

ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCE
SCHOOL OF NURSING AND MIDWIFERY

**PATIENT DELAY TO TREATMENT AND ASSOCIATED
FACTORS AMONG WOMEN WITH BREAST CANCER AT
TIKUR ANBESSA SPECIALIZED HOSPITAL AND ST.
PAUL HOSPITAL MILLENNIUM MEDICAL COLLEGE
ONCOLOGY UNITS.**

BY
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**A Thesis Submitted to be Addis Ababa University, College of
Health Sciences, School of Nursing and Midwifery for Partial
Fulfillment of Masters of Science in Clinical Oncology Nursing.**

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ADDIS ABABA, ETHIOPIA

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APPROVAL BY THE BOARD OF EXAMINATION.

This thesis by Gezahegn Ayele is accepted in its presence from the board of examiners as satisfying the thesis requirement for the degree of master's in clinical oncology nursing.

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STATEMENT OF DECLARATION

By my signature below, I declare and affirm that this thesis is my work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis, and completion of this thesis. All scholarly matter that is included in the thesis has been given recognition through citation. I affirm that I have cited and referenced all sources used in this document. Every effort has been made to avoid plagiarism in the preparation of this thesis.

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ACRONYMS AND ABBREVIATIONS

AACR	American Association for cancer research
AAU	Addis Ababa University
AJCC	American joint committee on cancer
BC	Breast cancer
BSE	Breast self-examination
Ca	Cancer
CBE	Clinical breast examination
MOH	Minister of health
SPHMMC	St. Paul hospital millennium medical college
SPSS	Statistical package for social science.
TASH	Tikur Anbessa specialized hospital
TNM-staging	Tumor size, Node involvement, Metastasis

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ABSTRACT

Unlike developed countries, there is high mortality of breast cancer cases in low and middle-income countries associated with prolonged patient delay and advanced stage presentations. This study aimed to assess patient delay to treatment and associated factors among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units 2021. An institutional-based cross-sectional study design was employed among 205 female breast cancer patients who attended oncology units from March 1 to April 1, 2021. Data was collected by using face-to-face structured interview questionnaires. The study participants were selected by the systematic random sampling method. The coded data were checked for completeness and consistency and entered into EPI-data version 4.6 then exported into statistical package for social sciences version 25 for analysis. Binary and multivariable logistic regression analysis was conducted to identify the factors associated with the outcome variables.

Results: This study showed that 126 (61.46%) patients had a delay > 3 months to get treatment, and 165 (80.4%) of them were getting treatment at an advanced stage of the disease. Age ≥ 41 years, AOR=0.4, 95% CI 0.2-0.7, rural residence {AOR=2.4, 95% CI (1.3-4.4)}, distance AOR=2.3, 95% CI (1.3-1.9)}, first diagnosed health structure AOR=0.2, 95% CI (0.07-0.7), treatment modalities AOR=5.5, 95% CI 1.7-17.0, cancer stage, AOR=0.5, 95% CI 0.2-1.0) and appointment waiting time AOR=5.9, 95% CI (0.1-2.6) were main predictors for a long patient delay to treatment. **Conclusion and recommendation:** Delay to treatment among breast cancer patients in this study is high. Higher proportions of patients get their treatment at an advanced stage. Distance, place of residence, age, waiting time, treatment type, first diagnosed health facilities and disease stage were important predictors for a delay to treatment. The establishment of additional cancer diagnosis and treatment centers and early detection and treatment of breast cancer cases may improve patient's problems.

Keywords: breast cancer, cancer stage, treatment, treatment-delay.

1. INTRODUCTION

1.1 Background

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells (1). Breast cancer is a heterogeneous disease in which cells in breast tissue change and divide uncontrolled, typically resulting in a lump or mass (2,3).

Diagnostic delay is defined as the time interval between the first symptom and medical diagnosis and Therapeutic delay defined as the time interval between receiving medical diagnosis and initial treatment. Delay in breast cancer treatment is defined as patient delay (the interval between the first detection of symptom and the first medical consultation) and provider or health-care system delay (the interval between the first presentation to a medical professional or health facility and initial treatment) (4–6).

According to the world health organization (WHO) guidelines of pharmacological and radiotherapeutic management of cancer pain, cancer is the leading cause of morbidity and mortality worldwide. It is responsible for 18.1 million new cases and 9.6 million deaths in 2018, significantly increasing the burden on patients, families, communities and, the healthcare system (7).

A population-based study of lancet global health 2020 conducted among women shows that breast cancer is the most common malignant disease worldwide, accounting for 24% of new cancer cases and 15% of cancer deaths in 2018 (8). Africa currently has the highest age-standardized breast cancer mortality rate globally, with the highest incidence rates being recorded within the sub-Saharan African sub-region(9).

A GLOBOCAN report obtained from 54 African countries showed that in Africa breast cancer caused 74072 deaths and 168690 cases in 2018. Although Nigeria was the leading country in terms of absolute burden with 26310 cases and 11564 deaths followed by Egypt with 23081 new cases and 9254 deaths. The mortality-to-incidence ratio for Africa stood at 0.44, varying from 0.24 in Libya to 0.68 in the Central Africa Republic (10).

Early diagnosis and treatment of breast cancer is the most crucial factor for reducing mortality and additional delays between the discovery of symptoms and seeking medical

treatment are likely to postpone an early diagnosis. There is strong evidence that treatment delays are associated with lower survival (11).

A study conducted in Mexico in 2017 by Monica mentioned that the lower survival rates in developing countries are explained by the scarcity of early detection programs, resulting in a high proportion of women presenting with the late-stage disease at diagnosis, along with a lack of adequate diagnosis and treatment facilities as well as delays associated with treatment(12).

According to the three years data conducted in Pakistan by the world health organization (2016-2018) at Jinnah Hospital, Allam Iqbal Medical College, the result shows that a total of 372 patients, Breast cancer cases showed longer mean a patient delay in older women (>50 years old) in long delay with median total delay 280 days and 410 days comparison with younger women) (13).

American Association for cancer research (AACR) international survey, report of breast cancer patients from 12 countries shows that an average patient-related delay and total delay were 4.7(range: 3.4-6.2) weeks and 14.4 (range: 11.5-29.4) weeks respectively. Long patient-related delays were associated with distrust and disregard, and shorter patient-related delays were associated with fear of breast cancer, practicing self-breast examination, higher education level, being employed, having support from friends, family and living in big cities(14).

One year retrospective cross-sectional study carried out data collected from 2019 to 2020 at Felege Hiwot specialized hospital oncology unit, among a total of 371 females patients showed that (75.7%) patients reported having had a long patient delay of ≥ 90 days and advanced stage diagnosis was found on (71.2%) of patients (15).

1.2 Statement of the problem

According to American Institute for Cancer Research, Breast cancer is the most commonly occurring cancer in women and the second most common cancer overall affecting. Over 2 million new cases in 2018(16).

The global burden of cancer continues to increase largely because of the aging and growth of the world population alongside an increasing adoption of cancer-causing behaviors, particularly smoking, in economically developing countries. Cancer (Ca) is an increasing public health burden for Ethiopia and Sub- Saharan Africa at large. In Ethiopia, hospital records show that more than 150,000 cancer cases per year, and currently cancer accounts for 4% of all deaths(17).

Because Tikur Anbessa Specialized Hospital is the only cancer center with all modalities of cancer treatment in the country, patients traveling from distant areas of the country may face Socioeconomic, further disease complications, and socio-cultural challenges resulting in a delay to treatment.

Delay in treatment predicts worse clinical outcomes. Improvement of medical service in rural areas, especially for premenopausal women, can decrease delays and benefit breast cancer patients(18).

Breast cancer incidence is rising and becoming a major public health problem in Ethiopia. Breast cancer care in Ethiopia is limited in terms of pathology, imaging, and the offered treatment modalities (19).

A quantitative study done in Tikur Anbessa specialized hospital oncology unit 2019 showed that most women with breast cancer in Ethiopia are diagnosed at an advanced stage of the disease, but the reasons for this have not been systematically investigated (20).

According to a study done by Bekele Chaka et al 2018 results showed that the overall knowledge of risk factors for breast cancer among women was low. Lack of cancer awareness and lack of education, in a general, is the most potent barriers to cause delay among cancer patients (21).

2. LITERATURE REVIEW

2.1 Introduction.

According to a study of barriers to timely treatment of breast cancer: observations from a tertiary referral center in India 2018 results revealed that a delay of 3 months or more was seen in 284 out of the 435 patients (65.3%). The time taken for presentation ranged from 2 weeks to 24 months. Among patients with delay, the meantime of presentation for treatment was 6.13 months. Delay due to patient factors was seen in 179 (41.1%), while provider delay was seen in 69 (15.9%) and 36 (8.3%) had both components(22).

The global burden of cancer continues to increase largely because of the aging and growth of the world population alongside an increasing adoption of cancer-causing behaviors, particularly smoking, in economically developing countries. Cancer (Ca) is an increasing public health burden for Ethiopia and Sub- Saharan Africa at large. In Ethiopia, hospital records show that more than 150,000 cancer cases per year, and currently cancer accounts for 4% of all deaths(17).

A study conducted in Addis Ababa Ethiopia by Tesfaw et al.,2020, mentioned that delays in getting medical help can be categorized into patient delay and provider delay or health system delay. The patient delay time was defined from a patient first becoming aware of symptoms until their first medical consultation and it was categorized as more than, or equal to ≥ 90 days long patient delay, and less than < 90 days short patient delay(23).

2.2 Factors associated with breast cancer patients delay getting treatment

According to a study by Tesfaw A et al 2020, delay in seeking medical help is one known reason for delayed getting of cancer treatment and may be due to either patient or health care system-related factors. Some of these factors include socio-demographic factors, personal factors, and provider factors, and cancer stage (23).

2.2.1 Socio-demographic Factors

According to a study conducted in Heidelberg by Christine and Coughlin s, 2016 results showed that 67 % indicated a change in employment and, 63 % of those reported reduced household income since their diagnosis and treatment. Travel (11 %), loss of income (14

%) and, cost of treatments (15 %) were commonly cited factors influencing treatment decision making. 74% of participants reported that they did not access financial assistance, with more than a third (37 %) of those being unaware that financial assistance was available. Being currently not employed, and a more recent diagnosis was associated with a reduced income since treatment (24,25).

A cross-sectional study done by Mariam Ansari 2017 in Iran results shows that a total of 190 breast cancer women 25% of patients delay treatment more than three months and the risk of long delay was found in divorced women AOR=3.7 (95% CI 1.5-9.1), women with a positive family history of breast cancer AOR=4.6, 95%CI 1.1-7.7), and illiterate women OR=5.2 95% CI 1.5-17.7), and the significant association also found between delay presentation and late-stage disease ($p=0.001$)(26).

A study done by Abdul Waheeda conducted in labor, Pakistan 2016-2018 result showed that Breast cancer cases showed longer mean patient delay in older women (> 41 years) in comparison with younger women, educated women showed a shorter delay in treatment compared with illiterate women ($P = 0.005$). 28% of rural residents showed significant delay ($P = 0.006$). Patients with low household income ($< \text{Rs } 10\,000$) had a greater delay in treatment ($P = 0.027$) and actively employed women showed shorter delay ($P < 0.001$). Unmarried women were seeking treatment earlier than married ($P < 0.001$) (27).

A study conducted in the United States of America in 2020, done by Elizabeth labor and Tamora result showed that 44% of participants reported breast cancer care treatment delays during the COVID19 pandemic. The dominant variable which had a significant effect was age ($p < 0.001$) with younger respondents reporting a higher incidence of delays than older respondents (28,29).

According to a study done by Dedy F et al_ 2016 in Ghana, 59% of prolonged waiting time to get treatment occurs for breast cancer patients particularly among older patients, those with minimal or no education, with lower income, single patients, those with late disease, those who are insured, and who did not receive adequate information from health workers (30).

A study was done by Keven S and Enrique Lukongl, 2017 on assessment of prevalence, treatment options of Breast cancer in Africa, revealed that the incidence of breast cancer

is rising in low-income and middle-income countries in Africa as the trend towards urbanization, and adoption of Western lifestyles increases (31,32).

2.2.2 Patient-related factors

According to a study done in Malaysia 2015, the result shows that major treatment barriers were, Lack of knowledge about breast cancer treatments and breast cancer symptoms, Denial and Psychological defense, Fear of cancer treatment consequences, Fear of surgery and treatment side effects, beliefs in alternative treatment, influences of other in symptoms appraisal and decision making (33).

The study conducted in Boston, America by George G in 2017 result showed that Patients with comorbid, anxiety and depression had an increased risk for treatment delay of >90 days from symptom recognition to treatment (RR 1.11; 95% CI 1.00, 1.23), and 18% of those with severe mental illness had an increased risk for initial treatment delay of >60 days from diagnosis (RR 1.36; 95% CI 1.06, 1.74). Patients with any mental illness experienced an increased risk for adjuvant chemotherapy delay of >90 days from the last operation (RR 1.13; 95% CI 1.01, 1.26) (34).

A cross-sectional study done at the National Institute of Oncology unit in Morocco, Rabat 2014 result shows that treatment delay was associated with a personal reason in (70.1 %) patients as Fear of surgery and treatment side effects believe in alternative treatment and to a medical reason in (13.9 %) patients(35).

According to a cross-sectional study done in Nigeria, Enugu in 2016 result shows that most breast cancer patients (82.3%) reported delay for initial treatment at private health facility while, (17.5%) (p=0.001) reported first to alternative practitioners and 26.4% presenting within a month of noticing the symptom while (45.3%) delay more than three months for initial treatment(36).

According to a study conducted in Soweto, South Africa by Joffe M et al 2018 result shows that factors that initially appeared to be associated with the advanced-stage disease were no high school education (p=0.010), a lower household socio-economic status 3.54 ± 1.60 (p=0.0226), higher parity 3.15 ± 1.97 31.08 (p=0.064), a lower score on self-

reported knowledge and awareness of breast cancer, hypertension, and HIV co-infection(37).

According to a study done in Ethiopia by Addissie A et al, the 2019 result shows that awareness about the causes, risk factors, initial symptoms, early detection methods, and treatment of breast cancer was uncommon, and misconceptions about the disease prevailed among breast cancer patients and family members. Consequently, performing spiritual acts (using holy water) or seeking care from traditional healers recurred amongst the interviewees (38).

2.2.3 Health care system-related Factors

A retrospective study conducted in cirri, Brazil done by Nidia Alves 2017 result shows that the patients whose source of referral was the public system waited longer between diagnosis and the treatment initiation ($p = 0.031$), with a median waiting time of 71.5 days versus 39 days for those receiving referrals from private services. In addition, those with public referrals before diagnosis also experienced a longer waiting time between the first medical visit and treatment initiation (77 days vs. 37 days; $p = 0.036$), with the waiting time for the biopsy being an important factor in this delay(39).

Studies done by askew s chukmaitov conducted in Kazakhstan in 2019 show that breast cancer patients treated in regions located further away from the city had higher risks of treatment delays. However, the risks of late-stage cancer diagnosis were greater for patients treated in the city and those with treatment delays. Delays in breast cancer treatment in Kazakhstan were experienced by 10.7% (0.107) of patients and 27.8% ($p=0.002$) by providers respectively (40).

Another study was done in India, Dr. Borough Cancer Institute, Guwahati_-2019 report showed that Majority of patients approached the private sector (70.6%) as the first care provider. Nearly half of all patients (50.6%) visited one health care provider before reaching doctors. Treatment delay was due to late initial visits to health care, misclassification of disease severity, dissatisfaction with care at public facilities, poor accessibility, and affordability(41).

According to a study conducted in India, 2020 result showed that a delay of 3 months or more was seen in 284 of the 435 patients (65.3%), among which 179 was a patient delay, 69 due to provider delay, and 36 due to a combined contribution of both factors provider factors were associated with prolonged delay. Misdiagnosis at first consult was the most common factor perceived by patients as a barrier, followed by delay in referral, distance from hospitals, and logistic issues(22).

A study done by Nasim Ahmadiyeh in America Kansas City, Missouri 2018 reveals that the most significant factor associated with late-stage diagnosis and delay for treatment was lack of screening mammogram within two years of diagnosis ($p < .0001$, OR 7.5, CI = 3.6, 15.3). Patients referred from national hospitals compared with those presenting from community health centers were significantly less likely to present with late-stage disease ($p = .04$, OR 0.50, CI = 0.25, 0.98) (42).

According to a study done by Florence in Ghana, the median waiting time from presentation to start of definitive treatment was 5 weeks. More than 4 out of 10 of the patients started treatment before 4 weeks; close to one-third started definitive treatment between 4 and 12 weeks, and slightly more than one-fifth started definitive treatment after 12 weeks of presentation to the hospital. Generally, only 22.4% of the patients thought that there was a delay in treatment(43).

Further, a more related study done by Addissie A et al., 2019 shows that in Ethiopia weak health systems such as delay in referral and long waiting periods for consultation were noted as the main contributors to late diagnosis and treatment (44).

2.2.4 Cancer stage and timing for starting treatment.

For study done in Rio de Janeiro, Brazil by Freitas AGQ et al, 2015 result shows that more than 70% of breast cancer patients in developed countries are diagnosed at stage I and II, whereas in low and middle-income countries, only 20-60% of patients are diagnosed and start treatment in an early stage of the diseases(45).

According to a study conducted in India done by Katya look in 2016, results showed that median days between diagnosis and chemotherapy initiation were 34 days. 30% of patients starting treatment within 28 days of diagnosis and 26.9% had an unaccepted treatment delay(46).

According to a study conducted at the University of Texas, done by Karin Gwyn et al, 2015 results showed that most women were treated within 3 months of initial consultation, 22.4% of African American women and 14.3% of white women had a clinical delay of fewer than 3 months. Compared with white women, African American women were more likely to experience delays in diagnosis and treatment(47,48).

A retrospective cross-sectional study was done by tiara Cristina et al 2017 a total of 82 participants were enrolled during the study period the result shows that 9% of treatment onset was delayed in some of the cases and the average time elapsing from diagnostic biopsy to onset of primary treatment was 87.3 ± 65.5 days(49).

JUSTIFICATION OF STUDY

Breast cancer is a leading cause among all forms of cancer in Ethiopia but there is still an unidentified gap between diagnosis and starting treatment among patients because of several challenges that need to be considered.

Also, Delay in treatment is a very serious health problem that causes complications in the patient's survival outcome. Therefore, it needs to be addressed urgently by identifying the root causes to delay to get treatment and associated factors that hinder early treatment among women with breast cancer to improve a patient's survival outcome.

SIGNIFICANCES OF STUDY

Firstly, finding results obtained from this study will have significant importance for informing and promoting early treatment and improving outcomes among breast cancer patients in Ethiopia.

Next, the results obtained from this study might have significant input for healthcare professionals to identify factors contributing to delay in seeking medical care among patients with breast cancer and to intervene in the problem.

Thirdly, the study will generate a general understanding of the factors associated with the delay in getting cancer treatment which is important to increase the overall cancer survival rate among breast cancer patients.

The study finding will be important for TASH administrators and also, will support the national minister of health (MOH) efforts aiming at reducing mortality caused by non-communicable diseases among the Ethiopians as it is formulated in millennium development goals.

Lastly, this study finding might be used as secondary sources for researchers who want to research on the same inquiry.

CONCEPTUAL FRAMEWORK

This conceptual framework was developed by reviewing different works of literature (4,17,22,45) related to patient delay for treatment and associated factors among women with breast cancer to show a relationship between independent and dependent variables.

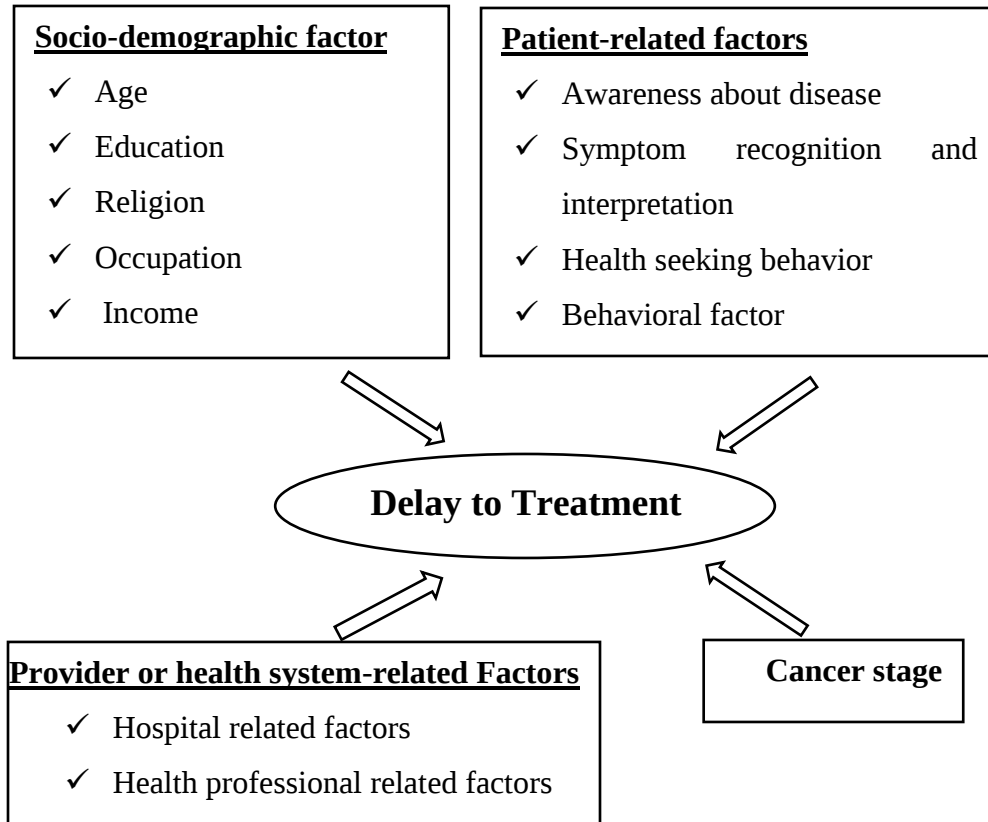


Figure 1: a conceptual framework developed by PI, associated factors contributing patient delay for treatment among women with breast cancer.

3. OBJECTIVES

3.1 General Objective

To assess patient delay to treatment and associated factors among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units, Addis Ababa Ethiopia 2021.

3.2 Specific Objective

- To determine delay to treatment among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units, Addis Ababa Ethiopia 2021.
- To identify factors associated with delay to treatment among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units, Addis Ababa Ethiopia 2021.

4. MATERIALS AND METHODS

4.1 The Study Area and Period

Study Area;

The study was conducted at Tikur Anbessa specialized hospital (TASH) and St. Paul hospital millennium medical college oncology units.

Tikur Anbessa specialized hospital (TASH), is the largest teaching hospital under the administration of Addis Ababa University in Ethiopia. The hospital was established in 1972 and has more than 800 beds. The oncology unit at TASH is the largest referral site in the country, providing service for over 60,000 patients annually. It is the sole oncology referral center for radiotherapy in the entire country(50). According to data obtained from the Human Resource Office, there are a total of 825 Nurses, 204 non-specialists' medical doctors, 209 Medical specialists, and 50 Medical Subspecialists and among those 15 oncology nurses and 8 clinical oncologists.

St. Paul's hospital millennium medical college (SPHMMC) oncology center was established on August 1, 2018. It was the second hospital offering cancer treatment in the country next to black lion specialized hospital. Currently, there are 3 oncologists, 10 general practitioners, 25 nurses, 2 medical physicists, and 3 clinical pharmacists. Around 800 cancer patients have served in the unit since its establishment(51).

Study period; study was carried out from March 1-April 1/2021.

4.2 Study Design

An intuition-based cross-sectional study design was used to assess patient delay to treatment and associated factors among women with breast cancer attending at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units,2021.

4.3 Source of population

All cancer patients attending at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units.

4.4 The study population

Female Breast cancer patients receiving cancer treatment either in the in-patient or out-patient services at Tikur Anbessa specialized hospital and St. Paul hospital millennium medical college oncology units.

4.5 Eligibility Criteria

4.5.1 Inclusion Criteria

All female breast cancer patients aged above 18 years of age who were receiving treatment (chemotherapy, radiation, and surgery and combined) at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units during the data collection period were included.

4.5.2 Exclusion Criteria

Breast cancer patients who are not willing to participate in the study and severely ill patients.

4.6 Sample Size Determination

There are no national or local literature found on the prevalence of delay to treatment among breast cancer patients. Hence, a proportion of 50 % is used.

Where
$$n = \frac{(Z_{\alpha/2})^2 \cdot p(1-p)}{d^2}$$

N, sample size.

d²

α , level of significance (set at 0.05).

Z, the standard normal deviate with 95% CI (1.96).

P, the proportion of breast cancer women who are delay for treatment.

D, degree of precision (0.05).

P, 50% with 5% margin of error.

$$n = \frac{(1.96)^2 \times (0.5) \times (1-0.5)}{(0.05)^2} = 384$$

The adjusted correction population formula was used since the total population is- less than 10, 000.

$nf = no / (1 + no/N)$, which becomes 187.

Where:

nf= sample size after using correction formula and

No= sample size before using correction formula

N= total number of female patients attending and taking breast cancer treatment in TASH= 310 and SPHMMC=85 breast cancer patients with a total number of breast cancer patients attending at both oncology centers was 395 patients per month.

A non-response rate of 10%, the total sample size will be: $187 + 10\% (NR) = 205$ female breast cancer patients.

4.7 Sampling Techniques and procedures

Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college, oncology units were selected purposively as these hospitals were the only facilities providing the services for breast cancer patients in the study area.

To select study participants systematic random sampling technique was used.

Finally, participants were identified using $K = N/n = 395/205 = \sim 2$, then the first respondent was randomly selected by the lottery method. Then individual patients were selected every 2nd by considering their order of visit as a sampling frame.

4.8 Study Variables

4.8.1 Dependent Variable:

- ❖ Delay to treatment.

4.8.2 Independent Variables:

- ❖ Socio-demographic factors (age, education, marital status, occupation, distance, income).

- ❖ Patient-related factors
- ❖ Provider/health system-related factors, (primary healthcare-related factors, hospital-related factors, health professional-related factors, treatment availability-related factors).

4.9 Operational Definition

Breast cancer: Breast cancer is a malignant tumor that starts in the cells of the breast.

Cancer stage: is based on the primary tumor's size and whether it has spread to other areas of the body. A different staging system is used to classify tumors. The TNM staging system assesses tumors in three ways: the extent of the primary tumor (T), absence or presence of regional lymph node involvement (N), and absence or presence of distant metastases (M). Once the T, N, and M are determined, a stage of I, II, III, or IV is assigned, with stage I being early and stage IV being advanced disease (52).

Treatment: Cancer treatment has four primary modes: surgery, chemotherapy radiotherapy and targeted therapy each mode may be used separately or in some combination, depending on the cancer type and stage.

Treatment delay: This is the time interval (gap) between receiving a medical diagnosis and initial treatment (53,54).

4.10 Data Collection instrument and procedures

Structured data collection instruments were used to gather information from participants. The instrument was developed from similar studies in the literature (4,17,22,45).

The instrument contains six parts: part one socio-demographic characteristics of participants, part two, Diagnostic history pathways, part three patient treatment-seeking behavior, part four information on the reason for the delay, part five behavioral characteristics of patients, and part six tumor characteristics. The English version of the questionnaire was translated to the Amharic language and back-translated to English by language experts to check for its consistency of original meanings.

The data were collected by trained 5 BSc nurses. Appropriate training was given for data collectors and supervisors that include a briefing on the data collection process of the study, discussing the contents of the questionnaire will be carried out

4.11 Data Quality Control

The quality of data was assured by properly designing the questionnaire, two (2) days of training were given to the data collector and supervisor by the principal investigator about the purpose of the study, data collection tools, and procedures. The completeness and accuracy of the data were checked by the supervisor and principal investigator during data collection time every day. Before actual data collection, the questionnaire was pre-tested among 5% of the sample size at St Paul hospital millennium medical college which was not included in the actual study to ensure the respondent able to understand the question and to check the wording, logic, and order of the questions in a sensible way to the respondents and the tool was refined and incorporate the challenges/issues observed during pretesting.

4.12 Data Processing and Analysis

Data were coded and entered using EPI data version 4.6 then exported to SPSS version 25 for further analysis. Before and during data processing the information was checked for completeness and internal consistency. The analyses were verified by using descriptive interpretation for demographic, socioeconomic, and clinical characteristics of the study participants using frequencies and other summary statistics. Binary logistic regression was used to measure the association of each covariate with the outcome variable. In addition, factors associated with outcome variables at a p-value ≤ 0.25 significance level were included in the multivariable logistic regression analysis to control the potential confounders. The result of the final model was expressed in terms of Adjusted Odd Ratio (AOR) and 95% confidence intervals (CI), and Statistical significance was declared at a P-value less than 0.05.

4.13 Ethical Consideration

Ethical approval and clearance to conduct this study were obtained from Addis Ababa University College of health science, school of nursing, and midwifery institutional review

committee. Permission to conduct the study was obtained from TASH and SPHMMC. Participation was fully voluntary and informed consent was obtained from each participant. To ensure the confidentiality of participants, names and any other personal identities were not used but code numbers were used during data collection. Participants were informed that there is no incentive or harm for their participation in this study.

4.14 Dissemination of Results

The result of this study will be presented to Addis Ababa University College of health science, school of nursing, and midwifery and a copy of the research will be sent to advisors of this research. Then, the document will be disseminated to Tikur Anbessa specialized hospital, Federal Minister of health, and the manuscript will be presented in workshops and different seminars and finally submitted to a relevant scientific journal for publication.

5. RESULTS

5.1 Socio-demographic characteristics of participants

A total of 205 clients participated in the study with a response rate of 100%. The age of respondents ranged between 30-40 years and 37.1% with mean age 43 ± 17 SD. Regarding marital status, the majority of participants were 174(84.9%) married, 5(2.4%) single, 11(5.4%) divorce, and 15(7.3%) widowed. Most 124(60.5%) study participants were urban residents. Most 123(60%) study participants were housewives. The largest portion of participants 80(39%) travel ≥ 1 day, 76(37.1%) travel 1-6, and 49(23.9%) travel 6-12 hour to arrive at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college to get health care service for breast cancer. (Table 1)

Table 1: Socio-demographic characteristics of participants at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

Variables	Categories	frequency	Percent %
Age	21-29	8	3.9
	30-40	76	37.1
	≥41	121	59
Marital status	Married	174	84.9
	Single	5	2.4
	Divorce	11	5.4
	Widowed	15	7.3
Residence	Urban	124	60.5
	Rural	81	39.5
Educational status	Unable to read and write	89	43.4
	Primary school	42	20.5
	Secondary school	24	11.7
	Collage and above	50	24.4
Occupation	Housewife	128	62.4
	Private	11	5.4
	Government employee	38	18.5
	Merchant	28	13.7
Income	<1000 ETB	126	61.4
	≥1001 ETB	79	38.6
Time taken to health facility	1-6 hour	76	37.1
	6-12 hour	49	23.9
	≥1 day	80	39

5.2 Lag time from diagnosis to initial treatment

The time interval between diagnosis and initial treatment of breast cancer 79(39%) were getting treatment within 3 months after diagnosis, and the majority of patients 126 (61%) had delay >3 months to get definitive treatment. (Figure 2)

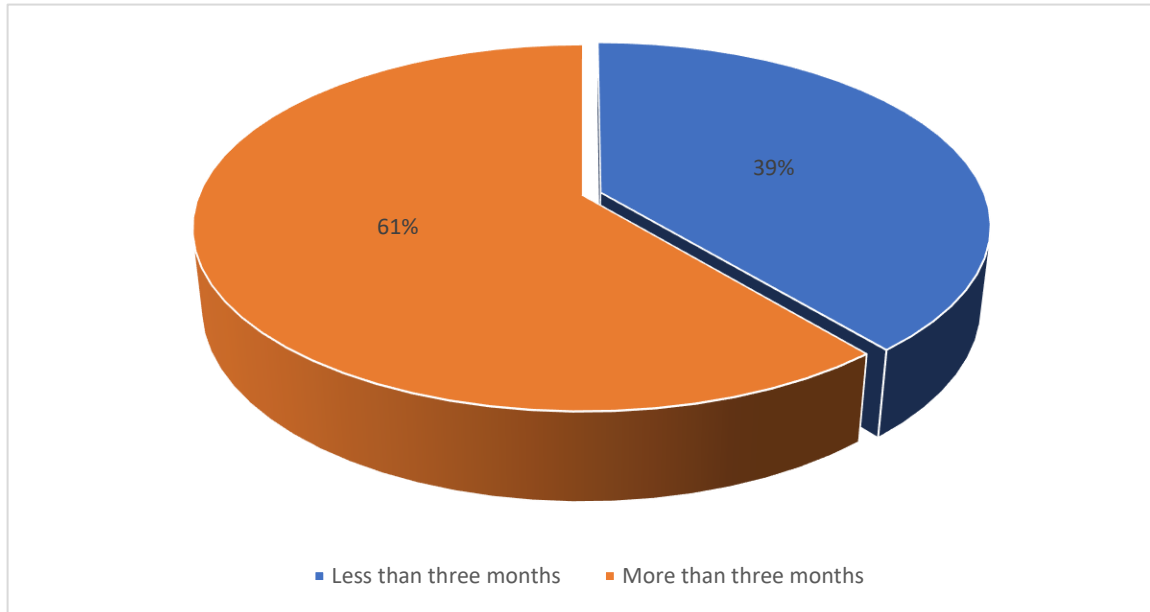


Figure 2: Patients delay to treatment among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

5.3. Waiting time from diagnosis to initial treatment

Among total patients, 67(32.6%) on chemotherapy, 5(2.4%) on radiotherapy and 7(3.4%) others (surgery and hormonal therapy) start initial treatment within 3 months while 96(46.9%) and 30(14.7%) delay more than 3 months to start initial treatment of chemotherapy and radiotherapy respectively. (Table 2)

Table 2: Waiting time from diagnosis to initial treatment among breast cancer patients at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

Variables	Waiting time from diagnosis	To start initial treatment	
		Frequency	Percentage
Chemotherapy	<3 months	67	32.6
	>3 months	96	46.9
Radiotherapy	< 3 months	5	2.4
	>3 months	30	14.7
Other	<3 months	7	3.4%
Total		205	100

5.4 Type of treatments

Out of a total of 205 breast cancer patients attending both hospital's oncology units, the majority of 163(80%) patients were on Chemotherapy, 35(17%) Radiotherapy, and others (surgery and hormonal therapy) 7(3%) respectively. (Figure 3)

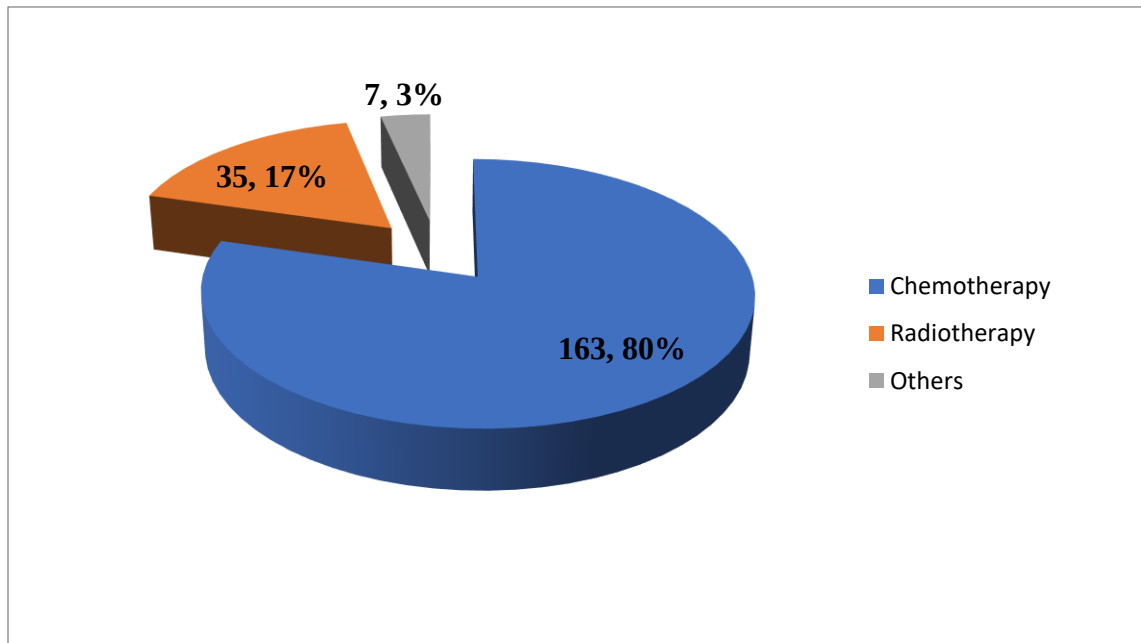


Figure 3: Types of treatment modalities given to breast cancer patients present at Tikur Anbessa specialized hospital and St. Paul's millennium medical college oncology units, 2021.

5.5 Reason for patients delay in treatment

Regarding the reason for to delay, all participants 205 had a reason to delay. Out of this 60(29.3%) are patients related and 145(70.7%) are provider or health care system-related. Patient-related reasons were the usage of traditional and spiritual treatment 38(18.5%), lack of money 12(5.9%), misinformation about cancer treatment 3(1.5%), thinking that breast cancer has no medical treatment, and difficulty to make decision 2(1.0%) respectively.

The provider or health-care system-related reasons included were lengthy waiting time to get treatment appointment 116(56.6%), long-distance to cancer center 22(10.7%), further diagnosis 10(4.9%), long waiting time at reception 2(1.0%), and Misdiagnoses of the disease 2(1.0%). (Table 3)

Table 3: Reason for patient delay in treatment among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

Variables	Frequency	Percent %
Patient-related factors		
I had no money	12	5.9
Misinformation about cancer treatment	3	1.5
Usage of traditional and spiritual treatment	41	20
Thinking that breast cancer has no medical treatment	1	0.5
Difficulty to make decision	2	1.0
Provider related factors		
Long waiting time at the reception	2	1.0
Long-distance to a cancer center	22	10.7
Long waiting time to get treatment appointment	116	56.6
Misdiagnosis of the diseases	2	1.0
Further diagnosis	10	4.9
Total	205	100.0

5.6 Patient history on treatment-seeking behavior and disease awareness

The largest portion of respondents 134(65%) said they had a lump in their breast for the presentation of breast cancer treatment and among all participants share problems with someone. From those shared problems 116(56%) share problems with the house band, 55(26%) share problems with the family members. For 1st contact for help, 142(69) contact health facility, 33(16%) contact nowhere 30(15%) contact traditional healer. Among all participants, only 62(30%) previously hear about breast cancer. Among all participants, only 72(35%) undergo early screening and 8 (4%) have a family history of breast cancer. (Table 4)

Table 4: Patient's history on treatment-seeking behavior and disease awareness among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

Variables	Frequency	Percentage %
First breast cancer symptoms present		
Breast lump	134	65
Change in breast size	20	10/
Discharge from nipple	28	13
Itching	14	7
Pain	9	5
To whom shared the problem		
House band	116	56
Friends	34	16
Family member	55	26
Health professional	3	2
Do you immediately share a problem with other		
Yes	183	89
No	22	11
First contact for help		
Traditional and faith healers	30	15
Nowhere/ self-medication	33	16
Health facility	142	69
Previously hear about breast cancer		
Yes	62	30
No	143	70
Have you ever done BSE, CBE before a diagnosis of current disease		
Yes	72	25
No	133	65
Family history of breast cancer		
Yes	8	4.0
No	197	96

5.7 Clinical characteristics of tumors

A large portion of participants 108(53%) develop tumors at the right breast and 97(47%) at the left breast and no bilateral tumor was found in the study participants. Among all participants 114(56%) axillary nodes are positive and 91(44%) have no axillary node involvement. (Table 5)

Table 5: Characteristics of tumors of breast cancer patients at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

Variable	Categories	Frequency	Percentage %
Site of tumor	Right	108	53
	Left	97	47
	Bilateral	-	-
Axillary node status	Positive	114	56
	Negative	91	44

5.8 Disease stage at first presentation to initial treatment

Out of 205 participants, the largest portion 90(43.9%) present at stage III and 75(36.5%) at stage IV the rest 35(17%) and 5(2.44%) presents at stage I and II respectively. (Fig 4)

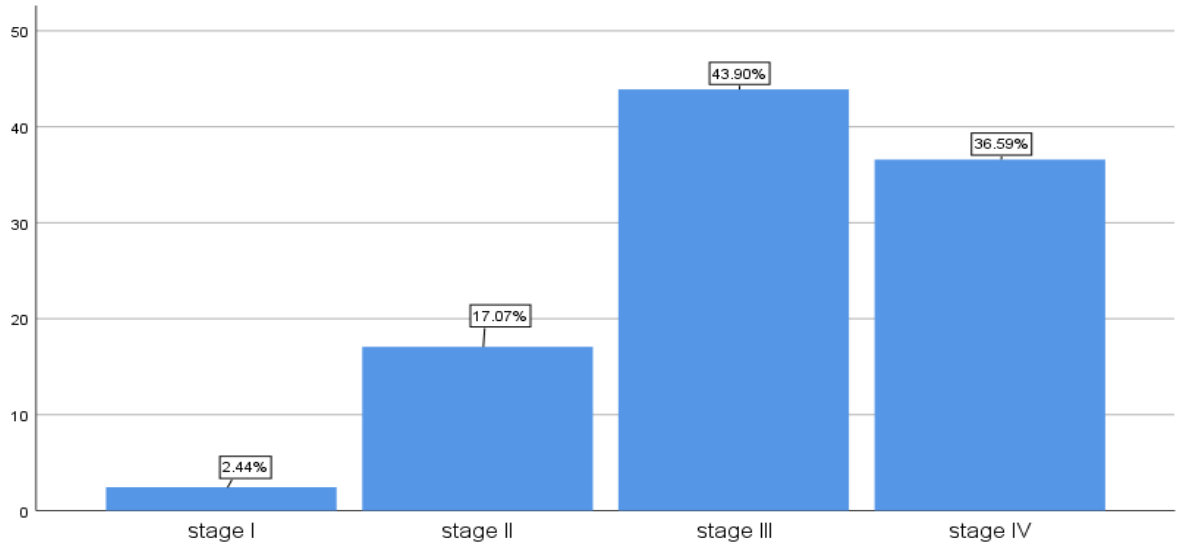


Figure 4: Stage of disease at presentation to treatment among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology units, 2021.

5.9 Factors associated with patients' delay to treatment

Determinants associated to delay to treatment among women with breast cancer who present at both oncology centers have been described in (Table 6). In the bivariate analysis the factors that were found to have association were age ≥ 41 , rural residence, occupation, educational status, distance, time of treatment initiation, first diagnosis health facility, treatment type and stage of the disease and, p-value ≤ 0.25 was a candidate for multivariate analysis.

In multivariate analysis, age of participants ≥ 41 years, rural residence, distance, first diagnosed health structure, mode of treatment, disease stage, and waiting time remained significantly associated with delay to treatment (p-value < 0.05).

In multivariate analysis, it was found that women whose age were ≥ 41 were 0.4 times less likely to be delayed than those women who were 18-29 AOR= 0.4, 95% CI (0.2-0.7); p=0.005, it was found that women who were come from rural area were 2.4 times more likely to be delayed than those women who were from urban area AOR= 2.4, 95% CI (1.3-4.4); p=0.005, woman travel ≥ 1 day to get the nearby cancer center were 2.3 times more likely to be delayed to treatment than those women who were 1-6 hours AOR=2.3, 95% CI (1.3-1.9); p=0.005, women who were received breast cancer diagnosis at general hospital were 0.2 times less likely to be delayed than those women who were diagnosed at privet hospital AOR= 0.2; 95% CI (0.07-0.7); p=0.015, woman who were received radiotherapy treatment were 5.5 times more likely to be delayed than those women who were receiving chemotherapy treatment AOR= 5.5, 95% CI (1.7-17; p=0.003), women who were late-stage disease were 0.5 times less likely to be delayed than women who were early stage AOR=0.5, 95% CI (0,2-1.0); p=0.049 and women who delayed more than three months had 5.9 times more likely to be delayed than those women who had delay less than 3 months AOR=5.9, 95% CI 0.1-2.6, P=0.031. (Table 6)

Table 6: Bivariate and Multivariate logistic regression which shows factors associated with patients' delay to treatment at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college oncology center,2021.

Variables	Categories	Patient delay		COR (C.I)	AOR (C.I)	P=	value
		Yes	No				
Age							
	21-29	0	8	1	1		
	30-40	56	20	0.6(0.4-1.6)	0.9(O.4,1.5)	0.072	
	≥41	70	51	0.4(0.2-0.8)	0.4(0.2,0.7)	0.005*	
Place of residence							
	Urban	67	57	1	1		
	Rural	59	22	2.3(1.2-4.2)	2.4(1.3,4.5)	0.005*	
Distance							
	1-6 hours	38	31	1	1		
	7-12 hours	48	25	0.7(0.3-1.7)	0.7(0.3,1.8)	0.063	
	≥1 day	40	32	2.1(1.2-3.8)	2.3(1.3,1.9)	0.005*	
Health structure							
	General hospital	51	52	2.4(1.2-4.8)	0.2(0.1,0.7)	0.015*	
	Ref, hospital	41	17	1.6(0.8-0.7)	0.5(0.1,1.7)	0.280	
	Spec, hospital	16	5	1.0(0.1-3.0)	0.5(0.1,6.6)	0.494	
	Private clinic	18	5	1	1		
Treatment type							
	Chemotherapy	96	67	1	1		
	Radiotherapy	30	5	4.1(1.0-11)	5.5(1.7,17)	0.003*	
	Other	-	7	1.0(0.7-1.5)	1.0(1.4,2.9)	0.303	
Cancer Stage							
	Early-stage	25	15	1	1		
	Late stage	101	64	0.9(0.2-1.0)	0.5(0.2,1.0)	0.049*	

Factors associated to patients delay to treatment among women with breast cancer cont...

Waiting time

<3	79	1	1	
>3	126	0.57(0.2-0.7)	5.9(0.1,2.6)	0.031*

Note: COR= crude odds ratio, AOR= adjusted odds ratio, CI= confidence interval, *= significantly associated at p <0.05 and 1:00=reference.

6. DISCUSSION

This institutional-based cross-sectional study has attempted to assess patient delay to treatment and associated factors among women with breast cancer. A total of 205 patients participated in this study with a response rate of 100%.

This study showed associated factors related to patients delay in the treatment of breast cancer. After controlling for all other variables in the odds ratio calculated to a delay to treatment among those women by multivariate analysis. Age ≥ 41 years, long travel distance ≥ 1 day, being rural residence, long waiting time to get a medical appointment, type of treatment, first diagnosed health structure and disease stage remained significantly associated with delay to treatment.

This study showed that 61% of the participants had delayed getting treatment over 3 months from diagnosis to the point of their initial treatment. The magnitude of delay to treatment is higher compared to the study carried out in China and Iran which reported that the prevalence of delay to treatment was (35.8%) and (25%) respectively (11,26). This higher rate of delay to the treatment of breast cancer in this study may be attributed due to the long waiting time to get a medical appointment due to mismatch between patient flow and limited-service delivery, long-distance to the cancer care center and, patient's intention to use traditional and spiritual treatment as an alternative. However, the findings were somewhat similar to the study conducted in India which showed 65.3% (22).

Many women who were delay in therapy were asked whether they were delayed in getting treatment following an initial breast cancer diagnosis. Among them, many participants preferred the usage of traditional and spiritual treatment (20%), had no money (5.9%), and misinformation about the disease 1.5% was the explanation that early care was delayed. This shows a similar study conducted in Morocco and Nigeria (35,36).

Factors associated with patients delay to treatment were also assessed. This study revealed that women aged ≥ 41 years were 60% (AOR=0.4; 95% CI: 0.2-0.7) less likely to delay the treatment of breast cancer than women from age 18-29. The finding was consistent with the study done in Pakistan and Ghana (29,30).

Concerning the place of residence women who were from the rural areas were 2.4 times more likely to delay treatment than women from urban (AOR=2.4; 95% CI: 1.3-4.5). This finding is coherent with the studies done in Pakistan and Kazakhstan in which women from rural areas were presented late to medical care compared with women from urban (27,40).

Regarding the distance, women who travel ≥ 1 day to get to a nearby cancer center were 2.3 times more likely delay to treatment than those women who travel 1-6 hours to health facilities (AOR=1.3-1.9; 95% CI: 1.3-1.9). This finding is similar to the study conducted in South Africa and Ghana (24,25).

This study found that women who perform their first diagnosis at a general hospital were 80% less likely to delay starting treatment than those diagnosed in a private clinic/ hospital (AOR=0.2; 95% CI: 0.1-0.7). This finding is consistent with studies conducted in America, Brazil, and India respectively(39,41,42).

In this study, women with breast cancer who received radiation treatment were 5.5 times more delay to treatment compared with those women who received chemotherapy (AOR=5.5; 95% CI:1.7-17.0). This finding is inconsistent with a study done in South Africa, Iran, and America (43,48,49). This could be due to the long waiting time to get initial treatment, the availability of medical equipment, mismatched patient flow to care service, and lack of skilled manpower.

This study reveals that long patient delay was significantly associated with an advanced stage of the disease (AOR=0.5; 95% CI: 0.2-1.0). This finding is similar to a study conducted in Brazil and South Africa in which among patients getting treatment at a late stage, the majority had more than three months delay and a delay of more than three months was a significant predictor of late-stage treatment. (37,45).

In this study majority of patients, delays were significantly associated with long waiting times for the initiation of treatment (AOR=5.9; 95% CI: 0.1,2.6). This finding is inconsistent with a study conducted in India, America (43,46). The difference could be due to long appointments to get treatment, scarcity of medical equipment, maintenance problems of medical equipment, large patient flow, and limited cancer care centers in the country.

7. STRENGTH AND LIMITATION OF STUDY

7.1 Strength

- ✓ There is a high response rate in this study
- ✓ Use of probability sampling
- ✓ Including both cancer centers in the study area.

7.2 Limitation

- ✓ Some patients were diagnosed and started treatment a long time ago hence the possibility of recall bias as most variables relied upon information given by patients.
- ✓ Cross-sectionals design may not show a relationship between exposure and outcome variable.
- ✓ Lack of adequate literature from a local or national level.

8. CONCLUSION AND RECOMMENDATION

8.1. Conclusion

Patient delay to treatment which results in advanced diseases is high in this study. Age ≥ 41 years, being rural residence, long travel distance ≥ 1 day, first diagnostic health facilities, the long waiting time to get a medical appointment, and disease stage were important predictors for a long patient delay to treatment in TASH and SPHMMC cancer centers.

8.2. Recommendation

Based on the finding of the following important recommendation are forwarded for the respective body on breast cancer early treatment program implementers, policymakers, and researchers who are engaged in this area:

Health professionals

According to the findings, it needs more effort from health professionals to educate public on breast cancer early treatment is required.

TASH and SPHMMC

This study shows that patients wait a long time for medical appointments in both hospitals' oncology clinics, as well as an imbalance in patient flow to health professionals, necessitating the training of further health professionals, the opening of new OPD and radiotherapy facilities, and the establishment of efficient medical equipment repair department within hospitals.

Ministry of health

Establish additional cancer treatment centers in different regions to reduce costs, long waiting time to get a medical appointment, and distance for cancer patients and hence reduce delay for getting treatment which in turn increase cancer patient survival.

Establish a public education campaign to educate the community by involving media groups and other implementers/ artists.

Researchers and others

This study may be used by researchers and policymakers as a baseline for further investigation to assess the reason for the delay to treatment which is not included in this study. Also, this study identifies and develops interventions.

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APPENDIX -A: INFORMATION SHEET

Objective: patient delay to treatment and associated factors among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's hospital millennium medical college, oncology centers.

Procedure to be carried out: answering this questionnaire that takes 15-20 minutes.

The risk associated with the study: there are no risks associated with the study.

Confidentiality of your study: any secret will not transfer to third parties.

The right to refuse or withdraw: fully guaranteed.

I would also like to inform you that this study will be approved and ethically cleared by Addis Ababa university college of health science school of nursing and midwifery, department of nursing.

Advisors: 1. Mr. Tigistu Gebreyohannis (BSc, MSc, Assistant professor)

2. Sr. Aklil Hailu (BSc, MSc, lecturer)

If you have any questions regarding this study, please feel free to contact the principal investigator.

Name: Gezahegn Ayele

Address: e-mail: gezemar4jc@gmail.com

Mobile phone number: +251-911880068

APPENDIX-B: CONSENT SHEET

CONSENT FORM

Hello, how are you, my name is _____. I am collecting data on behalf of Gezahegn Ayele he is going to be graduating this year with clinical oncology nursing from Addis Ababa University. Patient delay to treatment and associated factors among women with breast cancer at Tikur Anbessa specialized hospital and St. Paul's millennium medical college oncology centers made for the partial fulfillment of a Master's degree in clinical oncology in nursing.

This study aims to assess delay to treatment and associated factors among women with breast cancer attending Tikur Anbessa specialized hospital (TASH) and St. Paul's hospital millennium medical college oncology center. The results of the study will be used as baseline information to design appropriate interventional strategies to provide comprehensive care for cancer patients. The information you provide is confidential and is used only for this study.

Your cooperation and participation until the answering of the question are very necessary for the successful completion of the assessment. You will neither get harmed nor will you get benefit as a result of participating in this study. Therefore, I ask for your genuine willingness.

However, you have the right to decline if you don't volunteer to participate at any time.

If you have any questions and confusion regarding the question's, you have the right to ask me at any point or you can contact me at the following address.

Email: gezemar4jc@gmail.com

Cell phone: +251-911880068

Are you willing to participate? ☐ Yes ☐ No

Date collector: name _____ signature: _____ date: _____

APPENDIX C: ENGLISH VERSION STRUCTURED QUESTIONNAIRES

A structured questionnaire to assess patient delay to treatment and associated factors among women with breast cancer at Tikur Anbessa specialized hospital (TASH) and St. Paul's hospital millennium medical college oncology centres, 2021.

Instructions: Circle the code corresponding to the answer for each question.

Name of hospital _____ date _____ data collector name _____

Questionary status 1. fully completed 2. Partially completed. Confirmed by supervisor:

Name _____ date _____ sign _____

Part I: socio-demographic characteristics.

Code	Questions	Probable answer		Skip
001	What is your age?	Age in completed years _____		
002	What is your marital status?	Married Single Divorced/ separated widowed	1 2 3 4	
003	Where is your place of residence?	Urban Rural	1 2	
004	What is your educational status?	Unable to read and write Primary education Secondary education College and above	1 2 3 4	
005	What is your occupational status?	Housewife	1	

		Farmer	2	
		Private employee	3	
		Government employee	4	
		Marchant	5	
		Other	6	
006	What is your HH income/ month?	<500	1	
		501-1000	2	
		1001-1500	3	
		1501-2000	4	
		≥2001	5	
007	How much distance travel to get to this health facility?	1-6 hours	1	
		7-12 hours	2	
		≥1 day	3	

Part II: patient history on the diagnostic pathway.

Code	Questions	Probable answer		Skip
008	Can you please tell me the disease you have diagnosed with?	Breast cancer	1	
		Other	2	
009	How did you notice the initial symptoms on your breast?	Accidentally	1	
		During breastfeeding	2	
		During breast self ex	3	
		Other	4	

010	When were you first diagnosed with breast cancer?	Ddmmmyyy_____		
011	How many health facilities do you visit for a current complaint that is diagnosed as cancer?	No. of HF_____		
012	What problem had they diagnosed for your current symptoms in the HF you consulted before being referred to this hospital?	Diagnosis in HF 1_____		
		HF 2_____		
013	Had health professionals advised you to start treatment after you were diagnosed with breast cancer?	Yes	1	
		No	2	
014	In which structure of the health care system did you receive the diagnosis?	General hospital	1	
		Referral hospital	2	
		Specialized hospital	3	
		Private hospital/clinic	4	
015	What was the mode of diagnosis?	Mammography	1	
		Ultrasound	2	
		Biopsy	3	
		Fine needle aspiration	4	

016	What did you do after the first consultation for treatment?	Follow the doc advice	1	
		Visit another medical doctor	2	
		Visit traditional healer	3	

Part III: Patient's history on treatment pathways.

Code	Questions	Probable answer		Skip
017	Since you were diagnosed, how long did it take you to decide to get treatment?	Less than three months	1	
		Greater than three months	2	
018	Did you start treatment?	Yes	1	
		No	2	
019	If you start treatment, could you please tell me the types of treatment given?	Chemotherapy	1	
		Radiotherapy	2	
		Hormonal therapy	3	
		Other	4	
020	When did you start treatment?	Ddmmyyyy_____		

Part IV: Information on the reason for the delay to treatment.

Code	Questions	Probable answer		Skip
021	When was the time you presented to an HF for the current complaint for the first time?	ddmmyyyy_____		
022	What were the reasons for seeking treatment?	The appearance of the symptoms Persistence of symptoms Worsening of symptoms	1 2 3	
023	Is there time lag b/n diagnosis and treatment initiation?	Yes No	1 2	→ 027
024	Could you please tell me what was the reason for the delay in getting treatment?	Personal problem Provider related	1 2	→ 026
025	Could you please tell me what was the reason for the delay in getting treatment? If	I had no money Misinformation about cancer treatment Use of traditional and spiritual treatment	1 2 3 4	

	reason related to you	Thinking that breast cancer has no medical treatment Difficulty to make decision I thought it was relief by itself Others	5 6 7 8	
026	Could you please tell me what was the reason for the delay in getting treatment? If the reason related to a provider	Long waiting time at the reception Long-distance cancer care center Long waiting time to get a medical appointment Misdiagnosis of the disease No appropriate physician at the time Lack of appropriate attention Being too busy unable to examine patient appropriately Other	1 2 3 4 5 6 7 8	

Part V: Patient's history on treatment-seeking behavior and symptom awareness.

Code	Questions	Probable answer		Skip
027	When did you first notice signs and symptoms of the current condition?	Ddmmyyyy_____		

028	What were the first breast cancer symptoms present at arrival at the hospital?	Breast lump Change in breast size Discharge from nipple Itching Pain	1 2 3 4 5	
029	When was the time you first presented to HF?	Ddmmyyyy_____		
030	After you are diagnosed with breast cancer, to whom do you share the problem?	Husband Friends Family members Health professionals Others	1 2 3 4 5	
031	Did you immediately share the problem with others?	Yes No	1 2	
032	Where did you first contact for help?	Traditional and faith healers Nowhere/self-medication Health facility Others	1 2 3 4	
033	Have you previously heard about breast cancer?	Yes No	1 2	

Part VI: Behavioural characteristics of patients.

Code	Questions	Probable answer		Skip
034	Do you have a history of smoking cigarettes?	Yes No	1 2	036
035	How many cigars/ tobaccos did you smoke per day?	_____ cigarettes/day		
036	Do you have a history of drinking alcohol?	Yes No	1 2	
037	Do you have a history of using any traditional or spiritual treatment options before initial treatment?	Yes No	1 2	

Part VII: Tumor clinical characteristics filled from patients' medical charts.

Codes	Questions	Probable Answers	Skip
038	Site of tumor?	1. Right breast 2. Left breast 3. Bilateral	
039	The stage when treatment started?	1. Stage I 3. Stage III 2. Stage II 4. Stage IV	
040	Axillary node status?	1. Positive 2. Negative 3. Unknown	

አባሪ-A፡ የመረጃ መሰጫ ወረቀት

የጥናቱ አላማ፡ በጡት ካንሰር ዘግይቶ ለህክምና መምጣትና የተያያዙ ጉዳዮችን ለማወቅ በአድስ አበባ ጥቁር አንበሳ ሰፕሻልይድ ሆስፒታል እና ቅዱስ ጳውሎስ ሆስፒታል ሚልንየም ሜድካል ኮሌጅ የጡት ካንሰር ህክምና ለማግኘት የምመጡ ሰዎች ላይ ክስተቱ ምን ያህል እንደሆነ ለማወቅ ነው።

ጥያቄዎችን ለመመለስ የምፈጀዉ ጊዜ፡ ጥያቄዎችን መልሶ ለማጠናቀቅ ከ 15-20 ደቅቃ ልፈጅ ይችላል።

የገንንዩሽ ጉዳት በተመለከተ፡ በጥናቱ መሳተፍ ምንም አይነት ጉዳት አያሰከትልም ።

የመረጃ ምስጥራዉነት በተመለከተ፡ ስምምነቶም በዚህ መጠይቅ ላይ አይፃፍም መረጃም ከተሰጠው ዉጭ ለማንም ለላልፎ አይሰጥም።

በጥናቱ ያለመሳተፍ ሙብት በተመለከተ፡ ልመልሱ የማይፈልጉ ከሆን ጥያቄዉን አቀረጠዉ መሄድ ይችላሉ።

ለላ ልነግሮት የምፈልገዉ ነገር የርሶ እዉነተኛ መልስ ለምደረገዉ ጥናት በጣም ጠቃም እንደሆነና እንድሁም የተሰጣትን መረጃ ተረድተዉ በጥናቱ ልሳተፉ ስለፈቀዱ እጅግ በጣም አመሰግናለሁ።

የጥናቱ አማካሪዎች፡- 1ኛ አቶ ትግስቱ ገ/ዩሐንስ (BSc, MSc, ረዳት ፕ/ር)

2ኛ ሲ/ር አክልል ሐይሉ(BSc, MSc)

ለሚኖሮት ማንኛዉም ጥያቄ ቀጥሎ በተቀመጠዉ አድራሻ የጥናት አድራጊዉን ማግኘት ይችላሉ፡-

ኢ-መይል አድራሻ፡ gezemar4jc@gmail.com

ስልክ ቁጥር፡ +251-911880068

አባሪ-B፡ የስምምነት ቀረቀት

የአማርኛ ቋንቋ መጠይቅ

ጤና ይስጥልኝ ስሜ _____ ይባላል እኔ የጥናቱን ባለቤት ገዢዎች አየለን ወክሎ ስገኝ እርሱም የአድስ አበባ ዩኒቨርሲቲ የካንሰር ህክምና ነርስንግ የድረ ምረቃ ተማረ ስሆን የመመረቅያ ጥናቱን በጡት ካንሰር ዘግይቶ ለህክምና መምህራንና የተያያዙ ጉዳዮች በምል ርዕስ ላይ እየሰራ ይገኛል። የምስበሰበዉ መረጃ ለሆስፒታሉ፤ ለጤና ጥበቃ እና ለህብረተሰቡ ከፍተኛ ጥቅም ይሰጣል። ጥያቄዎችን ለመመለስ ከ 15-20 ደቅቃ ይወስዳል።

አላማዉ በጡት ካንሰር ዘግይቶ ለህክምና መምህራንና የተያያዙ ጉዳዮችን ለማወቅ በአድስ አበባ ጥቁር አንበሳ ስፐሻልይድ ሆስፒታል እና ቅዱስ ጳውሎስ ሆስፒታል ሚልንየም ሜድካል ኮሌጅ የጡት ካንሰር ህክምና ለማግኘት የምመጡ ሰዎች ላይ ክስተቱ ምን ያህል እንደሆነ ለማወቅ ነው።

የትናቱ ልዩ ጥቅም፡ የጥናቱ ተሳታፊዎች የረጅምና የአጭር ጊዜ ጥቅም ይኖራቸዋል፤ የረጅም ጊዜ ጥቅሙ የጥናቱ ዉጤት ለህብረተሰቡ የምያመጣዉ ጥቅም ስሆን የአጭር ጊዜ ጥቅም ደግሞ ከጥያቄዎቹ በላይ ለተሳታፊዎች ስለጡት ካንሰር አነስ ያለ ገለጻ ይደረግላቸዋል።

የጥናቱ ተሳታፊዎች መብት፡ በጥናቱ ላይ ያለመሳተፍ ሙሉ መብት አሎት፤ መመለስ የማይፈልጉትን ጥያቄዎች እንድመልሱ አይገደዱም።

በአስፈላጊዉ ሰዓት ጥናቱን ማቃረጥ ይችላሉ፤ ያልገባዎትን ማንኛኛዉንም ጥያቄ መጠየቅ ይችላሉ።

የመረጃ ምስጢራዊነትን በተመለከተ ምላሾቹ ሁሉ ምስጢራዊነታቸዉ የተጠበቀ ስሆን የጥናቱ ተሳታፊ ስም ሳይወሰድ በመለያ ቁጥቶች እንጠቀማለን።

ከላይ ያለዉን በሙሉ በማዉቀዉ ቋንቋ ተነቦልኝ ተረድቻለሁ ካሉ

በጥናቱ ለመሳተፍ ፈዳደኛ ኖት? 1. አይደለሁም 2. አዎን (እንቀጥላለን)

የጠያቅ ስም _____ ፊርማ _____ ቀን _____

አባሪ-C: AMHARIC VERSION STRUCTURED QUESTIONNAIRE

የሆስፒታሉ ስም _____ የተጠየቀበት ቀን በኢት.አቆ ____/____/____ የጠያቂው ስምና ፊርማ _____ የጥናቱ ውጤት 1. ተጠናቋል 2. በከፊል የተጠናቀቀ. በሱፐርቫይዘር ተረጋግጧል ስም _____ ፊርማ _____ ቀን _____

ክፍል 1: የመልስ ሰጪ ማንነት መለያና ስነ ህዝባዊ መረጃ

ተ.ቀ	ጥያቄ	የመልሶች አማራጭ	የመልስ ኮድ	ዝላል/እለፍ
001	የተጠያቂው እድሜ ስንት ነው?	በቁጥር(ዓመት)-----		
002	እባኩን ያጋብቻ ሁኔታ ልነግሩኝ ይችላሉ?	ያገባች ያላገባች የተፋታች ባለ የሞተባት	1 2 3 4	
003	የመኖሪያ አድራሻዎትን ልነግሩኝ ይችላሉ?	ገጠር ከተማ	1 2	
004	የትምህርት ደረጃዎትን ልነግሩኝ ይችላሉ?	ማንበብና መጻፍ የማትችል መንበብና መጻፍ የሚችል የመጀመሪያ ደረጃ(እስከ 8) ሁለተኛ ደረጃ(9-10) ዲፕሎማና ከዚያ በላይ	1 2 3 4 5	
005	የስራ ሁኔታዎን ልነግሩኝ ይችላሉ?	የቤት እመቤት አርሶ(አርብቶ)አደር የግልስራ የመንግስት ሰራተኛ ነጋዴ ሌሎች-----	1 2 3 4 5 6	

006	የቤተሰቡ የወር ገቢ ምን ያህል ነው?	<500 (ኢት. ብር)	1	
		501-1000	2	
		1001-1500	3	
		1501-2000	4	
		≥2001	5	
007	ወደዚህ የህክምና ተቋም ለመምጣት ምን ያህል ሰዓት ይወስዳል?	1-6 ሰዓት	1	
		7-12 ሰዓት	2	
		≥1 ቀን	3	

ክፍል 2፡ በምርመራ ሂደት ላይ የነበረ ታካሚ ሁኔታ የታካሚ ህመም የታወቀበት መንገድ (ካስፈላገ ከካርድ የሚሞላ)

ተቁ	ጥያቄ	የመልሶች አማራጭ	መ. ክድ	ዝላል
008	ከተመረመሩ በኋላ ምን በሽታ አለቦት እንደተባሉ ልነግሩኝ የችላሉ?	የጡት ካንሰር	1	
		ለላ_____	2	
009	የህመሙን ምልክቶችን እንደት ነዉ ያወቁት?	በድንገት	1	
		ጡት በምያጠባበት ጊዜ	2	
		በራሴ ጡተን ስዳስስ	3	
		ለላ ካለ-----	4	
010	ለመጀመሪያ ጊዜ ወደ ጤና ተቋም ሄደዉ ከተመረመሩ በሃላ የጡት ካንሰር እንዳለቦት የተነገሮት መቼ ነበር?	____/____/____		
011	ወደዚህ ሆስፒታል ለህክምና ከመላኮ በፊት አሁን ላለዎት በሽታ ስንት ጊዜ ወደ ተለያዩ ተቋማት ሄደዋል?	የሄዱበት ጊዜ _____		
		ጤና ተቋም1_____		
		ጤና ተቋም2_____		

012	ወደዚህ ሆስፒታል ለህክምና ከመላኮት በፊት የሄዱባቸው ተቋማት በሽታዎ ምንድን ነው አሎት	የተረጋገጠው ህክም-- ጤና ተቋም1_____		
		ጤና ተቋም2_____		
013	ከዚህ በፊት የሄዱባቸው የጤና ተቋማት ህክምና እንድጀምሩ ምክር ሰጥተዎት ነበር?	አዎን አልተሰጠም	1 2	
014	ለመጀመርያ ጊዜ የተመረመሩበት ጤና ተቋም የት ነበር?	ጤና ጣቢያ አጠ. ደረጃ ሆስፒታል ረፈ. ሆስፒታል ስፔሻላይድ ሆስፒታል የግል ሆስፒታል/ክልኒክ	1 2 3 4 5 6	
015	የጡት ካንሰር መሆኑን የተረጋገጠነት የምርመራ መሰረት ምን ነበር?	የጡት ራጅ አልትራሳውንድ ከጡት በተወሰደ ናሙና ከጡት ላይ በመርፌ በተወሰደ ናሙና	1 2 3 4	
016	ህክምና እንድጀምሩ በህክም ምክር ከተሰጡ በኋላ ምን አደረጉ?	በህክም ምክር ተከተልኩ ወደ ለላ ሃክም ወደ በህል ህክምና ለላ_____	1 2 3	

ክፍል 3፡ በህክምና ሂደት ላይ የነበረ ታካሚ ሁኔታ (ካስፈለገ ከካርድ የሚሞላ)

ተ.ቀ	ጥያቄ	የመልሶች አማራ	መ.ከድ	ዝላል
017	ተመርምረዉ የጡት ካንሰር እንዳለበት ካወቁ በሃላ ህክምና ለመጀመር ምን ያክል ጊዜ ቆዩ?	ከ3 ወር በታች ከ3 ወር በላይ	1 2	
018	ህክምና ጀምረዋል?	አዎ አልጀመርኩም	1 2	
019	ህክምና ከጀመሩ አሁን አያገኙ ያሉ የህክምና አይነት ልገልጹልኝ ይችላሉ?	ቀዶ ጥገና ከሞተራፕ የጨረረ ህክምና	1 2 3	
020	ህክምና የጀመሩት መቼ ነበር?	_____		

ክፍል 4፡ የመዘግየት ምክንያቶች (ካርድ ላይ ባለ መረጃ የሚደገፍ)

ተ.ቀ	ጥያቄ	የመልሶች አማራጭ	መ. ከድ	ዝላል
021	ለዚህ የህመም ስሜት ለመጀመሪያ ጊዜ የጤና ባለሙያ ያማከሩት መቼ ነበረ?	____/____/____		
022	የህክምና እርዳታ ለመፈለግ ምን አነሳሳዎት?	የምልክቶች ገጽታ የምልክቶች መቆየት የምልክቶች መባባስ	1 2 3	
023	ህመሙ ተረጋግጦ ወደዚህ ሆስፒታል ለህክምና	አዎን የለም	1 2	→ 027

	በመጡበትና ህክም በጀመሩበት መሃል የጊዜ ክፍተት ነበር?			
024	ለዚህ የጊዜ ክፍተት ምክንያቶች ምን ነበር?	ከግል ችግር ጋር የተያያዘ ጤና ተቁም ጋር የተያያዘ	1 2	→ 026
025	የዘገዩበት ምክንያት የግል ምክንያት ሊገልፁልኝ ይችላሉ?	የገንዘብ እጦት ለህክምናዉ የተሳሳተ መረጃ ስለነበረኝ የባህልና ህክምና እየወሰድኩ ስለነበር ካንሰር በዘመናዊ ህክምና የምዲን ሰላልመሰለኝ ለዉሳኔ በመቸገሬ በራሱ ጊዜ ይለቃል የምል አመለካከት ስለነበረኝ ለላ ካለ-----	1 2 3 4 5 6 7	
026	የዘገዩበት ምክንያት ጤና ተቀም አገልግሎት አቅቦትና ጤና ባለሙያ ጋር የተያያዘ ከሆነ ምክንያቱን ሊገልፁልኝ ይችላሉ?	እንግዳ መቀበያ ላይ ያለው ወረፋ የህክምና ቦታ እርቀት ህክምና ለመጀመር የለው ወረፋ የተሳሳተ የምርመራ በዘርፉ የሰለጠነ በለሙያ አለመኖረ ለታካሚ ተገብዉን አጽንኦት አለመስጠት በስራ እጅግ መጨናነቅና በትክክል ምርመራ አለማካሄድ ለላ ካለ-----	1 2 3 4 5 6 7 8	

ክፍል 5፡ የታካሚዎች ወደጤና ተቋማት የመሄድ ፍላጎት እና ህመሙን ያወቁበት መንገድ

ተ.ቀ	ጥያቄ	የመልሶች አማራጭ	የመልስ ኮድ	ዝላል/እለፍ
027	አሁን ያለቦት የበሽታ ምልክቶች መጀመሪያ የጀመረች መቼ ነው?	____/____/____		
028	መጀመሪያ የታየው የበሽታ ምልክት ምን ነበር?	የጡት እብጠት የጡት መጠን መለወጥ የጡጥ ጫፍ ያልተፈለገ ፈሳሽ የጡት ማሳከክ የጡት ላይ ህመም	1 2 3 4 5	
029	ለመጀመሪያ ጊዜ ወደ ጤና ተቀም የሄዱት መች ነበር?	-----/-----/-----		
031	ይህ ህመም ሲሰማዎት ወዲያውኑ ለሰዎች አማከሩ	አዎን አላማከርኩም	1 2	
030	ለመጀመሪያ ጊዜ ይህ ህመም የጡት ካንሰር መሆኑን ስያዉቁ ያማከሩት ለማን ነበር	ለባለቤቴ ለጓደኛዬ ለሌላ ሴት የቤተሰብ አባል ለጤና ባለሙያ ሌሎች ካሉ ይጥቀሱ -----	1 2 3 4 5	
032	የጤና ባለሙያ ከማማከሮት በፊት ያማከሩት ሰው ነበር	የባህል ህክምናና የእምነት ቤት ለማንም አላማከርኩም ጤና ተቀም ሌሎች ካሉ ጥቀስ	1 2 3 4	

033	ከዚህ በፊት ስለ ጡት ካንሰር ሰምተው ያውቃሉ?	አዎን አላዉቅም	1 2	
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ክፍል 6፡ የታካሚው ፀባይና ልምምዶች

ተ.ቀ	ጥያቄ	የመልሶ አማራጭ	ዝለል/ እለፍ
034	ከዚህ በፊት ስጋራ አጭሰዉ ያዉቃሉ?	1. አዎን 2. አላዉቅም	→ 036
035	በቀን ምን ያህል ስጋራ ያጭሳሉ (ቁጥር/ፓክት)	-----	
036	የአልኮል መጠጥ ጠጥተዉ ያዉቃሉ	1. አዎን 2. አላዉቅም	
037	ህክምና ከመጀመርዎ በፊት የባህል መዲሃንት ወስደዉ ያዉቃሉ	1. አዎን 2. አላዉቅም	

ክፍል 7፡ የታካሚ የህክምናና ምርመራ ሁኔታ (ካርድ ላይ ባለ መረጃ የሚደገፍ)

ተ.ቀ	ጥያቄ	የመልሶች አማራጭ	እለፍ
038	እጢ ያለበት ቦታ?	1. ቀኝ ጡት 2. ግራ ጡተት 3. በሁለቱም ጡት	
039	ካንሰር ስርጭት ደረጃ ህክምና ስጀመር	1. ደረጃ 1 2. ደረጃ 2 3. ደረጃ 3 4. ደረጃ 3	
040	እጥ ከጡት ዉጭ ወደ ሰዉነት ክፍል ተሰራጭታል?	1. አዎን 2. አልተሰራጩም	