ASSESSING STRUCTURAL FACTORS INFLUENCING HEALTH-SEEKING BEHAVIOUR OF WOMEN DIAGNOSED WITH BREAST CANCER AT OCEAN ROAD CANCER INSTITUTE, DAR ES SALAAM, TANZANIA.

SEKUYE MOSHI MSUGURU, BScN

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By

SEKUYE MOSHI MSUGURU

"A Dissertation submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Science (Oncology Nursing) of Muhimbili University of Health and Allied Sciences"

October, 2024

CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation titled:" **Assessing Structural Factors Influencing Health Seeking Behaviour of Women diagnosed with Breast Cancer at Ocean Road Cancer Institute, Dar es Salaam" in (**partial**) fulfilment** of the requirement for the degree of master of science (Oncology Nursing) of the Muhimbili University of Health and Allied Sciences

_____

Dr. Khadija I. Yahya-Malima (BScN, MPhil, PhD)

Supervisor

_____

Date

_____

Mr. Athuman Kibwanda (BScN, MSc)
Co-supervisor

_____

Date

DECLARATION AND COPYRIGHT

I, Sekuye Moshi, declare that this dissertation is my original work and that it has not been presented and will not be presented to any other University for similar or any other degree award.

Signature …….Date ……

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DEDICATION

To my lovely husband Juma R. Mrope your untiring support, encouragement, and sacrifice have been the cornerstone of my success. You've stood by me through the challenges and triumphs, offering a steady hand and a warm heart. Your belief in my abilities never faltered, and your love has been a constant source of motivation. I love you so much.

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ABSTRACT

Background: In Tanzania, breast cancer is the second most common cancer after cervical cancer accounting for 9.9% of all new cancer cases, and is the 4th common cause of death accounting for 7.3% of all cancer deaths. Studies have shown that there is a high awareness of breast cancer but still, women report at health facilities with advanced stages of disease that account for excess mortality. Understanding the health-seeking behaviour of women with breast cancer is fundamental to understanding why this trend happens.

Aim of the study: This study aimed to assess structural factors that influenced the health-seeking behaviours of women diagnosed with breast cancer at Ocean Road Cancer Institute.

Materials and methods: This study employed a **descriptive** cross-sectional design using a quantitative approach. The study was conducted at Ocean Road Cancer Institute. Simple random sampling was used to recruit 272 participants. A structured Swahili questionnaire was used to collect data from 17 May to 6 June 2024. Data analysis was done by using SPSS Version 27. The chi-square test was used to measure distribution between groups and multivariate analysis was used to determine association between variables. A p-value of < 0.05 was considered statistically significant.

Results: The mean age of participants was 48.18±11.79 years, almost half of them,139(51.1%) and 137 (50.4%), had primary education and lived in rural areas respectively. This study revealed that most of the participants, 220 (80.9%) had poor health-seeking behaviour. It was noted that the Lack of breast cancer education, no formal education, and belief in witchcraft were associated with poor health-seeking behaviour (aOR = 2.9, 95% CI: 1.9-7.87, p = 0.003). (aOR = 3.9, 95% CI: 1.01-14.94, p = 0.05) and (aOR = 0.5, 95% CI: 0.21-0.95, p = 0.04) respectively.

Conclusion; Health education on breast cancer, formal education, and cultural beliefs affect health-seeking behaviour. addressing educational disparities, improving healthcare infrastructure, and implementing culturally sensitive interventions are essential to enhance health-seeking behaviours in this population.

TABLE OF CONTENTS

CERTIFICATION i
DECLARATION AND COPYRIGHT ii
ACKNOWLEDGEMENT iii
DEDICATION iv
ABSTRACT v
LIST OF TABLE AND FIGURES ix
LIST OF TABLES x
LIST OF ABBREVIATIONS xi
DEFINITION OF TERMS xii
CHAPTER ONE 1
1.0 INTRODUCTION 1
1.1 Background 1
1.2 Problem statement 2
1.3 Conceptual framework 4
1.4 Significance of the study 6
1.5 Research questions 7
1.5.1 Main Research Question 7
1.5.2 Specific Research Questions 7
1.6 Study Objectives 7
1.6.1 General objectives 7
1.6.2 Specific objectives 7
CHAPTER TWO 8
2.0 LITERATURE REVIEW 8
2.1 Epidemiological changes in breast cancer pathology 8
2.2 Overview of health-seeking behaviour of women diagnosed with breast Cancer 9
2.3 Structural Factors Influencing Health-Seeking Behaviour 11
2.3.1 Socioeconomic factors 11
2.3.2 Cultural factors. 12
2.3.3 Health System Factors 13
CHAPTER THREE 15
3.0 METHODOLOGY 15

3.1 Study design 15
3.2 Study site 15
3.3 The study population 16
3.4 Eligibility criteria 16
3.4.1 Inclusion criteria 16
3.4.2 Exclusion criteria 16
3.5 Sample size estimation 16
3.6 Sampling technique 17
3.7 Variables 18
3.7.1 Dependent variable 18
3.7.2 Independent variables 18
3.8 Data collection tool 18
3.9 Validity, pilot, and reliability 18
3.9.1 Validity 18
3.9.2 Pilot 19
3.9.3 Reliability 19
3.10 Data collection procedure 19
3.11 Data quality and management plan 20
3.12 Data processing and analysis plan 20
3.13 Ethical consideration 21
3.14 Dissemination 21
4.0 RESULTS 22
4.1 Introduction 22
4.2 Social demographic characteristic of the study population 22
4.3 The prevalence of health-seeking behaviour. 26
4.4 The socioeconomic factors influencing health-seeking behaviour of women with breast cancer women. 26
4.5 Cultural factors influencing health-seeking behaviour 28
4.5 Health system factors influencing health-seeking behaviour 29
CHAPTER FIVE 31
5.0 DISCUSSION 31
5.1 Introduction 31

5.2 Prevalence of poor health seeking behaviors 31
5.3 Social economic factors influencing health seeking behavior 31
5.4 Cultural factors influencing health seeking behavior 32
5.5 Health system factors influencing health seeking behavior 33
5.6 Limitations and mitigation of the study 33
CHAPTER SIX 35
6.0 CONCLUSION AND RECOMMENDATIONS 35
6.1 Conclusion 35
6.2 Recommendations 36
REFERENCES 38
APPENDICES 44
Appendix I: Questionnaire (English version) 44
Appendix II: Dodoso (Kiswahili) 48
Appendix III. Consent form (English version) 52
Appendix: IV Fomu Ya Ridhaa 54
Appendix: V Ethical clearance 56
Appendix: VI: Introduction letter 58
Appendix VII: Permission letter 59

LIST OF TABLE AND FIGURES

Figure 1. The conceptual framework 5

LIST OF TABLES

Table 1: Social demographic characteristics of the study population 23
Table 2: The distribution of Socioeconomic characteristics of the study population with health-seeking behaviour. 24
Table 3: The Prevalence of Health-Seeking Behaviour 26
Table 4: The association of socioeconomic factors with health-seeking behaviour 27
Table 5: Cultural factors Influencing Health-seeking Behaviour 29
Table 6: Health system factors Influencing Health-seeking behaviour 30

LIST OF ABBREVIATIONS

BR	Breast cancer
BSE	Breast self-examination
CI	Confidence interval
HIV	Human immunodeficiency disease
HSB	Health-seeking behaviour
IRB	Institutional Review Board
MEWATA	Medical Women Association of Tanzania
MUHAS	Muhimbili University of Health and Allied Sciences
OR	Odds ratio
ORCI	Ocean Road Cancer Institute
PI	Principal investigator
RA	Research Assistant
SPSS	Statistical package for social sciences
WHO	World Health Organization

DEFINITION OF TERMS

Health-seeking behaviour is the actions and decisions individuals make in seeking medical care, maintaining their health, and preventing illness (Latunji and Akinyemi, 2018)

Advanced stage: means the tumour is greater than 5cm in size with regional lymph node involvement or tumour of any size with direct involvement to the chest wall (Brackstone, 2015)

Good health-seeking behaviour: refers to the appropriate sort of activities a person may use to engage in identifying or searching for information about health in the aspect of prevention, screening, treatment, and prognosis (Latunji and Akinyemi, 2018)

Early detection: refers to both early diagnosis and screening in asymptomatic women.(Memorial *et al.*, no date)

Structural factors: refer to social economic, cultural, and health system factors that influence and shape individual decisions and ability to seek healthcare services(Begashaw and Tesfaye, 2016; Seidu *et al.*, 2020; Fonseca *et al.*, 2022)

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Breast cancer is a public health concern affecting both males and females, but its incidence is higher in women than in men(Winters *et al.*, 2017). Globally breast cancer is the leading cancer among all cancer cases. There were 2.3 million new cases of women diagnosed with breast cancer, which accounts for 11.7% of all cancer cases in 2020(Shang and Xu, 2022)**.** Also in the same year, it was reported that about 685,000 deaths occurred with a mortality rate of 6.9%(Sung *et al.*, 2021). In Africa, breast cancer incidence and mortality are increasing, because most women with breast cancer delay in seeking medical care due to financial barriers, health care system, and cultural beliefs**.** These are factors that contribute to the late detection of breast cancer, hence leading to an increasing mortality rate and reducing the survival rate(Olayide *et al.*, 2021; Sakafu *et al.*, 2022). Breast cancer cases were 186,598 and the number of deaths was 85787 globally in 2020. The burden of the disease seems to be low in sub-Saharan Africa while the survival rate and mortality rate seem to be high(Anyigba, Awandare and Paemka, 2021; Sung *et al.*, 2021).

In Tanzania, breast cancer is the second most common cancer after cervical cancer with 3992 cases accounting for 9.9% of all new cancer cases, and is the 4th common cause of death with 1973 deaths accounting for 7.3% of all cancer deaths in Tanzania(Mansouri *et al.*, 2020)It is estimated that by 2030 the number of breast cancer cases is expected to increase by 82.0% and the mortality rate by 80.0%(Karbakhsh, 2021)

Health-seeking behaviour is the actions and decisions individuals make in seeking medical care, maintaining their health, and preventing illness. Health-seeking behaviour includes seeking out medical professionals, following recommended treatment plans, adopting healthy lifestyle behaviours, and utilizing health resources in the community(Agbokey *et al.*, 2019). In developing countries especially in sub-Saharan Africa, cultural beliefs, financial barriers, and health system factors are the factors that contribute to poor health-seeking

behaviour(Shaikh and Hatcher, 2005). These poor health behaviours may lead to late detection of breast cancer which increases the mortality rate and reduces the survival rate of breast cancer compared to developed countries(Anyigba, Awandare and Paemka, 2021).

Currently, only 17.0% of countries in Africa have established breast cancer screening programs for early detection of breast cancer(Karbakhsh, 2021). In sub-Saharan Africa, 67.0% of women with breast cancer tend to seek care at the advanced stage, mostly stage(III and IV)(Olayide *et al.,* 2021). Therefore, health-seeking behaviour is essential for women with breast cancer to make informed decisions to seek care. Understanding challenges that affect the early health-seeking behaviour of women with signs of breast anomalies, and what promotes compliance to treatment after diagnosis will help identify critical challenges and provide an opportunity to design responsive factors that would encourage accessing health services in due time.

1.2 Problem statement

In Tanzania, breast cancer is the most prevalent malignancy and the incidence is increasing annually(ORCI, 2022). Approximately 80% of women in Tanzania who have breast cancer tend to seek health care when their condition has already advanced typically stage III and IV(Chao *et al.,* 2020; Sakafu *et al.,* 2022). The late diagnosis of patients with breast cancer leads to poor survival and an increased mortality rate. The survival rate of breast cancer in developing countries is much lower than in developed countries. For example, the survival rate in Tanzania is only 56%, compared to 81% in Canada(Arnold *et al.,* 2022), due to late-stage presentation(Sakafu *et al.,* 2022).

Studies have evidenced that awareness and knowledge of breast cancer among Tanzania women is high(Mansouri *et al.,* 2020). Also, interventions such as the establishment of screening guidelines, community outreach, and community sensitization via mass media (radio and Television) have been available for many years. Despite the high level of awareness, knowledge, and availability of interventions still women with breast cancer delay in seeking care(Breast Cancer Initiative, 2017).

Social-economic and cultural factors are important in shaping healthy lifestyles in society, and what determines their accessibility and utilization is very much dependent on the existing health system and operating policies in the country. Thus, understanding the critical factors that affect the health-seeking behaviours of women diagnosed with breast cancer is important to allow for the planning of a responsive healthcare promotion strategy for breast cancer.

Most studies in Tanzania focused on knowledge and awareness of breast cancer with limited studies that have explored on health-seeking behaviours of women with breast cancer(Rick *et al.*, 2021; Cherlin *et al.*, 2022). Thus, assessing structural factors influencing health health-seeking behaviour of women diagnosed with breast cancer provides valuable information to health professionals on social economic, cultural factors, and health system factors. Information obtained could be used to suggest appropriate solutions to health-seeking behaviour hence leading to a reduction of mortality due to breast cancer.

1.3 Conceptual framework

The conceptual framework below is adapted to guide data collection and provide exploratory factors influencing health-seeking behaviours. The understanding of the structural factors that influence health-seeking behaviour is essential to identifying the reasons for the delay in seeking healthcare assistance when women realize something is wrong with their breasts(Chao *et al.*, 2020). Social economic factors like income, health literacy, education level, and occupation have an impact on seeking behaviour which leads to poor or good seeking care. Higher socioeconomic status is often associated with better access to healthcare resources and more proactive health-seeking behaviours. People with good health education or those who are more educated have good health-seeking behaviour. Also, the nature of one's occupation can influence access to healthcare, with some occupations providing better healthcare benefits**.** Furthermore, healthy literacy which is the ability to understand and use health information can influence health-seeking behaviours (Chao *et al.*, 2020; David *et al.*, 2022).

Cultural factors like cultural beliefs, social support, stigma, and discrimination are determinants of health health-seeking behaviour of women with breast cancer. Cultural beliefs about breast cancer can affect whether individuals seek care, the type of care they seek, and when they seek it. The presence of a supportive social network can encourage individuals to seek healthcare when needed. The stigma associated with breast cancer as a curse may discourage individuals from seeking care due to fear of judgment or discrimination(Chao *et al.*, 2020; Ng *et al.*, 2020).

Lastly, health system factors like healthcare accessibility, financial accessibility, geographical accessibility, availability of service, quality of care, communication channels, insurance coverage, and health policy are associated with health-seeking behaviour. The physical distance and transportation infrastructure can impact access to healthcare facilities. The cost of healthcare services, insurance coverage, and the availability of financial resources can influence health-seeking behaviours. The presence or absence of healthcare facilities, as well as the range of services provided, can affect individuals' choices in seeking care. Also, the availability and effectiveness of communication channels for disseminating health

information can impact people's awareness of available healthcare services(Begashaw and Tesfaye, 2016)

Furthermore, the perceptions of the quality of healthcare services, including the competence of healthcare providers and the availability of necessary medical equipment, can impact health-seeking behaviours. Government policies and regulations can shape the overall healthcare system, influencing the availability, accessibility, and affordability of healthcare services. The extent of health insurance coverage can significantly impact individuals' ability and willingness to seek healthcare, those who have health insurance can have good health-seeking behaviour compared to those who use out-of-pocket due to the reason that cancer is a chronic illness and requires frequent hospital visits(Ng *et al.*, 2020).

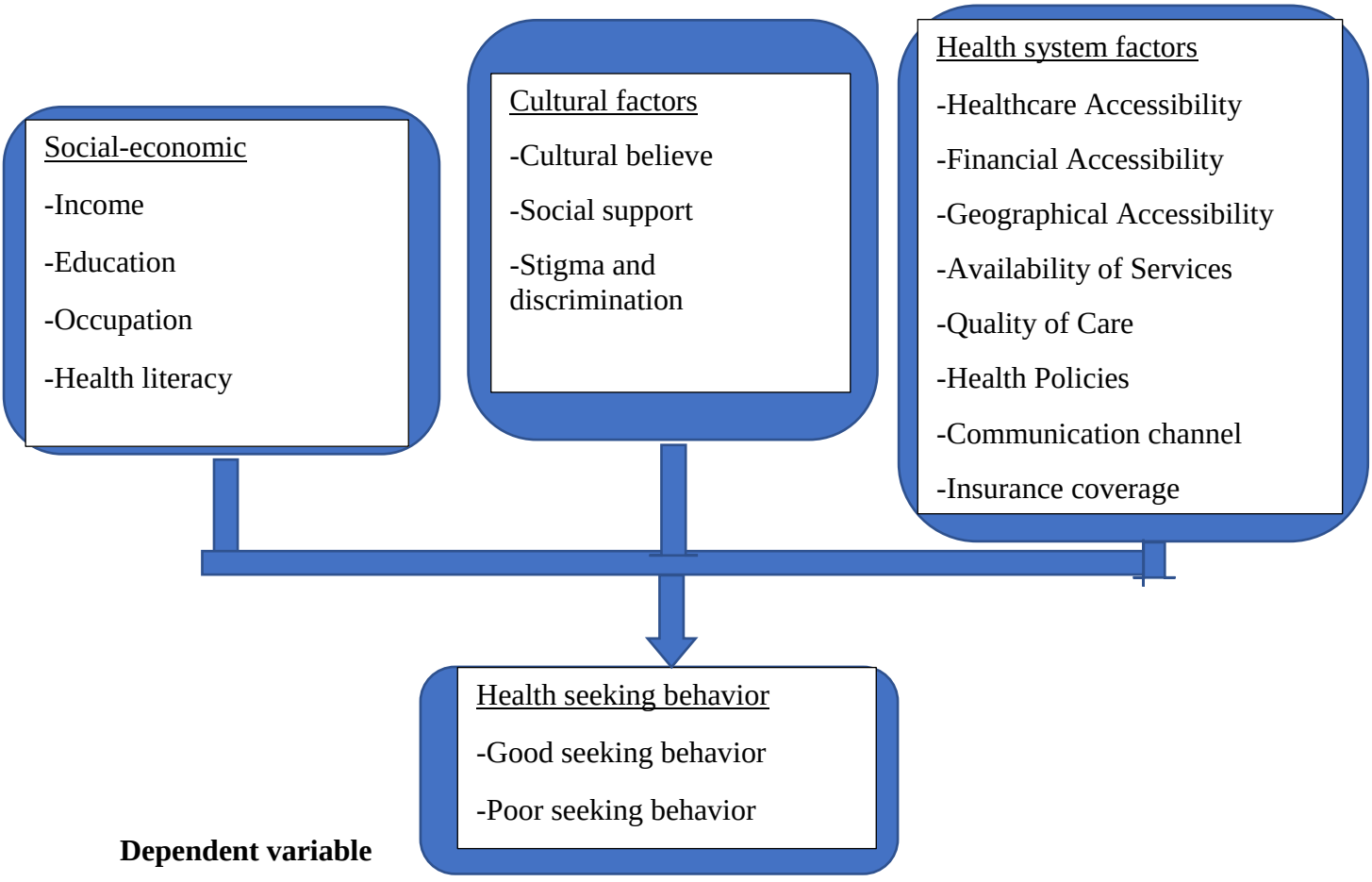


Fig 1. The conceptual framework was adapted from a comparative study of healthcare utilization in Ethiopia (Begashaw and Tesfaye, 2016)

1.4 Significance of the study

This study aimed to assess socioeconomic, cultural factors, and health system factors that influence the health-seeking behaviour of women diagnosed with breast cancer at ORCI. Understanding these factors helps to determine the key factors that promote health-seeking behaviour among women. The study also helps to identify pertinent health system factors that encourage or hinder timely assistance for any felt symptom of the breast which promotes health literacy among women. Also, the findings of this study could be used by oncology nurses to develop outreach screening programs for timely early detection and therapeutic intervention that eventually save lives and avert mortality due to breast cancer.

1.5 Research questions

1.5.1 Main Research Question

What are the structural factors that influence the health-seeking behaviours of women diagnosed with breast cancer at Ocean Road Cancer Institute?

1.5.2 Specific Research Questions

1. What is the prevalence of health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute?
2. What are the socioeconomic factors that influence the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute?
3. What are the cultural factors that influence the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute?
4. What are the health system factors that influence the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute?

1.6 Study Objectives

1.6.1 General objectives

This study aimed to assess structural factors that influence the health-seeking behaviours of women diagnosed with breast cancer at Ocean Road Cancer Institute.

1.6.2 Specific objectives

1. To determine the prevalence of health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute.
2. To determine socioeconomic factors that influenced the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute.
3. To determine the role of cultural factors influencing the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute.
4. To determine health-system factors influencing the seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Epidemiological changes in breast cancer pathology

The epidemiology of breast cancer in developing countries has been undergoing notable changes, reflecting shifts in lifestyle, demographics, and healthcare infrastructure. Currently, women are getting breast cancer at younger ages compared to the previous years. This is due the reproductive and hormonal factors. There is delayed childbearing hence leading to prolonged estrogen exposure, which increases the chance of breast cancer. Age is also another risk factor for breast cancer; as age increases the duration of exposure to estrogen increases hence predisposing the women to breast cancer due to prolonged estrogen exposure (Mansouri *et al.*, 2020)

A family history of breast cancer contributes to an increase in breast cancer but some women get breast cancer without familial history of breast cancer. Hereditary mutated genes like the Breast Cancer Gene (BRACA) are among the risk factors for breast cancer because normal BRACA genes repair DNA and stabilize replication fork, when it is mutated the ability of the body to repair DNA becomes weak hence there is a chance of abnormal cell proliferation which may lead to breast cancer(Begashaw and Tesfaye, 2016). Changes in lifestyle like changes in diet, increase in alcohol use and physical inactivity potentially increase breast cancer incidence in developing countries. There is an increase of using junk food and obesity in developing countries hence increasing the risk of breast cancer (Mansouri *et al.*, 2020)

Prolonged estrogen exposure predisposes to breast cancer especially when the breast tissues have hormonal receptors such as estrogen receptor (ER), progesterone receptor (PR), or Human epidermal growth factor receptor (HER-2) receptor. In Tanzania, the prevalence of ER-positive, PR-positive, and HER-2-positive were 43.4%, 26.4%, and 15.2% respectively (Mwakigonja, Lushina and Mwanga, 2017). The diagnosis of breast cancer is confirmed through biopsy. Breast cancer presents with painless mass and blood nipple discharge early stage while at the advanced stage presents with ulceration, axillary lymph node enlargement, and severe pain. Management of breast cancer includes surgery, chemotherapy, radiotherapy,

hormonal therapy, or both depending on the stage of disease, hormonal status, and clinical stability of the patient (Sood *et al.*, 2021).

Health infrastructure and screening are still limited in developing countries. Although there are improved healthcare facilities, screening or imaging technologies are only available in regional hospitals and most people in rural areas have limitations in the screening programs (Sakafu *et al.*, 2022). Large breast size poses a challenge in screening among African women. Most African women have larger breasts which may face challenges in the detection of tumors during breast cancer examination by palpation (Cherlin *et al.*, 2022).

Tanzania like other countries responded to the rapid increase in breast cancer by initiating breast screening campaigns. Medical Women Association of Tanzania (MEWATA) launched a national breast cancer screening campaign. The campaign started in 2005 to 2008 and it has three phases. Phase 1 was massive screening, phase 2 was establishing special clinics for diagnosis and investigation and Phase 3 was improving treatment in the aspect of surgery, chemotherapy, radiotherapy, and hormonal therapy (24). Furthermore, Tanzania has also developed a national cancer strategic plan which is aimed at increasing breast cancer screening rates(The United Republic of Tanzania Ministry of Health and Social Welfare, 2013).

2.2 Overview of health-seeking behaviour of women diagnosed with breast Cancer

Health-seeking behaviour refers to the continuous process individuals engage in to promote their health, treat illnesses, and restore their well-being. It is connected to a person's identity, social, personal, cultural circumstances, and lived experiences. The type of disease and crisis points can influence an individual's health-seeking behaviour**.** Health-seeking behaviour is a crucial factor that determines the uptake and outcomes of healthcare, and it can either encourage or hinder individuals from making healthy choices in their lifestyle (Haileamlak, 2018; Zhang *et al.*, 2020)

The proportion of breast cancer patients with health-seeking behaviour varies between regions. In Europe, the proportion ranges from 70-80%, while in America, it ranges from 60-75% while in Asia, the proportion is lower, ranging from 30-60% (Zhang *et al.*, 2020). A

recent systematic review reported that the proportion of women with health-seeking behaviour for breast cancer in sub-Saharan Africa using the cut-off of three months for seeking care after symptom onset, ranged between 22 to 100% (Okoronkwo *et al.*, 2021). Another study conducted in eastern Africa used a cut-off of six months for seeking care after symptom onset, and it reported a range of 5-62% for health-seeking behaviour among women with breast cancer (Chao *et al.*, 2020). However, a study conducted in Tanzania reported a low proportion of women with health-seeking behaviour for breast cancer which ranged from 17% to 57%; using a cut-off of three months for seeking care after symptom onset(Chao *et al.*, 2020). It is important to note that these proportions may vary depending on the specific population studied and the methodology used.

Breast cancer diagnosis heavily relies on the symptom appraisal process, which accounts for sixty to eighty per cent of the entire help-seeking process (29). In Ireland, women discovered their breast symptoms during their daily routines, such as bathing, dressing up, or breastfeeding, highlighting the importance of being aware of one's breast condition (Ji *et al.*, 2022). Breast self-examination (BSE) is crucial in enhancing early detection of breast cancer, but some women may not know how to do it properly(Ji *et al.*, 2022). Meanwhile, Malaysian women consider symptom appraisal the first step in seeking help, determining whether symptoms are typical, severe, or require medical attention (Sharif Ishak *et al.*, 2020). Unfortunately, some women may appraise their symptoms as not serious, leading to delayed help-seeking(Bonsu and Ncama, 2019). Perceived seriousness of the symptoms such as the onset of pain or interference with daily activities has been reported to be the trigger in the majority of women diagnosed with breast cancer to look for help in hospitals(Alam *et al.*, 2021). Furthermore, low levels of awareness and misconceptions about breast cancer symptoms have been pointed to be the stumbling block in timely seeking health care services (Kohler *et al.*, 2018). In Tanzania, approximately 80% of women who have breast cancer tend to seek health care when their condition has already advanced typically stage III and IV (Sakafu *et al.*, 2022).

2.3 Structural Factors Influencing Health-Seeking Behaviour

2.3.1 Socioeconomic factors

According to several studies, socio-demographic factors have varying effects on women's health-seeking behaviour. For example, a study done in Asia shows that Women living in rural areas tend to delay seeking help due to the inaccessibility of health facilities, reluctance to consult a doctor, and adherence to social customs(Ho-Huynh *et al.*, 2022) study done in Ghana shows that women living in rural areas and their level of education are not associated with seeking behaviour (Agbokey *et al.*, 2019), also older women delay seeking help (Teo *et al.*, 2022) similarly, the study done in Northern Tanzania reports that delay in seeking care is associated with older age(Rick *et al.*, 2021) However, a study in the United States found that age did not affect women's tendency to seek help (Velie *et al.*, 2021).

Interestingly, socio-demographic factors such as education, and marital status did not seem to influence patient delay in health-seeking behaviour in some African countries (Swinny, Kagee and Roomaney, 2022). In Egypt, low education levels, advanced age, and marriage led to delays in seeking help However, another study found that being single and younger influenced health-seeking (Agatha Ogunkorode *et al.*, 2021). As such, these studies show that socio-demographic factors affect health-seeking behaviour within a context of other factors, which can best be determined using a qualitative study method.

Economic factors also have effects on women's health-seeking behaviour. A qualitative study in Ghana indicates that women with lower incomes had to look for other sources of income to fund their medical needs, leading to delays in seeking help. Self-employed women were also concerned about losing income while seeking medical help (Agbokey *et al.*, 2019). Similarly, a study done in Nigeria reports that poverty is the main contributor to delay in seeking help (Agatha Ogunkorode *et al.*, 2021). However, the study done in Kenya indicates that the level of income is not associated with delay in seeking breast cancer treatment (David *et al.*, 2022). On the other hand, unmarried women tend to experience delays in seeking help due to a lack of financial and moral support (Bonsu and Ncama, 2019). However, being married can also lead to delayed health-seeking, especially for Iranian women who have to balance traditional duties such as taking care of children, house chores, and other family duties

(Swinny, Kagee and Roomaney, 2022). Some studies, however, found no relationship between delayed health-seeking and marital status (Agatha Ogunkorode *et al.*, 2021)

2.3.2 Cultural factors.

Cultural factors like cultural beliefs and stigma are determinants of health health-seeking behaviour of women with breast cancer. The stigma associated with breast cancer may discourage individuals from seeking care due to fear of judgment or discrimination (Chao *et al.*, 2020; Ng *et al.*, 2020; David *et al.*, 2022). Cultural interpretations of illnesses and their symptoms play a significant role in health-seeking behaviour. For example, in Malaysia, women's views of the fatal consequences of breast cancer have led to a social norm of hopelessness. Similarly, in some communities, conventional medicine is viewed as futile in treating breast cancer, and this belief influences women's health-seeking behaviour (Soh *et al.*, 2022).

Cultural responsibilities can also affect women's health-seeking behaviour, as many women postpone seeking medical attention due to work and home duties(Agbeko *et al.*, 2020). Religiosity and spirituality have also been found to vary, hence influencing women's health-seeking behaviour. For example, a study done in Nigeria reported that religious beliefs do not significantly influence health-seeking behaviour (Agatha Ogunkorode *et al.*, 2021), other studies done in Malaysia have found that these beliefs can help manage medical conditions(Soh *et al.*, 2022).

In the African context, traditional and complementary medicine has been cited as a reason for delayed presentation among women with breast cancer. Some women believed that this was the most effective way of treating their disease, while others did not think their symptoms were related to breast cancer. Even those aware of their condition did not believe hospital treatment would be effective (Kohler *et al.*, 2018). The presence of a supportive social network can encourage individuals to seek healthcare when need(Chao *et al.*, 2020; Ng *et al.*, 2020; David *et al.*, 2022). A quantitative study shows that women who receive good social support have good health-seeking behaviour (Holland and Holahan, 2003).

2.3.3 Health System Factors

Health system factors like healthcare accessibility, financial accessibility, geographical accessibility, availability of service, quality of care, insurance coverage, and health policy are associated with health-seeking behaviour (Ng *et al.*, 2020)

Geographical accessibility in terms of physical distance and transportation infrastructure can impact access to healthcare facilities. A study done in Brazil showed that poor infrastructure and long distances from the health facility were associated with poor health-seeking behaviour (Fonseca *et al.,* 2022).

Financial accessibility plays an important role in health-seeking behaviour. The cost of healthcare services, insurance coverage, and the availability of financial resources can influence health-seeking behaviours. Financial constraints also play a significant role in how women with breast cancer seek care in health facilities, especially in developing countries(Agbokey *et al.*, 2019; David *et al.*, 2022). In the USA, co-pay insurance and hidden costs led to delays in seeking care, comprising lost incomes and childcare expenses (Velie *et al.*, 2021). Similarly, the hidden costs among Indonesian women included transport and accommodation costs for them and their caregivers(Hutajulu *et al.*, 2022). In developing countries, poverty has been identified as contributing to delays in seeking medical care among women (Chao *et al.*, 2020; Agatha Ogunkorode *et al.*, 2021).

The availability of health facilities and different treatment options can significantly influence health-seeking behaviour positively and negatively. The presence or absence of healthcare facilities, as well as the range of services provided, can affect individuals' choices in seeking care. Complementary and alternative medicine can also significantly contribute to delayed health-seeking. While some women preferred complementary medicine due to a lack of awareness of other forms of treatment, others believed it gave a better quality of life or used it to avoid surgical interventions(David *et al.*, 2022; Soh *et al.*, 2022). Seeking alternative care also met some women's emotional and psychological needs.

Quality of care is also an important factor that influences health-seeking behaviour. The perceptions of the quality of healthcare services, including the competence of healthcare

providers and the availability of necessary medical equipment, can impact health-seeking behaviours (Ng *et al.*, 2020). In some cases, poor communication skills among medical teams have also led to misunderstandings and confusion in the diagnosis of breast cancer, with some women mistaking biopsy for a form of treatment (Kohler *et al.*, 2018; Karbakhsh, 2021). Similarly, false assurance from medical personnel has been shown to contribute to delays in seeking medical care among women in African settings (Agbeko *et al.*, 2020; Sakafu *et al.*, 2022).

In Mexico, Malaysia, and the USA, women reported undesirable experiences such as being despised, ridiculed, and fearing being judged as petty, which led to delayed health-seeking (Gebremariam *et al.*, 2019; Soh *et al.*, 2022). In addition, ineffective communication skills by medical teams in relaying the diagnosis and management of medical conditions led to confusion and loss of confidence in the medical team among some women (Soh *et al.*, 2022). In Mexico, women reported having to visit multiple health facilities to be attended to by a physician or have investigations done, leading to delays in care-seeking (Paksereshta, Tavakoliniab and Leili, 2021).

A study done in Iran found that long admission periods in public hospitals before being referred also led to delayed health-seeking among women with breast cancer (Alam *et al.*, 2021). Furthermore, government policies and regulations can shape the overall healthcare system, influencing the availability, accessibility, and affordability of healthcare services. The extent of health insurance coverage can significantly impact individuals' ability and willingness to seek healthcare (Ng *et al.*, 2020).

In summary, despite having many studies on breast cancer knowledge, awareness, and treatment, little has been studied on factors influencing health-seeking behaviour in breast cancer. People may face challenges in accessing, affording, and availability of breast cancer services such as screening and treatment. This study will address the gap in limited information on structural factors associated with health-seeking behaviour among women with breast cancer.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study design

This study employed a descriptive cross-sectional design using a quantitative approach, to obtain information on structural factors and associated predictors of health-seeking behaviour among women with breast cancer. The cross-section study design was used because of the limited time of data collection as it captures data at a point in time and a quantitative approach was used to answer research questions and provide a large sample size that allows generalization of data to answer the questions of women cultural beliefs, social economic factors, and health system factors that can influence women with breast cancer to seek health care.

3.2 Study site

The study was conducted at the Ocean Road Cancer Institute in Dar es Salaam, Tanzania, close to the Indian Ocean, about 200 meters from the beach. ORCI was chosen because it is a specialized cancer institute that treats patients from Tanzania and neighbouring countries, including women with breast cancer. The institute serves more than 50,000 patients including 28,000 cancer patients, 10,000 screening patients, and 12,000 non-cancer patients; also, the institute attends about 15,000 clients in outreach. ORCI offers inpatient and outpatient services including laboratory services, diagnostic imaging, chemotherapy, radiation therapy, palliative care services, cancer screening, and HIV/AIDS. The most common screenings are for cervical, breast, prostate, and colorectal cancer. On average, it serves 30 to 35 breast cancer screening daily. According to ORCI, annual report breast cancer patients are about 513 in 2022 of whom 70% have locally advanced and 10% have metastasized to distant organs(ORCI, 2022).

3.3 The study population

The study population involved women aged 18 years and above diagnosed with breast cancer who are on treatment, post-treatment follow-up, and those still on clinical investigation attending ORCI from May through June 2024.

3.4 Eligibility criteria

3.4.1 Inclusion criteria

This study included women Histologically diagnosed with primary breast cancer receiving treatment at ORCI between May and June 2024 and who will Consent to participate in the study.

3.4.2 Exclusion criteria

The study excluded women who were seriously sick and mentally ill.

3.5 Sample size estimation

The sample size of this study was obtained by using the Cochran formula (1975) with a 95% confidence interval and a margin of error of 5%. The proportion used to calculate the sample size of this study is derived from the cross-sectional study done in Tanzania among patients diagnosed with breast cancer at a late stage. The proportion was 80.0% (Sakafu *et al.*, 2022) As shown below, the formula for estimating a single proportion is used to calculate the internally valid sample size to estimate health-seeking behaviour in this study.

$$n = \frac{Z^2.P(100-P)}{\varepsilon^2}$$

Whereby,

n = Estimated sample size

Z = it is the Z-score of a critical level, taken at 95% =1.96

P = The proportional of breast cancer diagnosed at advanced stage 80% in Tanzania (Sakafu *et al.*, 2022)

ε = critical value of Z statistic taken at 5%.

$$n = \frac{1.96^2.P(100-P)}{5^2}$$

=1.96*1.96*80(100-80)/5*5

3.8416*80*20/25

6146/25

Therefore; the sample size was 245

Adjusting for non-response by adding 10% of the sample,

1/R*n

1/0.9*245

1.11*245

272

Therefore, this study included 272 participants.

3.6 Sampling technique

This study employed a simple random sampling approach to recruit participants. This technique yielded a representative sample of breast cancer patients who were previously treated and those in follow-up clinics at ORCI. The total number of breast cancer cases (both ongoing with treatment and those on follow-up) is around 20-25 patients per day, 400 patients per month.

The projected sampling frame of this study was 272. Data were collected for 21 days. On each day 13 patients were randomly selected to participate in the study. All patients who met the inclusion criteria were assigned a number on a piece of paper. The numbers were put in a box and the lottery method was used to select 13 patients in each day until the sample size was reached. During the data collection process, the researcher and Research Assistant (RA) use the attendee register of the patients visiting for daily radiotherapy and chemotherapy and those attending for post-treatment follow-up clinic. In the case that the patient refuses or is found physically not fit to participate after being pointed from the list of potential participants, then the patient was dropped and replaced on the following day of data collection by increasing the number of recruited participants per day.

3.7 Variables

3.7.1 Dependent variable

The dependent variable in this study was health-seeking behaviour which was either good or poor. Health-seeking behaviour is the willingness or action taken by an individual to seek care when he or she perceives that has a problem. Health-seeking behaviour is determined by different factors that influence an individual health-seeking (Oberoi *et al.*, 2016).

3.7.2 Independent variables

The independent variables were categorized into socioeconomic, cultural, and health system factors. The socioeconomic factors include income, education level, occupation, and health literacy. The cultural factors include cultural beliefs, social support, stigma, and discrimination. The health system factors include healthcare accessibility, geographical accessibility, financial accessibility, and quality of care.

3.8 Data collection tool

For data collection, a researcher administered questionnaire was used as a tool. The questionnaire was designed as a closed-end questionnaire where the patient must choose from a limited number of responses. This type of questionnaire is ideal as the responses can be easily quantified, enabling researchers to answer the proposed research question accurately. The questionnaire was divided into three sections. The first section gathered the socioeconomic factors of study participants. The second section involves cultural information on health-seeking behaviour and the third section contains health system factors. The survey employs a health-seeking questionnaire to gather information on health-seeking behaviours (Leão *et al.*, 2021).

3.9 Validity, pilot, and reliability

3.9.1 Validity

The health-seeking questionnaire was adapted from a comparative study on healthcare utilization among urban and rural households in Ethiopia, which was relatively similar to the setting where our study participants were obtained. However, to fit the construct of our study

context, the questionnaire was edited and translated into Swahili and then subjected to backward translation to English to ensure no partial loss of meaning construct occurs. Once this was done, the questionnaire was reviewed by the study's supervisors and IRB review committee before being submitted to the ethical board for more review along with the whole study protocol. Any suggestions and editions from supervisors and IRB were integrated into the questionnaire.

3.9.2 Pilot

Thirty breast cancer patients undergoing treatment at ORCI were selected for a pilot study. The questionnaire was piloted to 30 breast cancer patients undergoing treatment or on follow-up or investigations at ORCI to enhance clarity, as all ambiguous or contradicting words were replaced with easy terms. The piloting sample size was 30 because it is the default sample size recommended in the quantitative study (Hertzog, 2008). The piloting was done on the same study population and in the same setting where the study was conducted. The piloting helps to modify the questionnaire where necessary before conducting the study, also piloting helps to estimate the time for an interview. The pilot data were not included in the analysis and results of this study.

3.9.3 Reliability

Pilot data was collected to establish the reliability of the health-seeking questionnaire, the data was then entered into SPSS version 27, and a reliability test was performed on each questionnaire construct. Any item that does not improve the Cronbach alpha value of the reliability test for each construct was removed. A Cronbach alpha value of 0.7 was considered reliable (Peterson, 1994). This process helps to ensure the accuracy and reliability of the questionnaire.

3.10 Data collection procedure

The data collection process started after securing the IRB letter and permission from ORCI's ethical committee, publication, and academic unit. Data collection started on 17th May 2024 to 6th June 2024. The data collection was conducted in the departments of radiotherapy, chemotherapy, inpatients, and outpatient clinics. Data was collected at the nursing station before the patient entered the consultation room for those who were outpatients. For patients

who are admitted, data was collected in the side room after the ward round. Data collection was collected using a structured English-Swahili translated questionnaire. The questionnaire was interviewer-administered, and the patient's response was noted. The interviewer-administered questionnaire ensures that no chance of the returns of the blank questionnaire or several missing. Data was collected by the researcher and one research assistant who was a health professional because the study involves collecting clinical data.

Before collection, the research assistant was trained for two days to become familiar with the study objective, obtaining consent, and the collection process. The research assistant was stationed in each department (radiotherapy, chemotherapy, and outpatient clinic). Their first role is developing a potential list of participants and carrying out the sampling process for recruitment.

3.11 Data quality and management plan

The researcher checks both the questionnaire papers and Excel data for accuracy, and also closely monitors the completeness of the data. When the researcher detects the missing data during collection, tries to complete the data by looking back into the raw data in the questionnaire form. To avoid double entry of data questionnaire numbers were recorded. The Excel sheet was set in a way that rejects double entries of the same questionnaire number.

Data security measures include locking the questionnaire papers in a cabinet and password-protecting the Excel version, which was accessible only to the RA and PI. The data were available to the study supervisors and MUHAS IRB as necessary. After the study conclusion, the data was deposited in the MUHAS repository following the repository policies.

By selecting experienced RAs and implementing strict security measures, to ensure that the data collected for this study was accurate, secure, and accessible to the right people.

3.12 Data processing and analysis plan

The collected data were stored in an Excel sheet and then transported into SPSS Software, version 27 from Chicago Inc. Co. for further analysis. Descriptive analysis was done for categorical data and their results were presented in the form of frequency and percentages. Mean and standard deviation were used to present normally distributed continuous data while

median and range were used to present not normally distributed continuous data. Univariate and multivariate analyses were used to determine factors influencing health-seeking behaviour. Variables with a p-value of 0.2 or less are included in the multivariable analysis. The variables with a p-value of <0.05 on multivariate analysis were considered statistically significant.

3.13 Ethical consideration

The study obtained ethical clearance from MUHAS IRB with ref No: DA.282/298/01.C/2243 and a permission letter from the MUHAS administration with ref No: HD/MUH/T.489/2022. The written informed consent was given after receiving adequate information about the study's aim, risks, benefits, and confidentiality issues. Permission to conduct the study at ORCI was obtained from the ORCI research ethical committee with ref No: 10/VOL.XXI/233B. Before data collection, participants were asked to consent after an adequate explanation of the nature of the study. Participants were allowed to withdraw at any time without any consequences. Participants' names were coded to ensure privacy. Data was securely stored and accessible only to the researcher. The paper questionnaires will be destroyed after three years. No risk is involved, as the questionnaire was asking about the habit of seeking health.

3.14 Dissemination

The study findings will be disseminated to the MUHAS research committee, ORCI, and MUHAS library for student review. Also, the results will be published in different peer-reviewed journals. This study expects to produce 1 manuscript with the following title: Assessing structural factors influencing health health-seeking behaviour of women diagnosed with breast cancer at ORCI

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This chapter presents the results of data collected from 272 women diagnosed with breast cancer who attended ORCI. The study aimed to assess structural factors that influence the health-seeking behaviour of women diagnosed with breast cancer which described socioeconomic, cultural and health system factors on health-seeking behaviour. The results of analyses are presented according to the study objectives and illustrated in tables and figures.

4.2 Social demographic characteristic of the study population

The mean age of study participants was 48.18 years (SD = ±11.79, 95% CI: 46.81-49.55) with the average duration since diagnosis being 2.26 years (SD = ±2.23, 95% CI: 1.99-2.54). Most participants were married 154 (56.6%), lived in rural areas 137 (50.4%), and had primary education 139 (51.1%). A significant portion were housewives 146 (53.6%) and earned less than 2500 Tanzanian Shillings per day 176 (64.7%). Only 37 (13.6%) had health insurance. (See Table 1)

Table 1: Social demographic characteristics of the study population

Variable name	Category	Frequency (%)
Age (years)	≤40	69 (25.4)
	>40	203 (74.6)
Marital status		
	Married	154 (56.6)
	Single	69 (25.4)
	Divorced/widow	49 (18.0)
Residence	Rural	137 (50.4)
	Urban	135 (49.6)
Education level	Primary education	139 (51.1)
	Secondary education	76 (27.9)
	University	16 (5.9)
	No education	41 (15.1)
Occupation	Housewife/Peasant	146 (53.6)
	Self-employed/Employed	126 (46.3)
Income per day	Less 2500Tsh	176 (64.7)
	2500Tshs or above	96 (35.3)
Health insurance	Yes	37 (13.6)
	No	235 (86.4)

The distribution of health-seeking behaviour varied with different variables. Occupation of being a housewife was statistically significant (p=0.006), those with poor seeking behaviour were 127 (57.7%) while those with good were 19 (36.5%). Respondents who received financial support from husbands with good health-seeking behaviour were 21 (40.4%) while those with poor health-seeking behaviour were 52 (23.6%) with p=0.014. Having electricity in the house was associated with good-seeking behaviour 38 (73.1%) while poor-seeking behaviour was 123 (55.9%) (p=0.023). (See Table 2)

Table 2: The distribution of Socioeconomic characteristics of the study population with health-seeking behaviour.

Variable name	Category	Good health-seeking behaviour	Poor health-seeking behaviour	Frequency (%)	P Value
Age (years)	≤40	15 (28.8)	54 (24.5)	69 (25.4)	0.52
	>40	37 (71.2)	166(75.5)	203 (74.6)	
Marital status	Married	35 (67.3)	119 (54.1)	154 (56.6)	0.20
	Single	11 (21.2)	58 (26.4)	69 (25.4)	
	Divorced/widow	6 (11.5)	43 (19.5)	49 (18.0)	
Residence	Rural	22 (42.3)	115 (52.3)	137 (50.4)	0.196
	Urban	30 (57.7)	105 (47.7)	135 (49.6)	
Education level	Primary education	26 (50.0)	113 (51.4)	139 (51.1)	0.124
	Secondary education	19 (36.5)	57 (25.9)	76 (27.9)	
	University	4 (7.7)	12 (5.4)	16 (5.9)	
	No education	3 (5.8)	38 (17.3)	41 (15.1)	
Occupation	**Housewife/Peasant**	**19 (36.5)**	**127 (57.7)**	**146 (53.6)**	**0.006**
	Self-employed/Employed	**33 (63.5)**	**93(42.3)**	**126 (46.3)**	
Financial support	Yes	34 (65.4)	132 (60.0)	166 (61.0)	0.474
	No	18 (34.6)	88 (40.0)	106 (39.0)	
Receiving financial support Husband	**Yes**	**21 (40.4)**	**52 (23.6)**	**73 (26.8)**	**0.014**
	No	**31 (59.6)**	**168 (76.4)**	**199 (73.2)**	
Receiving financial support Brother /Sister	Yes	20 (38.5)	85 (38.6)	105 (38.6)	0.981
	No	32 (61.5)	135 (61.4)	167 (61.4)	
Receiving financial support Children	Yes	9 (17.3)	34 (15.4)	43 (15.8)	0.742
	No	43 (82.7)	186 (84.6)	229 (84.2)	
Receiving financial	Yes	10 (19.2)	41 (18.6)	51 (18.7)	0.921

support Neighbors	No	42 (80.8)	179 (81.4)	221 (81.3)	
Receiving financial	Yes	9 (17.3)	35 (15.9)	44 (16.2)	0.805
support from NGOs/ Faith-based organizations	No	43 (82.7)	185 (84.1)	228 (83.8)	
Adequate financial support	Yes	10 (30.3)	40 (30.1)	50 (30.1)	0.577
	No	19 (57.6)	84 (63.1)	103 (62.1)	
	Not sure	4 (12.1)	9 (6.8)	13 (7.8)	
Income per day	Less 2500Tsh	37 (71.2)	139 (63.2)	176 (64.7)	0.279
	2500Tshs or above	15 (28.8)	81 (36.8)	96 (35.3)	
Ownership of house	Yes	29 (55.8)	138 (62.7)	167 (61.4)	0.354
	No	23 (44.2)	82 (37.3)	105 (38.6)	
Electricity in the living house	**Yes**	**38 (73.1)**	**123 (55.9)**	**161 (59.2)**	**0.023**
	No	**14 (26.9)**	**97 (44.1)**	**111 (40.8)**	
Ownership of car	Yes	3 (5.8)	9 (4.1)	12 (4.4)	0.596
	No	49 (94.2)	211 (95.9)	260 (95.6)	
Type of cooker in cooking	**Firewood**	**8 (15.4)**	**64 (29.1)**	**72 (26.5)**	**0.024**
	Charcoal	**38 (73.1)**	**115 (52.3)**	**153 (56.3)**	
	Gas/Electricity	**6 (11.5)**	**41 (18.6)**	**47 (17.2)**	
Health insurance	Yes	10 (19.2)	27 (12.3)	37 (13.6)	0.188
	No	42 (80.8)	193 (87.7)	235 (86.4)	
Psychosocial support	Yes	42 (80.8)	176 (80.0)	218 (80.1)	0.900
	No	10 (19.2)	44 (20.0)	54 (19.9)	
Psychosocial support from	Husband	11 (26.2)	39 (22.2)	50 (23.0)	0.557
	Sister/Brother	14 (33.3)	77 (43.8)	91 (41.7)	
	Children	11 (26.2)	33 (18.7)	44 (20.2)	
	Neighbours	6 (14.3)	27 (15.3)	33 (15.1)	

4.3 The prevalence of health-seeking behaviour.

The study showed that 220 (80.9%) had poor health-seeking behaviour. Patients who did not go to the hospital (went for alternative medicine) at the onset of the first symptom and those who did not go to the hospital for more than 3 months since the onset of symptoms were considered to have poor health-seeking behaviour. Respondents with good seeking behavior were scored 1 and those with poor seeking behaviour were scored 2. The results are shown in Table 3.

Table 3; the Prevalence of Health-Seeking Behaviour

Variable	Category	Frequency	Percent (%)	95% CI
Seeking-behaviour	Good	52	19.1	14.7-23.9
status	Poor	220	80.9	76.1-85.3

4.4 The socioeconomic factors influencing health-seeking behaviour of women with breast cancer women.

The association between socioeconomic characteristics and health-seeking behaviour showed that education level and electricity in the living house were significant factors. Participants with no formal education had 3.8 times the odds of poor health-seeking behaviour compared to those with primary education (aOR = 3.89, 95% CI: 1.01-14.94, p = 0.05). Additionally, the lack of electricity in the living house was associated with an increased risk of poor health-seeking behaviour (cOR = 2.1, 95% CI: 1.10-4.18, p = 0.03). Although initially significant in univariate analysis, self-employment (cOR = 0.4, 95% CI: 0.21-0.76, p =0 .01) and lack of financial support from a husband (cOR = 2.2, 95% CI: 1.16-4.13, p = 0.02) were not significant in multivariate analysis. Other variables, such as age, marital status, residence, occupation, overall financial support, daily income, house ownership, car ownership, type of cooker, health insurance, psychosocial support, and duration since diagnosis, were not significantly associated with health-seeking behaviour. The details of the results are shown in table 4.

Table 4; The association of socioeconomic factors with health-seeking behaviour

Variable name	Category		Univariate analysis			Multivariate analysis		
			cOR	95% CI	P value	aOR	95% CI	P value
Age (years)	≤40		Ref					
	>40		1.2	0.64-2.40	0.52			
Marital status	Married		Ref			Ref		
	Single		1.6	0.74-3.27	0.25	1.1	0.45-2.68	0.85
	Divorced		2.5	0.83-7.53	0.10	1.5	0.43-4.89	0.55
	Widow		1.3	0.27-6.41	0.73	0.9	0.18-5.39	0.99
Residence	Rural		Ref					
	Urban		0.7	0.36-1.23	0.20	1.1	0.50-2.21	0.90
Education level	Primary education		Ref			Ref		
	Secondary education		0.7	0.35-1.35	0.28	0.8	0.39-1.82	0.65
	University		0.6	0.21-2.31	0.55	0.7	0.15-2.95	0.58
	No education		**2.9**	**0.84-10.18**	**0.09**	**3.9**	**1.01-14.94**	**0.05**
Occupation	Housewife		Ref					
	Employed		0.6	0.18-1.98	0.40	1.1	0.27-4.41	0.92
	Self-employed		0.4	0.21-0.76	0.01	0.6	0.28-1.24	0.16
Financial support	Yes		Ref			Ref		
	No		1.3	0.67-2.37	0.48			
Receiving financial support	Husband	Yes	Ref			Ref		
		No	2.2	1.16-4.13	0.02	0.5	0.21-1.10	0.08
	Brother /Sister	Yes	Ref					
		No	1.0	0.54-1.88	0.98			
	Children	Yes	Ref					
		No	0.9	0.39-1.96	0.74			
	Neighbours	Yes						
		No	1.0	0.45-2.08	0.92			
	NGOs/ Faith-based	Yes						
		No	0.9	0.40-2.02	0.81			
Adequate financial support	Yes		Ref					
	No		1.1	0.47-2.59	0.82			
	Not sure		0.6	0.14-2.21	0.41			
Income per day	Less 2500Tsh		Ref					
	2500Tshs or above		1.4	0.74-2.78	0.28			
Electricity in the living house	Yes		Ref					
	No		2.1	1.10-4.18	0.03	1.5	0.81-2.76	0.76
	Firewood		Ref					

Type of cooker in cooking	Charcoal	0.4	0.17-0.86	0.02	0.5	0.21-1.37	0.19
	Gas/Electricity	0.9	0.28-2.64	0.78	1.7	0.45-6.00	0.45
Health insurance	Yes	Ref					
	No	1.7	0.77-3.78	0.19	1.6	0.68-4.09	0.26
Psychosocial support	Yes	Ref					
	No	1.1	0.49-2.26	0.90			
Psychosocial support from	Husband	Ref					
	Sister/Brother	1.6	0.64-3.74	0.33			
	Children	0.8	0.33-2.20	0.73			
	Neighbours	1.3	0.42-3.85	0.67			
Duration since diagnosis (years)	1 or less						
	2-3	0.7	0.35-1.40	0.31			
	4 or above	0.6	0.26-1.34	0.21			

cOR: Crude Odd Ratio aOR: adjusted Odds Ratio CI: Confidence Interval

4.5 Cultural factors influencing health-seeking behaviour

This study revealed that witchcraft beliefs and the perception of breast cancer as inheritable influenced health-seeking behaviour. Participants who did not believe breast cancer is caused by witchcraft were at reduced risk of poor health-seeking behaviour (aOR = 0.5, 95% CI: 0.21-0.95, p = 0.04), and those who did not perceive breast cancer as inheritable were increased risk of poor health seeking (aOR = 2.1, 95% CI: 1.01-4.17, p = 0.05). Other cultural factors, such as patients with breast cancer being discriminated against in the community, belief in herbal medication, hospital treatment efficacy, religious prayer cure breast cancer, and the perception of breast cancer as infectious, were not significantly associated with health-seeking behaviour. See Table 5.

Table 5; Cultural factors Influencing Health-seeking Behaviour

Variable name	Category	Univariate analysis			Multivariate analysis		
		cOR	95% CI	P value	aOR	95% CI	P value
Discrimination in the community	Yes	Ref					
	No	0.7	0.37-1.35	0.29			
Reason for discrimination	Curse	Ref					
	Side effects	0.4	0.08-2.26	0.32			
	Fear of being infected	0.5	0.09-2.63	0.41			
Herbal medication cures breast cancer	Yes	Ref					
	No	0.8	0.39-1.46	0.40			
Hospital treatment cures cancer	Yes	Ref					
	No	1.2	0.42-3.18	0.79			
Religious players treat breast cancer	Yes	Ref					
	No	0.7	0.33-1.50	0.37			
Witchcraft	Yes	Ref					
	No	**0.4**	**0.19-0.88**	**0.02**	**0.5**	**0.21- 0.95**	**0.04**
Breast cancer is an infectious	Yes	Ref					
	No	0.8	0.41-1.71	0.63			
Breast cancer be inherited	Yes	Ref					
	No	**2.2**	**1.10-4.47**	**0.025**	**2.1**	**1.01-4.17**	**0.05**

cOR: Crude Odd Ratio aOR: adjusted Odds Ratio CI: Confidence Interval

4.5 Health system factors influencing health-seeking behaviour

The study showed that health system factors influence health-seeking behaviour. The result revealed that lack of breast cancer education was significantly associated with increased poor health-seeking behaviour (aOR = 2.9, 95% CI: 1.90-7.87, p = 0.003). Other factors, such as distance from the hospital, time taken for referral, time to start treatment, ability to pay for investigation and treatment, satisfaction with care received, time from biopsy to results, number of hospitals attended, and place of receiving education, were not significantly associated with health-seeking behaviour in multivariate analysis. Other results are shown in table 6.

Table 6; Health System Factors Influencing Health-seeking Behaviour

Variable name	Category	Univariate analysis			Multivariate analysis		
		cOR	95% CI	P value	aOR	95% CI	P value
Distance from the hospital	Less than 50 km	Ref			Ref		
	50-100 km	2.1	1.08-3.92	0.02	2.2	0.83-5.91	0.11
	More than 100 km	3.8	1.08-13.28	0.04	5.5	0.55-55.02	0.15
Time taken for referral	1 month or less	Ref			Ref		
	2-3 months	2.3	1.14-4.59	0.02	1.5	0.46-4.74	0.50
	More than 3 months	3.2	1.27-8.28	0.01	4.7	0.67-32.97	0.12
Time taken to start treatment	Less than 1 month	Ref			Ref		
	1-3 month	1.7	0.82-3.29	0.16	0.9	0.33-2.61	0.88
	More than 3	1.7	0.76-3.95	0.20	0.6	0.12-2.92	0.51
Ability to pay for investigation and treatment	Yes	Ref			Ref		
	No	1.9	0.95-3.84	0.07	1.2	0.38-3.48	0.81
Satisfaction with the care received	Yes	Ref			Ref		
	No	1.6	0.78-3.49	0.19	1.6	0.53-4.56	
Time of biopsy to results (weeks)	1-2	Ref			Ref		
	3-4	1.6	0.81-3.09	0.18	0.7	0.22-2.57	0.64
	5 and above	13.7	1.81-102.95	0.01	2.0	0.18-22.10	0.57
Number of hospitals attended	1-3	Ref			Ref		
	4-6	2.8	1.41-5.72	0.003	2.8	0.93-8.21	0.07
	7 or above	9.8	2.26-42.41	0.002	7.7	0.78-76.06	0.08
Breast cancer education	Yes	Ref			Ref		
	No	**3.2**	**1.70-6.21**	**0.000**	**2.9**	**1.90-7.87**	**0.003**
Place of receiving education	Mass media	Ref			Ref		
	Hospital	2.7	1.06-6.97	0.04	2.3	0.80-6.63	0.12
	Screening campaign	2.0	0.60-6.79	0.25	1.6	0.36-6.72	0.55
	Neighbours/Family	6.0	1.16-31.82	0.03	2.5	0.31-20.27	0.39

cOR: Crude Odd Ratio aOR: adjusted Odds Ratio CI: Confidence Interval

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

This chapter discusses the findings of the study and the limitations of the study. The discussion is presented according to the objectives of this study, which are socioeconomic factors, cultural factors and health system factors.

The study highlights the association between socioeconomic, cultural, and health system factors that influence health-seeking behaviour among women diagnosed with breast cancer at Ocean Road Cancer Institute.

5.2 Prevalence of poor health seeking behaviors

A total of 220 (81.0%) participants exhibited poor health-seeking behaviour. These findings are consistent with previous studies conducted in sub-Saharan Africa that indicate a low proportion of women seeking timely medical care after symptom onset (Chao *et al.*, 2020; Okoronkwo *et al.*, 2021).

5.3 Social economic factors influencing health seeking behavior

Age, marital status, residence, occupation, overall financial support, daily income, house ownership, car ownership, type of cooker, health insurance, psychosocial support, and duration since diagnosis were not significantly associated with health-seeking behaviour. However, the study done in Ghana highlighted the influence of socioeconomic variables such as age and financial status as determinants of health-seeking behaviour (Agbokey *et al.*, 2019; Teo *et al.*, 2022). The absence of significant findings in this study could be due to differences in culture which may overshadow these individual factors. Culture plays an important role in health-seeking behavior.

The study found that women with no formal education had 3.9 times the odds of poor health-seeking behaviour compared to those with primary education (aOR = 3.9, 95% CI: 1.01-14.93, p = 0.05). This finding aligns with previous research done in northern Tanzania and Ghana

indicating that lower educational attainment is associated with delays in seeking medical care, likely due to a lack of awareness and understanding of breast cancer symptoms and the importance of early detection (Agbokey *et al.*, 2019; Rick *et al.*, 2021). This implies that health education about breast cancer is important to this group to raise awareness of breast cancer symptoms and the importance of early detection to reduce the misinterpretation and ignoring of the symptoms of breast cancer that contribute to delay in seeking care and result in presentation at the advanced stage of disease.

The study findings showed health insurance was not significantly associated with health-seeking behaviour. This finding is different from a study done in the US where health insurance substantially reduces delays in seeking care(Velie *et al.*, 2021). These variations are due to differences in socioeconomic, cultural and health systems to utilize health insurance in different countries. This implies that when policymakers design community health insurance in Tanzania should consider the socioeconomic, cultural and the country's health system. However, this does not always guarantee to improve health-seeking behavior.

5.4 Cultural factors influencing health seeking behavior

The study findings also showed that Cultural beliefs are significantly associated with health-seeking behavior (aOR = 0.5, 95% CI: 0.21-0.95, p = 0.04). The belief in witchcraft as a cause of breast cancer was associated with poorer health-seeking behavior, while the perception of breast cancer as inheritable reduced the likelihood of delayed medical attention (aOR = 2.1, 95% CI: 1.01-4.17, p = 0.05). These findings are consistent with the study done in Malaysia and Malawi which shows how cultural beliefs and stigma surrounding breast cancer can hinder timely healthcare-seeking behaviors (Chao *et al.*, 2020; Soh *et al.*, 2022). Conversely, factors such as belief in herbal medicine, hospital treatment efficacy, religious prayer, and the perception of breast cancer as infectious were not significantly associated with health-seeking behaviour in this study. This finding might reflect a shifting cultural landscape or the impact of public health campaigns in reducing reliance on non-medical treatments, contrasting with studies done in Malaysia that emphasize the strong influence of these cultural beliefs (Kohler *et al.*, 2018; Soh *et al.*, 2022).

5.5 Health system factors influencing health seeking behavior

Health system factors, particularly the lack of breast cancer education, were significantly associated with poor health-seeking behavior (aOR = 2.9, 95% CI: 1.90-7.87, p = 0.003). The findings are similar to previous research done in Ghana indicating that educational interventions can significantly improve health-seeking behaviors by empowering women with knowledge and resources to make informed decisions about their health (Bonsu and Ncama, 2019). This implies that there is a need for the establishment of comprehensive interventional educational programs to raise awareness about breast cancer, its symptoms, and the benefits of early detection and treatment (Ng *et al.*, 2020).

Despite advancements in healthcare infrastructure, the accessibility and availability of breast cancer services remain questionable in Tanzania, especially for women living in rural areas. This has been acting as a contributor to timely diagnosis and treatment, leading to high rates of women presenting to the facility with advanced-stage breast cancer as observed in this study. However, factors such as distance from the hospital, referral times, time to start treatment, ability to pay for investigations and treatment, satisfaction with care, time from biopsy to results, and the number of hospitals attended were not significantly associated with health-seeking behavior. These findings differ from studies done in Singapore and Bangladesh that cite these factors as significant barriers to accessing timely healthcare (Ng *et al.*, 2020; Alam *et al.*, 2021). The lack of significant associations could reflect improvements in the provision of cancer care services in Tanzania, suggesting that these factors are no longer as restrictive as previously thought.

5.6 Limitations and mitigation of the study

The study was prone to selection bias. This was mitigated by doing simple random sampling to reduce selection bias and detailed descriptions were given to aid the actual data analytics, including reporting the precision of estimates. Also, there is a high chance that factors associated with health-seeking behavior could be due to confounders, therefore to control for confounding variables those factors which showed association in the univariate model were subjected to a multivariable model. The study employed a quantitative design that limited

participants from giving deep and thick descriptions of factors associated with seeking behavior, therefore another qualitative study should be conducted to explore these factors. The study also employed Cross-sectional design that provides data at a single point in time which does not follow individuals over time, so they cannot establish causal relationships between variables.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study assessed the structural factors influencing health-seeking behaviour among women diagnosed with breast cancer at Ocean Road Cancer Institute, Dar es Salaam. The results highlighted the following key findings:

Prevalence of Health-Seeking Behaviour: A significant portion of the participants (81%) exhibited poor health-seeking behaviour, which was reflected in delays in seeking medical care and opting for alternative treatments. This finding emphasizes the need for timely interventions to promote early diagnosis and treatment.

Socioeconomic Factors: Education level and access to electricity were significant determinants of health-seeking behaviour. Women with no formal education were more likely to delay seeking care compared to those with primary education. Additionally, the presence of electricity in the household was associated with better health-seeking behaviour. Other socioeconomic factors such as daily income, financial support, and occupation were not significantly associated, suggesting that education plays a more prominent role.

Cultural Factors: Cultural beliefs, particularly those regarding witchcraft and the inheritability of breast cancer, significantly influenced health-seeking behaviour. Women who believed breast cancer was caused by witchcraft were less likely to seek medical help. Conversely, those who did not perceive breast cancer as inheritable had a higher risk of delayed care. These cultural beliefs remain important considerations for healthcare interventions.

Health System Factors: Lack of breast cancer education was a critical factor associated with poor health-seeking behaviour. While other health system factors like distance to the hospital, referral times, and affordability of treatment were not significantly associated, the need for comprehensive education programs remains crucial.

6.2 Recommendations

Prevalence of Health-Seeking Behaviour

Given that 81% of participants exhibited poor health-seeking behaviour, it is crucial to implement targeted public health campaigns to raise awareness about the importance of early detection and timely treatment of breast cancer. This should involve media outreach, community education sessions, and collaboration with local healthcare providers to disseminate information about breast cancer symptoms and the dangers of delayed care.

Socioeconomic Factors

To address the significant role of socioeconomic factors, particularly education: Increase access to educational programs focused on breast cancer awareness, targeting women with no formal education or those living in disadvantaged areas.

Improve basic infrastructure, such as ensuring access to electricity in rural areas, as this was associated with better health-seeking behaviour.

Develop financial support schemes for breast cancer patients, focusing on low-income groups and housewives, to ease the financial burden and encourage them to seek medical help earlier.

Cultural Factors

Cultural beliefs, such as witchcraft and inheritance, were significant influencers of poor health-seeking behaviour. Therefore, engage community leaders and cultural influencers in addressing misconceptions about breast cancer. Community education programs should directly target harmful beliefs and myths, such as the idea that breast cancer is caused by witchcraft.

Integrate culturally sensitive education into healthcare outreach, using local languages and culturally acceptable approaches to shift perceptions and promote the benefits of medical care.

Health System Factors

The lack of breast cancer education within the healthcare system was a significant barrier. To overcome this there is a need to establish comprehensive educational interventions within

healthcare facilities, including training healthcare providers to deliver breast cancer education at every patient touchpoint.

Expand outreach services to rural and underserved areas, making it easier for women to access timely care and receive accurate information about breast cancer treatment options.

Strengthen healthcare infrastructure by improving access to screening, diagnosis, and treatment, ensuring that women can receive the necessary care without excessive delays or financial burdens.

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APPENDICES

Appendix I: Questionnaire (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

Health-seeking behaviour of women diagnosed with breast cancer at ORCI, Dar es Salaam.

Serial no……date…….

PART A: SOCIAL-ECONOMIC CHARACTERISTICS OF PARTICIPANTS

Please answer all questions and tick for the best answer.

1. What is your age (in years)?

a. 18-25 ☐ b. 26-40 ☐ c. 41-60 ☐ d. 60 years and above ☐

2. What is your marital status?

a) Married ☐ b) Single ☐ c) Divorced ☐

3. Where do you live?

a) Rural ☐ b) Urban ☐

4. What is your education level?

a) Primary education ☐ b) Secondary education ☐ c) University education ☐

d) None ☐

5. What is your occupation?

a) Housewife ☐ b) Employed ☐ c) Self-employed ☐

6. How long since you have been diagnosed with breast cancer ……. (years)

7. Do you receive any financial support (If No skip qn 8 and 9)?

a) Yes ☐ b) No ☐

8. From whom you are receiving financial support (Multiple responses, tick all appropriate)

a) Husband b) Sister/Brother c) Children d) Neighbor

e) NGOs/Faith-based organizations Others, specify ……

9. Did the financial support you are receiving adequate?

a) Yes b) No c) Not sure

10. What is your income per day?

a) Less than 2500 Tsh (1 USD) b) Above 2500 Tsh (1 USD)

11. Do you own the house you live in?

a) Yes b) No

12. Do have electricity in the house you live?

a) Yes b) No

13. Do you own a car?

a) Yes b) No

14. What type of cooker do you use in cooking?

a) Firewood b) Charcoal c) Gas cooker d) Electric cooker

15. Do you have health insurance?

a) Yes b) No

16. Do you receive psycho-social support?

a) Yes b) No

17. From whom you are receiving psychosocial support? (Multiple responses, tick all appropriate)

a) Husband b) Sister/Brother c) Children d) Neighbor Other

PART B: CULTURAL FACTORS THAT INFLUENCE HEALTH-SEEKING BEHAVIOUR OF WOMEN WITH BREAST CANCER.

18. Are patients with breast cancer discriminated against in your community (If NO skip qn 19)

a) Yes b) No

19. What is the reason for discrimination?

a) Breast cancer is a curse b) Treatment side effects of the patient with breast cancer

c) Fear of getting breast cancer when staying near a patient with breast cancer

20. Does herbal medicine treat breast cancer?

a) Yes ☐ c) No ☐

21. Does hospital treatment cure cancer?

a) Yes ☐ b) No ☐

22. Do religious players treat breast cancer?

a) Yes ☐ b)No ☐

23. Breast cancer is caused by witchcraft?

a) Yes ☐ b)No ☐

24. Breast cancer is infectious?

a) Yes ☐ b)No ☐

25. Can breast cancer be inherited?

a) Yes ☐ b) No ☐

PART C: HEALTH SYSTEM FACTORS THAT INFLUENCE HEALTH-SEEKING BEHAVIOUR OF WOMEN WITH BREAST CANCER.

26. What did you do after the first symptom to occur?

a) Went to the hospital ☐ b) Went to the herbalist/traditional healer c) Went ☐ Spiritual d) I don't kno ☐ what to do e) Others, specify . ☐ …….

27. what is your distance from the hospital?

a) Less than 50km ☐ b)50-100km ☐ c) More than 100km ☐

28. How long did it take to go to the hospital from the onset of the first symptom?

a) Less than 3 months ☐ b) More than 3 months ☐

29. What time has it taken to get a referral from the local hospital to ORCI?

a) one month ☐ b) three months ☐ c) more than three months ☐

30. How long has it taken to start treatment after the diagnosis?

a) less than 1 month ☐ b) 1 to 3 months ☐ c) More than 3 months ☐

31. Were you able to pay for the investigation and primary treatment at your nearby hospital?

a) Yes ☐ b) No ☐

32. Were you satisfied with the care you received at the primary hospital

a) Yes ☐ b) No ☐

33. How long does it take from the time the biopsy was taken until you get the results?

a) 1-2 weeks ☐ b) 3-4 weeks ☐ c) 5-8 weeks ☐

d) 9 weeks and above ☐

34. How many hospitals did you attend before coming to ORCI since you started symptoms?

a) 1-3 ☐ b) 4-6 ☐ c) 7 and above ☐

35. Have ever received breast cancer education before the diagnosis of breast cancer (If NO skip qn 36)

a) Yes ☐ b) No ☐

36. Where did you receive education on breast cancer?

a) Mass media ☐ b) hospital ☐ c) Screening campaign ☐

d) Neighbor /Family member ☐ ther, specify …….

Appendix II: Dodoso (Kiswahili)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

SEHEMU A: VIPENGELE VYA KIJAMII NA KIUCHUMI VINAVYOBADILI TABIA YA KUTAFUTA MATIBABU YA WANAWAKE WENYE SARATANI YA MATITI

Tafadhali jibu maswali yote na weka tiki kwenye jibu sahihi.

1.Umri wako ni miaka mingapi? (taja miaka)

a) 18-25 ☐ b) 26-40 ☐ c) 41-60 ☐ d) Zaidi ya miaka 60 ☐

2. Hali yako ya ndoa ni ipi?

a) Nimeolewa ☐ b) Sijaolewa ☐ c) Nimeachika ☐

3. Unapoishi ni wapi?

a) kijijini ☐ b) Mjini ☐

4. Kiwango chako cha elimu ni kipi?

a) Elimu ya msingi ☐ b) Elimu ya sekondari ☐ c) Elimu ya chuo kikuu ☐

d) Sina elimu ☐

5. Unafanya shughuli gani?

a) Mama wa nyumbani ☐ b) Mfanyakazi ☐ c) Mjasiriamali ☐

6. Ni muda gani tangu ugundulike na sratani ya ziwa …….(miaka)

7. Je, unapokea msaada wa kifedha? (Ikiwa Hapana ruka swali la 8 na 9)?

a) Ndiyo ☐ b) Hapana ☐

8. Kutoka kwa nani unapokea msaada wa kifedha (Chagua majibu mengi, tiki yote yanayofaa)

a) Mume ☐ b) Dada/Kaka ☐ c) Watoto ☐ d) Jirani ☐

e) Mashirika binafsi/kidini ☐ f) Nyingine, elezea ……

9. Je, msaada wa kifedha unaoipata ni wa kutosha?

a) Ndiyo ☐ b) Hapana ☐ c) Sijui ☐

10. Kipato chako kwa siku ni kiasi gani?

a) Chini ya Tsh 2500 (1 USD) ☐ b) Zaidi ya Tsh 2500 (1 USD) ☐

11. Unamiliki nyumba unayoishi?

a) Ndio ☐ b) Hapana ☐

12. Nyumba unayoishi ina umeme?

a) Ndio ☐ b) Hapana ☐

13. Je, unamiliki gari?

a) Ndio ☐ b) Hapana ☐

14. Je, unatumia nishati gani kupikia ?

a) Kuni ☐ b) Jiko la Mkaa ☐ c) Jiko la Gesi ☐ d) Jiko la umeme ☐

15. Je, una bima ya afya?

a) Ndiyo ☐ b) Hapana ☐

16. Je, unapokea msaada wa kisaikolojia wa kijamii?

a) Ndiyo ☐ b) Hapana ☐

17. Kutoka kwa nani unapokea msaada wa kisaikolojia wa kijamii (Chagua majibu mengi, tiki yote vanayofaa)

a) Mume ☐ b) Dada/Kaka c) ☐ Watoto ☐ d) Jirani Mengineyo ☐

SEHEMU B: VIPENGELE VYA UTAMADUNI VINAVYOBADILI TABIA YA KUTAFUTA MATIBABU YA WANAWAKE WENYE SARATANI YA MATITI.

18. Je, wagonjwa wa saratani ya matiti wanatengwa katika jamii yako (Ikiwa HAPANA ruka swali 18)

a) Ndiyo ☐ b) Hapana ☐

19. Ni kwa nini wanatengwa?

a) Saratani ya matiti ni laana ☐ b) Madhara yatokanayo na matibabu ya saratani ya matiti ☐

c) Hofu ya kuambukizwa saratani ☐

d) Nyinginezo, elezea ……

20. Je, dawa za mitishamba zinatibu saratani ya matiti?

a) Ndiyo ☐ b) Hapana ☐

21. Je, matibabu ya hospitali yanatibu saratani?

a) Ndiyo ☐ b) Hapana ☐

22. Je, Imani ya dini inatibu saratani ya matiti?

a) Ndiyo ☐ b) Hapana ☐

23. Saratani ya matiti inasababishwa na uchawi?

a) Ndiyo ☐ b) Hapana ☐

24. Saratani ya matiti ni ya kuambukiza?

a) Ndiyo ☐ b) Hapana ☐

25.Je, saratani ya matiti inaweza kurithiwa?

a) Ndiyo ☐ b) Hapana ☐

SEHEMU C: VIASHIRIA VYA MFUMO WA AFYA VINAVYOBADILISHA TABIA YA KUTAFUTA AFYA YA WANAWAKE WENYE SARATANI YA MATITI.

26. Ulifanya nini baada ya dalili ya kwanza kujitokeza?

a) Nilienda hospitalini ☐ b) Nilienda kwa mganga wa jadi/daktari wa mitishamba

c) Nilienda kutibiwa kiroho ☐ d) Sikujua cha kufanya ☐ e) Nyingine, eleza ...

27. Ni umbali gani kutoka kwako mpaka hospitali?

a) Chini ya kilomita 50 ☐ b) Kilomita 50-100 ☐ c) Zaidi ya kilomita 100 ☐

28. Ilichukua Muda gani kufika hospitalini tangu kutokea kwa dalili ya kwanza?

a) Chini ya miezi 3 ☐ b) Zaidi ya miezi 3 ☐

29. Muda gani umechukua kupata rufaa kutoka hospitali ya eneo lako kwenda hospitali ya saratani Ocean Road?

a) Mwezi mmoja ☐ b) Miezi mitatu ☐ c) Zaidi ya miezi mitatu ☐

30. Muda gani umechukua kuanza matibabu baada ya kufanya uchunguzi?

a) Chini ya mwezi 1 ☐ b) Miezi 1 hadi 3 ☐ c) Zaidi ya miezi 3 ☐

31. Je, uliweza kulipia uchunguzi na matibabu ya msingi katika hospitali yako ya karibu?

a) Ndiyo ☐ b) Hapana ☐

32. Je, uliridhika na huduma uliyopokea katika hospitali ya awali?

a) Ndiyo ☐ b) Hapana ☐

33. Ilichukua muda gani kutoka uchunguzi wa kibayopsi hadi kupata majibu?

a) Wiki1-2 ☐ b) Wiki 3-4 ☐ c) Wiki 5-8 ☐ d) Wiki 9 na zaidi ☐

34.Ni hospitali ngapi ulitibiwa kabla ya kuja ORCI tangu ulipoanza kuwa na dalili?

a) 1-3 ☐ b) 4-6 ☐ c) 7 au zaidi ☐

35. Je, umewahi kupata elimu ya saratani ya matiti kabla ya kupata uchunguzi wa saratani ya matiti (Ikiwa HAPANA ruka swali 31)

a) Ndiyo ☐ b) Hapana ☐

36. Ulimwahi kupokea elimu ya saratani ya matiti kutoka wapi?

a) Vyombo vya habari ☐ b) Hospitali ☐ c) Kampeni ya uchunguzi ☐

d) Jirani /ndugu wa karibu ☐ e) Nyinginezo, elezea …….

Appendix III. Consent form (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

ID. NO

Consent Form for Participating in a Research Study

My name is **Sekuye Moshi,** a postgraduate student; pursuing a Master of Science in Oncology Nursing at Muhimbili University of Health and Allied Sciences (MUHAS) in the School of Nursing. **I am researching the health-seeking behaviour of women diagnosed with breast cancer at Ocean Road Cancer Institute**.

The aim of the study

This study aimed to assess structural factors that influence health-seeking behaviours of women diagnosed with breast cancer, attending Ocean Road Cancer Institute.

The findings of this study will help to determine the key factors that will promote health-seeking behaviour among women with breast cancer and identify pertinent health system factors that encourage or hinder the timely seeking of care. The information will promote health literacy among women as well as help Oncology nurses develop outreach screening programs for timely early detection and therapeutic intervention that will eventually save lives and avert mortality due to breast cancer.

Participant involved

This study included women diagnosed with primary breast cancer receiving treatment at ORCI who Consent to participate. I would like you to participate in this study and you are free to decide whether to participate in this study or not. If you agree to participate in this study, I will request you to read carefully the research questions and then answer all questions.

Confidentiality

The information that you will provide in this study will be treated as strictly confidential and will be used for research purposes only and not for other reasons. Your name will not be used for identification during data analysis and report development, instead the number will be used.

Right to refuse or withdraw

To participate in the study is voluntary. You are free to choose whether to participate or not. Refusals to participate, or withdrawal from the study, will not entail punishment. However, I encourage you to participate because your experience is very important in this study.

Benefits

Participating in this study may not benefit you personally; however; participation in this research has the potential for improving women diagnosed with breast cancer to seek care earlier and improve the health care system.

Risks

The researcher expects no harm will happen to participation in this study.

Whom to Contact

In case of any inquiry please contact the researcher, Sekuye Moshi from MUHAS, P. O. BOX 65001, Dar es Salaam, mobile number 07653317601, email address: sekuyem@gmail.com. If you have a serious matter about this research related to the violation of your rights, and you feel that the researcher has not been able to help you as a participant, you may contact the Directorate of Research, Publications, and Innovations, MUHAS, P.O. Box 65001, Dar es Salaam, phone number 255-22-2152489

Agreement of participation

I……...

Identification number……

Age……years old.

I am willing to participate in this study

Informant's Signature……...Date

Researcher's Signature……. Date

Appendix: IV Fomu Ya Ridhaa

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED HEALTH SCIENCES
DIRECTORATE OF RESEARCH AND PUBLICATIONS

FOMU YA KUOMBA RIDHAA KUSHIRIKI KATIKA UTAFITI KUHUSU TABIA ZA KUTAFUTA AFYA KWA WANAWAKE WALIOGUNDULIWA NA SARATANI YA MATITI WANAOPATA MATIBABU KATIKA TAASISI YA SARATANI YA OCEAN ROAD.

Habari jina langu naitwa Sekuye Moshi, mwanafunzi wa Shahada ya Uzamili ya Sayansi ya Uuguzi wa saratani katika Chuo Kikuu cha Afya shirikishi na Sayansi cha Muhimbili (MUHAS). Ninafanya utafiti kuhusu tabia za kutafuta afya kwa wanawake waliogunduliwa na saratani ya matiti katika Taasisi ya Saratani ya Ocean Road.

Dhumuni la utafiti

Utafiti huu unalenga kutathmini mambo ya kimuundo yanayoathiri tabia za kutafuta huduma za afya kwa wanawake waliothibitishwa kuwa na saratani ya matiti, wanaofanya matibabu Taasisi ya Saratani ya Ocean Road. Matokeo ya utafiti huu yatasaidia kubainisha mambo muhimu ambayo yatasaidia kuchochea tabia za kutafuta huduma za afya kwa wanawake walio na saratani ya matiti na kutambua mambo muhimu ya mfumo wa afya yanayosaidia au kuzuia kutafuta huduma kwa wakati. Taarifa hii itachochea ustawi wa afya kati ya wanawake pamoja na kusaidia wauguzi wa saratani kuendeleza programu za uchunguzi wa nje ya hospitali kwa ajili ya kugundua mapema na kutoa huduma za matibabu kwa wakati ambazo hatimaye zitasaidia kuokoa maisha na kuepusha vifo vinavyotokana na saratani ya matiti.

Washiriki waliohusishwa

Utafiti huu utajumuisha wanawake wenye saratani ya matiti wanaopata matibabu katika taasisi ya saratani ya Ocean Road ambao watatoa idhini ya kushiriki. Ningependa wewe ushiriki katika utafiti huu na wewe uko huru kuamua kushiriki au la. Ikiwa utakubaliana

kushiriki katika utafiti huu, nitakuomba usome kwa uangalifu maswali ya utafiti kisha jibu maswali yote.

Usiri

Taarifa utakazotoa katika utafiti huu zitahifadhiwa vizuri na zitatumika kwa madhumuni ya utafiti pekee na sio kwa sababu nyingine. Jina lako halitatumika wakati wa uchambuzi wa taarifa, badala yake, namba itatumika.

Haki ya kujitoa kwenye uafiti.

Kushiriki katika utafiti ni hiari. upo huru kuchagua kushiriki au la. Kukataa kushiriki au kujitoa katika utafiti hautaleta adhabu. Hata hivyo, nakushauri kushiriki kwa sababu uzoefu wako ni muhimu sana katika utafiti huu.

Faida

Kushiriki katika utafiti huu huenda isiwe na manufaa kwako kibinafsi; hata hivyo, kushiriki katika utafiti huu kuna uwezekano wa kuboresha wanawake wenye saratani ya matiti kutafuta huduma mapema na kutibiwa, pia utafiti huu utasaidia kuboresha mfumo wa huduma za afya.

Madhara

Hakutakua na madhara yoyote kushiriki katika utafiti huu.

Watu wa Kuwasiliana nao

Kwa maswali yoyote tafadhali wasiliana na mtafiti, Sekuye Moshi kutoka MUHAS, S.L.P 65001, Dar es Salaam, namba ya simu 07653317601, anwani ya barua pepe: sekuyem@gmail.com. Ikiwa una suala kubwa kuhusu utafiti huu kuhusiana na uvunjaji wa haki zako, na unahisi kwamba mtafiti hajaweza kukusaidia kama mshiriki, unaweza kuwasiliana na Mkurugenzi wa Utafiti, Machapisho na Ubunifu, MUHAS, S.L.P 65001, Dar es Salaam, simu 255-22-2152489

Mkataba wa Kushiriki

Mimi…… Namba ya Utambulisho ……... Umri wa miaka…….….

Nipo tayari kushiriki katika utafiti huu.

Sahihi ya Mtoaji Taarifa…… Tarehe

Sahihi ya Mtafiti…… Tarehe

Appendix: V Ethical clearance

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATION

Ref. No.DA.282/298/01.C/2243 Date: 17/05/2024

MUHAS-REC-05-2024-2243
SEKUYE MOSHI MSUGURU

MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: ASSESSING STRUCTURAL FACTORS AFFECTING HEALTH-SEEKING BEHAVIOR OF WOMEN DIAGNOSED WITH BREAST CANCER AT OCEAN ROAD CANCER INSTITUTE, DAR ES SALAAM, TANZANIA.

Reference is made to the above heading,

I am pleased to inform you that the Chairperson has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 17/05/2024
EXPIRATION DATE OF APPROVAL: 17/05/2025

STUDY DESCRIPTION:
Purpose:

The purpose of this observational cross-sectional study is to assess structural factors that influence the health-seeking behaviors of women diagnosed with breast cancer at Ocean Road Cancer Institute.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%2015363.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain Data Transfer Agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain Material Transfer Agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country.
8. Apply for and obtain permission to publish the results from National Institute for Medical Research. The application should be before submitting to a publisher and not concurrently through the email publications@nimr.or.tz.
9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Nahya Salim Masoud,

Chairperson, MUHAS Research and Ethics Committee

Muhimbili University of Health and Allied Sciences
DIRECTOR
Research, Publications & Innovations
Box 65001

Appendix: VI: Introduction letter

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

In reply quote;
Ref. No. HD/MUH/T.489/2022

21st May, 2024

The Executive Director,
Ocean Road Cancer Institute,
P.O. Box 3592,
DAR ES SALAAM

Re: INTRODUCTION LETTER

The bearer of this letter is Sekuye Moshi Msuguru (HD/MUH/T.489/2022), a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MSc. Oncology Nursing

As part of her studies she intends to do a study titled: **"Assessing Structural Factors Affecting Health-Seeking Behaviour of Women Diagnosed with Breast Cancer at Ocean Road Cancer Institute, Dar es Salaam, Tanzania."**

The research has been approved by the Chairman of University Senate.

Kindly provide her the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

c.c. Sekuye Moshi Msuguru

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz

Appendix VII: Permission letter

UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH
OCEAN ROAD CANCER INSTITUTE

ORCI OCEAN ROAD CANCER INSTITUTE

On Reply Please Quote:
Ref: 10/VOL.XXI/233B

Date: 28th May, 2024

INSTITUTIONAL ACADEMICS, RESEARCH, PUBLICATIONS AND ETHICS COMMITTEE

Sekuye Moshi
HD/MUH/T.489/2022
MSc. Oncology Nursing
MUHAS

Re: Approval to collect data for the study "Assessing Structural Factors affecting Health seeking behavior of women diagnosed with breast cancer at ORCI, Dar es salaam, Tanzania ."

Reference is made to the above heading, this is to let you know that the Institute Academics, Research, Publications and Ethics Committee has granted you permission to conduct this study. For a period of one year ending; May 2025.

Upon successful completion of the study, you are obliged to submit a copy of the final document of this research project to the IARPEC.

Yours Sincerely,

OCEAN ROAD CANCER INSTITUTE ACADEMIC UNIT P.O. Box 3592 DAR ES SALAAM

Dr. Mamsau Ngoma
Academic Unit, ORCI.