symptoms, fear of diagnosis and treatments are widespread and associated with advanced-stage diagnosis in other LMICs. Geographical isolation, inadequate financial resources, a preference for consulting traditional healers linked with cultural and religious beliefs are widespread delay factors for diagnosis of breast cancer.

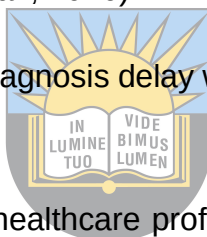
There are more concerns expressed regarding the burden of travel from a patient's residence to healthcare providers (Lubuzo, Ginindza, & Hlongwana, 2019). The necessity for repeated visits for breast cancer diagnosis on an outpatient basis, thereby making distance an issue with which the patient must manage during the disease course (Lubuzo et al., 2019). According to Lubuzo et al. (2019) living in rural areas influences access to proper diagnostic services; the more faraway people are, the harder it is for them to access adequate health services; oncology services are located within the major cities (Lubuzo et al., 2019). In the Eastern Cape Province,

oncology services are in Nelson Mandela Academic Hospital in Umtata, Frere Hospital in East London, and Livingstone Hospital in Port Elizabeth; women from remote areas of the Eastern Cape Province suffer the most in terms of delayed diagnosis of cancer because oncology services are in big cities.

2.2.2. Provider-linked factors

Provider delay is defined as the time taken from first presentation to a health care practitioner to receiving the diagnosis of breast cancer (National Department of Health, 2017). Provider-linked factors associated with delays in breast cancer diagnosis among women were delays in referrals for example the general practitioners not following two-week referral guidelines meaning that patients were diagnosed late in the course of the disease, misdiagnosing the breast cancer, general practitioners and primary health care nurses disregard alarming symptoms leading to delays in the diagnosis of breast cancer (Car et al., 2016).

Maghous et al. (2016) found that diagnosis delay was associated with medical reason in 19 (13.9 %) out of 137 patients.



A shortage of adequately trained healthcare professionals and facilities to diagnose cancer are also provider linked factors for delayed diagnosis of breast cancer (Akuoko et al., 2017; Brinton et al., 2017; Pace et al., 2015; Pace & Shulman, 2016).

Ferreira et al. (2017) conducted a retrospective study that included 473 women with breast cancer at the Oncology Centre of the Cariri in Brazil and found that the patients wait too long before entering the Oncology Service because of long waiting queues in the public health system. According to Ferreira et al. (2017), it was concluded that late diagnosis of breast cancer is often due to the inefficiency of the prevention policies linked with difficulty accessing the public health network.

2.3. Strategies to reduce time to diagnosis of breast cancer

2.3.1. Health education and breast cancer awareness campaigns

Health education, breast cancer campaigns particularly among women with a low schooling level and of rural origin could reduce the time to consultation (Belaid et al., 2018). Pictorial means of conveying information about breast cancer need to be

introduced to the rural community, along with opportunistic screening at local clinics (Cañala & Gilart, 2017). According to Cañala and Gilart (2017), this should be done with visual aids such as videos that could be shown at local clinics. Discussion about breast cancer with pictures of what to look for and who to see and how to proceed once a problem is identified would need to be included (Cañala & Gilart, 2017). Public awareness campaigns should be encouraged on common signs and symptoms of cancer to ensure patients present early in the course of their disease (Car et al., 2016).

2.3.2. Timely access to care and Specialist breast clinics

To avoid delays in the assessment of symptomatic breast cancer patients, and to utilize the available resources appropriately, the most appropriate regional facilities in each province in South Africa should be ear-marked as Specialist Breast Units (SBUs) receiving patients from primary healthcare facilities and district hospitals (National Department of Health, 2017). Facilitating direct access to specialist breast clinics may reduce delays in presentation and improve time to diagnosis and care (Rayne et al., 2019).



2.3.3. Specialist education

Promoting medical and nursing education for oncology could avoid diagnostic errors (Belaid et al. 2018) and reduce delays in breast cancer diagnosis. Car et al. 2016 invited Northwest London cancer care clinicians to prioritize solutions to delayed diagnosis of cancer and one of them is to improve specialist education for doctors and nurses to ensure better standards of care.

2.4. Chapter Summary

This chapter has explored the existing literature on delays of breast cancer diagnosis among women and contributing factors. The aim was to recognize what is already known about factors contributing to delays of breast cancer diagnosis among women. The next chapter discussed the research methodology of this study.

CHAPTER 3: RESEARCH METHODOLOGY

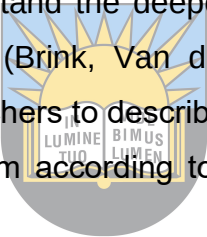
3.1. Introduction

This section focused on the methodology that was applied to attain the goals and objectives of this research study namely, the research design, study setting, population, sample and sampling procedure, data collection and analysis, pilot interview, the trustworthiness of data, findings, and ethical considerations.

3.2. Research Design

A research design is the plan that is used to determine how data is collected and analysed to answer the research question (Polit & Beck, 2017). The study used an explorative, descriptive and contextual design to identify the reasons for delay in breast cancer diagnosis, among women in St. Elizabeth Regional Hospital in Eastern Cape Province, South Africa. A qualitative approach was used for this study. Qualitative studies seek to understand the deeper insights and experiences of the phenomenon under investigation (Brink, Van der Walt & Van Rensburg, 2012). Qualitative research allows researchers to describe the research participants' actions in-depth and give meaning to them according to the participants' own beliefs and perspectives (Creswell, 2013).

3.3. Research setting



University of Fort Hare
Together in Excellence

The study was conducted at St. Elizabeth Regional Hospital which is a secondary level regional hospital at Ingquza Hill Municipality in Lusikisiki, Eastern Cape. Patients seen at St. Elizabeth Regional Hospital are usually referred from clinics and district hospitals in the catchment area or walk-in from far and nearby locations (figure 3.2). St. Elizabeth Regional Hospital provides the following health services: gynaecology services, emergency services, outpatient services, surgical services, oncology mini clinic, medical services, paediatrics, maternity services, operating theatre & CSSD services, anti-retroviral treatment services, X-Ray, physiotherapy, occupational services, pharmacy Services and COVID 19 quarantine unit. The institution is suitably resourced, with offices, private consulting rooms at OPD and research is conducted ethically without problems. The study setting is shown in **figure 3.1** below.

Fig 3.1. study setting



Fig 3.1. study setting: St. Elizabeth's Regional Hospital

Map showing St. Elizabeth's Hospital and some of the locations in the catchment area

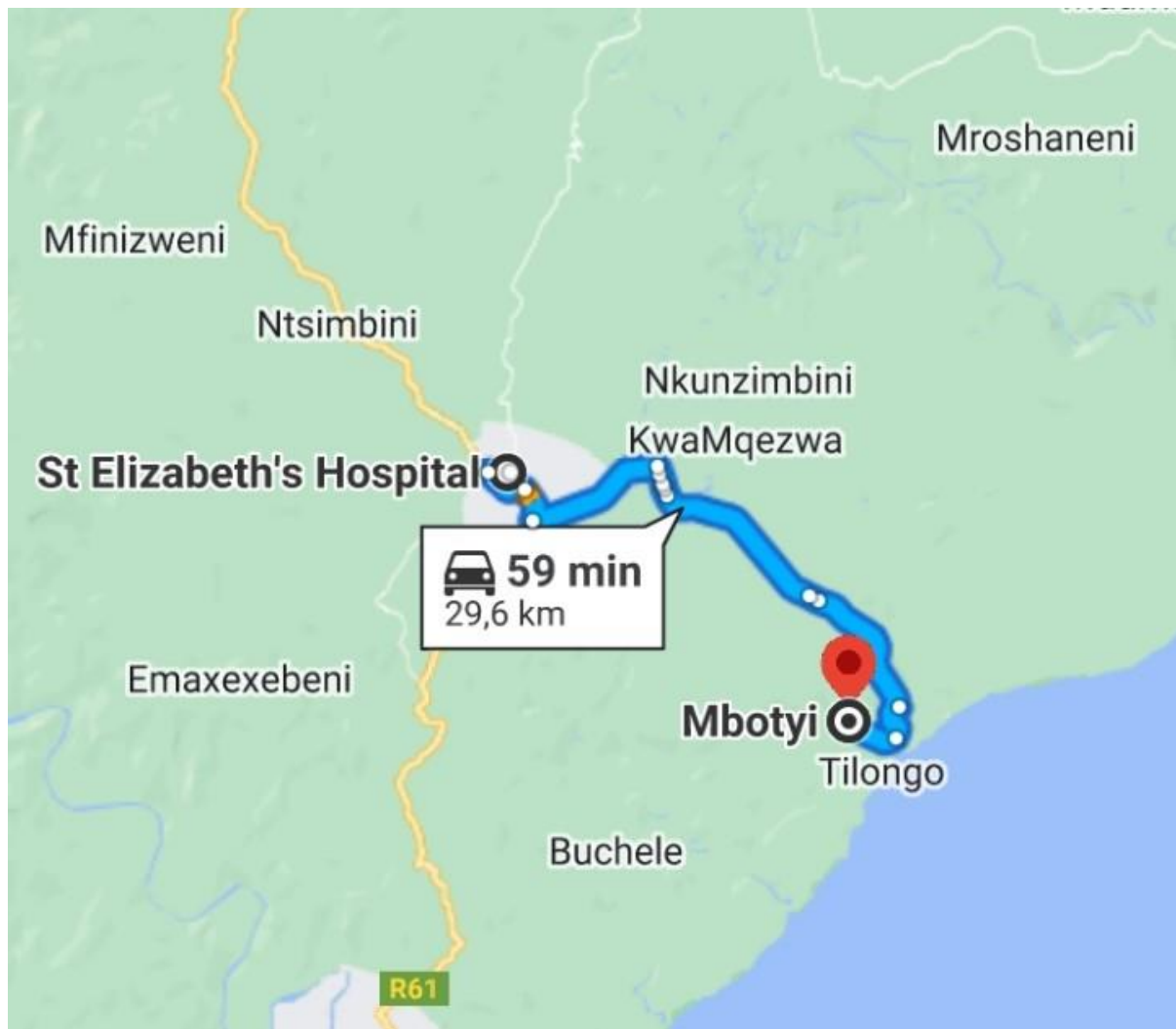


Figure 3.2: Map showing St. Elizabeth's Hospital and some of the locations in the catchment area

3.4. Population

A population is defined as a group of objects or persons with the characteristics that can help the researcher generate information and meet the study's inclusion criteria (Brink et al., 2012; De Vos et al., 2014). This section on population presents the strategies used to select study participants. It focuses on the study sites, target population, sampling techniques, and the inclusion and exclusion criteria. The target population of the study was all women diagnosed with breast cancer regardless of stage of disease, from age 18 years and above in St. Elizabeth Regional Hospital, at Lusikisiki in Eastern Cape during the study period.



University of Fort Hare
Together in Excellence

3.5. Sample and sampling procedure

Sampling is a process of selecting a sample from a population to obtain rich information (Grove, Gray, & Burns, 2015). A purposeful sampling was used for this study to consciously select certain information-rich participants from which researcher can obtain in-depth information needed (Grove et al., 2015). When defining purposive sampling, Polit and Beck (2017) state that it refers to the deliberate selection of participants who are knowledgeable about the topic under study and have the potential of providing the required information (Polit & Beck, 2017). Women with confirmed breast cancer diagnosis have the knowledge of cancer journey they went through. Hence, they were recruited as the target group.

Therefore, given the qualitative nature of this study, non- probability purposive sampling techniques were employed, where the researcher selected a small sample based on his subjective judgment, or with a specific purpose in mind, to provide rich data for the study (Polit & Beck, 2017). The researcher did not know in advance how many study participants were to be selected because sampling continued until saturation occurred (Brink et al., 2012).



3.5.1. Inclusion criteria

The eligibility criteria were: The logo of the University of Fort Hare is a circular emblem. It features a shield with a sunburst at the top. Inside the shield, there is a book with the Latin motto 'IN JUMINE TUO VIDE BIMIUS LUMEN' written on it. The shield is set against a background of a blue sky with white clouds.

The women with confirmed primary breast cancer diagnosis, who were 18 years of age and above. Participants above the age of 18 years are permitted by law to sign the informed consent on their own or make own decision to participate in the study. All the women with histologically confirmed breast cancer regardless of the stage of disease and time since diagnosed seen at St. Elizabeth's Regional Hospital and who voluntarily agreed to participate and signed the informed consent met the inclusion criteria for this study.

3.5.2. Exclusion criteria

Women less than 18 years of age were excluded in the study because breast cancer is exceedingly rare among women less than 18 years. Women diagnosed with other types of cancers were not eligible to participate because the study target participants are women with breast cancer. Extremely ill breast cancer women and those

hospitalised and unable to give consent, were excluded in study because risk outweighs the benefit, and it is unethical to conduct a study to such vulnerable groups.

3.6. Data Collection: Research instrument

Qualitative data was collected using a self-designed semi-structured interview guide by the researcher. Face-to face interview questions were administered by the researcher. The duration of the interview took about 45 minutes per participant, and the study participants were probed during the interview until saturation was reached. Field notes were recorded during face-to-face interview process. The reason for choosing face-to-face interviews is that these interviews have the potential to enable the gathering of enough data that would mainly address the research questions. The instrument was comprised of sections A: demographic data of participants; B was about the reasons for breast cancer diagnosis delays and C was about the strategies to reduce time to diagnosis of breast cancer among women.

3.6.1. Pilot interview

Prior to the main study, the researcher conducted an explorative pilot interview, which is a smaller version of the main study (Grove et al., 2015), to determine whether participants would understand the questions and to pre-empt the problems that might arise in the main study (De Vos et al., 2014). A mini study was done by the researcher with people who shared the same features as the real research participants (Hennink, Hutter & Bailey, 2011). Informed consent was obtained from the pilot participants who were not the same participants of the real study. The pilot study enabled the researcher to test the instrument for content and the duration of the interviews. Any irregularities found were corrected by the researcher accordingly.

3.7. Trustworthiness

Trustworthiness is defined by Brink et al. (2012) as the process through which the researcher ensures the truthfulness of the study by deploying different strategies to ensure rigor. In this study, Lincoln and Guba's model was used to promote trustworthiness, as cited by Polit and Beck (2017). This model refers to trustworthiness as the "truth value" of the study's findings and demonstrates how accurately the researcher interprets the participants' perspectives on the explored phenomenon (Polit & Beck, 2017). This strategy includes (1) credibility, (2) transferability, (3)

dependability, (4) conformability (Polit & Beck, 2017). These strategies are described in detail in the following section, highlighting how each of these was ensured in the study.

3.7.1. Credibility

In addressing the credibility of the research findings, the researcher attempts to present a true picture of the delays in breast cancer diagnosis among women. A member checking strategy was applied in which the researcher went back to the research participants, to ensure that the interpretations of the research findings accurately represented their experiences (Thomas & Magilvy, 2011; Creswell, 2014). This strategy involves conducting a follow-up with participants and providing an opportunity for them to comment on the study findings (Creswell, 2014). In this study, the credibility of findings was enhanced through prolonged engagement, persistent observation, and triangulation. Firstly, the researcher re-listened to the audiotapes and reading the transcripts several times to gain an accurate understanding of the information. This allowed the researcher to jot down information collected from the interviews, field notes kept during interviews. The information collected was used to prepare the sequence of themes that are guided by the interviews. The researcher created rapport through prolonged engagement with the participants to discuss the subject under study and sought their opinions (Polit & Beck, 2017).

3.7.2. Transferability

Transferability refers to the extent to which the findings that emerged from the population sample can be transferred or generalized to other contexts or other participants (Polit & Beck, 2017). To enhance data transferability, the researcher provided a thick description of the design, the method of exploration, and a description of factors that could enhance compliance with quality standards.

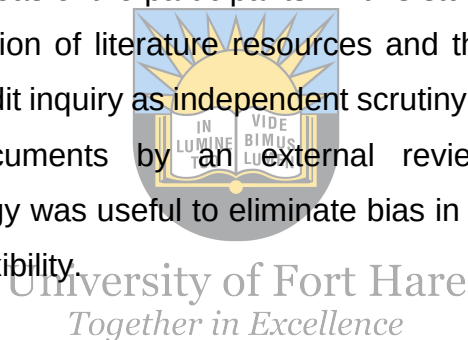
3.7.3. Dependability

Dependability refers to the consistency of the data. If the study is conducted in a similar context with the same participants, the findings will be similar (Brink et al., 2012; Polit & Beck, 2017). To measure consistency in qualitative studies, another researcher could reach the same or similar findings with the use of the researcher's perspective,

data, and situation. To ensure dependability, the researcher reported the processes within the study in detail in methodology, thus creating an audit trail that could enable another researcher to repeat the process (Thomas & Magilvy, 2011). In this study, the research process was clearly explained by researcher in research methodology chapter in such a way that other researchers could attempt to collect and analyse data in the same way.

3.7.4. Confirmability

Confirmability refers to the degree to which general findings are supported by the data and not by the researcher's bias, which is the neutrality, relevance, and meaning of data (Polit & Beck, 2017). Strategies to enhance confirmability are audit inquiry, reflexivity, and triangulation (Brink et al., 2012). To ensure the confirmability of the study, the researcher engaged with participants so that the findings were the results of the experiences and ideas of the participants. In this study, confirmability was also ensured by the triangulation of literature resources and the audit inquiry. Polit and Beck (2017) define an audit inquiry as independent scrutiny of qualitative data and the relevant supporting documents by an external reviewer to determine data dependability. The strategy was useful to eliminate bias in the research study. Notes were kept as part of reflexivity.



3.8. Ethical considerations

In this study, all ethical principles were considered during the research process as recommended by Grove et al. (2015) and Brink et al. (2012). There are three basic principles for researchers involving human participants that protect the interests of participants and promote the body of knowledge. These are the principle of respect for persons, the principle of beneficence, and justice, as recommended by Grove et al. (2015).

The research proposal was submitted to the University of Fort Hare Research Ethics Committee (UFHREC) for research approval. Before commencing the study, ethical clearance was received from the University of Fort Hare Research Ethics Committee (Ref #2021=06=04=MzameleniM). Permission was then obtained from the Provincial Department of Health, and St. Elizabeth's Regional Hospital to continue with the study. The researcher submitted the support documents including letter of approval,

approved proposal, and research tool to St. Elizabeth's hospital authority before commencement of the study.

The researcher considered the following ethical principles as a guide towards protecting the rights of the research participants:

3.8.1. Informed consent

The researcher set up an appointment to recruit and met with the participants when they came for their routine check-ups or follow up. Researcher ensured that the potential participants were provided with all relevant information about the study, in their own language of choice. Participants were made aware that participation in the research is voluntary and that they might withdraw from the study at any time without penalty. Refusing to participate or withdraw from the study while it is in progress could not affect participants in any way. In situations where the participant is not clear, a researcher was involved in clarifying issues before obtaining informed consent for participation. The researcher obtained necessary permission from the participants after they had been thoroughly informed about the purpose of the interview. The researcher obtained consent from the participants to tape record the interview for accurate data collection purpose and permission for data analysis. Potential participants were given an appropriate time to ask questions and concerns were addressed, participants took their own decision, and were not coerced by the researcher to participate in the study.

3.8.2. Anonymity, Confidentiality and Privacy

Anonymity and privacy of the participants was ensured by not revealing their real names and identity in the data collection. During analysis and reporting of the study findings, codes were used instead of names. The participants' right to privacy was protected and always respected. Interviews took place inside the consulting room, and efforts were made to avoid interference from other people during interviews to ensure privacy. Participant's data were kept privately and safely stored. Privacy of research participants information was ensured by keeping hard copies containing personal information safe, locked inside file cabinet in the office and electronic data protected by password encrypted file, access restricted to other people outside research team. Participants were informed that the information and records are to be only accessible

to the researcher. Participant's personal information and records were not shared with others without participant's consent.

Private information was managed in such a way that participants' identities were not linked to their responses. Confidentiality of all the information of participants was respected and ensured by not writing participant's name anywhere on the data and no one could be able to link participant to the answers given. Only the researcher had the access to the unlinked information. The information remained confidential and there were no "come backs" from the answers participants have given.

The confidentiality was ensured by limiting access to research records, discarding any data that might identify research participants and limiting geographic full details, thus protecting participant's information from disclosure to other people.

3.8.3. Principle of respect for persons

The principle indicates that people should be allowed to decide to participate in the study or not, without any penalty, and they should have the freedom to withdraw from the study at any time (Brink et al., 2012). To uphold the principle of respect for persons, participants' autonomy was enhanced by issuing invitation letters to participate in the study during their routine check-ups at the hospital. Potential participants were requested to sign and return the letters if they were interested in participating in the study. Written consent was obtained from all participants, as well as permission to audiotape them during interviews. The purpose of the study was communicated to the participants during the recruitment. Participants were informed that they could withdraw from the interviews at any time without any repercussions. The researcher ensured that the potential participants were provided with all relevant information about the study aims and objectives, in their own language of choice. The researcher explained that participation was always voluntary; refusing to participate or withdraw from the study while it is in progress could not affect participants in any way. Potential participants were given an appropriate time to ask questions and any concerns were addressed accordingly by the researcher.

3.8.4. Principle of beneficence and non-maleficence

The researcher ensured that participants are protected against any harm such as emotional distress due to life threatening disease by applying precautionary measures. The researcher ensured safety and prevention of any form of harm to the research participants, by continuous assessment, prepared for debriefing sessions to offer clarity, answered participant's concerns. The COVID - 19 protocols were maintained to prevent risk for COVID -19 infection during data collection. A COVID- 19 protocol was maintained by taking temperatures to each participant, ensuring wearing of masks, sanitizing, and keeping social distance before entering the interview room.

3.8.5. The principle of justice

This principle entails the fair selection and treatment of participants (Brink et al., 2012). In this study, this principle was adhered to by giving fair chance and treatment to every participant purposefully selecting participants who are considered knowledgeable about their condition.



3.9. Data collection Procedure

The appointments were set up with the participants while coming for reviews and follow ups at St. Elizabeth's Hospital or waiting for patient transport vehicle for those referred to tertiary health institution. Participants were asked to participate in interviews before seeing the doctor or transfer. The researcher allayed anxiety of the participants during data collection. The participants were assured of their safety, confidentiality of information, and anonymity (Tesfaw et al., 2020). The researcher reiterated that participants were assured of their right to privacy. The names and identity of the participants were not revealed in data collection, analysis, and dissemination of the study results to ensure privacy of participants. Each interview was conducted individually in a private and quiet consulting room without access by outsiders, free from noise and disturbance. Face-to- face Interviews took almost 30 to 45 minutes using an in-depth interview guide. Research participants were probed when necessary to understand the participants' breast cancer experiences and data was collected until saturation point was reached. Field notes were also noted during the process. The following issues were explored in the interviews with study participants: changes women noticed in their breasts before diagnosis, perceptions

about breast cancer, access and use of various services of care (including alternative medicine), support during the breast cancer journey; Factors that contributed to time to breast cancer diagnosis - social and barriers that the women encountered as they sought care and diagnosis of breast cancer and strategies they used to ensure they reported early thus reducing delays in obtaining proper and accurate diagnosis.

3.10. Data management

The interviews were audiotaped with participants' consent and transcribed verbatim into English'. The data was coded and analysed using thematic analysis by the researcher (Gebremariam et al., 2019). The collected data was stored in the computer data file that is access restricted and hard copy stored in a secured, safe, and locked file cabinet in the office as required by the university. The primary researcher was responsible for the collected qualitative data management and storage. The electronic data was kept in hard drive, secured by password protection and data encryption, retained for the duration of three to five years after the study completion. Data will be destroyed by permanently deleting the research data files in the computer after five years. The data cannot be shared with others without participant's consent and will not leave the country.



3.11. Data analysis

University of Fort Hare
Together in Excellence

The interviews were transcribed verbatim after the concluding the interviews. A qualitative interview data contained field notes and audio-tape recordings that were kept during interviews. Data was transcribed and analysed by thematic analysis by the researcher. The researcher used an independent data coder who is skilled in coding of qualitative interviews to code the data. After the independent coder had completed the coding, an agreement was made between the researcher and the independent data coder on identified themes and subthemes.

To organize the data into themes that identify factors associated with delays in breast cancer diagnosis among women, 8 Steps of Tesch's inductive, descriptive open coding technique Creswell (2014) was used by following the steps below:

Step 1 – Reading through the data

The researcher got a sense of the whole by reading all the verbatim transcripts carefully. This gave ideas about the data segments and how they look like/mean. The meaning emerged during reading were written down and all ideas as they come to mind. The researcher carefully and repeatedly read the transcripts of all the participants and understood them.

An uninterrupted period of time to digest and thought about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they come to mind.

Step 2 – Reduction of the collected

The researcher scaled-down the data collected to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have association were clustered separately. Notes were written on margins and the researcher started recording thoughts about the data on the margins of the paper where the verbatim transcripts appear.

Step 3 – Asking questions about the meaning of the collected data

The researcher read through the transcriptions again and analyse them. This time the researcher asked himself questions about the transcriptions of the interview, based on the codes which existed from the frequency of the concepts. The questions were “Which words describe it?” “What is this about?” and “What is the underlying meaning?”

Step 4 – Abbreviation of topics to codes

The researcher started to abbreviate the topics that have emerged as codes. These codes need to be written next to the appropriate segments of the transcription. Differentiation of the codes by including all meaningful instances of a specific code’s data were done. All these codes were written on the margins of the paper against the data they represent with a different pen colour as to the one in Step 3.

Step 5 – Development of themes and sub-themes

The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by grouping topics that relate to one another to create meaning of the themes and sub-themes.

Step 6 – Compare the codes, topics, and themes for duplication

The researcher in this step reworks from the beginning to check the work for duplication and to refined codes, topics and themes where necessary. Using the list of all codes she checked for duplication. The researcher grouped similar codes and recoded others that were necessary so that they fit in the description.

Step 7 – Initial grouping of all themes and sub-themes

The data belonging to each theme were assembled in one column and preliminary analysis was performed, which was followed by the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently (Creswell, 2014).

3.12. Chapter Summary

This chapter has discussed the research approach, research design, setting of the study, study population, sampling and sampling procedure, data collection instrument, trustworthiness, ethical considerations, data collection procedure, data management and data analysis of the study. The next chapter presents research results.



CHAPTER 4: RESULTS

4.1. Introduction

This chapter discusses research findings which includes participants demographic data and themes that emerged from data analysis.

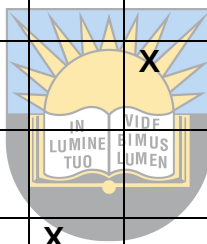
4.2. Demographic Data

This study consisted of a total of eleven (11) participants that reached saturation point during interviews. All 11 participants were black, females residing in locations of Lusikisiki in the Eastern cape province. The recruited age ranged from 34 to 65 years meaning that breast cancer diagnosis was prevalent from middle- aged adult to old adult women at Lusikisiki. Only one participant had tertiary education, 3 had primary school and no formal education respectively. Four (4) participants had junior secondary educational level, and none had high school level. The socio- demographic data of the interviewed research participants is shown in **table 1** below.

Table 1 1: socio- demographic data

Participant's code	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11
AGE GROUP											
<30											
30- 39					X		X				
40- 49								X	X	X	
50-59		X	X								X
>60	X			X		X					
EMPLOYMENT STATUS											
Employed				X				X		X	X
Unemployed	X	X	X		X	X	X		X		

Other											
MARITAL STATUS											
Never married		X		X	X		X		X	X	X
Married								X			
Widowed	X		X			X					
Separated											
Cohabiting											
Other											
Educational level											
No formal education		X		X						X	
Primary	X				X	X	X				
Junior Secondary			X					X	X		
High school											
Tertiary											X
RELIGION											
Christian	X	X	X	X	X	X		X	X	X	X
Hinduism											
Islam											
Judaism											
Other							X				
DISTANCE TO HOSPITAL											



University of Fort Hare
Together in Excellence

< 5 km		X									X
5- 10 km	X		X		X			X			
10-15 km				X		X					
> 15 km							X		X	X	

4.3. THEMES AND SUB-THEMES

1. Symptom discovery and interpretation.
2. Help-seeking behaviour for symptoms.
3. Experiences at different facilities before breast cancer was diagnosed.
4. Breast cancer knowledge and perception of risk
5. Suggested strategies to facilitate timely help-care seeking and diagnosis.

The following themes and sub-themes emerged from the data analysis using Tesch's open-coding method:

Table 2 : Themes and sub-themes



Themes	Sub-themes
1. Symptom discovery and interpretation	• Self-identification of breast cancer signs and symptoms • Experiences from initial symptoms of breast cancer up to the diagnosis of breast cancer
2. Help-seeking for symptoms	• Fear, Stigma and denial which are caused by knowing that diagnosis is unbearable. • Lack of social support and negative responses.

3. Experiences at health care facilities before being diagnosed with breast cancer	• Experiences during interaction with different health care professionals. • Shortage of human and material resources which affect care provision in different facilities. • Unreasonable turnaround time for getting results after investigations carried out
4. knowledge related to all aspects related to breast cancer	• knowledge related to breast cancer and perceived risk • Knowledge related to investigations, procedures in breast cancer diagnosis • Knowledge related to signs and symptoms of breast cancer • Knowledge related factors leading to late breast cancer diagnosis
5. Suggested strategies to reduce time to diagnosis of breast cancer	• Early consultation for examination and diagnosis when symptoms are suspected viewed as a best option for early detection • Early referral to other health care professional may Fast track early diagnosis • Education related to breast cancer suggested as a best method that can lead to early detection • Encouragement of routine visit to health facilities by all ages of women at the childbearing age and beyond • Education related self-examination of the breast encouraged

Table 2: Themes and sub-themes

4.3.1 THEME 1: Symptom discovery and initial interpretation

The following sub- themes were identified discovery and interpretation of initial symptoms of breast cancer:

- Self-identification of breast cancer signs and symptoms
- Experiences of initial symptoms of breast cancer

Self-identification of breast cancer signs and symptoms

The participants have explained how they noticed the breast cancer symptoms, their signs and symptoms were different from participant to participant. *“I had Breast lump. I did not feel pain in the breast”. P01*

“The signs I noticed were breast swelling and pains on that same breast”. P02

Some participants accidentally noticed the breast lumps on their breasts and did not draw their attention to seek medical help at nearest local health facilities.

“I detect a lump on my breast by accident because it was not painful, that day I was bathing, I do not usually do breast self-examination”..... “I didn't seek help for about one year because it was not painful and not growing”. P04

“I accidentally felt a lump in my breast....I stayed at home, I did not know the lump needs attention”. P09

Other participants were able to discover the signs and symptoms of breast cancer due their family history of breast cancer, but they were unable to immediately seek medical help at any health care facility. This problem of not seeking help as soon as possible is very common among the women because of fear of cancer diagnosis and not experiencing pain, hence the other participants said:

“I did not seek help, I ignored the abnormality I noticed from my breast, like all other women we always do not take care of those things”. (P05)

I ignored the symptoms as was not hurting, I did not go anywhere, I did not seek for help”..... (P11)

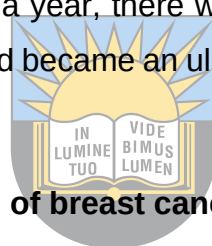
Many women noticed a breast lump whether painless or not but did not seek medical help promptly because they did not think it would be breast cancer.

“I noticed a breast swelling by myself then it became painful I thought it was an abscess”. (P02)

“I felt the lump accidentally, I did not know anything about examining the breasts before, and we were never taught even in the clinic. I ignored the symptoms as was not hurting, I did not go anywhere, I did not seek for help”. (P11)

Participants stayed at home for more than six months without seeking medical advice at the health care facility, most of them reported that they did not experience pain during first symptoms experienced. Participants ignored first symptoms because there was no pain.

“mmh these ... for the lump I took a year, there was no pain on the breast, after that the lump was growing, ruptured and became an ulcer, I took three months for the ulcer before seeking help”. P11



Experiences of initial symptoms of breast cancer

Other participants mentioned painless lump, delayed seeking medical advice as they said symptoms were not hurting. Participants took actions after the symptoms has become serious and severe. Participants said:

“I kept staying at home then after a year I visited the clinic, I did not think it could be a cancer, because it was not painful and not growing”. P04

“It became easy to feel the mass, but firstly it was not painful, it did not worry me to rush to the clinic because it was not painful”. (P05)

Some women self-detected their breast lumps, breast problems, but they did not immediately seek medical help for breast cancer symptoms at the nearest health care facilities.

“I have waited two weeks before I had to seek for help”. P01

“I did not go anywhere at first; I ignored the symptoms because I did not think it could be cancer as it was not common in our community I did not seek for help”. P05

Theme 2: Help-seeking behaviour for symptoms

Participants thought that breast lump was not a serious problem and decided not to seek for medical advice. *“I did not think the symptoms were serious, I did not know it can be a cancer symptom” P01.*

Some participants delayed presentation because of fears, stigma and denial related to breast cancer.

Fear, stigma and denial of breast cancer which are caused by knowing the diagnosis is unbearable.

Other participants reported that they were afraid of death hence they did not go to the clinic, which means that fear of cancer death was the cause for participants to delay seeking medical care.

“I was afraid before I was taught about breast cancer, because in the community they said I will die if it is breast cancer that I had” P06.

“I have a family history of cancer, some of my relatives died of cancer, I heard that if your breast is removed you are lucky to survive, I was afraid of dying at my age”. P07

“I thought I will die leaving my children alone. I was afraid because breast cancer is incurable disease..... mmh.... Other people are lucky to be treated for cancer”. P09

Participants explained different reasons why they delayed health seeking at the nearest health care facility, the following quotes were taken from interview transcripts:

“Something came into my mind that it was cancer and was afraid of surgery because people said if you go to theatre for an operation, most of the times you don't come back alive”. (P01)

“I did not seek help, I ignored the abnormality I noticed from my breast, like all other women we always do not take care of those things. I ignored because it wasn't painful,

and I thought it was just an inheritance mass or an abscess, I decided to seek care later when it was becoming serious". (P05)

"The fear was due to lack of information about breast cancer. I had fears because breast cancer is a serious disease and is difficult to treat it, I was also worried about the biopsy results that I had been waiting for a long time". (P08)

"I ignored the symptoms as was not hurting, I did not go anywhere, I did not seek for help. I had lot of fears, a lot, I was even afraid to tell the relatives, I knew how they will react when I tell them the symptoms, I and everyone in the community fear the word 'cancer, you have cancer". (P11)

One participant further explained a different reason for delaying to go for consultation for prompt diagnosis of breast cancer, she said culturally she believes in traditional healers than going to the clinic.

"I believed too much in traditional healers, because I am also one of them. I did not use much money to consult the traditional healer, so I preferred traditional treatment than clinic and hospital. I am a sangoma, culturally I believe in traditional medicines. (P07)

Participants were afraid to be diagnosed with breast cancer hence they did not report their symptoms early at the health care facility. Fears of the diagnosis of breast cancer made participants to avoid seeking health advice promptly at the health facility.

"The fear was due to lack of information about breast cancer. I had fears because breast cancer is a serious disease and is difficult to treat it". P08

"Something came into my mind that it was cancer and was afraid of surgery because people said if you go to theatre for an operation, most of the times you don't come back alive". P01

Participants suspected that they might have breast cancer although they ignored and avoided prompt diagnosis at health care facility.

"I could be diagnosed with cancer of the breast, but I kept praying that God will help me". P01

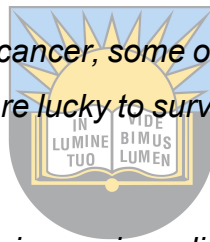
"I thought I will die leaving my children alone. I was afraid because breast cancer is incurable disease" P09

Participants were afraid of breast surgery and biopsies to confirm the diagnosis, thinking that if they are diagnosed with breast cancer they will die. Participants expressed feelings of fear of surgery before breast cancer is diagnosed, which made them not to seek for medical help early. By interpreting the signs and symptoms they noticed, participants had fears and anxiety of being diagnosed with breast cancer as they understand the seriousness of breast cancer.

"I was afraid of the operation to remove my breast. I was very worried, because as I am not married, I thought that after surgery I will have a scare that will not heal" P10.

Other participants had to hide and not disclose what they were experiencing for months due stigma of breast cancer.

"Because I have a family history of cancer, some of my relatives died of cancer, I heard that if your breast is removed you are lucky to survive, I was afraid of dying at my age". (P07)



"I had fears because breast cancer is a serious disease and is difficult to treat it" (P08)

"I thought I will die leaving my children alone. I was afraid because breast cancer is incurable disease". (P09)

"Fear of cancer itself bro, and the fear of people around me, fear of the word cancer, you don't know how you can explain what you are experiencing, because people have myths". (P11)

Lack of support and negative responses from family members.

Participants reported lack of support and negative responses from the family members which caused her not to seek care early at clinic or health institution. The following participant said the following quote:

"The family members were fighting against me; I did not take decision on time. I got challenges in my family they did not support me even financially, as I am not

working..... my brother was against seeking help for my breast problem, he influenced others in the family”. (P02)

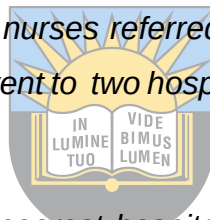
“Lack of money kept delaying me on my appointments and there is no one supporting me at home, my husband is not working” (P08).

“I had lot of fears, a lot, I was even afraid to tell the relatives, I knew how they will react when I tell them the symptoms, I and everyone in the community fear the word ‘cancer, you have cancer”. (P11)

Theme 3: Experiences at health facilities before diagnosis of breast cancer

Many women reported that they were referred to other health care facilities before breast cancer was diagnosed, which also prolonged the delay time before diagnosis of breast cancer.

“I did go to the clinic before,.. the nurses referred me to hospital on the third month with breast pain and swelling.....I went to two hospitals that is St. Elizabeth and Nelson Mandela Academic Hospital”. P02



“Three hospitals, the doctor from nearest hospital also referred me to Harding then Nelson Mandela Academic Hospital”. P03

University of Fort Hare
Together in Excellence

Participants experienced difficulties from the time of symptom detection up to initial diagnosis of breast cancer, moving from one health institution to the other, seen by different health professionals and being subjected to different investigations. Some patients had mixed experiences when seeking help at health care facilities, some were referred promptly while others were not promptly referred by nurses from the clinic to hospital.

“Nurses did not do anything and said I must come on a Wednesday when the doctor is in the clinic, the doctor referred me to St. Elizabeth Hospital. The doctor was not sure what was happening. He suspected that it was just a lump that is not dangerous or abscess”. (P09)

“The sisters at the clinic referred me to the hospital. I went to the hospital and the doctor examined me and said he will give me pills if no improvement with those pills I

should come back to the hospital. He ended up referring me to Nelson Mandela Academic Hospital". (P10)

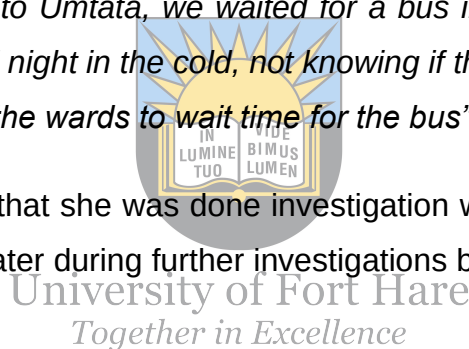
Some participants who sought medical help at their local clinics first were not referred immediately by health care providers who first saw them. Health care providers gave treatment that did not work at all. Some participants, waited for the results that took long time before they became ready.

According to other participants there were no resources to make them comfortable like bathrooms, food parcels, beds and ward for lodging while waiting for the transport to and from tertiary hospital.

"I was turned back because there were no beds, I felt like what if it spreads to distance organs while I am moved up and down not getting help" (P10).

"When we were referred to Umtata, we waited for a bus in St. Elizabeth hospital at OPD and sit on a chair all night in the cold, not knowing if this was the case, I thought we supposed to lodge in the wards to wait time for the bus". P11

One participant reported that she was done investigation which initially she was told results are not clear but later during further investigations breast cancer was found in advanced stages.



"on my next visit here one of the doctors said the fine needle aspiration results are not clear".P04

Participants explained that they interacted with different health professionals during the breast cancer journey to arrive to the final diagnosis starting from the clinic. Some participants were turned back home with antibiotics, not urgently referred to next level of care for prompt diagnosis of breast cancer.

"The nurses referred me to hospital on the third month with breast pain and swelling". (P02)

"The health care professionals at the clinic gave me antibiotics to treat the problem". (P05)

"I was given medication at the clinic to treat the painful lump but did not help me. I was referred to different health facilities and doctors before breast cancer was diagnosed... I do not think a biopsy was taken I only remember mammogram that was done at Port Shepstone and a needle aspiration taken at St. Elizabeth Hospital". P06

"The hospital delayed me a lot, that's why my breast cancer was diagnosed at late stage". P07

Participants with suspected breast cancer signs did not receive urgent attention and health care professionals did not suspect breast cancer, repeated pathology investigations already done.

"The doctor was not sure what was happening. He suspected that it was just a lump that is not dangerous or abscess. At Nelson Mandela Academic Hospital the doctors repeated the same investigations that were done here at St. Elizabeth, and I had to wait again for the results". (P09)

Many participants experienced lot of challenges before diagnosis of breast cancer which contributed to the delay of breast cancer diagnosis.

Shortage of human and material resources which affect care provision in different facilities

University of Fort Hare
Together in Excellence

Participants revealed that human and materiel resources affected the provision of the care they should have received in different health care facilities.

"There are no oncology doctors in our hospital, no laboratory to do cancer relate test, and specimen must be sent to Umtata to be tested" (P05). "I was told to come back after certain weeks, I'm not sure whether it was three weeks or..... yes it was three weeks to get the results, but I could not go there to follow up my results, because of the hospital transport issues at the hospital, the hospital bus was full, and I was left by that bus, and we were told there were no ambulances. I went home, stayed, I felt that there are other masses growing around the operated site where the first mass was removed and sutured" (P05).

“We do not have a room or ward to sleep and relax comfortably, remember we are ill, we are congested on the chairs, I felt that we are ignored here in St. Elizabeth Hospital”. (P06)

“Some doctors do not know much about cancer, there are no health care providers who come to teach us in the villages, we do listen to the radio to get little information on how cancer happens, but it is not enough for diagnosing breast cancer early”. (P08)

“There are no equipment and cancer surgeon at St. Elizabeth unlike at Nelson Mandela Academic Hospital”. (P09)

“I was always given far return dates; I did not know why. There was a time I went to Nelson Mandela Academic Hospital, and I was turned back because there were no beds, I felt like what if it spreads to distance organs while I am moved up and down not getting help”. (P10)

Sub-theme 2.4: Turnaround time for results

Participants complained about too long waiting times for getting their results after investigations were carried out at the health care facility, while at that time the disease is progressing to other stages of breast cancer.

“I waited for three months for both results and referral at Nelson Mandela Academic Hospital”. (P02)

“Doctors and investigations delayed the diagnosis; the biopsy results took long time to be ready”. (P08)

“I am complaining too much about results turnaround time, I am not satisfied, more than a month was too long for me”. (P08)

“You don't just get results early and then confirm, that time cancer is progressing, too many investigations and waiting times”. (P09)

Some participants were informed of the investigations carried out, and time it took for the results to be ready, thought they were delayed by the health system in the process of breast cancer diagnosis.

“Doctors and investigations delayed the diagnosis; the biopsy results took long time to be ready”. (P08)

“You don't just get results early and then confirm, that time cancer is progressing, too many investigations and waiting times”. (P09)

Most of the participants experienced different emotions while waiting for the investigation's results, afraid that breast cancer is a serious disease, difficult to treat especially in advanced stages.

“I had fears because breast cancer is a serious disease and is difficult to treat it, I was also worried about the biopsy results that I had been waiting for a long time”. (P08)

Sub-theme 2.6: Lack of finances described as leading to complications and affecting prognosis of the disease

Participants reported lack of financial support as most common factor delaying diagnosis of breast cancer among women, they missed their appointments due to lack of money for transportation or hiring a taxi to health facility. Other participants stressed that they would wait until money is available or borrow it for taxi fare to public hospital when referred by the clinic or follow up for results.

“I got challenges in my family they did not support me even financially, as I am not working, I had to depend on my children's support grant to travel by taxi to hospital”. (P02)

“Money was the problem, I did not have food parcel when going to Nelson Mandela Academic Hospital, I starved a lot, yet I was ill”. (P03)

“I missed my appointment for results, and I did not have any other alternative, because I did not have money to take a taxi to Nelson Mandela Academic Hospital, no one was working at home. I went back home; I did not know what to do”. (P05)

“I also depended on borrowing money before I can seek medical help in a health care facility, I used taxi to travel to hospital, and I was not working. I did not use much money to consult the traditional healer, so I preferred traditional treatment than clinic and hospital”. (P07)

“Sometimes there is no money to hire a car to hospital when too sick”. (P08)

“I am working at the kitchen as general worker I do not get enough money, it's just to feed my family, its challenging to go for scheduled appointments sometimes because of lack of money. There was a time I couldn't go for my appointment date because I didn't have money for taxi to go to hospital so that I can take the hospital bus to Nelson Mandela Academic Hospital”. (P08)

” Firstly, I struggled financially because there was no one at home who was employed. I did not have money and there must be someone who must accompany me because of my condition, I needed more support” (P09)

THEME 4: knowledge related to all aspects related to breast cancer.

Participants revealed existing knowledge to some strategies to reduce time to breast cancer diagnosis among women. They explained different strategies.

“Firstly, I would say when a person suspects something like a lump on the breast she must talk to some she trusts. Do not be afraid, there must be someone to speak to, even if you want to visit the doctor for breast symptoms, first talk to someone to get support. Because it cannot be easy to disclose to other people, even in the case of breast cancer, get advice from someone you trust, everything will be easy”. (P10)

“It is important that we are educated about breast cancer, if we can get health education or awareness in our communities on how to get this cancer early, it can help us. Some of us who have experience of breast cancer to stand up and advocate for cancer education in the communities”. (P08)

“Health care professionals should educate the public to be careful of breast cancer because it spreads. The government must build cancer departments in our nearest hospitals. Further research should be done by health care professionals”. (P04)

Many participants had lack of knowledge and awareness of breast cancer risk among women:

“I believe this is due to punishment by my ancestors”. (P07)

"I do not know, I really don't know what caused my breast cancer, I have heard other women saying they are bewitched, but for me I do not even know the cause of cancer" P09.

knowledge and perception related to breast cancer and risk factors

Many participants had lack of awareness, did not know the causes and risks of developing breast cancer. There was a lack of knowledge of risk of breast cancer among women who participated in the study:

"I do not know what caused the breast cancer, I just had that lump and was investigated by a biopsy". (P01)

"I don't have an idea". (P03)

. "I did not know the cause, I did not have previous personal experience of breast cancer, and I did not know what caused it". (P11)

Many research participants misinterpreted the breast cancer symptoms as not dangerous. Some participants did not suspect cancer at all, and they thought breast cancer would never happen to them.

"I do not know the cause, no one ever had breast cancer in my family. I only know cancer on the horses not human beings". (P09)

There were participants who showed that they have knowledge about breast cancer and its causative factor, some of them were not sure if they gave the right answers or not, participants commented as follow:

"I am not sure, but I think it is because of using sniff too much, I do not want to lie, and I used it very much. At the same time, I believe this is due to punishment by my ancestors". (P07)

"I don't know because it is said you will be at risk of having breast cancer if there is a relative with breast cancer or your parents". (P04)

"I think it is heredity because my biological mother was found with late-stage breast cancer, and she died". (P05)

knowledge related to investigations, and procedures

According to participants, the health professionals had lack of knowledge on the management of breast cancer from the primary health care, misdiagnosing breast cancer and issuing medication that is not treating the presenting problem.

“The nurses examined me, saw the mass, and gave me pills to treat the mass on my breast, they said it will be treated by these pills called antibiotics. I finished the pills at home, there was no difference”. P05

“The nurse examined me, gave me pills thinking that the pills will help the problem” P08

“I went to the hospital and the doctor examined me and said he will give me pills, if no improvement with those pills I should come back to the hospital”.P10

Participants displayed knowledge of procedures done for the diagnosis of breast cancer and showed knowledge of procedures not done.

“The nurses in the clinic referred me to hospital, and I was done fine needle aspiration at St. Elizabeth Hospital. No biopsy done at St. Elizabeth Hospital” P04.

I just had that lump and was investigated by a biopsy”. (P01)

“I only remember mammogram that was done at Port Shepstone and a needle aspiration taken at St. Elizabeth Hospital” P06.

knowledge related to signs and symptoms of breast cancer

Some participants had little knowledge about symptoms of breast cancer, they stayed at home and listened to their community myths about breast cancer.

“there were myths about breast cancer in my community, until I felt other masses and some pains”. P05

“I ignored signs when I should have acted, and I listened to myths” P07

“It became easy to feel the mass, but firstly it was not painful, it did not worry me to rush to the clinic because it was not painful”. P05

"The lump was small that time, not painful". P10

Some participants did not have knowledge related to signs and symptoms of breast cancer and necessary care; they ignored the symptoms because they did not think what they experienced could be breast cancer symptoms. Participants said:

I ignored signs when I should have acted, and I listened to myths which were associated with late presentation to clinic and hospital. (P07)

"We do not know much about cancer in our society, until one of the family members is diagnosed with cancer or breast cancer". (P08)

Knowledge related factors leading to late breast cancer diagnosis.

The participants had a lack of knowledge related to factors leading to late breast cancer diagnosis. They did not know the difference between early and late diagnosis of breast cancer. They were not aware that they had been delayed throughout the process. Although clinically the breast cancer stage showed it is the late-stage breast cancer. There were participants who denied having had delayed their presentation to the health care facility, but their breast cancer was diagnosed at stage 3 and stage 4.

The participants showed lack of knowledge and awareness of behaviours, factors leading to late diagnosis of breast cancer among women, hence they said:

"I did not think the symptoms were serious, I did not know it can be a cancer symptom, I can say it was just ignorance". (P01)

"I stayed at home, thinking that symptoms will go away on its own, I had no information about the disease, I was not aware about warning signs of breast cancer". (P02)

"I did not know anything about breast cancer disease, maybe it is because I am old now". (P03)

"I did not know the cause, I did not have previous personal experience of breast cancer, and I did not know what caused it". (P09)

Women did not perceive the benefits and motivation of seeking help, ignored the signs and symptoms due to lack of knowledge and awareness of breast cancer.

“I did not take care for myself, and I did not have knowledge of breast cancer”. (P07)

“We do not know much about cancer in our society, until one of the family members is diagnosed with cancer or breast cancer, so those who have signs cannot be helped, advised by others, because of rare breast cancer information, they cannot encourage each other to seek medical help at the hospital or clinic”. (P08)

“I did not know much about the signs and symptoms, even at home I told and showed them my problem they knew nothing, it was the first time to see this, I ignored the symptoms first and used painkillers so that pains are relieved. I don’t know what caused it”. (P08)

“I stayed at home because I did not know the lump needs attention”. (P09)

Participants showed lack of existence of knowledge related to factors leading to late breast cancer diagnosis hence they kept ignoring the disease.

4.3.4 THEME5: Suggested strategies to facilitate timely help-care seeking and diagnosis.



The participants have suggested the following strategies to reduce time to diagnosis of breast cancer and improving early detection of breast cancer. There was an issue pertaining ambulances and patient transport vehicle (PTV) that should take oncology patients from base hospital straight to their point of care without delaying them due to shortage of transport.

The following suggestions were commonly stressed by participants during interviews:

“The women must visit the clinic when they notice anything abnormal in their breasts so that it is investigated and diagnosed early”. (P05)

“One should get up early and prevent the breast cancer to spread”. (P09)

“I wish there could be means to take us straight where we are going to or using ambulances especially to Frere oncology”. (P03)

“At hospital the woman must be examined and screened for breast cancer every time she goes to the hospital. If breast cancer is suspected, doctors should do all investigations same day to prevent the delays”. (P10)

“I would say the government can help by employing doctors to deal with breast cancer. It must not only be nurses who are cancer trained, all disciplines must be involved, employed by the government, and train them about breast cancer”. (P10)

“Government must train workers, counsellors so that people are given hope, I had complaints because of lack of care and neglected”. (P07)

“The government can help us because this is the big hospital, and we see people coming from Flagstaff Bizana regions to St. Elizabeth hospital, because they are looking for help, but because we do not have the equipment here, and no oncology doctors, we are told to wait for results for more than two weeks, specimen are sent to Umtata, the government must help us, I do not think government can fail to send equipment, doctors and nurses who are trained for cancer at St. Elizabeth Hospital”. (P08)



The following subthemes were developed as suggested strategies for improvement of early diagnosis of breast cancer among women:

- 4.1. Early consultation for examination and diagnosis when symptoms are suspected viewed as a best option for early detection.
- 4.2. Early referral to other health care professional may fast track early diagnosis.
- 4.3. Education related to breast cancer suggested as a best method that can lead to early detection.
- 4.4. Encouragement of routine visit to health facilities by all ages of women at the childbearing age and beyond.
- 4.5. Education related self-examination of the breast encouraged.

Sub-theme4.1: Early consultation for examination and diagnosis when symptoms are suspected viewed as a best option for early detection.

Many women suggested early consultation to the nearest health facility for early diagnosis and detection of breast cancer. In this study there are few participants who consulted early for the symptoms they experienced, so now women are asked to present themselves so that early diagnosis is made as soon as possible. The participants had Knowledge about the strategies that can be used to reduce time to diagnosis of breast cancer among women. Because for other patients, breast cancer symptoms do not show up early so, it is important to seek help as soon as women notice those symptoms to prevent late diagnosis of breast cancer.

“Sometimes the breast cancer hides itself, for any breast symptom the women must see the doctor or clinic immediately”. (P02)

” The women must visit the clinic when they notice anything abnormal in their breasts so that it is investigated and diagnosed early”. (P05)

“It depends when did you come to clinic or hospital, the earlier the better, breast cancer is better treated when detected early”. (P06)

“One should get up early and prevent the breast cancer to spread. In the hospital they are quick to help you when the breast lump is not attached to the flesh, but when it is attached in the flesh, hard, not moving and growing it becomes difficult”. (P09)

Sub-theme 4.2: Early referral to other health care professional may Fast track early diagnosis

It is advised that clients must be referred early by health care professionals to fast track early diagnosis of breast cancer. Participants thought this is the best option for early diagnosis especially when the health care professional is not sure of the condition, to refer for continuity of care and early investigations.

“Early referral if the health care provider is unable to treat the condition. The nurses referred me to the doctor at St. Elizabeth hospital, where he examined the breast problem and referred me to Nelson Mandela Academic Hospital”. (P02)

“The nurses in the clinic referred me to hospital, and I was done fine needle aspiration at St. Elizabeth Hospital. No biopsy done at St. Elizabeth Hospital, on my next visit here one of the doctors said the fine needle aspiration results are not clear. The doctor

said he will refer me to Nelson Mandela Academic Hospital to avoid delays because it was not clear from the results what the problem was". (P04)

Some participants never missed their appointments when they were referred to next level of care for further management and diagnostic investigations. Participants complained that their clinics did not refer them on time for early investigations and diagnosis.

Sub-theme 4.3: Education related to breast cancer suggested as a best method that can lead to early detection

Many participants had no knowledge of signs and symptoms of breast cancer, hence most of them were diagnosed at advanced stages. Women seen at St. Elizabeth Hospital do not know the warning signs of breast cancer, they tend to ignore and not appraise the breast cancer symptoms. Health education related to breast cancer was suggested by study participants because they did not really know the consequences of not seeking medical help early for those signs and symptoms of breast cancer. Health education will be an important tool in raising the level of breast cancer knowledge and awareness among women. Participants saw a need for health education regarding breast cancer to promote early detection, some participants said the following:



University of Fort Hare
Together in Excellence

"Health care professionals should educate the public to be careful of breast cancer because it spreads". (P04)

"It is important that we are educated about breast cancer, if we can get health education or awareness in our communities on how to get this cancer early, it can help us". (P08)

"The cancer volunteers, community health workers dealing with the breast cancer should be another option the government must consider so that everyone will be educated and get help from communities". (P10)

"According to what I think, there must be community visits by nurses who are cancer trained, and educate the public through community radio stations, educate about

breast cancer early presentation to local clinics and hospitals so that breast cancer is detected early”. (P11)

One participant recommended that, those who have experienced the journey of breast cancer should advocate for cancer education and support in their communities. *“Some of us who have experience of breast cancer to stand up and advocate for cancer education in the communities”. (P08)*

Women should be empowered with appropriate knowledge including recognising warning signs of breast cancer and avoiding ignoring those signs and symptoms. One participant during the interviews said: *“it is important that we are educated about breast cancer, if we can get health education or awareness in our communities on how to get this cancer early, it can help us. (P08)*

Sub-theme 4.4: Encouragement of routine visit to health facilities by all ages of women at the childbearing age and beyond

All women are encouraged to visit the clinics so that they are screened and detected early for breast cancer. Participants encouraged all women to attend routine visits at local health facilities for early detection of breast cancer, especially when they suspect one of the breast cancer warning signs. Participants encouraged others as follows:

“Women must come early for help”. (P07)

“mmmh.... the women must visit the clinic when they notice anything abnormal in their breasts so that it is investigated and diagnosed early”. (P05)

“One should get up early and prevent the breast cancer to spread”. (P09)

“Do not be afraid, there must be someone to speak to, even if you want to visit the doctor for breast symptoms, first talk to someone to get support”. (P10)

It was also suggested that during the routine visits at the healthcare facility the health care practitioner should do all the necessary investigations at on the say day to avoid unnecessary visits, P10 said *“At hospital the woman must be examined and screened for breast cancer every time she goes to the hospital. If breast cancer is suspected, doctors should do all investigations same day to prevent the delays”.*

Sub-theme 4.5: Education related self-examination of the breast encouraged

The health professionals should educate the women about self-examination and encourage early consultation when abnormalities are detected. Most participants agreed that they were taught about breast self-examination at their local clinics:

“We are also told to examine ourselves; I felt the difference on an abnormal breast and responded to it”. (P01)

“I examined myself before I took a bath and noticed redness and lump on my breast. I noticed it myself, then I went to the clinic”. (P03)

“I used to do self-breast examination at home as we were taught at the clinic, the other day I saw an abnormality on my breast just below the breast skin, while doing self-breast examination”. (P05)

Some of the participants recommended that clients should be given health education in their communities, clinic by health provider to teach them about importance of noticing breast changes, abnormalities and appropriate actions to be taken to prevent delays.



University of Fort Hare
Together in Excellence

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1. Introduction

This chapter presents the discussion of findings, summary, limitations, and recommendations of the study.

5.2. Discussion of findings

1. Symptom discovery and interpretation

Breast lump associated with pain was the most common symptom mentioned by participants which made them to suspect breast cancer and sought medical help in advanced stages. This is further supported by Moodley et al. (2016), deficits in breast self-awareness and knowledge of breast cancer symptoms delayed women's

interpretation of bodily changes as being abnormal. Majority of women reported that they did not think first symptoms could indicate breast cancer and will go away soon, therefore, were less likely to be concerned about those symptoms.

Despite identifying the lump on the breast early, many women did not associate that breast lump with breast cancer. Participants did not recognize the symptoms as serious which was associated with lack of knowledge and lack of awareness about breast cancer and diagnosis. The recognition of symptoms especially in the absence of pain on the breast lump strongly influenced help seeking behaviours of women and delayed seeking care for breast problem (Pruitt et al., 2015). According to previous studies (Abolfotouch et al., 2015; Khiyali et al., 2017) women who consider breast cancer as serious illness and think that they are more susceptible to it, are likely to perform self-examination on regular basis and report abnormal breast changes to health care facility. Participants told the researcher that they did breast self-examination at home and were able to detect warning signs early but did not seek medical help.

The participants ignored the breast cancer early signs and abnormal breast changes, due to denial of symptoms contributing to late diagnosis. They further explained that the breast lumps were not painful for the first time that is why they stayed and ignored the symptoms.

The women in this study did not seek early consultation and diagnosis because the breast cancer did not become aggressive when it started. Some breast cancer types do not show symptoms in early stages and are more aggressive in advance stages. Norsa'adah et al. 2011 stated that, patients with aggressive types of breast cancer usually had progressive symptoms in a short time, causing them to have a high index of cancer suspicion, some of the women seek early consultation and diagnosis.

Patients who had a breast lump had earlier consultations than those with nipple discharge or pain (Norsa'adah et al., 2011). Some participants in this study delayed being diagnosed because of fear of cancer. In contrast to this study, a study conducted in Brazil among breast cancer patients referred to oncological reference hospital, found that patients who presented a lump as the first sign or symptom had a lower chance of delay (Medeiros et al., 2019). In other cases, the breast cancer hides itself

and not show up even on investigations like core biopsy and fine needle aspiration (FNA), and one day when it shows up its in aggressive state and spreading quickly to other parts of the body.

Help seeking behaviours:

Fear, stigma, and social support.

Many participants feared breast cancer diagnosis and its treatment options like breast surgery in such a way that they did not present to health care facility for breast abnormality because of fears. Freitas & Weller (2015) also found that fear of illness and treatment explain the delay in consultation for breast cancer symptoms.

This study reveals that, fear of breast cancer diagnosis contributes to delayed diagnostic investigations at secondary and tertiary hospital and breast cancer is diagnosed at advanced stages among many women due to fear and anxiety of being diagnosed with cancer. A study conducted in KwaZulu-Natal by Caçala and Gilart (2017), found that forty percent of patients stayed away out of fear, and 40% were afraid of losing a breast. Another study by Maghous et al. 2016 conducted on factors influencing diagnosis delay of advanced breast cancer at the National Institute of Oncology and discovered that fear of cancer diagnosis and/or treatment in 14 (11.9 %) patients was associated with diagnosis delay.

Participants in this study were afraid of breast surgery and biopsies to confirm the diagnosis, thinking that if they are diagnosed with breast cancer they will die. One of the reasons for delay in the presentation of patients with breast cancer in Ghana included fear of mastectomy (Mody et al., 2013).

One participant in this study sought traditional healer initially before opting for seeking medical help, she believed in traditional treatment because she disclosed that she was a witch doctor. A use of traditional medicine especially by women in rural areas before seeking medical care has been discovered by other studies in Africa and it is associated with significant diagnosis delays of breast cancer. A behaviour of seeing a traditional healer initially is significantly associated with a longer patient delay before diagnosis can be made in the health care facility (Pace et al., 2015). The use of traditional medicine is more common in more remote areas especially among resource

constraint populations where traditional medicines are free, accessible and affordable to them. Tetteh & Faulkner, 2016).

Lack of support and negative responses leading to emotional burden.

Participants reported lack of support and negative responses from the health care providers leading to emotional distress on participants and their family members. Furthermore, Drageset et al. 2012 stated that both professional information and someone professional with whom to talk personally are essential, especially in the process of diagnosis and cancer management.

Two participants in this study were worried to be neglected by their family members if diagnosed with breast cancer. Another study found reasons for women delaying to seek medical advice for breast symptoms, one of these included fears of societal stigmatization, and fears regarding abandonment by the spouse because of breast cancer (Elobaid et al., 2016). So, lack of support and negative responses contribute to delaying cancer diagnosis among women.

The study shows that the women with breast cancer symptoms delay going to the clinic or hospital as they fear that their family, community members and colleagues at work. Drageset et al. 2012 found that knowing family is available and caring give a sense of security.

The participants stayed at home not going to the clinic or hospital because they know that health care professional always have negative responses did not support women with breast problem. *“I did not get help at all, I was neglected there, even simple wound dressing was not done I covered my breast wound with a plastic while I was admitted in the ward in Johannesburg, and I was not given pain killers, no one counselled me”* (P07). The researcher believes that all women with breast cancer symptoms need to be supported emotionally, socially, physically and spiritually to avoid late diagnosis of cancer.

It was unfortunate for some of this study participants to experience lack of family support to seek prompt diagnosis of breast cancer. Participants said: *“The family members were fighting against me; I did not take decision on time. I got challenges in my family they did not support me even financially, as I am not working..... my*

brother was against seeking help for my breast problem, he influenced others in the family". (P02)

It emerged from the study that some participants were not supported by their families. *"I got challenges in my family they did not support me even financially, as I am not working, I had to depend on my children's support grant to travel by taxi to hospital". (P02)* Family is an important social support for patients coping with problems stemming from a cancer diagnosis (Cebeci et al., 2012). Frie et al., 2018 found that lack of social support contributes to delayed diagnosis of breast cancer.

2. Experiences at health care facility before diagnosis of breast cancer:

Experiences on interaction with health care professionals

The results of this study revealed that many participants presented late to the primary health care facilities and were falsely reassured by health care providers. Shamsi et al. 2020 found that 9.4% out of 499 women presented to a health care provider with a breast lump but no action was taken, and they were wrongly reassured about the lump by health provider without mammography or biopsy. A breast mass rapidly growing may suggest a cancer in both doctors and patients while a mass of slow evolution may be less evident in patients and reassure them falsely (Gueye et al., 2017).

Some of these participants were misdiagnosed at primary health care level, given multiple follow ups and treatments, but when the breast cancer is diagnosed it is already stage 3 or 4. One participant said: *"I was done fine needle aspiration at St. Elizabeth Hospital. No biopsy done at St. Elizabeth Hospital, on my next visit here one of the doctors said the fine needle aspiration results are not clear"* (P04). In this study both provider and system delays were experienced by many participants presenting with breast cancer symptoms, nurses and doctors were not oncology trained. A cross-sectional study of 180 patients with invasive breast cancer in Northeast Thailand revealed that 42% reported a doctor delay of longer than 3 months, and hospital referral from a health care provider was a major contributor to delayed diagnosis (Poum et al., 2014).

Another participant who felt she was delayed by lack of doctors to diagnose breast cancer early said: *"There are no doctors treating cancer in our hospital it makes us*

suffer” (P01). There is lack of oncology skills in regional and district hospital affecting care and management of patients with breast cancer, delaying referral to next level of care with oncologists (NDoH 2017).

One participant had a bad experience while presenting with breast cancer symptoms during Covid-19, participant narrated her experience as follows: *“The clinic and hospital did not help me, they kept on giving me review dates, admitted me, nothing was done, they said they were waiting for COVID 19 results which came back after seven days, no painkillers, no wound dressing, absolutely nothing was done to me, hence I decided to come here”*. (P07). Patients were really delayed during period of Covid-19, but it was depending on the quality of health service rendered in the facility, and care of health professionals. Frie et al., 2018 found that low quality of health care services was a barrier during the diagnosis interval of breast cancer in a study conducted in Bamako.

Shortage of resources

According to other participants there were no resources to make them comfortable like bathrooms, food parcels. Participants revealed that human and materiel resources affected the provision of the care they should have received in different health care facilities.



University of Fort Hare
Together in Excellence

Many research participants were unemployed and had financial difficulties to buy food ant for transport to access health facilities, there were no food parcels or meals at outpatient department for patient especially those referred to other NMAH for investigations and specialist interventions. Low financial resources are more likely to delay seeking medical attention for a self-detected breast abnormality (Ruddy et al., 2014). There is a need for food parcels for all patients in outpatient departments of regional hospitals to eliminate poverty and promote prompt seeking of medical attention of any abnormal symptoms. Patient who had lack of personal resources said: *“Money was the problem, I did not have food parcel when going to Nelson Mandela Academic Hospital, I starved a lot, yet I was ill”* (P03). Women living in extreme poverty levels have high rates of late-stage presentation of breast cancer relative to women living in low poverty rates (Williams & Thompson, 2017). Patients should not be hungry

while they are in the hospital, the government should eliminate poverty among patients.

Regional hospitals and district hospitals do not have specialist for early oncology interventions to reduce delayed diagnosis of cancer. This is due to the health system of the country where oncology services are rendered in tertiary hospitals, making it difficult to access those services and delay diagnosing breast cancers. A participant said: *There are no oncology doctors in our hospital, no laboratory to do cancer relate test, and specimen must be sent to Umtata to be tested” (P05)*. There should be oncology services in regional hospital for early diagnosis of breast cancer, as this is the mostly diagnosed cancer in advanced stage. National Department of Health also recommends that, most appropriate regional facilities in each province in South Africa should be ear-marked as Specialist Breast Units (SBUs) receiving patients from primary healthcare facilities and district hospitals to avoid delays in diagnosis of symptomatic breast cancer patients, and to utilize the available resources for early diagnosis of breast cancer (NDOH, 2017).

Living in rural areas influences access to proper diagnostic services; the more faraway people are, the harder it is for them to access adequate health services; oncology services are located within the major cities (Lubuzo et al., 2019). Access to oncology services including diagnosis is a challenge for women living in remote area and small cities like Lusikisiki, where there is lack of transport and low socioeconomic state. When there was no patient vehicle transport, many women miss and default their appointments for investigation and result. A participant said: *I could not go there to follow up my results, because of the hospital transport issues at the hospital, the hospital bus was full, and I was left by that bus, and we were told there were no ambulances. I went home, stayed, I felt that there are other masses growing” (P05)*.

Unreasonable turnaround time for investigation results

Participants had fine needle aspiration or tissue biopsies to diagnose the breast cancer, however most reported waiting a long time for histology results. A study conducted among women attending a Reference Service in Brazil found that, the average time for diagnosis was 102.5 ± 165.5 days (Lopes et al., 2017). Performing the biopsy in the public healthcare system doubled the chance of delay of breast

cancer among women (Medeiros et al., 2019). Furthermore, according to Medeiros et al. (2019) there are many failures in the healthcare system, especially regarding early diagnosis. At St. Elizabeth Hospital the breast biopsies and fine needle aspirations to diagnose breast cancer are needed to be sent to Nelson Mandela academic Hospital for oncology tests, sometime results come back not clear according to participants of this study and needed to be repeated and. False-negative test results may reassure the women who have breast cancer and delay early diagnosis (WHO, 2020), and default follow up visits. Inadequate availability and optimization of a trained pathology workforce contribute to limited access and poor outcomes (WHO, 2020).

3. Knowledge related to all aspects related to breast cancer

Participants had limited knowledge about breast cancer, this has affected time to diagnosis. Participants did not know any risk factors of breast cancer among women, so there so lack of knowledge on causes of breast cancer. Many respondents were surprised to be diagnosed with breast cancer as they claimed that they did not have family history of breast cancer.

This study revealed that women with confirmed breast cancer diagnosis at St. Elizabeth Hospital had lack of knowledge regarding breast cancer before diagnosis. Similarly, a study of females aged 18-52 years old, found that Iranian female population had lack knowledge on breast cancer (Akhtari-Zavare et al., 2014).

This study shows that women have low level of awareness of breast cancer and detection methods. Similarly, a study conducted in Trichy et al. 2017 showed that level of awareness and practice of BSE among women were low.

The findings of this study show that many women do not have knowledge and awareness about breast cancer and its causes, hence they delayed seeking care for diagnosis. This is in line with the results from a study (Liu et al. 2014) in Eastern China that showed poor awareness of breast cancer among women aged 25–70 years in Eastern China. Among all participants, family history of breast cancer was the best accepted risk factor for breast cancer (Liu et al., 2014). Almutairi et al. 2019 also found that knowledge about breast cancer and its risk factors among young women was inadequate.

Participants in this study showed lack of knowledge of other signs and symptoms of breast cancer. Pruitt et al. (2015) found that individual woman factors contributing to delay in presentation for diagnosis include a lack of awareness about the existence of signs and symptoms of breast cancer among women. A study conducted by Frie et al. (2018) found that the barriers during the time of symptom appraisal were low level of breast cancer knowledge among women, their family members and health care professionals. The researcher thinks that women with adequate knowledge of breast cancer would respond better to breast cancer warning signs and report to the health care provider preventing late diagnosis of breast cancer.

4. Strategies to reduce time to breast cancer diagnosis

The study participants have suggested several strategies to reduce the delays of breast cancer diagnosis among women. The most appropriate regional facilities in each province in South Africa should be ear-marked as Specialist Breast Units (SBUs) receiving patients from primary healthcare facilities and district hospitals to avoid delays in diagnosis of symptomatic breast cancer patients, and to utilize the available resources for early diagnosis of breast cancer (NDOH, 2017). St. Elizabeth Hospital is one of the regional hospitals in the OR Tambo Region and receives breast cancer patients from Holly cross and other district hospital and clinics around Ingquza Hill Municipality. Therefore St. Elizabeth Hospital should be ear marked as specialist breast unit according to the National Department of Health Breast Cancer Prevention and Control Policy 2017.

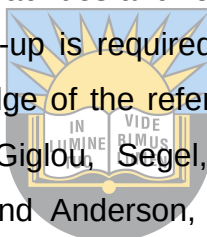
Early consultation for examination and diagnosis when symptoms are suspected viewed as a best option for early detection

Early presentation to the nearest health care facility was the most suggestion by the participants for early diagnosis of breast cancer. When women present to the clinic or hospital a clinical breast examination is conducted by health care provider and early referral is encouraged for women with suspected breast cancer symptoms. Breast cancer survival depends largely on a woman's access to timely, effective, and affordable care (Ginsburg, Yip, Brooks, Cabanes, Caleffi, Dunstan Yataco, Gyawali, McCormack, McLaughlin de Anderson, Mehrotra, and Mohar, 2020). Early detection is critical to breast cancer survival (Ginsburg et al., 2020). Other authors (Koo, Unger-

Saldaña, Mwaka, Corbex, Ginsburg, Walter, Calanzani, Moodley, Rubin, and Lyratzopoulos, 2021) noted that timely investigation and diagnosis of breast cancer relies on the availability of medical equipment, imaging, pathology, and clinical laboratory services.

Early referral to other health care professional may fast track early diagnosis

The study results show that participants suggested training of health care providers to increase their knowledge and avoid delaying patients at primary health care, district and regional hospitals. The suggested strategy is in line with the study conducted by Emery, Shaw, Williams, Mazza, Fallon-Ferguson, Varlow, and Trevena (2014), concluded that fast-track referral routes might be a useful approach to reducing diagnostic delay in cancer, especially in health-care systems with long waiting times for out-patient diagnostic services. Women with breast symptoms are supposed to self-present to primary healthcare facilities and referred to secondary or tertiary-level facilities if further diagnostic work-up is required (Moodley et al., 2018). A lack of trained professionals and knowledge of the referral system contribute to significant health system delays (Scheel, Giglou, Segel, Orem, Tsu, Galukande, Okello, Nakigudde, Mugisha, Muyinda, and Anderson, 2020) of breast cancer diagnosis among women.



University of Fort Hare
Together in Excellence

Nurses working in clinics should be offered study leaves for oncology nursing as they are the first point of care for clients presenting with cancer symptoms. This will prevent delaying the women at the clinic for nothing and improve quality of life of women in communities. Oncology training to primary healthcare nurses could be importance for early referrals, and where to refer patients for diagnostic services and could reduce system delays (Pace et al., 2015).

Some of the participants advised that the government must train workers (doctors, nurses, counsellors) to prevent negligence, investigation errors and lack of care in the hospitals caring for cancer patients. Other authors (Belaid et al., 2018) revealed that promoting medical and nursing education for oncology could avoid diagnostic errors and reduce delays in breast cancer diagnosis. Car et al. (2016) found that one of the solutions to reduce delayed diagnosis and late referrals of cancer is to improve specialist education for doctors and nurses to ensure better standards of care.

Education related to breast cancer suggested as a best method that can lead to early detection

The study found that some participants suggested educating the public regarding breast cancer and to be more careful of signs and symptoms because it is a serious disease. Pictorial means of conveying information about breast cancer need to be introduced to the rural community, along with opportunistic screening at local clinics (Cačala & Gilart, 2017). According to Cačala and Gilart (2017), this should be done with visual aids such as videos that could be shown at local clinics. Health education about breast cancer is very important in communities where many women are not educated, as stated by some of the participants in this study. Participant said: *“Health care professionals should educate the public to be careful of breast cancer because it spreads. The government must build cancer departments in our nearest hospitals. Further research should be done by health care professionals” (P04).*

Furthermore, the education of primary care providers to recognize the early signs and symptoms of breast cancer is necessary for prompt referral through the health care system (Ginsburg et al., 2020). Nurses' knowledge, practice as well as client teaching especially at PHC level, will contribute to early detection of breast cancer (Oluwatosin, 2012). Education and materials regarding specimen handling and transport are necessary to ensure quality interpretation, and to shift some of the responsibility for achieving a diagnosis from the patient to the health system (Scheel et al., 2020).

Nurses may organize formal planned client teaching and conduct CBE in their Primary Health Care units to assist them with self-care practices and to help them maximize self-care abilities (Oluwatosin, 2012). A study conducted in Kenya, stated that undergraduate medical schools, nursing schools, and clinical officer training colleges do not include education in breast self-examination or clinical breast examination and triaging for breast cancer screening, early detection, and diagnostic investigations as part of their training curricula (Sayed et al., 2016).

Recent graduates of training programs are usually the first contact for patients in a health facility, so this lack of training may contribute to misdiagnosis and inappropriate treatment or referral of women presenting with breast masses (Sayed et al., 2016).

Healthcare providers should establish and promote screening programs to reduce delays of breast cancer diagnosis.

Encouragement of routine visit to health facilities by all ages of women at the childbearing age and beyond.

The results of this study show that participants suggested encouragement of routine visits by all women, because being a woman is one of the risk factors of breast cancer regardless of age. It is known that as a woman become older the risk of cancer increases, that is why it was proposed that women of all ages should be done clinical breast examination (CBE) at any health facility during routine visit. Encouragement through word of mouth and small media (pamphlets and short videos) also increase participation, whereas mass media have been shown to be effective only when they are part of a multicomponent intervention (WHO, 2020). According to WHO 2020, a robust procurement and supply chains for screening devices are necessary to promote access and minimize barriers of screening of breast cancer.

Education related self-examination of the breast encouraged

The participants in the study encouraged to be continuously taught by health providers about how to examine their breast and detect breast abnormalities. Women need to be taught and encouraged to self-monitor in order to detect abnormalities in their breasts (Suleiman, 2014). Appropriate educational interventions are urgently required to encourage women to engage in regular breast self-examination (Suleiman, 2014). it is imperative to encourage the practice of breast self-examination in the communities through health education programs (Siddharth, Gupta, Narang, Singh, 2016). Efforts should be made to increase level of knowledge and practice of BSE through health education programs.

Health education campaigns particularly among women with a low schooling level and of rural origin could reduce time for consultation (Belaid et al., 2018). A recent study conducted in two hospitals in Karachi, Pakistan found that urgent measures are needed to improve the awareness of women regarding breast cancer symptoms through comprehensive and positive breast cancer education campaigns (Shamsi et al., 2020). Public awareness programs about breast cancer should be designed to

eliminate patient delays in presentation and to promote early detection, diagnosis of cases before advancement (Tesfaw et al., 2020).

6. CONCLUSION

The main factors contributing to delays of breast cancer diagnosis among women in St Elizabeth Hospital included lack of knowledge, fear of breast cancer and surgery, unreasonable turnaround time for investigation results, lack of oncology resources for prompt diagnosis and management. Strategies to facilitate prompt diagnosis of breast cancer included: Early consultation for breast cancer symptoms, early referral, Education, routine visits and screening and health education on self-breast examination.

7. LIMITATIONS

The researcher has observed the following study limitations:

The study was conducted in one public health facility at Ingquza Hill Municipality, participants selected purposively, not involving the private sector participants, therefore findings of this study cannot be generalised to entire population.

8. RECOMMENDATIONS

Based on the study findings, the following recommendations are in place:

- Patient education and breast cancer public programmes are needed to be the priority to create breast cancer awareness among women and their families, promoting early diagnosis.
- Oncology professional education is required to equip with breast cancer early diagnosis to prevent delays
- Further studies are required to be conducted using other different methodologies and bigger setting.
- There is a need for implementation of breast cancer prevention and control policy to ensure provision of timely care of breast cancer.
- There is a need to minimise appointment times for breast cancer diagnostic investigations to prevent delays of breast cancer diagnosis.

REFERENCES

- Abolfotouh, M.A., Ala'a, A.B., Mahfouz, A.A., Al-Assiri, M.H., Al-Juhani, A.F. and Alaskar, A.S., 2015. Using the health belief model to predict breast self-examination among Saudi women. *BMC public health*, 15(1), pp.1-12.
- Agodirin, O., Olatoke, S., Rahman, G., Olaogun, J., Kolawole, O., Agboola, J., Olasehinde, O., Katung, A., Ayandipo, O., Etonyeaku, A. & Ajiboye, A. 2019. Impact of primary care delay on the progression of breast cancer in a black African population: A multicentered survey. *Journal of cancer epidemiology*, 2019.
- Akhtari-Zavare, M., Ghanbari Baghestan, A., Latiff, L.A., Matinnia, N. and Hoseini, M., 2014. Knowledge of breast cancer and breast self-examination practice among Iranian women in Hamedan, Iran. *Asian Pacific Journal of Cancer Prevention*, 15, pp.6531-6534.
- Akuoko, C.P., Armah, E., Sarpong, T., Quansah, D.Y., Amankwaa, I. & Boateng, D. 2017. Barriers to early presentation and diagnosis of breast cancer among African women living in sub-Saharan Africa. *PloS one* 12(2), p.e 0171024.
- Almutairi, A.H., Tamrin, S.B.B.M., Wirza, R. and Ahmad, N.B., 2019. Systematic review on knowledge and awareness of breast cancer and risk factors among young women. *Advances in Bioscience and Clinical Medicine*, 7(1), pp.41-47.
- Belaid, I., Said, N., Gahbiche, S., Hochlef, M., Chabchoub, I. & Ezzairi, F. 2018. What could be the reasons for the late diagnosis of breast cancer in Tunisia? *La Tunisie medicale*, 96(10-11), pp.665-671.
- Brink, H., Van der Walt & Van Rensburg, G. 2012. *Fundamentals of research methodology for healthcare professionals*. 3rd Edition. Cape Town: Juta.
- Brinton, L. Figueroa, J. Adjei, E. Ansong, D. Biritwum, R. Edusei, L. Nyarko, K.M. Wiafe, S. Yarney, J. Addai, B.W. and Awuah, B. 2017. Factors contributing to delays in diagnosis of breast cancers in Ghana, West Africa. *Breast cancer research and treatment*, 162(1), pp.105-114.

Čačala, S. R. & Gilart, J. 2017. Factors relating to late presentation of patients with breast cancer in Area 2 KwaZulu-Natal, South Africa. *Journal of global oncology*, 3(5): 497-501.

Car, L.T., Papachristou, N., Urch, C., Majeed, A., El-Khatib, M., Aylin, P., Atun, R., Carr, J. & Vincent, C. 2016. Preventing delayed diagnosis of cancer: clinicians' views on main problems and solutions. *Journal of Global Health*, 6(2).

Cebeci, F., Yangın, H.B. and Tekeli, A., 2012. Life experiences of women with breast cancer in South Western Turkey: A qualitative study. *European Journal of Oncology Nursing*, 16(4), pp.406-412.

Chou, A.F., Stewart, S.L., Wild, R.C. and Bloom, J.R., 2012. Social support and survival in young women with breast carcinoma. *Psycho-Oncology*, 21(2), pp.125-133.

Collins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers.

Creswell, J.W. 2013. *Research design: Qualitative, Quantitative and Mixed Methods Approaches*. 4th ed. California: Sage.

Creswell, J. W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed). Thousand Oaks, CA: Sage Publications.

De Vos, A., Strydom, H., Fouchè, C. & Delport, C. 2014. *Research at grass roots: For the social sciences and human service professions*. 3rd ed. Pretoria: Van Schaik.

Donkor, A., Lathlean, J., Wiafe, S., Vanderpuye, V., Fenlon, D., Yarney, J., Opoku, S.Y., Antwi, W. and Kyei, K.A., 2015. Factors contributing to late presentation of breast cancer in Africa: A systematic literature review. *Archives of Medicine*, 8(2.2), pp.1-10.

Drageset, S., Lindstrøm, T.C., Giske, T. and Underlid, K., 2012. "The support I need": women's experiences of social support after having received breast cancer diagnosis and awaiting surgery. *Cancer nursing*, 35(6), pp.E39-E47.

Elobaid, Y., Aw, T.C., Lim, J.N.W., Hamid, S, & Grivna, M. 2016. Breast cancer presentation delays among Arab and national women in the UAE: a qualitative study. *SSM Popul Health*; 5(2):155–63.

Emery, J.D., Shaw, K., Williams, B., Mazza, D., Fallon-Ferguson, J., Varlow, M. and Trevena, L.J., 2014. The role of primary care in early detection and follow-up of cancer. *Nature reviews Clinical oncology*, 11(1), pp.38-48.

Ermiah, E., Abdalla, F., Buhmeida, A., Larbesh, E., Pyrhönen, S. and Collan, Y., 2012. Diagnosis delay in Libyan female breast cancer. *BMC research notes*, 5(1), pp.1-8.

Ferreira, N.A.S., de Carvalho, S.M.F., Valenti, V.E., Bezerra, I.M.P., Batista, H.M.T., de Abreu, L.C., Matos, L.L. & Adami, F. 2017. Treatment delays among women with breast cancer in a low socio-economic status region in Brazil. *BMC Women's Health*, 17(1), pp.1-8.

Frie, K.G., Samoura, H., Diop, S., Kamate, B., Traore, C.B., Malle, B., Coulibaly, B. and Kantelhardt, E.J., 2018. Why do women with breast Cancer get diagnosed and treated late in sub-Saharan Africa perspectives from women and patients in Bamako, Mali. *Breast Care*, 13(1), pp.39-43.

Freitas, A.G. and Weller, M. (2015) Patient Delays and System Delays in Breast Cancer Treatment in Developed and Developing Countries. *Ciência & Saúde Coletiva*, 20, 3177-3189. <https://doi.org/10.1590/1413-812320152010.19692014>

Gebremariam, A., Addissie, A., Worku, A., Assefa, M., Kantelhardt, E.J. and Jemal, A., 2019. Perspectives of patients, family members, and health care providers on late diagnosis of breast cancer in Ethiopia: A qualitative study. *PloS one*, 14(8), p.e0220769.

Ginsburg, O., Yip, C.H., Brooks, A., Cabanes, A., Caleffi, M., Dunstan Yataco, J.A., Gyawali, B., McCormack, V., McLaughlin de Anderson, M., Mehrotra, R. and Mohar, A., 2020. Breast cancer early detection: A phased approach to implementation. *Cancer*, 126, pp.2379-2393.

Glanz, K., Rimer, B.K. and Viswanath, K. eds., 2015. *Health behavior: Theory, research, and practice*. John Wiley & Sons.

Grove, S.K., Gray, J.R. and Burns, N., 2015. *Understanding nursing research: building an evidence-based practice*.

Gueye, M., Gueye, S.M.K., Diallo, M., Thiam, O., Mbodji, A., Diouf, A., Fall, K., Toure, Y., Daff, H.M.B. and Moreau, J.C. (2017) Sociodemographic Factors Associated with Delays in Breast Cancer. *Open Journal of Obstetrics and Gynecology*, 7, 455-463.

Hajian-Tilaki, K. and Auladi, S., 2014. Health belief model and practice of breast self-examination and breast cancer screening in Iranian women. *Breast cancer*, 21(4), pp.429-434.

Hennink, M., Hutter, I. & Bailey, A. 2011. *Qualitative research methods*. Los Angeles: Sage Publications.

Huo, Q. Cai, C. Zhang, Y. Kong, X. Jiang, L. Ma, T. Zhang, N. and Yang, Q. 2015. Delay in diagnosis and treatment of symptomatic breast cancer in China. *Annals of surgical oncology*, 22(3), pp.883-888.

Joffe, M., Ayeni, O., Norris, S.A., McCormack, V.A., Ruff, P., Das, I., Neugut, A.I., Jacobson, J.S. & Cubasch, H. 2018. Barriers to early presentation of breast cancer among women in Soweto, South Africa. *PloS one*, 13(2), p.e0192071.

Khan TM, Leong JP, Ming LC, Khan AH. 2015. Association of Knowledge and Cultural Perceptions of Malaysian Women with Delay in Diagnosis and Treatment of Breast Cancer: A Systematic Review. *Asian Pac J Cancer Prev.*; 16(13):5349-57.

Khiyali, Z., Aliyan, F., Kashfi, S.H., Mansourian, M. and Jeihooni, A.K., 2017. Educational intervention on breast self-examination behavior in women referred to health centers: Application of Health Belief Model. *Asian Pacific journal of cancer prevention: APJCP*, 18(10), p.2833.

Koo, M.M., Unger-Saldaña, K., Mwaka, A.D., Corbex, M., Ginsburg, O., Walter, F.M., Calanzani, N., Moodley, J., Rubin, G.P. and Lyratzopoulos, G., 2021. Conceptual framework to guide early diagnosis programs for symptomatic cancer as part of global cancer control. *JCO global oncology*, 7, pp.35-45.

Kumarasamy, H., Veerakumar, A.M., Subhathra, S., Suga, Y. and Murugaraj, R., 2017. Determinants of awareness and practice of breast self-examination among rural women in Trichy, Tamil Nadu. *Journal of mid-life health*, 8(2), p.84.

Liu, L.Y., Wang, F., Yu, L.X., Ma, Z.B., Zhang, Q., Gao, D.Z., Li, Y.Y., Li, L., Zhao, Z.T. and Yu, Z.G., 2014. Breast cancer awareness among women in Eastern China: a cross-sectional study. *BMC Public Health*, 14(1), pp.1-8.

Lubuzo, B., Ginindza, T. & Hlongwana, K. 2019. Exploring barriers to lung cancer patient access, diagnosis, referral and treatment in Kwazulu-Natal, South Africa: the health providers' perspectives. *Translational lung cancer research*, 8(4), p.380.

Lopes, T.C.R., Gravena, A.A.F., de Oliveira Demitto, M., Borghesan, D.H.P., DellAgnolo, C.M., Brischiliari, S.C.R., de Barros Carvalho, M.D. and Pelloso, S.M., 2017. Delay in diagnosis and treatment of breast cancer among women attending a reference service in Brazil. *Asian Pacific journal of cancer prevention: APJCP*, 18(11), p.3017.

Maghous, A., Rais, F., Ahid, S., Benhmidou, N., Bellahamou, K., Loughlimi, H., Marnouche, E., Elmajjaoui, S., Elkacemi, H., Kebdani, T. & Benjaafar, N. 2016. Factors influencing diagnosis delay of advanced breast cancer in Moroccan women. *BMC Cancer*, 16(1), pp.1-8.

Maly, R.C., Leake, B., Mojica, C.M., Liu, Y., Diamant, A.L. & Thind, A. 2011. What influences diagnostic delay in low-income women with breast cancer? *Journal of women's health*, 20(7), pp.1017-1023.

Medeiros, G.C., Thuler, L.C.S. and Bergmann, A., 2019. Delay in breast cancer diagnosis: a Brazilian cohort study. *Public Health*, 167, pp.88-95.

Mody, G.N., Nduaguba, A., Ntirenganya, F. and Riviello, R., 2013. Characteristics and presentation of patients with breast cancer in Rwanda. *The American Journal of Surgery*, 205(4), pp.409-413.

Moodley, J., Cairncross, L., Naiker, T. & Momberg, M. 2016. Understanding pathways to breast cancer diagnosis among women in the Western Cape Province, South Africa: a qualitative study. *BMJ Open*, 6(1), p.e009905.

Moodley, J., Cairncross, L., Naiker, T. & Constant, D. 2018. From symptom discovery to treatment women's pathways to breast cancer care: a cross-sectional study. *BMC Cancer*, 18(1), pp.1-11.

National Department of Health 2017. Breast Cancer Prevention and Control Policy. South Africa.

Norsa'adah, B., Rampal, K.G., Rahmah, M.A., Naing, N.N. and Biswal, B.M., 2011. Diagnosis delay of breast cancer and its associated factors in Malaysian women. BMC cancer, 11(1), pp.1-8.

Obiorah, C.C. & Abu, E.K. 2019. Breast cancer in Rivers State, Nigeria: Ten-year review of the Port Harcourt cancer registry. South African Journal of Oncology, 3, p.7.

Oluwatosin, O., 2012. Primary health care nurses' knowledge practice and client teaching of early detection measures of breast cancer in Ibadan. BMC nursing, 11(1), pp.1-8.

Orsini, M. Trétarre, B. Daurès, J.P., & Bessaoud, F. 2016. Individual socioeconomic status and breast cancer diagnostic stages: a French case-control study. The European Journal of Public Health, 26(3), pp.445-450.

Oxford Concise Medical Dictionary. 2010 (5th ed). Oxford: University Press.

Pace, L.E., Mpunga, T., Hategekimana, V., Dusengimana, J.M.V., Habineza, H., Bigirimana, J.B., Mutumbira, C., Mpanumusingo, E., Ngiruwera, J.P., Tapela, N. & Amoroso, C. 2015. Delays in breast cancer presentation and diagnosis at two rural cancer referral centers in Rwanda. The Oncologist, 20(7), p.780.

Pace LE, & Shulman LN. 2016. Breast Cancer in sub-Saharan Africa: challenges and opportunities to red Africa: challenges and opportunities to reduce mortality. Oncologist, 21(6):739–44.

Perusquía, K.Y.G. & Bautista, J.C.P. 2018. Delayed Access to Medical Care of Patients with Breast Cancer. Mexican Journal of Medical Research, 6(11).

Polit, D.F. & Beck, C.T. 2017. Nursing Research: Generating and Assessing Evidence for Nursing Practice. 10th ed. Philadelphia: Wolters Kluwer Health.

Poum, A., Promthet, S., Duffy, S.W. and Parkin, D.M., 2014. Factors associated with delayed diagnosis of breast cancer in northeast Thailand. Journal of Epidemiology, 24(2), pp.102-108.

Pruitt, L., Mumuni, T., Raikhel, E., Ademola, A., Ogundiran, T., Adenipekun, A., Morhason-Bello, I., Ojengbede, O.A. & Olopade, O.I. 2015. Social barriers to diagnosis and treatment of breast cancer in patients presenting at a teaching hospital in Ibadan, Nigeria. *Global public health*, 10(3), pp.331-344.

Ramathuba, D.U., Ratshirumbi, C.T. & Mashamba, T.M. 2015. Knowledge, attitudes, and practices toward breast cancer screening in a rural South African community. *Curationis*, 38(1), pp.1-8.

Rayne, S., Schnippel, K., Kruger, D., Benn, C.A. & Firnhaber, C. 2019. Delay to diagnosis and breast cancer stage in an urban South African breast clinic. *South African Medical Journal*, 109(3), pp.159-163.

Richards, L., 2020. *Handling qualitative data: A practical guide*. Sage Publications Limited.

Ridley, D., 2012. *The literature review: A step-by-step guide for students*.

Ruddy, K.J. Gelber, S. Tamimi, R.M. Schapira, L. Come, S.E. Meyer, M.E. Winer, E.P., and Partridge, A.H. 2014. Breast cancer presentation and diagnostic delays in young women. *Cancer*, 120(1), pp.20-25.

Sayed, S., Moloo, Z., Ngugi, A., Allidina, A., Ndumia, R., Mutui, A., Wasike, R., Wahome, C., Abdihakim, M., Kasmani, R. and Spears, C.D., 2016. Breast camps for awareness and early diagnosis of breast cancer in countries with limited resources: A multidisciplinary model from Kenya. *The Oncologist*, 21(9), pp.1138-1148.

Scheel, J.R., Giglou, M.J., Segel, S., Orem, J., Tsu, V., Galukande, M., Okello, J., Nakigudde, G., Mugisha, N., Muyinda, Z. and Anderson, B.O., 2020. Breast cancer early detection and diagnostic capacity in Uganda. *Cancer*, 126, pp.2469-2480.

Shamsi, U., Khan, S., Azam, I., Usman, S., Maqbool, A., Gill, T., Iqbal, R. and Callen, D., 2020. Patient delay in breast cancer diagnosis in two hospitals in Karachi, Pakistan: preventive and life-saving measures needed. *JCO Global Oncology*, 6, pp.873-883.

Siddharth, R., Gupta, D., Narang, R. and Singh, P., 2016. Knowledge, attitude and practice about breast cancer and breast self-examination among women seeking outpatient care in a teaching hospital in central India. *Indian Journal of cancer*, 53(2), p.226.

Suleiman, A.K., 2014. Awareness and attitudes regarding breast cancer and breast self-examination among female Jordanian students. *Journal of basic and clinical pharmacy*, 5(3), p.74.

Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, Bray F. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2021 Feb 4. doi:10.3322/caac.21660.

Tesfaw, A., Demis, S., Munye, T. & Ashuro, Z. 2020. Patient Delay and Contributing Factors among Breast Cancer Patients at Two Cancer Referral Centres in Ethiopia: A Cross-Sectional Study. *Journal of Multidisciplinary Healthcare*, 13, p.1391.

Tetteh, D.A. & Faulkner, S.L. 2016. Sociocultural factors and breast cancer in sub-Saharan Africa: implications for diagnosis and management. *Women's Health*, 12(1), pp.147-156.

Thomas, E. & Magilvy, J.K. 2011. Qualitative rigor or research validity in qualitative research. *Journal for specialists in pediatric nursing*.

Torre, L.A., Bray, F., Siegel, R.L., Ferlay, J., Lortet-Tieulent, J. & Jemal, A. 2015. Global cancer statistics, 2012. *CA: a cancer journal for clinicians*, 65(2), pp.87-108.

Unger-Saldaña K. Challenges to the early diagnosis and treatment of breast cancer in developing countries. *World J Clin Oncol* 2014; 5(3): 465-477 [PMID: 25114860 DOI: 10.5306/wjco.v5.i3.465]

Unger Saldaña, K., Miranda, A., Zarco Espinosa, G., Mainero Ratchelous, F., Bargalló, Rocha, E. & Miguel Lázaro, León, J. 2015, Health system delay and its effect on clinical stage of breast cancer: Multicentre study. Mexico.

Wang, X., Chen, D., Xie, T. and Zhang, W., 2019. Predicting women's intentions to screen for breast cancer based on the health belief model and the theory of planned behaviour. *Journal of Obstetrics and Gynaecology Research*, 45(12), pp.2440-2451.

Williams, F. and Thompson, E., 2017. Disparities in breast cancer stage at diagnosis: importance of race, poverty, and age. *Journal of health disparities research and practice*, 10(3), p.34.

World Health Organization, 2020. WHO report on cancer: setting priorities, investing wisely and providing care for all.



University of Fort Hare
Together in Excellence

ANNEXURES

ANNEXURE A: Ethics Research Confidentiality and Informed Consent Form



University of Fort Hare
Together in Excellence

Ethics Research Confidentiality and Informed Consent Form

Please note:

This form is to be completed by the researcher(s) as well as by the interviewee before the commencement of the research. Copies of the signed form must be filed and kept on record



(To be adapted for individual circumstances/needs)

University of Fort Hare
Together in Excellence

Mthinjwa Mzameleni is asking participants from St. Elizabeth's Regional Hospital to answer some questions based on a study which I hope will benefit participants and communities maybe in the future.

Mzameleni Mthinjwa will be conducting research regarding breast cancer diagnosis delays among the women at St. Elizabeth Hospital in Lusikisiki, Easter Cape Province. I am interested to know more about the factors contributing to breast cancer diagnosis delays among women. I will carry out this research to identify factors contributing to breast cancer diagnosis delays among women and to help department of health to reduce breast cancer mortality, inform the policy regarding breast cancer diagnosis among women in the Eastern Cape. *(adapt for individual projects)*

Please understand that you are not being forced to take part in this study and the choice whether to participate or not is yours alone. However, I would really appreciate it if you do share your thoughts with me. If you choose not to take part in answering these questions, you will not be affected in any way. If you agree to participate, you may stop me at any time and tell me that you don't want to go on with the interview. If you do this there will also be no penalties and you will not be prejudiced in any way. Confidentiality will be observed/ maintained professionally by the researcher.

I will not be recording your name anywhere on the data and no one will be able to link you to the answers you give. Only the researcher will have access to unlinked information. The information will remain confidential and there will be no "come-backs" from the answers you give.

The interview will last around 45 minutes (*this is to be tested through a pilot*). I will be asking you a question and asking that you are as open and honest as possible in answering these questions. Some questions may be of a personal and/or sensitive nature. I will be asking some questions that you may not have thought about before, and which also involve thinking about the past or the future. I know that you cannot be absolutely certain about the answers to these questions, but we ask that you try to think about these questions. When it comes to answering questions there are no right and wrong answers. When we ask questions about the future, we are not interested in what you think the best thing would be to do, but what you think would actually happen. (*adapt for individual circumstances*)

If possible, I would like to come back to this area once I have completed our study to inform you and your community of what the results are and discuss the findings and proposals around the research and what it means for people in this area.

INFORMED CONSENT

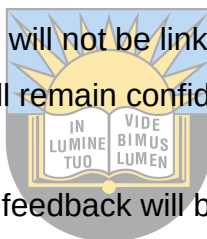
I hereby agree to participate in research regarding breast cancer diagnosis delays among the women at St. Elizabeth Hospital at Lusikisiki in the Eastern Cape. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop this interview at any point should I not want to continue, and this decision will not in any way affect me negatively.

I understand that this is a research project, and the purpose is not necessarily to benefit me personally.

I have received the telephone number of a person to contact should I need to speak about any issues which may arise in the interviews.

I understand that this consent form will not be linked to the interview guide and questions, and that my answers will remain confidential.

I understand that, if at all possible, feedback will be given to my community on the results of the completed research.



University of Fort Hare
Together in Excellence

.....
Signature of participant

Date:.....

I hereby agree to the tape recording of my participation in the study

.....
Signature of participant

Date:.....

ANNEXURE B: INTERVIEW GUIDE



University of Fort Hare
Together in Excellence

Participant ID.....

Date.....

INTERVIEW GUIDE

SECTION A: DEMOGRAPHIC INFORMATION

Where do you live?

How old are you?

What is your ethnic group or origin?

Employment status?

Which religion do you belong to?

What is your highest level of education?

What is your marital status?

SECTION B: ACCESS TO HEALTH CARE SERVICES

Where do you first get services pertaining to health?

Why do you choose this type of service as your first choice?

Why did you seek medical care?

How long do you travel to access health facility like clinic or hospital?

How many hours do you take to come to the nearest hospital?

Have you ever heard of breast cancer before you recognized the first symptom of your illness? (How, by whom [do not mention names if person])

Explain what caused the breast cancer?

How is breast cancer recognised and diagnosed?

Were all necessary steps taken to diagnose the breast cancer on time?

Tell me about your experience with breast cancer from the first symptom recognition to diagnosis

Probing questions:

- Who noticed the problem with your breast?
- What breast symptoms did you experience?
- How did you notice the problem in your breast?
- What actions did you take after the problem was known? (Before the diagnosis)
- When did you seek medical care?
- What did the health providers advise you when you seek help for your breast problem?

What are the major challenges you have faced during diagnosis of breast cancer?

Why do breast cancer patients seek medical care late?

SECTION C: STRATEGIES TO REDUCE TIME TO BREAST CANCER DIAGNOSIS

What measures would you suggest making sure breast cancer diagnosis happens early?

Do you have any questions you want to ask me?

Thank you for your time and information, have a good day.

Interviewer: M. Mthinjwa

ANNEXURE C: Application Letter to University of Fort Hare Research Ethics Committee

Mthinjwa Mzameleni
St. Elizabeth Regional
Hospital
LUSIKISIKI
4820
10/11/2020
0786960267
200802282@ufh.ac.za

UFH Research Ethics Committee
University of Fort Hare
East London



Dear Sir/Madam

University of Fort Hare
Together in Excellence

Research title: Delays of breast cancer diagnosis among women at St. Elizabeth Regional Hospital in Lusikisiki, Eastern Cape, South Africa.

I hereby apply for approval of research ethics committee for the above-mentioned research study proposal.

I am a student currently doing Masters in Public Health year 2 at University of Fort Hare. I am required that I submit a research proposal and conduct a study in my interest. I am fascinated in doing a study on delays in breast cancer diagnosis among women at St. Elizabeth Regional Hospital in Eastern Cape.

This study aims to assess factors affecting time to breast cancer diagnosis among women. The objectives are to determine the factors affecting time to breast cancer diagnosis and explore strategies to reduce time to breast cancer diagnosis among women at St. Elizabeth's Hospital. Ethical issues will be taken into consideration by the primary researcher throughout the study.

I hope my application will be kindly considered, if any information is required, please contact me on my contact information.

Yours Sincerely

M. Mthinjwa



.....



University of Fort Hare
Together in Excellence

ANNEXURE D: Application for Institutional consent to conduct research study

Mthinjwa Mzameleni

P/Bag X 1007

LUSIKISIKI

16 July 2021

0786960267

mthinjwam@gmail.com

The Chief Executive Officer (CEO)

St. Elizabeth Regional Hospital

LUSIKISIKI

4820

Dear Sir/Madam



Research title: Delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa.

*University of Fort Hare
Together in Excellence*

I hereby apply for Institutional consent to conduct the above-mentioned research study as approved by the University of Fort Hare Research Ethics Committee (**Ref # 2021=06=04=MzameleniM**) and Eastern Cape Health Research Committee.

I am a student currently doing master's in public health year two at University of Fort Hare. I am required that I conduct a study in my interest. I am fascinated in doing a study on delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa.

This study aims to investigate the reasons for the diagnosis delays among women with breast cancer to improve prompt diagnosis and save lives of breast cancer women. A final report of findings and recommendations will be disseminated to your office when the research is completed. Ethical issues will be taken into consideration by the primary researcher throughout the study.

I hope my application will be kindly considered, if any information is required, please contact me on my contact information. Please find attached my ethics approval documents.

Yours Sincerely

Mthinjwa M



University of Fort Hare
Together in Excellence

ANNEXTURE E Eastern Cape Department of Health research approval



Enquiries: Yvonne Gixela

Tel no: 079 074 0859

Email: Yvonne.Gixela@echealth.gov.za / yvixela@gmail.com

Date: 07 July 2021

RE: Delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa (EC_2022107_006)

Dear Mr. Mthinjwa Mzameleni

The department would like to inform you that your application for the abovementioned research topic has been approved based on the following conditions:

1. During your study, you will follow the submitted protocol with ethical approval and can only deviate from it after having a written approval from the Department of Health in writing.
2. You are advised to ensure, observe and respect the rights and culture of your research participants and maintain confidentiality of their identities and shall remove or not collect any information which can be used to link the participants.
3. The Department of Health expects you to provide a progress update on your study every 3 months (from date you received this letter) in writing.
4. At the end of your study, you will be expected to send a full written report with your findings and implementable recommendations to the Eastern Cape Health Research Committee secretariat. You may also be invited to the department to come and present your research findings with your implementable recommendations.
5. Your results on the Eastern Cape will not be presented anywhere unless you have shared them with the Department of Health as indicated above.

Your compliance in this regard will be highly appreciated.

SECRETARIAT: EASTERN CAPE HEALTH RESEARCH COMMITTEE

TOGETHER, MOVING THE HEALTH SYSTEM
FORWARD



ANNEXTURE F: Data Coding Certificate

Qualitative data analysis

MASTER OF PUBLIC OF HEALTH

OF

Mr M MTHINJWA

THIS IS TO CERTIFY THAT:

Professor Tebogo M. Mothiba has co-coded the following qualitative data:

Unstructured one-to-one interviews

For the study:

**DELAYS OF BREAST CANCER DIAGNOSIS AMONG WOMEN IN ST.
ELIZABETH REGIONAL HOSPITAL, EASTERN CAPE, SOUTH
AFRICA**

I declare that the candidate and I have reached consensus on the major themes reflected by the data. I further declare that adequate data saturation was achieved as evidenced by repeating themes.

Prof TM Mothiba

DECEMBER 2021



TM Mothiba (PhD)

ANNEXTURE G: Institutional permission to conduct the study



St. Elizabeth Regional Hospital • ERF 161 • Main Street • Lusikisiki • Eastern Cape

Private Bag X1007 • Lusikisiki • 4820 • REPUBLIC OF SOUTH AFRICA

Tel.: +27 (0)39 253 5054 • Fax: +27 (0)39 253 1116 • Website: www.ecdoh.gov.za

TO: MR M. MTHINJWA

SUBJECT: PERMISSION TO CONDUCT RESEARCH ON DELAYS OF BREAST CANCER DIAGNOSIS AMONG WOMEN IN ST. ELIZABETH'S REGIONAL HOSPITAL, EASTERN CAPE, SOUTH AFRICA.

Dear Mr M Mthinjwa

This is to confirm that permission to conduct the research is granted as per research proposal.

Please ensure that adequate information is given to the study participants as well as ensuring confidentiality.

Regards

MRS. NE MNGWEBA

ACTING CHIEF EXECUTIVE OFFICER

ST. ELIZABETH REGIONAL HOSPITAL

DATE: 29/07/2021

ANNEXTURE H: UFH RESEARCH ETHICS CLEARANCE CERTIFICATE



University of Fort Hare
Together in Excellence

HEALTH RESEARCH ETHICS COMMITTEE

P.O Box 1054
East London 5200
Tel: +27 (0) 43 704 7368
E-mail: dgoon@ufh.ac.za

ETHICAL CLEARANCE CERTIFICATE REC-100118-054

Certificate Reference Number: **Ref #2021=06=04=MzameleniM**
Project title: Delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa
Nature of Project: Masters of Public Health
Principal Researcher: Mzameleni M
Student Number: 200802282
Supervisor: Dr N Nkutu

On behalf of the University of Fort Hare Health Research Ethics Committee (HREC), I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instruments(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the HREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the HREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The HREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
 - Any unethical principles or practices are revealed or suspected
 - relevant information has been withheld or misrepresented
 - regulatory changes of whatsoever nature so require
 - the conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.



University of Fort Hare
Together in Excellence

HEALTH RESEARCH ETHICS COMMITTEE

P.O Box 1054
East London 5200
Tel: +27 (0) 43 704 7368
E-mail: dgoon@ufh.ac.za

- In addition to the need to comply with the highest level of ethical conduct principal investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to HREC monitoring@ufh.ac.za.

The Ethics Committee wishes you well in your research endeavours.

Yours sincerely

Professor DT Goon
Chairperson: HREC
24th June 2021

ANNEXTURE I: Coding report

CODING REPORT FOR: MR. MZAMELENI MTHINJWA

DATE: 2021/12/11th

STUDY: DELAYS OF BREAST CANCER DIAGNOSIS AMONG WOMEN IN ST. ELIZABETH REGIONAL HOSPITAL, EASTERN CAPE, SOUTH AFRICA

INDEPENDENT CODING BY: PROF TM MOTHIBA

DATA ANALYSIS METHOD: 8 Steps of Tesch's inductive, descriptive open coding technique Creswell (2014) was used by following the steps below:

Step 1 – Reading through the data

The researcher got a sense of the whole by reading all the verbatim transcripts carefully. This gave ideas about the data segments and how they look like/mean. The meaning emerged during reading were written down and all ideas as they come to mind. The researcher carefully and repeatedly read the transcripts of all the participants and understood them.

An uninterrupted period of time to digest and thought about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they come to mind.

Step 2 – Reduction of the collected

The researcher scaled-down the data collected to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have association were clustered separately. Notes were written on margins and the researcher started recording thoughts about the data on the margins of the paper where the verbatim transcripts appear.

Step 3 – Asking questions about the meaning of the collected data

The researcher read through the transcriptions again and analyse them. This time the researcher asked herself questions about the transcriptions of the interview, based on the codes (mental picture codes when reading through) which existed from the frequency of the concepts. The questions were "Which words describe it?" "What is this about?" and "What is the underlying meaning?"

Step 4 – Abbreviation of topics to codes

The researcher started to abbreviate the topics that have emerged as codes. These codes need to be written next to the appropriate segments of the transcription. Differentiation of the codes by including all meaningful instances of a specific code's data were done. All these codes were written on the margins of the paper against the data they represent with a different pen colour as to the one in Step 3.

Step 5 – Development of themes and sub-themes

The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by grouping topics that relate to one another to create meaning of the themes and sub-themes.

Step 6 – Compare the codes, topics, and themes for duplication

The researcher in this step reworks from the beginning to check the work for duplication and to refined codes, topics and themes where necessary. Using the list of all codes she checked for duplication. The researcher grouped similar codes and recoded others that were necessary so that they fit in the description.

Step 7 – Initial grouping of all themes and sub-themes

The data belonging to each theme were assembled in one column and preliminary analysis was performed, which was followed by the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently.

Table 1: Themes and sub-themes reflecting the delays of breast cancer diagnosis among women in St. Elizabeth Regional Hospital, Eastern Cape, South Africa

Themes	Sub-themes
1. Description of paradoxical experiences related	1.1. Explanation of Self-identification of breast cancer signs and symptoms which differs from one person to the other 1.2. Description of paradoxical (different) experiences of initial symptoms of breast cancer which causes suffering

to breast Cancer diagnosis	at multiple levels (frustrating, feelings of fear and stress, leading to establishment of diagnosis) 1.3. Explanation of the difficulties experienced from initial diagnosis up to treatment initiation (moving from one health institution to the other, treated by different health professionals and being subjected to different investigations). 1.4. Experiences during interaction with different health professionals explained 1.5. Description of various health facilities and reasons thereof explained (before and after diagnosis) 1.6. Reasons for early and or delayed time to go for consultation to health professionals explained 1.7. Health seeking behaviour and reasons thereof described
2. Description of challenges experienced before and after being diagnosed with breast cancer	2.1. Shortage of human and material resources which affect care provision in different facilities explained 2.2. Lack of support and negative responses from family members leading to emotional burden described. 2.3. Lack of support and negative responses from health care professionals leading to emotional burden described. 2.4. Description of unreasonable turnaround time for getting results after investigations carried out 2.5. The negative consequences of investigation's results delay outlined 2.6. Lack of finances described as leading to complications and affecting prognosis of the disease 2.7. Existing feelings of fear and anxiety which is caused by knowing the diagnosis is unbearable 2.8. Lack of memory of the procedures and treatment given problematic

3. Existence of knowledge related to all aspects related to breast cancer explanation of the strategies used to overcome problem experience	2.1. Lack versus existing knowledge related to breast cancer and its causative factors 2.2. Lack versus existing knowledge related to investigations, procedures and treatment given to breast cancer patients 2.3. Lack versus existing knowledge related to signs and symptoms of breast cancer and relevant care thereof 2.4. Existing versus lack of existence of knowledge related factors leading to late breast cancer diagnosis
4. Suggested strategies to reduce time to diagnosis of breast cancer	2.5. Early consultation for examination and diagnosis when symptoms are suspected viewed as a best option for early detection 2.6. Early referral to other health care professional may fast track early diagnosis 2.7. Education related to breast cancer suggested as a best method that can lead to early detection 2.8. Encouragement of routine visit to health facilities by all ages of women at the childbearing age and beyond 2.9. Education related self-examination of the breast encouraged

SUMMARY OF OBSERVATIONS MADE DURING ANALYSIS OF DATA

The following observations were made:

- Data saturation was reached because the themes and subthemes have saturated given the transcripts provided with four themes and each theme has 4 and more sub-themes.
- What appears in smaller font it is just highlights of the things that emanated from transcripts that were repeated by all participants