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Psychosocial Challenges, Coping Strategies and Access to Support for Women with Breast Cancer in the Gaza Strip

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Dedication

To whom I owe my life and success, My beloved parents
To my sunshine, my beautiful daughters; Shahd and Majd
To my husband; Ahmad who gave the strength to continue
To my brothers; Maher, Mahmoud, And Basel.
To the sole of my brother Mohammad
To my sisters; Reham, Aml And Ola

***To the sole of my great friend who I will never forget; Sireen*.**

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I want to extend my heartfelt gratitude to all the study participants, wishing them healthy, happy lives.

Lastly, I wish to thank everyone who supported me in any respect during the completion of my study.

All respect
Ayda Ahmad Helles

Declaration

I certify that this thesis submitted for the degree of master is the result of my own research, except where otherwise acknowledged, and that this thesis or any of its parts has not been submitted for higher degree to any other university or institution.

Signed: Ayda Ahmad Helles

Date: 21 /April / 2024

Abstract

Introduction and objectives

Breast cancer represents 11.7% of all cancer cases worldwide and 18% in in the Gaza Strip. In addition to being a common bodily health problem, cancer is also associated with psychosocial problems such as depression, anxiety. Universally, there is growing evidence around the challenges and support for women with breast cancer. The study is conducted to explore key psychosocial and mental health challenges facing women with BC, appraise their coping strategies, and to ascertain formal and informal support accessible to them.

Methods

A cross sectional design was used, in which data have been triangulated, quantitatively and qualitatively. The quantitative part is conducted through an interviewed questionnaire with 330 women diagnosed with breast cancer and focused on exploring the challenges they are facing and the support provided to them. The qualitative part looked in-depth to the lived experiences of women with breast cancer, their perspectives were explored through four focus group discussions with 25 participants. Quantitative data was analyzed using the SPSS and open coding thematic analysis technique was used for analyzing qualitative materials.

Findings

Findings revealed that 35.6% of the participants were 51-60 years old, nearly half of them from Gaza City, 76% were married, 93.3% were housewives and 53.8% reported that their monthly household income is less than 1000 ILS. With regard to the staging of BC, nearly a quarter (24%) were stage I and 36.8% were stage II. As reported by women, 60% took more than 4 weeks to initiate treatment after confirming their diagnosis. Chemotherapy was received by 83% of women, surgery was done for 84%, hormonal therapy was received by 71%, while 68.4% of participants received radiotherapy. Participants scores on mental health scales show that anxiety was more prominent (76% with moderate and severe) than depression (29% moderate and severe) or stress (9% moderate or severe). When asked how BC affected them, 31% reported that cancer reduced their activity level and negatively affected their psychosocial status (26.7%).
Findings show that among the five social support dimensions, positive social interaction was the most common dimension, while tangible support (provision of practical resources and material aid) was the least common. Women used different strategies to cope with their disease, the most frequent coping strategies were praying or meditating (75.5%), followed by trying to find comfort in religion or spiritual beliefs (55.2 %).

Inferential analysis showed that younger women (less than 40 years), recently diagnosed (one year and less) and women diagnosed at stage of III and IV were facing more challenges than their counterparts from other groups in reporting higher scores of depression, anxiety and stress, and had higher scores of avoidant coping strategies when compared to other women. Women who had mastectomy, reported higher scores in the challenges they face, depression, anxiety and stress, and received more social and formal support compared to women who had breast conservative surgery, but these variances are not statistically significant.

Conclusions and recommendations

The study concluded numerous challenges that are facing women throughout their course of disease, which found to be adversely affecting their mental health outcomes and points out to the necessity of addressing these challenges. Breast cancer management is not only medical rather, it requires multi-modal interventions including intensive psychosocial support and social protection which needs to be integrated as a crucial component of care.

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List of abbreviations

ACS	American Cancer Society
AJCC	American Joint Committee on Cancer
APA	American Psychological Association
ANOVA	One Way Analysis of Variance
BC	Breast Cancer
BCS	Breast Conservative Surgery
BCE	Breast Clinical Examination
BRCA	Breast Cancer Gene
BSE	Breast Self-Examination
CFTA	Culture and Free Thought Association
DASS	Depression, Anxiety, Stress scale
DCIS	Ductal Carcinoma in Situ
DSM	Diagnostic and Statistical Manual for Mental Disorders
HH	Households
HR	Hormone receptors
HER2	Human epidermal growth factor receptor 2
ER	Estrogen Receptor
FGD	Focus Group Discussion
FNAB	Fine Needle Aspiration Biopsy
FSD	Faster Standard Diagnosis
Ibid	The same preceded reference
ICD10	International Classification of Diseases
IDC	Invasive Ductal Carcinoma
IDI	In Depth Interview
ICU	Intensive Care Unit
ILC	Invasive Lobular Carcinoma
Km2	Squared kilometer
LCIS	Lobular Carcinoma in Situ
LSD	Least Significance Differences
MDT	Multidisciplinary Team
MHPSS	Mental Health and Psychosocial Support
MoH	Ministry of Health
MRM	Modified Radical Mastectomy
MRI	Magnetic Resonance Imaging
MICS	Multiple Indicators Cluster Survey
NCCN	National Comprehensive Cancer Network
NHS	National health system
NHI	National health insurance
NIS	New Israeli Shekel
NGOs	Non-Governmental Organizations
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PALB	Partner and Localizer of Breast Cancer2 (BRCA2)
PCBS	Palestinian Central Bureau of Statistics
PR	Progesterone Receptor
PTSD	Post-Traumatic Stress Disorder
QoL	Quality of Life

SLN	Sentinel Lymph Node
SSS	Social Support Scale
SPSS	Statistical Package for Social Sciences
TNM	Tumor, Lymph nodes, Metastasis
TV	Television
UNFPA	United Nations Population Funds
UNRWA	United Nations Relief and Works Agency for Palestine Refugees
USA	United States of America
USD	United State Dollars
UK	United Kingdom
WB	West Bank
WHO	World Health Organization

Chapter one

1 Introduction

1.1 Background

Female Breast Cancer (BC) has now surpassed lung cancer as the leading cause of global cancer incidence in 2020, with an estimated 2.3 million new cases, representing 11.7% of all cancer cases (Sung et al. 2021). It is the fifth leading cause of cancer mortality worldwide, with 685,000 deaths globally (ibid). According to the American Cancer Society (ACS), approximately 1 in 8 women (13%) can be diagnosed with invasive BC in their lifetime and 1 in 39 women (3%) will die from BC (ACS, 2019). According to the Ministry of Health (MoH) report in the Gaza Strip, BC represents 18% of all cancers, and 33% of women's cancers, in 2020, there were 324 new cases of BC with an incidence rate of 32/100,000 ladies, most of the cases were discovered in advanced stages (MoH, 2021). BC diagnosis along with its treatment, can contribute to physical, social, and psychological turmoil (Benson et al, 2020). In addition, to being a common bodily health problem, cancer is also associated with psychosocial problems such as depression, anxiety, diminished life satisfaction or lowered self-esteem (Çürük, 2020).

It is widely perceived that breast stands for femininity, sexuality, good appearance, breastfeeding, love and motherhood. Therefore, BC disrupts a woman’s image of her body, which results in decreased self-esteem, fear of losing femininity, sexual dysfunctions, anxiety, depression, feelings of guilt and embarrassment, fear of relapse, isolation and fear of death (Rizalar et al, 2014). Also, treatment may produce significant toxicities which cause substantial short- and long-term side effects, functional loss in various behavioral and life domains (physical, cognitive, emotional, social, and vocational), as well as psychosocial distress (Weis, 2015). The same source indicates that quality of life and functional status of the patients may be substantially reduced, and patients and their families are faced with many challenges in terms of coping and adjustment (ibid).

Appropriate diagnostic and treatment pathways for BC patients are essential to ensure adequate outcomes, however, palliative care & psychosocial support post diagnosis and throughout the treatment and survival journey are also critical prognostic factors for survival and for better quality of life. Considering the fact that not only the diagnosis and treatment journey but also the transition from BC patient to survivor causes numerous challenges and uncertainties for women (Kshirsagar, 2020). Usually women diagnosed with BC, develop different coping strategies to help them deal with the multi-factorial unpleasant experiences (Benson et al, 2020).

In this study the researcher wants to explore the psychosocial impact of BC diagnosis and treatment on patients, their coping mechanisms and access to formal and informal support.

1.2 Research problem

According to World Health Organization, BC occurs in every country of the world in women at any age after puberty, but with increasing rates in later life (WHO, 2020). According to the same source, of the end of 2020, there were 7.8 million women alive who were diagnosed with BC in the past 5 years, making it the world's most prevalent cancer (WHO, 2020). In Gaza, yearly, 300-350 women are newly diagnosed with cancer (MoH, 2019).

The magnitude and the risk factors of BC are somewhat known in Gaza, but less is known about the lived experience of women with BC. The non-medical aspects particularly the social support and the mental health and psychological challenges are less investigated in Gaza. The study contributes to the body of knowledge by answering unanswered questions about the key psychosocial challenges facing women with cancer, how they cope with these challenges and to what extent they are supported and by whom. What are the coping options and support opportunities available to them, thus it allows telling unheard experiences of this vulnerable left behind category.

1.3 Justification

Globally, many studies focused on psychosocial challenges and support for women with BC, and their psychosocial needs through the cancer journey. Most commonly reported needs include help with coping with anxiety, depression, and fear of recurrence or progression, help with better communication, and support for relatives and families. In Gaza, this issue hasn't been studied in-depth yet. The importance of this study comes from the point that it focuses on BC which is the most common cancer in Gaza that affects large number of women. As psychosocial challenges are common for all the population in Gaza, it is expected that women with BC will face compounded challenges when experiencing the diagnostic and treatment journey. Not only Gaza is unique in facing high level of stress originating from ongoing occupation, poverty but also gender norms are extremely constraining to women (Abu Hamad, 2020). The favorable psychosocial outcomes are central to broader health and wellbeing (ibid)

In line with health strategy in Gaza, which focuses on non-communicable diseases including cancer, it is expected that this study might contribute towards improving the national understanding of psychosocial challenges facing women with BC in the Gaza Strip and their impact on their lives. The study might be beneficial for many audiences as it might help policy makers in policy and programming for improving the services and interventions needed for such vulnerable cohort. Also, practitioners including the researchers can utilize the findings for addressing the challenges facing women by integrating psychosocial support services within the health care, and encourage women to seek support services. Understanding the psychosocial needs of women with BC is essential for setting relevant interventions. The body of knowledge and the research community can benefit from the study as it might stimulate further research in Gaza and in other places.

1.4 Aim

The aim of this study is to explore the psychosocial challenges, coping strategies, and the support provided to women-survivals of BC-currently registered in the cancer registry in the Gaza Strip in order to provide recommendations that could improve the psychosocial status and wellbeing for women with BC.

1.5 Objectives

- To explore key psychosocial and mental health challenges facing women with BC.
- To appraise coping strategies utilized by women with BC.
- To ascertain formal and informal support accessible to women with BC.
- To recognize variations in challenges, coping strategies and access to social support in reference to sociodemographic characteristics and disease related variables.
- To suggest recommendations for promoting psychosocial wellbeing among women with BC.

1.6 Context of study

1.6.1 Geographical and demographical context

The Gaza Strip is a small area 365 square kilometer (km2), situated on a relatively flat coastal plain, divided into five governorates: North Gaza, Gaza City, Middle area, Khanyunis and Rafah. The estimated population of Gaza Strip was 2.23 million; of whom 1.13 million males and 1.10 million females,). The population density in Palestine by the end of 2022was 899 persons per km2, density is high in the Gaza Strip, where it is 6,019 persons/km2 compared to a lower population density in the West Bank of 569 persons/km2, noting that 66% of the total population of Gaza Strip are refugees (PCBS, 2023).

1.6.2 Socioeconomic context

In Gaza, the Israeli blockade continue to increase vulnerabilities especially for young people, children, women and people with disabilities (United Nations Office for the Coordination of Humanitarian Affairs- OCHA, 2020), this ongoing crisis has also weakened the social networks, increased incidence of psychological and emotional liabilities, and aggravated poor housing and sanitation. It has also led to high poverty, in 2018, 36.4% of Palestinians have a monthly income that is below the extreme poverty line, of whom55.9% are in the Gaza Strip (PCBS, 2018). also, according to OCHA Unemployment in Gaza increased from 43 % in 2018 to almost 47 % in the second quarter of 2019, with youth unemployment at 64 % (OCHA, 2020). PCBS reports indicate that approximately 12 % of households in Palestine are headed by females, 11 % in the Gaza Strip (PCBS, 2023).

1.6.3 Health status and health care system

Palestine performs better than many countries in the Middle East and North Africa region on key indicators, the infant mortality rate is relatively low, at around 14 per 1,000 live births (PCBS, MICS survey 2020); the maternal mortality ratio is less than 15-20 per 100,000 live births; and immunization coverage is at 95% for most vaccines. According to PCBS (2020), health insurance is mostly available (more than 85% of households are medically insured, being higher in Gaza 90%, in Palestine noncommunicable diseases remain the leading cause of mortality, accounting for more than two thirds of all Palestinian deaths in 2018, According to statistics from the Palestinian MoH, perinatal deaths and congenital malformations accounted for more than 10% of deaths; infectious diseases for 8.1%; and transport accidents, assault and falls together accounted for 2.8%.5 (WHO, 2020).

According to United Nations Population Funds report (UNFPA), of all cancers diagnosed among women, more than 69% is BC after the age of 45, 23% between the age of 35 and 44, and 6% between the age of 25 and 34 (UNFPA, 2018).

In 2020 the number of newly diagnosed women with BC was 324, with incidence rate 16/100000 population and 32/100000 women, representing 18% of all cancers and 32.8% of cancers among women, the most common cancer mortality in women was due to BC 14.3% (MoH. 2020).

According to information from the MoH in Gaza, the annual increase of BC cases in the Gaza Strip is 4%, which is in the range comparable to other neighboring countries (UNFPA, 2018).

The Palestinian healthcare system is composed of five main health providers; MOH which is the main healthcare provider and provides primary, secondary, and tertiary health care services (MoH, 2021). The second provider is the United Nation for Relief and Working Agency for Palestinian (UNRWA) which provides health programs focused on comprehensive, preventive, and primary healthcare, services covering medical care, family health, disease control and prevention, and health education. All of these services are provided free of charge for refugees. The third provider is the Non-Governmental Organizations (NGO's) which provides primary, secondary, and tertiary healthcare services for the population. Finally, the private sector, which has hundreds of private settings that are operated mainly by private individuals, medical specialists, dentists, physicians, laboratory technicians and x-ray technicians (MoH, 2021).

1.7 Operational Definitions

Social support is the provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors it could be formal or informal support the perception and actuality that one is cared for, has assistance available from other people, and most popularly, that one is part of a supportive social network.

Formal support is all kinds of support provided by institutions through licensed staff.

Informal support is the support provided outside formal settings Support may arise from any interpersonal relationship in an individual’s social network, involving family members, friends, neighbors, religious institutions, colleagues, caregivers, or support groups.

2 Literature review

2.1 Conceptual framework

According to literature, the experiences of women with BC and their psychosocial status is affected by many factors including sociodemographic characteristics, disease characteristics, coping mechanisms adopted by women in addition to availability of social support.

2.1.1 Sociodemographic characteristics

Sociodemographic variables included age, marital status, Economic status, level of education and employment status

Age, the age of the woman with BC could affect the psychosocial status, coping and the support she receives after BC diagnosis

Marital status, the marital status of the woman either married or single (not married, divorced, widow) is associated with difference in her psychosocial status, coping and the support she receives after BC diagnosis.

Economic status, the economic status and the income could affect the psychosocial status, coping and the support she receives after BC diagnosis

Education level, the level of education the women with BC attained whether she is illiterate or school or university education and to what extent the level of education could affect the psychosocial status, coping and the support she receives after BC diagnosis

Employment status, whether the woman employed or not could affect her psychosocial status, coping and the support she receives after BC diagnosis

2.1.2 Disease related variables

At what stage BC is diagnosed, the type of surgery and the time since diagnosis are main prognostic factors for BC and reflects on the psychosocial status, coping mechanisms and social support for women with BC.

Stage, the most common staging system for breast cancer is the TNM system (T: Tumor size in centimeters, N: Number of nearby lymph nodes with cancer, M: Whether the cancer has metastasized or spread to other organs of the body). For breast cancer there are 5 stages – stage 0 followed by stages 1 to 4. Generally, the higher the stage number, the more the cancer is advanced.in general, patient with more advanced stage of cancer causes a decrease in the ability to cope with illness and body resistance.

Time since diagnosis, the time passed since BC diagnosis, newly diagnosed women differ from those diagnosed since longer time, in the levels of psychological distress, coping mechanisms and social support for women with BC.

Type of treatment, there are different treatment options for women with BC, including surgery, chemotherapy, radiotherapy, hormonal, and biological treatment, most treatment plans includes more than one type of treatment, type and duration of treatment received contributes to differences among women with BC in the levels of psychological distress, coping mechanisms and social support.

Type of surgery, there are different types of surgery for breast cancer, including mastectomy, BCS and lymph node removal, as breast stands for feminity, the type of surgery whether to remove the whole breast or only the malignant lump could affect the levels of psychological distress, coping mechanisms and social support for women with BC.

2.1.3 Psychosocial Challenges

The psychosocial difficulties, which are impairments, activity limitations and participation restrictions that affects health state. Generally, cancer diagnosis can induce psychosocial problems which are affected by the sociodemographic characters of the women and their disease characteristics, the most commonly known problems and challenges are related not only to the disease diagnosis but also to the treatment modalities used, the accessibility to services, the need to referral in addition to gender and social associated challenges resulting in:

Depression, prevalence and level of depression in relation to sociodemographic characters of the women and their disease characteristics.

Anxiety, prevalence and level of anxiety in relation to sociodemographic characters of the women and their disease characteristics.

Stress, prevalence and level of anxiety in relation to sociodemographic characters of the women and their disease characteristics.

2.1.4 Social Support

the support the woman with BC receives in her journey with cancer and to what extent its affected by sociodemographic characteristics and disease characteristics, two types of support are present:

Informal support, interpersonal relationships

Formal support, services may be provided by the health-care professionals involved in BC care, such as nurses, primary care physicians, surgeons, and oncologists, or by professionals with special training in social work, psychology, psychiatry.

2.1.5 Coping Strategies

There are three types of coping,

Problem-focused Coping, the individual perceives that the stressor is something about which action can be taken

Emotion-focused Coping, the individual is focused on the emotion related to the stressful situation rather than the situation

Avoidance Coping, Avoidance activities involve, “procrastination, passivity, or inaction, and dependency.”.

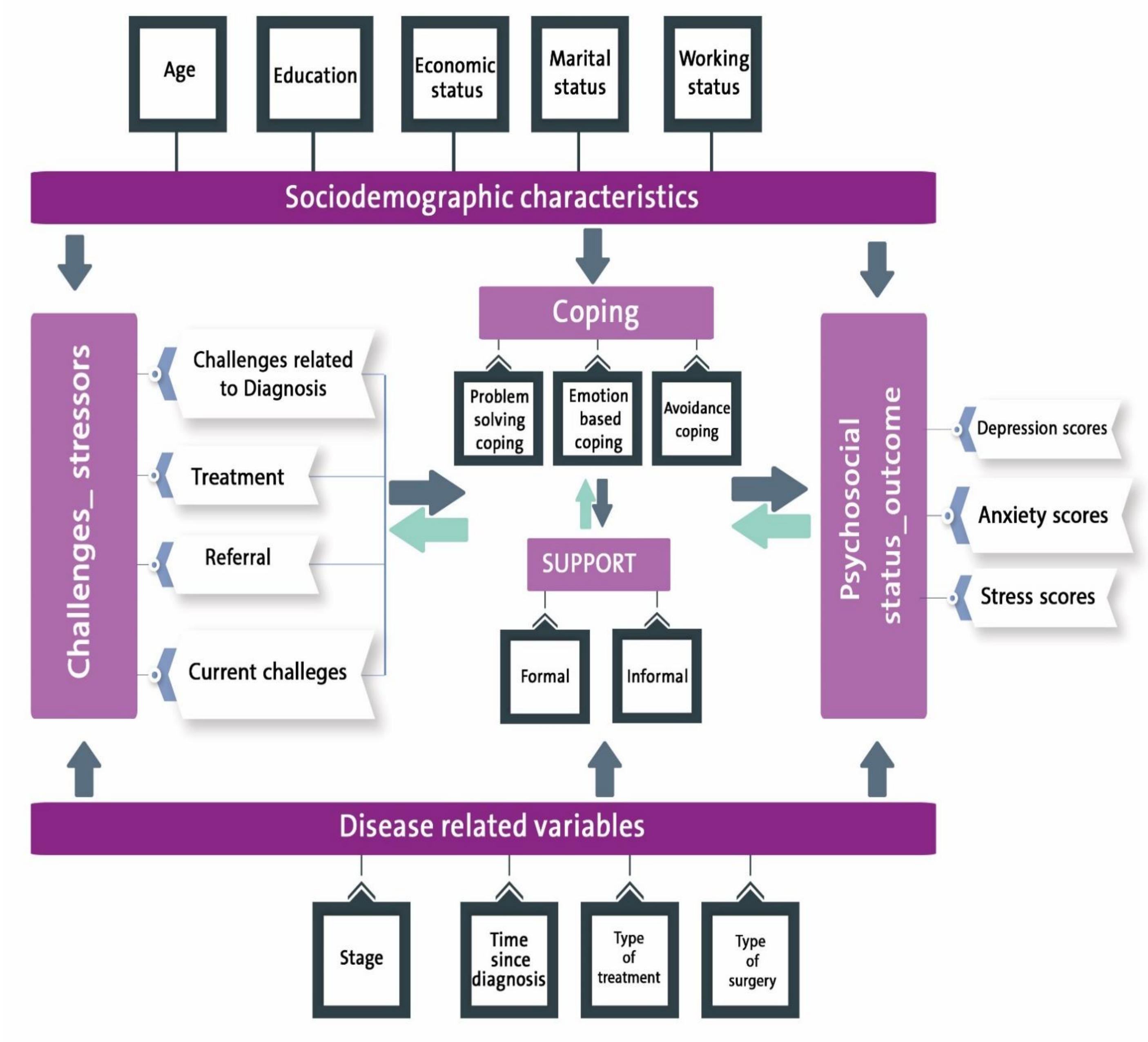

Figure (2.1) Conceptual framework

2.2 Literature

2.2.1 Breast Cancer

BC is a group of diseases in which cells in breast tissue change and divide uncontrolled, typically resulting in a lump (WHO, 2020). BC arises in the lining cells (epithelium) of the ducts (85%) or lobules (15%) in the glandular tissue of the breast. Initially, the cancerous growth is confined to the duct or lobule ("in situ") where it generally causes no symptoms and has minimal potential for spread (metastasis). Over time, these in situ (stage 0) cancers may progress and invade the surrounding breast tissue (invasive BC) then spread to the nearby lymph nodes (regional metastasis) or to other organs in the body (distant metastasis). If a woman dies from BC, it is because of widespread metastasis (WHO, 2020). Treatment options for cancer may have significant side effects, affecting the physical well-being of the person and reducing the quality of life, these side effects include nausea and vomiting, hormonal changes, energy loss, pain, and fatigue, which negatively influence patients' daily lives (Geyikci et al, 2018).

2.2.2 Breast Cancer risk factors

Approximately half of BCs develop in women who have no identifiable BC risk factor other than gender (female) and age (over 40 years). Certain factors increase the risk of BC including increasing age, obesity, harmful use of alcohol, family history of BC, history of radiation exposure, reproductive history (such as age that menstrual periods began and age at first pregnancy), tobacco use and postmenopausal hormone therapy, Female gender is the strongest BC risk factor. Approximately 0.5-1% of BCs occur in men. Family history of BC increases the risk of BC, but the majority of women diagnosed with BC do not have a known family history of the disease. Lack of a known family history does not necessarily mean that a woman is at reduced risk. Also, Certain inherited "high penetrance" gene mutations greatly increase BC risk, the most dominant being mutations in the genes BRCA1, BRCA2 and PALB-2 (WHO, 2020).

2.2.3 Breast Cancer types and stages

There are several types of BC, and they're broken into two main categories: "invasive" and "noninvasive," or in situ., While invasive cancer has spread from the breast ducts or glands to other parts of the breast, noninvasive cancer has not spread from the original tissue. The most common types of BC, include:

Ductal carcinoma in situ (DCIS) is a noninvasive condition. where the cancer cells are confined to the ducts in the breast and haven’t invaded the surrounding breast tissue.

Lobular carcinoma in situ (LCIS) is cancer that grows in the milk-producing glands of breast. Like DCIS, the cancer cells haven’t invaded the surrounding tissue.

Invasive ductal carcinoma (IDC) is the most common type of BC. This type of BC begins in breast’s milk ducts and then invades nearby tissue in the breast. Once the BC has spread to the tissue outside milk ducts, it can begin to spread to other nearby organs and tissue.

Invasive lobular carcinoma (ILC) first develops in breast’s lobules and has invaded nearby tissue. Other, less common types of BC include:

Paget disease of the nipple. This type of BC begins in the ducts of the nipple, but as it grows, it begins to affect the skin and areola of the nipple.

Phyllodes tumor. This very rare type of BC grows in the connective tissue of the breast. Most of these tumors are benign, but some are cancerous.

Angiosarcoma. This is cancer that grows on the blood vessels or lymph vessels in the breast (Herndon, 2021).

Knowing the stage of BC helps plan treatment. BC stage is the most important factor for prognosis. In general, the earlier the stage, the better the prognosis will be (Shehadeh, 2017). There’re different staging systems, the most common is TNM staging system, that classifies the stages of BC from 0 to IV as following: Stage 0 is a pre-cancerous, either DCIS or LCIS. Stage I Invasive carcinoma 2 cm or less in size (including carcinoma in situ with micro invasion) without nodal involvement and no distance metastasis, stage II Invasive carcinoma < 5 cm without nodal involvement but with movable axillary nodes and no distance metastasis, stage III Invasive carcinoma < 5 cm in size with nodal involvement and fixed axillary nodes, and Stage IV Any form of BC with distance metastasis which has a less favorable prognosis (WHO, 2006). Also, one of the main staging systems for cancer is the American Joint Committee on Cancer (AJCC) staging system, typically used in clinical settings, that was recently updated (effective January 2018) to add prognostic stage groups. AJCC anatomic stage is based on extent of the cancer (in the breast, regional lymph nodes, and distant spread), while prognostic stage also includes information on the presence of estrogen receptors (ER), progesterone receptors (PR), levels HER2(a growth-promoting protein) and/or extra copies of the HER2 gene (HER2+/HER2-), and grade (reflecting how closely the cancer's microscopic appearance looks like normal breast tissue) (ACS, 2020).

2.2.4 Breast Cancer treatment

The most effective treatment approach depends on several factors, including: the type and stage of the cancer, the sensitivity to hormones, the person's age, overall health, menopausal status, and preferences, and the risks and benefits associated with each option (Felman, 2021). According to ACS treatment decisions are made jointly by the patient and the physician after consideration of these factors. BC treatment includes Surgery, radiotherapy, and Systemic therapy (Chemotherapy, Hormonal Therapy, Targeted Therapy, Immunotherapy) (ACS, 2019). Systemic therapies are drugs that travel through the bloodstream, potentially affecting all parts of the body, and work using different mechanisms. For example, chemotherapy drugs generally attack cells that grow quickly. Hormonal therapy works by either blocking or decreasing the level of the body's natural hormones, which sometimes act to promote cancer growth. Targeted therapies work by attacking specific proteins on cancer cells (or nearby cells) that normally help them grow. Immunotherapy stimulates the patient's immune system to attack the cancer (ibid).

2.2.4.1 Surgery

BC surgery primary goals are to remove the cancer and determine its stage. Surgical treatment involves mastectomy (surgical removal of the entire breast) or breast-conserving surgery (BCS). With BCS (also known as partial mastectomy or lumpectomy), only cancerous tissue, plus a rim of normal tissue (tumor margin), is removed. BCS is generally not an option in those with high tumor-to-breast ratio, multiple tumors within the same breast, or inflammatory or locally advanced cancers (ACS, 2020). In the past, all breast cancers were treated surgically by mastectomy. When cancers are large, mastectomy may still be required. Today, the majority of BC can be treated with lumpectomy. In these cases, radiation therapy to the breast is generally required to minimize the chances of recurrence in the breast. Lymph nodes are removed at the time of cancer surgery for invasive cancers. Complete removal of the lymph node bed under the arm (complete axillary dissection) in the past was thought to be necessary to prevent the spread of cancer. A smaller lymph node procedure called "sentinel node biopsy" is now preferred as it has fewer complications. It uses dye and/or a radioactive tracer to find the first few lymph nodes to which cancer could spread from the breast (WHO, 2021).

2.2.4.2 Radiotherapy

Radiation therapy is often used after surgery to destroy cancer cells remaining in the breast, chest wall, or underarm area and reduce the risk of recurrence (ACS, 2020). Radiotherapy is recommended for all patients with BC who undergo BCS, and in certain subtypes of tumors larger than 20 mm, it has been shown that postoperative radiotherapy administered after breast-conserving therapy reduced the relative risk of recurrence up to 50% (Shehadeh et al,2017). Radiation therapy may be administered as external beam radiation, internal radiation therapy (brachytherapy), or a combination of both. The method depends on the type, stage, and location of the tumor, as well as patient characteristics and doctor and patient preferences. External beam radiation is the standard type of radiation, whereby radiation from a machine outside the body is focused on the area affected by cancer. Brachytherapy uses a radioactive source placed in catheters or other devices that are put into the cavity left after BCS and is sometimes an option for patients with early-stage breast cancers. Accumulating evidence suggests that radiation therapy given at higher doses over fewer days (known as accelerated partial breast irradiation) may be as effective as conventional therapy (Hickey, 2016). Intra-operative radiation therapy, in which a single fraction of radiation is given into the cavity left by tumor removal during BCS, is also sometimes an option (ACS, 2020).

2.2.4.3 Systemic therapy

Most women who are treated with chemotherapy receive it after surgery, but there’s increase in the use of neoadjuvant chemotherapy, particularly among patients with HER2+ and triple negative breast cancers (ACS, 2020). The benefit of chemotherapy is dependent on multiple factors, including the size of the tumor and the number of lymph nodes involved, as well as HR and HER2 status. Triple negative and HER2+ breast cancers tend to be more sensitive to chemotherapy than HR+ tumors (Cortazar, 2014). According to the ACS (2020) when systemic therapy is given to patients before surgery, it is called neoadjuvant or preoperative therapy, for larger breast tumors, its often used to shrink the tumor enough to make surgical removal easier and less extensive. While when it’s given after surgery is called adjuvant therapy, its use based on the biological subtyping of the cancers. About 83% of breast cancers are hormone receptors positive (HR+), and can be treated with hormonal therapy to block the effects of estrogen on the growth of breast cancer cells. These drugs are different than menopausal hormone therapies, which actually increase hormone levels (ACS, 2020).

According to WHO (2021), Cancer that express the estrogen receptor (ER) and/or progesterone receptor (PR) are likely to respond to hormone therapies such as tamoxifen or aromatase inhibitors. These medicines are taken orally for 5-10 years, and reduce the chance of recurrence of these “hormone-positive” cancers by nearly half. Endocrine therapies can cause symptoms of menopause but are generally well tolerated (WHO, 2021). For premenopausal women, tamoxifen for up to 10 years is standard treatment; however, the combination of ovarian suppression and either tamoxifen or an aromatase inhibitor is recommended for those women with a high risk of recurrence (Burstein et al,2019). For postmenopausal women, aromatase inhibitors (i.e., letrozole, anastrozole, and exemestane) are the preferred hormonal treatment. The decision to treat with an aromatase inhibitor beyond 5 years is individualized based on patient factors and the expected benefit from the reduction in risk of subsequent breast cancers (Wheeler et al,2019). Immunotherapy drugs are an emerging area of BC treatment. These drugs stimulate a person’s own immune system to recognize and destroy cancer cells more effectively. Checkpoint inhibitors are one type of immunotherapy drug that has been identified to treat some breast cancers, particularly the triple negative subtype. Drugs that target these checkpoints help to restore the immune response against BC cells (ACS, 2020).

2.2.5 Psychosocial challenges and needs of BC Patients

A diagnosis of cancer is a very stressful event for the patients and their families. Patients, partners and other family members can suffer from clinical levels of depression and severe levels of anxiety and stress reactions (Clarke, 2004), the degree of psychological reaction to BC is closely intertwined with women`s feelings about her breast (Rizalar, 2014). psychosocial challenges in BC patients is related to the essence of the breasts in a woman’s body image or femininity, sexuality, and motherhood. Additional concerns include physical appearance and disfigurement after treatment, uncertainty regarding recurrence in the future, periods of anxiety and depression, difficulty maintaining hope, fear of death, as well as loss of self-esteem, women often had unpleasant thoughts about their illness, including fear of recurrence of the disease and were anxious and depressed. Sometimes, women felt vulnerable and had physical symptoms such as fatigue, burnout, and trouble with sleeping, and partner communication issues (Benson et al.2020).

Each woman who is diagnosed with BC reacts individually. Most women perceive psychological distress after diagnosis. In general, the psychosocial impact of the disease decreases over time and only a few develop psychiatric problems (Arving, 2007). The suffer caused by surgery, chemotherapy, radiotherapy and hormonal therapy, as well as other problems linked to family and business life, and they are uncertain about future, all of which have negative influences on their physical and psychosocial health (Rizalar et al 2014). In several studies on the psychology of patients who underwent surgical procedures because of BC, the psychological dysfunction rate was found to range from 30 to 47% without any significant difference between those who underwent BCS and those who underwent modified radical mastectomy (MRM) (Izci et al. 2016).

Psychosocial needs of women with BC change over the cancer care trajectory, so that reassessment is necessary during and after treatment or during the recovery phase. The assessment must be sensitive to the changes in psychosocial needs. Survivorship issues like distress related to body image, cognitive function, sexual problems, and lymphedema may only emerge following treatment. Assessments must take into consideration the context of a woman's age and social situation. Family, career, sexual, and reproductive issues may be at the forefront of concerns for younger women. Women in midlife may, in addition, have concerns related to menopause, while older women may have distinct concerns regarding other chronic health conditions (Hewitt, et al. 2004). According to Almuhtaseb et al (2021), Despite these challenges combined with the high incidence and mortality rates of BC in the Gaza Strip, little attention has been given to the issue of psychosocial challenges facing women and how they cope with them (Almuhtaseb et al, 2021).

2.2.5.1 Challenges during diagnosis

A good outcome in BC treatment is dependent on an early and accurate diagnosis. The main methods for early diagnosis are BCE by experienced physician, mammogram, and Ultrasound. Following clinical suspicion, the diagnosis needs to be confirmed by histopathological and immunohistochemical analysis of a tissue biopsy. Once the diagnosis is confirmed, a multidisciplinary (MDT) team should discuss the ideal treatment which needs to be initiated quickly (Buzaid et al, 2020). When women had a breast abnormality and decide to visit a doctor, the majority of women prefer private doctors (gynecologists, oncologist or surgeons), who either refer them to governmental oncology clinics or private or NGO health facilities for further confirmation. Women referred to governmental services often reported delay in receiving confirmation, particularly in getting appointments for MRI scans and getting histopathology results as there are no systematic procedures to link primary healthcare facilities with the follow up of breast cancer patients (UNFPA, 2018).

2.2.5.2 Challenges during treatment

BC treatment involves mastectomy that has side effects as scaring, weight gain, and cosmetic disfigurement, the change in body image often leads to dissatisfaction and bodily shame and low self-esteem. Also, Bodily disfigurement and sexual dysfunction have a major influence on psychological as physiological aspects of BC survivors. A report by UNFPA (2018) highlighted the lack of some hormonal and pain relief drugs in some governmental hospitals, which obliges them to pay such costs themselves (UNFPA, 2018). The same source mentioned that radiation therapy, which is crucial in cancer therapy, is completely unavailable in the WB and the Gaza Strip, except for the radiotherapy services provided by Augusta Victoria Hospital in East Jerusalem. At Augusta Victoria, two linear accelerators are available to serve the oncologic needs (1/1,000,000 inhabitants) of Palestinians referred from the WB and Gaza (UNFPA, 2018). The hormonal therapies have shown a significant reduction in the rate of mortality and recurrence rate by 30% and 31% respectively. However, the most common side effects of these therapies are reported as vaginal dryness and hot flashes. In addition, it is also associated with the cessation of the menstrual cycle (Rahool et al,2021).

2.2.5.3 Challenges during referral

Referral of Gaza cancer patients outside the Gaza Strip is mainly due to the lack of needed radiotherapy and specialized chemotherapies in the MoH hospitals. Access to treatment outside the Gaza Strip is, however, limited to certain cases and it involves complex administrative processes that deprive around 20% of patients from accessing healthcare in specialized hospitals in Jerusalem or the WB (UNFPA, 2018). According to the same source its estimated that governmental hospitals lack approximately 100 of 522 registered essential drugs. For example, Trastuzumab, known as Herceptin, which is a drug used in the treatment of BC is often in shortage. Consequently, around 15-20 of breast cancer cases a week are being referred to non-MoH hospitals for treatment. Other drugs that cause referral of cases include Rituximab, which is used in the treatment of some autoimmune diseases and cancers, and methotrexate, which interferes with the abnormal growth of certain body cells; used in the treatment of cancers and some rheumatologic diseases. Due to the unique situation of Palestine being occupied and for Gaza being siged , there’s shortage of some systemic therapies, in addition to unavailability of radiotherapy Patients usually referred from Gaza to Jerusalem, women referred from Gaza face various challenges starting from obtaining permits from the Israeli occupation to leave the Strip. Many are obliged to wait for months to receive their permits, which consequently influences their health situation and ability to start or continue treatment (UNFPA, 2018). WHO report indicates that one-fourth of patients who needed permits were seeking medical treatment for cancer. Cancer patients were the most frequently delayed. Furthermore, additional security checks have been imposed patients' companions from Gaza up to the age of 55 years that need to undergo intensive security investigation in order to receive their permits. This situation consequently increases the rate of denials and processing times (WHO, 2016).

2.2.5.4 Posttreatment challenges

literature has shown that women with BC who have undergone chemotherapy, radiotherapy, biological therapy or hormonal therapy, surgery, and reconstructive surgery may face numerous psychosocial and physical issues and as well as a compromised overall quality of life (Rahool et al. 2021). Psychological problems such as sadness, anxiety, and depression owing to therapy, recurrence, and bodily disfigurement stay constant after diagnosis and cure. Various studies have shown that women with BC who have received treatment successfully with adjuvant therapy (chemotherapy, hormonal therapy, targeted drug therapy, and radiation therapy) might experience multiple physical and psychosocial problems (Sapkota et al, 2016).

Physiotherapy and psychosocial support are essential post BC treatment. Both services are not covered in the governmental health insurance, nor are they provided in a systematic manner for women with BC. Survivors of BC, especially those undergoing surgical treatment suffer from physical and psychological problems from the complications associated with removal of one or more breasts including sever edema caused by removal of the lymphatic nodes and drainage system, loss of hair due to chemotherapy (UNFPA, 2018).

2.2.6 Psychosocial outcomes

Having BC or receiving its treatment has been seen as traumatic experience for women due to its impacts on their self-image and sexual relationship, and may lead to psychological reactions such as denial, anger or intense fear toward their disease and treatment process, also many of BC patients have psychic morbidities such as depression and anxiety (Tsaras et al, 2018). According to International classification of diseases (ICD10) diagnostic criteria in cancer patients with a prognosis of six months or less, prevalence of depression was 22%. Also, studies focusing on psychological distress during the clinical course of the disease showed a significant increase in psychological distress during the last two to three months before death and especially in the last month of life(ibid). Psychosocial distress is understood as a continuum ranging from normal distress levels such as fear, grief etc. up to high levels of distress and psychiatric comorbidity (Weis, 2015). Al-Azri et al. documented that in lower-income countries women with BC are at an increased risk of physical and psychological morbidities after diagnosis, such as distress, anxiety, depression and concerns relating to children and family burden, body image and sexual and marital relations.

Depression and anxiety are the two most common psychiatric co-morbidities encountered in BC patients. BC patient may experience depression and/or anxiety at any stage of their illness from pre-diagnosis to the terminal phase of the illness. Studies in the Western countries have shown that the prevalence of depression ranges from 1% to 56%, whereas the prevalence of depression from Asian studies is between 12.5%and 31% (Kshirsagar, 2020). Another researcher states that after a cancer diagnosis up to third of patients will develop a major depressive disorder, generalized anxiety disorder or adjustment disorder, representing an increased relative risk of three times the prevalence in the general population. At the less severe end of the morbidity spectrum, all cancer patients experience some distress (Pascoe et al, 2004). A recent study in Egypt shows that the prevalence of depressive symptoms, anxiety symptoms, and perceived stress among women with BD were 68.6%, 73.3%, and 78.1% respectively (Alagizy, 2020). Risk factors for anxiety and depression in women with BC include, a past history of anxiety or depressive disorder, younger age at diagnosis, poor social support, burdensome somatic symptoms, currently undergoing active cancer treatment, specific drug treatments (Beatty and Kissane, 2017).

2.2.6.1 Anxiety

Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure. People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. They may also have physical symptoms such as sweating, trembling, dizziness or a rapid heartbeat (American psychological association APA, 2021). another definition of anxiety, according to the Diagnostic and Statistical Manual for Mental Disorders (DSM-V), excessive worry and apprehensive expectations, occurring more days than not for at least 6 months, about a number of events or activities, such as work or school performance; therefore, it is a common symptom in connection with cancer (DSM-V, 2022). It is often detected in cancer patients during cancer screening and diagnosis, and it may increase as the disease progresses or as treatment becomes more aggressive. About 25 % – 48 % of all cancer patients experience significant anxiety symptoms, whereas 2 % – 14 % of the patients with advanced disease meet the criteria for anxiety disorder (Lilius,2010). It is a normal reaction to a cancer diagnosis, as When people feel threatened, their stress level naturally goes up. Cancer can be very dangerous and so many patients become anxious.

Symptoms include shaking, fast or irregular heartbeat, and extreme levels of worry. Anxiety can occur at any and all times during cancer screening, diagnosis, and treatment. About 48% of cancer patients report high levels of anxiety and 18% experience anxiety disorders, Anxiety is less common when patients are able to freely communicate information to their family members.

2.2.6.2 Depression

Depression is more than just sadness. People with depression may experience a lack of interest and pleasure in daily activities, significant weight loss or gain, insomnia or excessive sleeping, lack of energy, inability to concentrate, feelings of worthlessness or excessive guilt and recurrent thoughts of death or suicide. It is the most common mental disorder. Fortunately, depression is treatable. A combination of therapy and antidepressant medication can help ensure recovery (APA, 2021). It is one of the most common comorbidities of many chronic medical diseases including cancer and cardiovascular, metabolic, inflammatory and neurological disorders. Indeed, the prevalence of depression in these patients is often substantially higher than in the general population, and depression accounts for a substantial part of the psychosocial burden of these disorders (Gold et al, 2020). According to Somerset et al (2004), major depression and depressive symptoms, although commonly encountered in patients with medical illnesses, are frequently underdiagnosed and undertreated in women with BC. Alagizy et al, (2020) results showed that the prevalence of psychological distress among BC patients is high, and they are at higher risk of developing severe anxiety and depression. Shehadeh et al (2017) state that anxiety after cancer diagnosis is not necessarily to be normal, understanding the nature of the anxiety in cancer patient populations is important because anxiety is troublesome the psychological wellbeing of the patients. Ayalew et al (2022), highlights the need for continuous screening for symptoms of anxiety and depression as a necessary approach for good cancer care

2.2.6.3 Stress

Stress is a normal reaction to everyday pressures, but can become unhealthy when it upsets your day-to-day functioning. Stress involves changes affecting nearly every system of the body, influencing how people feel and behave. By causing mind–body changes, stress contributes directly to psychological and physiological disorder and affects mental and physical health, reducing quality of life (APA, 2021). Diagnosis and treatment of BC can be a very stressful issue during and after the treatment, despite improvements in the early detection and medical treatments, a diagnosis of BC continues to elicit greater stress on women than any other medical diagnosis, regardless of the prognosis (Alagizy et al,2020). According to DSM-IV, life threatening events, such as cancer diagnosis has been recognized as a trigger for post-traumatic stress disorder (PTSD) (Shehadeh et al,2017). Stress appears to be an important factor affecting the quality of life of both patients and their caregivers (Gosain et al,2020).

2.2.6.4 Sexual dysfunction

The breast is a highly important organ because it symbolizes femininity and sexuality, surgical removal because of cancer poses a threat to senses of sexuality, motherhood, and attraction, and the patient’s body image (Tavoli et al, 2007). BC may leads to sexual dysfunction more than other cancer types because mastectomy is a common procedure (Robinson et al, 2009)., It is also reported that sexual life of patients with BC is negatively affected by surgical intervention, radiotherapy, chemotherapy, and/or hormonal treatment through deterioration of physical well-beings (İzci et al, 2016). Receiving a BC diagnosis and undergoing associated treatments including long-term therapy can impair sexual function via a number of mechanisms, including disrupting ovarian function, body image, intimacy, and relationships (Benson, 2020).

2.2.7 Coping Strategies

Women diagnosed with BC develop coping strategies to deal with the multifactorial unpleasant experience of a psychological, social, and spiritual nature of their new situation, Coping is defined as current cognitive and/or behavioral efforts adopted to deal with specific external and/or internal stresses or anxieties that are valued as challenges and beyond the control and resources of the person (Benson et al.2020). According to Johnson ‘s stress-coping model, coping strategies are efforts directed toward managing or dealing with a stressor. Depending upon how effectively individuals cope with their stressors, they may experience either desired emotional states of acceptance, peace, and equanimity, or undesired emotional consequences such as depression, anxiety, and anger. According to Benson coping involves persistently changing cognitive and behavioral efforts in order to manage specific external and/or internal demands, studies shows that most adopted active coping strategy was religious coping. most strategies are adaptive, favorable, and problem-focused, and individuals accept and actively attempt to deal with their situation, others are avoidant coping strategies among women. (Alagizy, 2020). Coping strategies can influence treatment outcomes and survival rates of women with BC, and coping is accepted to be one of the core concepts in the context of quality of life (Hajian et al, 2017).

A diagnosis of BC regardless of the stage can be stressful, impact multiple spheres of life, and disrupt physical status, emotional and spiritual well-being, and personal relationships for the patient and family. In order to adapt, the patient employ different coping mechanisms. Individuals with terminal illness who utilize coping strategies have better quality of life compared to those who do not (Shehadeh et al, 2017).

Features such as age, sex, personality, and variables that affect the prognosis of disease and response to treatment such as symptoms that give rise to loss of ability, location of cancer, pain, the degree to which it reduces the quality of life, life purposes, career, marriage, and family, and environmental conditions such as social support, the existence of someone who is perceived as helpful in an emotional sense, and socio-economic status have several impacts on the ability to cope with the diagnosis of cancer (İzci et al. 2016). A review of literature suggests that the adjustment of patients with BC is influenced by self-esteem, social support, social stress, psychological support, emotional problems, stage of illness, type of operation, symptoms, physical fitness, perceptions of illness, coping methods and relations with health staff (Rizalar et al 2014)

Emotional adjustment involves the use of defense mechanisms, previous experiences and emotion-focused coping mechanisms. On the other hand, sociocultural adjustment contains relationships with family, friends and society, environmental changes and fast-growing technology as well as the norms, traditions, customs and pressures of the society one lives in. One needs to have accurate knowledge so that she can cope with things and understand behaviors. Psychosocial adjustment to illness is influenced by all factors associated with illness and treatment. It has been reported that the psychosocial adjustment of patients with BC is affected by such factors as self-esteem, social stress, social support, psychological support, sense of control, emotional problems, stage of illness, type of operation, symptoms, physical fitness, perceptions of illness, coping methods, relationships with health staff and cooperation (Rizalar et al 2014).

2.2.7.1 Problem solving coping

A stress-management strategy in which a person directly confronts a stressor in an attempt to decrease or eliminate it. This may involve generating possible solutions to a problem, confronting others who are responsible for or otherwise associated with the stressor, and other forms of instrumental action (APA ,2021). Khalili et al (2013) mentioned that coping theorists often emphasized on the benefits of problem-focused coping, such as acceptance, positive reframing and turning to religion. Some studies show that increase religious coping decreases depression, anxiety and increases adaptation the illness process, life satisfactory and quality of life (Khalili, et al,2013)

2.2.7.2 Emotion-focused coping

A stress-management strategy in which a person focuses on regulating his or her negative emotional reactions to a stressor, rather than taking actions to change the stressor itself, the individual tries to control feelings using a variety of cognitive and behavioral tools, including meditation and other relaxation techniques, prayer, positive reframing, wishful thinking and other avoidance techniques, self-blame, seeking social support (or conversely engaging in social withdrawal), and talking with others (including mental health care professionals). It has been proposed that emotion-focused coping is used primarily when a person appraises a stressor as beyond his or her capacity to change (APA ,2021). According to Mehrabi et al (2015), in the early stages after cancer diagnosis, patients tend to practice emotion focused coping strategies (Mehrabi et al, 2015). Literatures also revealed that coping through emotion–focused strategies may be useful in short-term and uncontrollable situation but in chronic and persistent stressful events these strategies may have negative mental and physical health outcomes (Taylor et al, 2007).

2.2.7.3 Avoidance coping

any strategy for managing a stressful situation in which a person does not address the problem directly but instead disengages from the situation and averts attention from it. In other words, the individual turns away from the processing of threatening information., avoidant strategies may provide some benefit by reducing stress and preventing anxiety from becoming overwhelming (APA ,2021). The same source define avoidance coping as a maladaptive form of coping in which a person changes their behavior to avoid thinking about, feeling, or doing difficult things(ibid). it’s considered to be maladaptive (or unhealthy) because it often exacerbates stress without helping a person deal with the things that are causing them stress. Hack et al,2004 study results showed that patients who uses avoidance coping strategies were at significant risk for poor long-term psychological adjustment (Hack et al, 2004).

According to literature many cancer patients rely on their social support as an external source of strength to cope with the illness and life changes (Hsieh et al, 2020). support is defined generally as information, advice, or tangible aid provided through contact with one's social network that has beneficial effects on the recipient (Chou et al, 2012).

Social support and well-being were demonstrated as a significant prognostic factor for BC outcomes (Huang et al, 2013). also, social support, often referred to as help provided by people around the stressed or individual in difficult situation, aids to protect the wellbeing by alleviating or compensating for the damages caused by stress. It is stated that the social support provided by family and friends is very important in the psychosocial adjustment of the patients, for women to recover, they may receive informal help from family and friends, but also formal help from practitioners. (Çürük et al, 2020).

First definitions of social support emerged in the 1970's. While researchers' concepts varied, they still shared the notion that social relationships could reduce stress and consequently have a positive effect on a person's health (Vangelisti, 2009). Cancer diagnosis has deep effects not only on psychological state but also on the cognitive, emotional, spiritual and social features of the individual. Both the cancer diagnosis and the treatment process change self-esteem, the perception of the body, the quality of life, the daily life activities, the sexual life, personal and social roles, the family and the environment of the patient and in response to that the need for social support is increased (Çürük et al, 2020).

One of the factors in psychosocial adjustment to illness, social support is commonly regarded as help provided for someone under stress or in a difficult situation by people around. When they feel too incompetent or burnout to cope with things, individuals get support from their family or people they deem important. It is acknowledged that social support has a direct positive effect on one's physical and emotional health by satisfying basic social requirements such as love, affection, self-esteem and belonging to a group as well as proving to be significant help with coping with the facts of life (Ikeda et al., 2013). Cinar et al. (2009) maintains that social support is useful for patients with cancer and emotional support from family members is positively correlated with physical and psychological adjustment to cancer. Women with BC who are in support groups have significantly better psychological well-being, more posttraumatic growth, better self-image, better sexual functioning and higher sexual satisfaction, better coping and communication, and fewer physical symptoms associated with BC (Benson et al.2020).

The need for fast and accurate diagnosis and timely treatment is vital, but attention to psychosocial needs and quality of life is equally important, forming an essential part of modern cancer care. An important aspect of psychosocial care and quality of life is social support which includes formal and informal relationships (Ogce et al, 2007). Formal and informal help are key factors that promote recovery (Lauzier et al, 2021). The ACS developed a program (Reach to Recovery program) that connects trained volunteers with BC patients to provide peer-to-peer support on everything from practical and emotional issues to helping them cope with their disease, treatment, and long-term survivorship issues (ACS,2020).

Recent study in WB shows that members of the immediate family, husbands in particular, are reported to be the most supportive social sources (Almuhtaseb et al, 2021), the same study also suggests that given the limitations that characterize access to cancer care in Palestine and the collectivistic values of the society, women with BC seem to rely mainly on their husbands to handle emotional, functional and informational needs. another study shows that individuals living in Middle Eastern countries would seek help for mental health problems first and foremost from friends and family (Al Ali et al.2017).

2.2.8 Difference by sociodemographic characteristics and disease related variables

Many studies have searched the relationship between socio-demographic factors and QOL among BC women. However, the results have been inconclusive (Konieczny et al, 2020). Cui et al. (2004) identified that marital status, income, and education level were all associated with QOL ratings among Chinese women with breast cancer. another study identified that employment status and income were associated with QOL, whereas marital status and education level had a null association (Ogce et al, 2007). most literature support that younger patients had significantly higher levels of anxiety and depression than the elderly and was attributed to the fact that BC may have more destructive effects on sexuality, motherhood, and body image with greater losses in younger women than in the elderly (Geyikci et al, 2018). some studies found the overall quality of life scores were higher in the 40 and below aged comparing to the 50 and above aged group (Ogce et al, 2007).While Geyikci, et al, found that women in the age range of 35-44 years had a higher mean depression score than patient aged 55-65 years, it is emphasized that as the education level of the individual increases, the understanding of health will improve, individuals will take more responsibility for matters related to their health, they will learn more and use more efficient strategies to manage disease symptoms, so that they will deal with the problems caused by the disease more easily, and that their adjustment will be better (Çürük, 2020).

Recently Baldelli, et al. (2022), found that for women with BC undergoing conservative surgery experience less stress, probably because the idea of preserving most of the breast has less impact on breast-specific concerns, such as feminity and attractiveness (Baldelli, ET AL 2022). Regarding prevalence of depression and anxiety among BC women, Tasaras et al (2018) study results showed that less educated women dealing with BC was more likely to experience depression and anxiety symptoms. Same source found that women who were diagnosed in stage IV of BC were in a high risk for depression and anxiety compered to women with stage I. Benson et al (2020) found that age, marital status, and employment status were associated with coping strategies adopted by women with BC (Benson et al, 2020). A report by UNFPA (2018) mentioned that the majority of screening, treatment and post-treatment services for BC patients in Palestine are located in cities. Women in rural areas are more inclined to travel to access these services due to social and economic barriers (UNFPA, 2018).

Chapter three

3 Methodology

This chapter illustrates the methodology used in this thesis, including; the study design, study period, study population and sampling methods, eligibility criteria, exclusion criteria, study instruments, scientific rigor, also the pilot study and the modifications done based on it. in addition to the data collection, data entry and analysis methods, ethical consideration and limitations of the study.

3.1 Study Design

The study design is a cross sectional design with triangulation between quantitative and qualitative methods. The cross-sectional design consumes less time than other longitudinal studies. Also, it allows the researcher to compare many different variables at the same time.

The quantitative part is conducted through a survey with women with BC to explore their experiences with BC. The qualitative part looked in-depth where the experiences of women with BC are explored through focus group discussions (FGDs).

3.2 Study population

The study target population is women with a confirmed diagnosis of BC in the last 5 years, who are living in the Gaza Strip. According to MoH annual reports, their number is 1583 women (MoH, 2020).

3.3 Inclusion criteria

1. Women with BC aged 25 to 75 years old.
2. Women with BC who have files in any of the main hospitals or organizations for cancer treatment in the Gaza Strip

3. Six months to five years post BC diagnosis-interval since the diagnosis took place at least six months ago.

3.4 Study settings

The study was conducted in the Gaza Strip, in the main hospitals providing cancer services particularly Turkish Hospital, also in non-governmental organizations (NGOs), which provide services to women with BC, Smile of Hope association (Basmat Amal), and Culture and Free Thought Association (CFTA).

3.5 Study period

The study period was 2 years, the research proposal has been summited to and defended in March 2022, the proposal included information about the targeted population of the research, the design used, data collection and data analysis tools. When approved the researcher prepared the required tools and consulting ten experts for the validation and finalization of the tools. The tools were ready in October 2022, a pilot study was conducted. Then the actual quantitative data collection started in November 2022 as the researcher trained three data collectors and agreed on the places for collecting data including Turkish hospital, smile of hope organization and CFTA, women were invited to voluntary participate in the research. The quantitative data collection finished in February 2023.

Analysis of quantitative data was done between march and June 2023. Compiling results and reporting started before and in parallel to qualitative data collection. where four FDGs were done with 25women who were voluntary invited to participate in June 2023.

The researcher extracted findings, created descriptive tables and performed inferential statistical analysis, and then explained findings through linking them to relevant pieces of the literature and inputs obtained during the FGDs. Supervisor consultation and literature review by the researcher was continuous though all stages. The final draft was ready in March 2024.

3.6 Study Sample

Quantitative

- The sample size is calculated using Epi-Info sample size statistical calculator and considered following parameters: Confidence level is 95%, confidence interval is 5%, the target population is 1583 women (see Annex 1).

The suggested sample size is 309 women. the researcher increased the sample up to 330 to compensate non-respondents. For the quantitative part of the study 329 women were interviewed.

Participants were conveniently (non-probability) selected from organizations serving them with consideration to ensure diversity of participants from different organizations, different duration of illness and experiencing treatment modalities. Moreover, the sample size from each organization was proportional to the population served by these organizations with a larger sample taken from organizations that serve more beneficiaries to ensure diversity in the sampling.

Qualitative part

- A non-probability purposive sample of 25 women were selected and called on voluntary basis for four FGDs. They were selected in a way that ensures diversity among participants. For example, educated versus non-educated, married versus single or divorced, newly diagnosed versus patients who were diagnosed several years ago. The researcher was keen to include people from diverse cultural and social backgrounds.

3.7 Study instruments

This study utilized different instruments

Quantitative data:

Structured questionnaire was developed; its main items were:

- Socio-demographic characteristics (age, place of residence, education, economic status, marital status, employment status).
- Medical information (time since of diagnosis, stage at diagnosis - type of surgical treatment).
- The disease staging was categorized into patients with early stage (stages I and II) and patients with advanced stage (stages III and IV) disease
- Scales for challenges, anxiety, depression, stress, formal support, social support, and for coping.

Depression, Anxiety and Stress Scale - 21 Items (DASS-21): The DASS-21 is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items. The participants were asked to respond to each item on a 4-point Likert scale indicating how much the statement applied to them (0=Did not apply.1=Some of the time,2=part of the time, 3=Most of the time).

<u>The Social Support Scale (SSS):</u> The social support levels of the participants were identified through the Social Support Scale, which comprises 19 items with five functional social support dimensions: material-Tangible support (4 questions – provision of practical resources and material aid); affective (3 questions – physical displays of love and affection); emotional (4 questions– expressions of positive affection, understanding, and trust); informational (4 questions – availability of people that provide advice or guidelines); positive social interaction (3 questions – availability of people to have fun or relax with) and one additional item. The participants were asked to respond to each item on a 5-point Likert scale indicating the frequency in which each type of support was available in case of need (1= None of the time, 2= A little of the time, 3= Some of the time, 4= Most of the time, 5= All of the time)

<u>The Brief COPE (Coping Orientation to Problems Experienced scale)</u> for assessing coping mechanisms, Brief COPE is a 28 items scale measures the ways individuals use to cope with stress in their life. Brief COPE is formed of three overarching coping styles:

1) Problem-Focused Coping (Items 2, 7, 10, 12, 14, 17, 23, 25) Characterized by the facets of active coping, use of informational support, planning, and positive reframing. A high score indicates coping strategies that are aimed at changing the stressful situation. High scores are indicative of psychological strength, grit, a practical approach to problem solving and is predictive of positive outcomes.
2) Emotion-Focused Coping (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28)
   Characterized by the facets of venting, use of emotional support, humor, acceptance, self-blame, and religion. A high score indicates coping strategies that are aiming to regulate emotions associated with the stressful situation. High or low scores are not uniformly associated with psychological health or ill health, but can be used to inform a wider formulation of the respondent's coping styles.
3) Avoidant Coping (Items 1, 3, 4, 6, 8, 11, 16, 19)
   Characterized by the facets of self-distraction, denial, substance use, and behavioral disengagement. A high score indicates physical or cognitive efforts to disengage from the stressor. Low scores are typically indicative of adaptive coping.

In addition to the three overarching subscales, scores are presented for the below 14 facets.

- Active coping, items 2 & 7 (Problem-Focused)

- Use of informational support, items 10 & 23 (Problem-Focused)
- Positive reframing, items 12 & 17 (Problem-Focused)
- Planning, items 14 & 25 (Problem-Focused)
- Emotional support, items 5 & 15 (Emotion-Focused)
- Venting, items 9 & 21 (Emotion-Focused)
- Humor, items 18 & 28 (Emotion-Focused)
- Acceptance, items 20 & 24 (Emotion-Focused)
- Religion, items 22 & 27 (Emotion-Focused)
- Self-blame, items 13 & 26 (Emotion-Focused)
- Self-distraction, items 1 & 19 (Avoidant)
- Denial, items 3 & 8 (Avoidant)
- Substance use, items 4 & 11 (Avoidant)
- Behavioral disengagement, items 6 & 16 (Avoidant)

The participants were asked to respond to each item on a 4-point Likert scale indicating what they generally do and feel when they experience cancer related stressful events (1 = I have not been doing this at all and 4= I have been doing this a lot).

Qualitative data:

The researcher used open ended (semi-structured) questions through:

FGD guides for women with BC explored their experience with BC diagnosis, treatment and post treatment also assessed the availability of services, particularly looked at whether MHPSS programs were sensitive to women needs and how services could be made more responsive to their needs.

Qualitative questions were tailored to fit the type of respondents. In general, questions were around the following

- Psychological challenges emerge as a result of BC
- Access to services for women with BC
- Barriers in diagnosis, treatment and follow up
- Who provides support to women with BC
- Met and unmet needs of women with BC
- Gaps in services provision

- How to better support women with BC

3.8 Ethical considerations

- An academic approval was obtained from the School of Public Health at Al-Quds University.
- Ethical approval was obtained from Helsinki Committee.
- Administrative approval was obtained from MOH.
- For participants' rights, a covering letter indicating that the participation is voluntary and confidentiality was assured for all of them.
- Also, consent form was signed.

3.9 Pilot study

Quantitative part: pilot study was conducted before the actual data collection to examine participants responses to the questionnaire and how they understand it. In order to enhance the validity of the questionnaire after modifying it to be better understood,30 participants were interviewed to fill the questionnaire. no major changes were required. Therefore, the 30 questionnaires were included in the analyzed study sample.

3.10 Data collection

The researcher and two trained data collectors collected the data.

Quantitative

The first component was face to face interviews with the selected women who came for appointment to the hospitals also, the researcher with the coordination with the hospitals and mainly smile of hope organizations managers called the other women who didn't have appointments, to attend to the facilities for the interviews.

Qualitative

Was conducted in parallel to and after the analysis of the quantitative part, face to face FGDs with the participants where Semi-structured questions that was designed and asked, aiming to map women's experiences and perceptions of the psychosocial challenges facing them, their coping mechanisms and social support available for them. the researcher was the facilitator.

3.11 Scientific rigors and trustworthiness

Validity

Face validity: The researcher organized the questionnaire in a way that enables the readers to read it easily. The researcher tries to make the layout of the questionnaire in addition to its structure and format professional as much as possible.

Content validity: The questionnaire was evaluated and validated by 10 experts who review it to ensure its relevance and appropriateness. Experts' comments were taken in consideration, Modifications were made based on their review after consulting the supervisor.

Also, a pilot study was conducted by the researcher herself before the actual data collection to examine participants responses to the questionnaire and how they understand it.

Reliability

The following steps were done to assure instruments reliability

Training of data collectors was done on the patients interviewing steps, including awareness for the purpose of the study and the way of asking questions, to assure standardization of questionnaire filling.

Data entry in the same day of data collection that allow possible interventions to check the data quality or to re-fill the questionnaire when required.

Qualitative part

To assure the trustworthiness of the qualitative part in this study. First, a peer check was done through experts to revise the in-depth interview questions to assure that they cover all the required dimensions. Then, a member check was done to assure accuracy and transparency of the transcripts during the interviews. Prolonged engagement was done as the researcher tried to probe for answers and cover all the interview dimensions properly.

In addition, recording the interviews that enhanced tracking up facts and re-check the accuracy of the transcripts. Finally, all the transcripts and recordings were kept for tracking the information by others at any time.

3.12 Data entry and analysis

Quantitative part; During data collection, the researcher reviewed the questionnaires continuously and before entering them to ensure valid information and correct immediately when required. The researcher used Statistical Package of Social Science (SPSS) program for data entry and analysis. The questions and variables were coded and entered. Re-entry test was performed with 5% of the data. Then data cleaning was performed to check illogical values.

Descriptive results were presented using mean and standard deviation for continuous variables and percentages for qualitative variables.

Frequency tables were created to show sample characteristics and plot differences between various variables.

Cross tabulation for main findings and advanced statistical tests were done to analyze data, such as Chi square test to compare categorical variables, t-test and One-way ANOVA test to compare means of numeric variables.

For example, to explore the differences in scores of anxiety, depression and stress by treatment modalities or disease stage, one-way ANOVA test was used.

To explore the differences in scores of anxiety, depression and stress in relation to marital status t-test was used. Differences in receiving versus not receiving support in relation to employment status was explored by Chi-square test.

Qualitative part; The researcher used Braun and Clarke's open coding thematic analysis method (2006), an iterative process consisting of becoming familiar with the data, generating codes, generating themes, reviewing themes, defining and naming themes. As a start, debriefing reports of the FGDs were done immediately after the end of each group. Then, transcription, reading and immersion, categorization of related ideas, identifying thematic areas as well as comparison and integration between the quantitative and the qualitative findings was done to enrich information and validate findings.

3.13 Anticipated limitations of the study

- The cross-sectional design has some limitations: this design representing a specific snapshot of time, that might not necessarily be representative for the situation over a longer period of time,

- Recall bias for the lived experience.
- For the targeted women it was hard to reach women who didn't attend hospitals for appointment.

Chapter four

4 Results and discussion

This chapter presents the main quantitative and qualitative findings of the study. With overview of descriptive data including sociodemographic and breast cancer related characteristics of the study participants, in addition to scales scoring and analytic data.

4.1 Descriptive analysis

4.1.1 Socio-demographic characteristics

The total number of the study participants was 329 women, diagnosed with BC. Participants were diverse in age, 20.7% were 40 years and less, 28.8% from 41 to 50 years, 35.6% from 51 to 60 years (see Table 4.1). The mean age of the participants was 50.45 (Median 51.00, Std 10.38). The findings of this study around age are close to a study done by UNFPA in Gaza in 2018, which shows that 69% of women with BC were above the age of 45 (UNFPA, 2018). Also, age distribution is close to a study done in Egypt, the mean age was 52.29 ± 11.64 years old (Alagizy el al, 2020) while less than other studies in Italy 59.93±14.03 years (Baldelli et al, 2022) and 61.1±13.8 years in Canada (Groome et al, 2019). This could be attributed to higher life expectancy in the latter countries.

Table 4.1: Distribution of the study participants according to socio-demographic characteristics (N 329)

Items	No	%
Age		
40 years and less	68	20.7
41 to 50 years	93	28.3
51 to 60 years	117	35.6
60 and above years	51	15.5
Mean = 50.45, Median = 51.00, Std = 10.38		
Governorate		
Gaza	169	51.4
North	50	15.2
Middle area	39	11.9
Khanyounis	32	9.7
Rafah	39	11.9
Classification of neighborhood		
City	246	74.8
Village and camps	83	25.2

Refugee status		
Refugee	227	69.0
Non-refugee	102	31.0
HH size		
6 and less	182	55.3
More 6 members	147	44.7
Mean:6.73, Median:6.00, Std:3.75		
Number of rooms in the household		
2 and less	119	36.2
Three	139	42.2
More than 3	71	21.6
Mean:2.84, Median:3.00, Std:0.94		
Ownership of the house		
Rented	37	11.2
Family owned	157	47.7
Yours	124	37.7
Others	11	3.3
Type of family		
Nuclear family	261	79.3
Extended family	68	20.7
Current marital status		
Single	27	8.2
Divorce	21	6.4
Married	250	76.0
Widow	31	9.4
Age of marriage (N=298)		
Less 18 years	86	28.9
18 to 20 years	91	30.5
21 to 25 years	88	29.5
Above 25 years	33	11.1
Mean = 20.6, Median = 19.00, Std = 2.27		
Having children (N=302)		
Yes	283	93.7
No	19	6.3
Total	**302**	**100.0**
Number of children (N=282)		
6 and less	182	64.5
More than 6 Members	100	35.5
Mean:5.9, Median:6.00, Std:2.75		
Level of education		
Primary or less	130	39.5
High school	127	38.6
University and post graduate	72	21.9
Desire/plan to attend further education in the future		
Yes	33	10.0
No	296	90.0
Having a valid health insurance		
Yes	304	92.4
No	25	7.6
Type of insurance (N=304)		
Governmental	284	93.4
Non-Governmental	20	6.6

As shown in Table 4.1, nearly half of women (51.4%) were from Gaza. The highest proportion (74.8%) were living in cities. This higher percentage may be attributed to the better access to health care services and supportive institutions among those living in Gaza. Results are congruent with Rahool et al (2021) results as the majority of the participants were living in urban areas (73.9%) whereas 67 were from rural areas (26.1%) (Rahool et al, 2021). Refugees represented 69% of the participants which is close to the latest PCBS reported figure of 66% (PCBS, 2023).

The majority of women (76%) were married, compared to 70% in Shehadeh study in WB (2017), 73.4% in the Alagizy et al (2020) study in Egypt, 62.4% in Baldelliet al (2022) study in Italy, and 71.8% in Ehrenstein et al (2021) in Germany. Regarding the marital status of the rest of the women in this study, 9.4% widows, 8.2% single and 6.4% divorced, close to PCBS figures (2021). At the time of the study none of the widows or divorced women participated got married again or think they will remarry again it could be attributed to their hard experience with BC. The majority having children (93.7%), of them 64.5% having 6 children and less, consistent with PCBS figures in the Gaza Strip, the average HH size declined to 5.5 in 2022 (PCBS,2023).

With regard to education, 39.5 % attained primary school or less, 38.6% finished high school, and only 21.9% of them were university graduates. These findings are consistent with PCBS figures. but was different from Shehadeh study results in WB as 29% of the participants in his study had a university degree (Shehadeh, 2017), and Alagizy et al (2020) results, half of the participants were illiterate compared to 35% of participants in another study by Rahool et al (2021). Among surveyed women, only 10% mentioned that they have a desire or plan to attend further education in the future, which is consistent with the international literature (Alagizy et al 2020, Rahool et al 2021). With regard to health insurance, 92.4% of women reported having valid health insurance.

4.1.2 Employment and Income

The majority of participants were housewives (93.3%), only 6.6% were working which was very close to the results in Egypt (Alagizy et al 2020) which show that 95.3% were housewives. While being different from a study in Italy 51.8% of women were employed (Baldelli et al, 2022), and in Germany 55.6% were employed (Ehrenstein et al, 2021). Among working women 47.4% were working in the public sector (Ramallah 66.7%; Gaza 33.3%), 31.6% in private sector, 15.8% are self-employed and 5.3% working in UNRWA. Of them 36.4 % reported that their working status had been affected by breast cancer diagnosis, as 62.5% left their job, 25% turned to tasks that need less effort and 12.5% worked part time after their diagnosis. All of them reported that the change in working status was their own choice. This is different from Ehrenstein et al results (2021) as the majority of patients returned to work after 6 months, but 18.7% of the women never returned to work.

Table 4.2: Distribution of the study participants according to employment and income

Items	No	%
Employment status before BC diagnosis		
No	307	93.3
Yes	22	6.7
Effect of BC diagnosis on employment status (N=22)		
Yes	8	36.4
No	14	63.6
Total	**22**	**100.0**
Household monthly income among respondents to this question (N=93)		
Less Than 1000	50	53.8
1000 and above	43	46.2
Mean:1010, Median:800.00, Std:769.94		
Receiving assistance from any governmental or non-governmental aid		
No	131	39.8
Yes	198	60.2
Total	**329**	**100.0**
Sources of assistance (N=198)		
Governmental aids	65	32.8
None governmental	133	67.2
Type of assistance received before BC diagnosis (N=198)		
Cash	54	27.3
Food items	144	72.7
Receiving any kind of assistance after BC diagnosis		
No	283	86.0
Yes	46	14.0
Type of aid received after BC diagnosis (N=45)		
Food items	19	42.2
Cash	13	28.9
In-kind items	9	20.0
Medications	4	8.9
The primary source of family income		
Work of breadwinner	194	59.0
Aid from governmental organizations	45	13.7
Aid from relatives or friends	25	7.6
UNRWA	23	7.0
Aid from non-governmental organizations	16	4.9
Other	26	7.9
Regularity of family income		
Regular on monthly basis	125	38.0
Regular on daily basis	48	14.6
Irregular	156	47.4
HH income meeting basic needs		
Yes, completely	39	11.9
Yes, partially	35	10.6
No	255	77.5

Household expenditure after BC diagnosis		
Experiencing more expenditure	312	94.8
The same, no changes	15	4.6
Experiencing less expenditure	2	.6
Issues require extra costs related to the diseases		
Medications	301	96.5
Transportations	281	90.1
Costs of medical consultations	254	81.4
Special diet	48	15.4
Rehabilitation	6	1.8
Someone to take care of you	1	0.3
Affordability of extra costs (N=312)		
Yes	89	28.5
No	223	71.5
Coping approaches to deal with the extra costs (N=223)		
Borrowing money	192	86.1
Reducing household expenses	26	11.7
Selling assets	4	1.8
Asking children to drop out school and work	1	0.4

Regarding the HH monthly income for those who responded, 53.8% reported that their income is less than 1000 ILS, and 46.2% have an income of 1000 and above. In the study in WB only 17% reporting having income less than 1000NIS (Shehadeh.2017). Which is not surprising as the situations in Gaza became much different than in WB due to the political conflict and its impact on the all aspects of life including income. while among Adanu et al (2022) study participants nearly 57% earn an income of 370 USD or less per month (Adanu et al ,2022). The primary source of family income for 59% of respondents was the work of breadwinner, while 13.7% depend mainly on aid from governmental organizations. Nearly half (47.7%) of women reported that their income was irregular, 38% was regular on monthly basis and 14.6% reported that it was regular but on daily basis. The majority of women (77.5%) reported that their family income doesn't meet their basic needs similar to the results in Egypt were 73.4% reported they don't have enough income (Alagizy et al,2020).

Among the participants, 60% reported that their families were receiving assistant from different sources, mainly from NGOs (67.2%), while governmental aid represents 32.8% of the entire sources. Close to the PCBS data which indicate that 74% of households receiving assistance in the Gaza strip, the most common type of aid they receive was in the form of food items as reported by 72.7% and to a less extent cash (27.3%). Only 14% of women reported that they received more assistance after BC diagnosis from different organizations like Smile of Hope, Aisha, CFTA and woman affair, and it was mainly food items (42.2%), cash (28.9%), in-kind (20%) and the least was medications 8.9%, The vast majority (94.8%) of women reported that their HH expenditure increased after BC diagnosis. Participants in FGDs agreed and attributed this increase in expenditure to the costs of supplementations, supportive medications, transportation and follow-up care in private clinics in addition to the need for special diet can be a financial strain for some women and their families, even when they have health insurance. A housewife from Gaza, aged 55 years, with 3.5 years of BC duration said during FGDs *'My treating doctors write multivitamins and supplementations that are not available in the hospital pharmacy, I had to buy it to be able to fight my illness".* The results of the study show that extra costs were mainly due to medications (96.5%) of women. Transportations was the second consumer of extra cost for 90.1% of women which is not surprising given the special situation of Gaza and the fact that many cancer patients need to be referred to continue their treatment plan and because of the siege and the restrictions on movement travelling abroad costs even more money , medical consultations causes extra cost for 81.4% of women, participants in FGDs attributed this to the fact that most of them prefer to seek medical consultations in private clinics for more privacy and more attention from specialist as the lack of specialists in oncology services limits the time provided to each women and may affect the privacy while providing care. A housewife aged 33 years, with 8 months duration of BC said *"If I had any complain I prefer to go to the private clinic of my treating oncologist to be able to tell all my worries, it's very crowded in the hospital, with limited number of specialists".* Special diet was responsible for extra costs for only 15.4% of participants. A housewife aged 59years, with 2years duration of BC said "*During chemotherapy I needed special diet as fruits and juices, my husband and my sons try to meet these needs but they can't afford that most of the time".* Consumers of extra costs for the study participants were consistent with literature, in a study in Ghana the medical and direct costs including transportation, lodging/rent, food and drinks make up 84% and 95% of the total expenditure, respectively (Adanu et al, 2022). On the other hand, most of the women (71.5%) reported that these extra costs weren't affordable and they had to cope in different ways, as 86% of them reported that they borrowed money to be able to cope with the extra costs, 11.7% said that they reduced other household expenses, 1.8% had to sell some of their assets, one of the participants reported that she asked her children to drop out school and work.

4.1.3 General consequences of BC on women lives

More than half of the women (59%) worried that BC might affect the future of their families negatively. They more worried about financial situation, family illness, and death 53%; 43.5%;

12.5% respectively. Most of FGDs participants mentioned that financial situation was a real concern for them, as the extra costs after BC diagnosis can be a significant burden on women and their families.

Table 4.3: Distribution of the study participants according to general consequences of BC

Items	**No**	**%**
Having worries that BC might affect the future of family (N=329)		
Yes, negatively	194	59.0
Yes, positively	6	1.8
No	129	39.2
The most commonly worries (N=200)		
Financial problems	106	53.0
Family illness with BC	69	34.5
Death	25	12.5
Effect of BC diagnosis on women lives		
Affects activity	101	30.7
Affects psychosocial status negatively	88	26.7
Affects relationships with friends and family	39	11.9
Restricts ability to take care of family	35	10.6
Restricts ability to enjoy life	31	9.4
Restricts ability to work	13	4.0
Prevents from spending time with friends and family	10	3.0
Prevents from getting married	5	1.5
Increases determination and resilience	4	1.2
Others specify: nothing	19	5.8
BC diagnosis affecting marital status (N=302)		
Yes	146	48.3
No	156	51.7
Effect of BC diagnosis on marital status (N=146)		
My relationship with my husband deteriorated, but still, we live together	91	62.3
My relationship with husband improved	30	20.5
Got divorced	10	6.8
Separated	10	6.8
My husband married another woman	5	3.4
Approaches applied by women since BC diagnosis to cope with disease		
Pray more often	244	74.2
Watch TV more	97	29.5
Use social media more	94	28.6
Socialize more	51	15.5
Practice sport more often	32	9.7
Avoid people	28	8.5
Read more	26	7.9
Learn life skills	25	7.6
Others (Work in house 1 meet friend)	22	6.7
Avoid participate in social events	19	5.8
Do charity work more	12	3.6
Listen to music more	12	3.6
Did nothing	3	0.9

A housewife from khanyounis, aged 46 years, with 2 years duration of BC said "*I sold some of my house assets to be able to afford medications and go to private clinics, I'm afraid that because of the extra costs of my illness my son won't be able to join university*".

Another 60 years woman stated "*I was afraid from doing the surgery in a public hospital, I did it in a private hospital despite the financial burden it causes on my husband, but he borrowed money from his friends"*

When asked about how BC affected their lives, the most prevalent reported issues were reducing activity (30.7%), followed by deteriorated psychosocial status (26.7%), and 11.9% reported that their relationships with friends and family had been negatively affected. Participants in FGDs agreed that BC diagnosis and treatment leads to significant physical changes in their bodies, main effects were reduced activity, fatigue and inability to perform daily activities as usual. Also, most of them mentioned that their relation with family was affected. As mentioned by a 53 employed woman from Gaza with BC duration of 3 years" *BC causes physical and psychological burden on me, I needed time before going back to work and interact with my colleagues, and I did tasks that needed less effort than I used to*". A housewife from north, aged 60 years, with BC duration of 4 years said during FGDs *"I spent most of my time at home, trying to avoid people as much as I can, I found more comfort in being alone* ". Another young mother of two kids from Gaza with BC duration of 1 year who underwent mastectomy said during FGDs*" After my BC diagnosis I preferred to stay away from my mother and my sisters because they only cry when they see me"*. These results were consistent with literature, that highlights that BC diagnosis and treatment have a significant impact on women's lives both physically and psychologically, with psychological concerns are more prevalent. According to Higian et al (2017) researchers have found that most common concerns of BC survivors are the worries related to their health status, womanhood, job situation, their general roles in the family, living with uncertainty, and the probability of death (Higian et al, 2017). Also, İzci et al (2016) reported that BC therapies cause several adverse effects, the most common ones were loss of energy, fatigue, pain, nausea and vomiting, hormonal changes, and sleep disorders; all of these adverse effects impair daily life functions of patients. In Iddrisu et al (2020) study results women complained of their inability to carry out their activities of daily living, because of the effects of BC medications given to them. In my study 48.3% of the women agreed that their marital status had been affected by BC diagnosis, 62.3% of them reported that their relationship with husband deteriorated, and others got divorced or separated (13.2

combined) in spite of that they are still living together. Only 20.5% said that their relationship with husband improved, 6.8% got divorced, 6.8% separated without divorce and 3.4% the husband married another woman. FGDs revealed different attitudes of the husbands after women diagnosis with BC. A housewife, aged 36 years old, mother of 3, with BC duration 1.5 years said during FGDs "*I was in the ICU when my friend told me that my husband was looking for a new wife*". In contrast another 57 years, housewife with BC duration of 4 years said *"The death of my husband made it harder for me to live with BC, he was the major source of support during my illness, before my disease he never showed me that support and love"*

As shown in Table 4.3 women reported applying different approaches to cope with these worries, the most commonly used approach was praying more often (74.2%), All FGDs participants agreed that their belief in God mercy and praying was the main source of their strength and ability to fight BC, as stated by 47 Housewife from Gaza with BC duration of 3.5 years "*My relation with god was part of my therapy, guided me through my illness* ". The next common approaches were watching TV more (29.5%), Using social media more 28.6%. while the least used were avoiding participating in social events 5.8%. A housewife, aged 35 years, from Gaza who had mastectomy participated in FGDs said *"It took me long time before I accept to go to family gathering and parties and wear party cloths after doing my surgery, I felt like everyone is looking at the side of mastectomy"*. Doing charity work more (3.6%) and listening to music more (3.6%) were also reported. These results were consistent with the international literature, Hijian et al results (2017), the most prevalent approaches used to cope with cancer-related challenges, were the religious approach, spiritual fighting, positive thinking.

4.1.4 Breast Cancer related variables

4.1.4.1 Breast Cancer Diagnosis

The highest proportion of women (77.2%) reported that the abnormality first was found by themselves. Either accidently (56.5%), or by routine BSE (20.7%), while only 1.2% were symptomatic. This result is much different from the results reported by Jiang et al (2018) in Canada, 36.2% were screen-detected and 63.8% were symptomatic (Jiang et al, 2018), this may reflect better adoption of primary prevention policies in the Gaza Strip including health education programs.

More than half of women (54.7%) took 7 days and less to go to seek for diagnosis, 23.7% took 8 to 30 days, and 21.6 took above 30 days, much better than Koo et al (2017) study findings that show 9% of women waited longer than 90 days before seeking help (Koo et al,2017).

Table 4.4: Distribution of the study participants according to BC diagnosis (N=329)

Items	**No**	**%**
First diagnosed BC by		
Accidently discovered by the lady	186	56.5
Routine breast self-examination BSE	68	20.7
Routine breast clinical examination BCE	36	10.9
Screening mammogram	19	5.8
Accidently discovered by HC provider	16	4.9
Abnormal symptom/ sign	4	1.2
Time needed to seek for diagnosis by days (190)		
7 days and less	104	54.7
8 to 30 Days	45	23.7
Above 30 days	41	21.6
Mean:48.55, Median:7.00, Std:134.55		
Place of diagnosis by HC provider (37)		
MoH	15	40.5
UNWRA	13	35.1
Private	4	10.8
Hospital	5	13.5
Stage of BC at diagnosis (Self-reported)		
Stage I	79	24.0
Stage II	121	36.8
Stage III	70	21.3
Stage IV	16	4.9
Don't Know	43	13.1
Having a biopsy done		
Yes	Yes	Yes
No	No	No
Type of biopsy (329)		
Open	7	2.1
FNAB	151	45.9
Core biopsy	171	52.0
Place of carrying out the biopsy		
MOH	185	56.2
Private	144	43.8
The first-person women talked to about BC diagnosis		
The referring surgeon after receiving the biopsy result	181	55.0
Referring surgeon before the biopsy result	52	15.8
The pathology department while receiving the biopsy result	42	12.8
A family member who was informed before me	32	9.7
The radiologist before the biopsy result	21	6.4
The navigator nurse	1	0.3
The way women were informed about BC diagnosis		
Shocking	205	62.3
Was Okay/good	92	28.0
Wasn’t accepted	32	9.7
The first one woman talked to about BC diagnosis		
Husband	140	42.6
Sister	75	22.8
Brother	29	8.8

Doctor	25	7.6
Parents	12	3.6
Friend	7	2.1
No one	20	6.1
Others	21	6.4
Time needed to receive the final diagnosis since presented to HCP (315)		
2 weeks and less	119	37.8
3 weeks	71	22.5
4 Weeks	57	18.1
More than 4 weeks	68	21.6
Mean:3.54, Median:3.00, Std:1.78		
Time needed to initiate treatment after diagnosis (314)		
2 weeks and less	77	24.5
3 weeks	49	15.6
4 Weeks	92	29.3
More than 4 weeks	96	30.6
Mean:4.19, Median:4.00, Std:1.91		
Time since diagnosis		
Less than 1year	35	10.6
1 to less 3years	116	35.3
3 to 4 years	92	28
5years	86	26.1
Mean:3.56, Median:4.00, Std:2.16		

Table 4.4 shows that only 15.8% of women reported that the first sign was found by the health care providers, either accidently (4.9%), or by routine CBE (10.9%), among them 40.5% was in MoH. An explanation could be a gap in BC screening and diagnosis skills among health care providers or the need to reconsider the value of CBE in BC screening and early diagnosis. There’s controversy surrounding the role of CBE in breast cancer screening as the ACS updated its guidelines in 2015 for average-risk women. These guidelines do not recommend CBE for BC screening in average-risk women at any age. This recommendation is based on lack of evidence of any benefit for CBE either as a stand-alone tool or in conjunction with screening mammography (ACR, 2020). In contrast with the ACS guidelines, the National Cancer Comprehensive Network (NCCN) continues to recommend CBE from the age of 25 as part of the clinical encounter.

Also, The ACS highlights the importance of breast awareness; that is, women should be familiar with the normal condition of their own breasts and promptly report to healthcare in the case of changes, but no longer recommends BSEs, on the other hand evidence from LMICs exists that regular BSE is positively associated with the identification of BC in an early stage, which thereby improves treatment outcomes

Despite there`s still controversy in both guidelines and literature regarding the role of CBEs and BSEs in early detection and diagnosis of BC, I still believe in the value of BSE and CBE in countries like us with limited resources and lack of national population-based screening program,

Unfortunately, in my study only 5.85 of cancers were discovered by screening mammogram, much different from Jiang et al (2018) results 36.5% of participants were detected by screening. Which may highlight a gap in screening services in the Gaza governorates, and weakness in adoption of secondary prevention policies by the health care system for both screening and early diagnosis of BC. Despite the availability of considerable number of mammograms in the Gaza strip which are underutilized and can cover the targeted women by screening. In Gaza, screening mammogram is still on opportunistic basis, it must be a national health priority to establish an organized population-based BC screening program.

The highest proportion of women representing 60.8% were found in early stages according to the pathological grading, as 24% were Stage I, 36.8% Stage II, advanced stages were less prevalent as 21.3% were Stage III, and only 4.9% Stage IV, while 13.1% didn't know the stage at diagnosis. Results of this study were much better compared to what reported by Alagizy et al (2020) in Egypt, in his study half of women had stage III BC (50%), followed by 25.0% stage II, 17.2% in stage IV, and 7.8% in stage I. Also, better compared to Kshirsagar et al (2020) results in India, nearly half of women were of stage III 46% followed by stage II 28%, stage IV 15.6%, and stage I 9.3% (Kshirsagar et al, 2020). The results were surprising and also promising, despite the limited organized screening efforts most BC were found in earl stages.

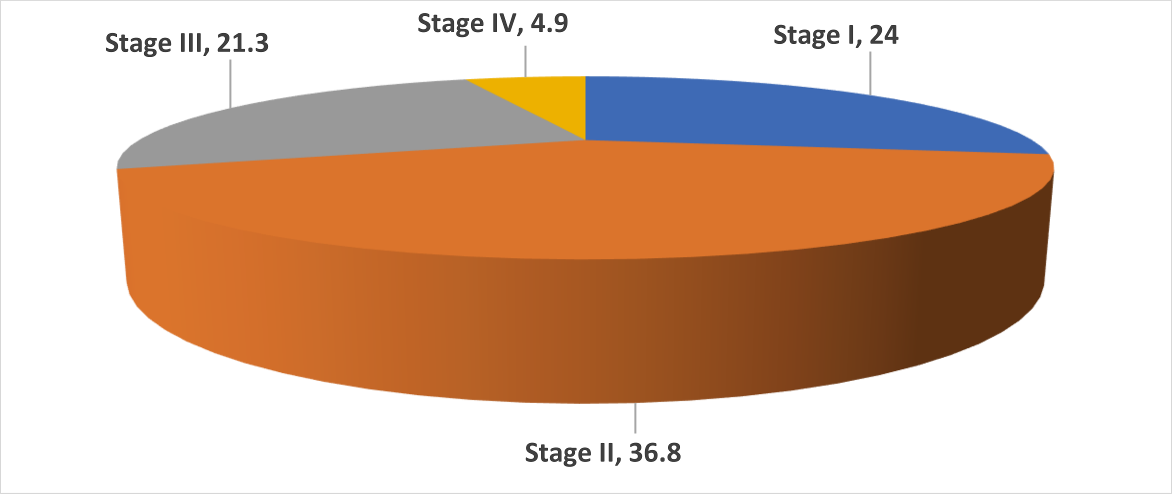

Figure 4.1: Distribution of participants by the stage of cancer at diagnosis

To confirm diagnosis biopsy was done for all the women surveyed (329). Regarding the type of biopsy, core biopsy was done for 52% of women, FNAB was done for 45.9% and low proportion of women, 2.1%reported that open biopsy was done for them. Which is consistent with the national clinical standards for BC (2018) that were based on Scottish BC guideline 2007-2016, that states that a minimum of 80% of BC patients have a non-operative histological diagnosis, core biopsy should be the norm (MoH, 2018).

Biopsy was done for 56.2% of them in MoH, and 43.8% in private. More than half of participants (55%) were informed about BC diagnosis by the referring surgeon after receiving the biopsy result, and most of them described the way they informed by as being shocking to them, the husband was the first person most of the women (42.6%) choose to talk to about their BC diagnosis, while 22.8% choose to talk to their sisters.

The time needed to receive the final diagnosis since first presented to health care providers was 2weeks and less for 37% of women, 3 weeks for 22.5% took, 4 weeks for 18.1%, and 21.6% took More than 4 weeks (Mean:3.54, Median:3.00, Std:1.78). which is consistent with standards for best practices for BC diagnosis as BC screening standards and protocols in Canada 2023 suggests that ≥ 90% of patients who do require a biopsy to have a result within 7 weeks. Also based on a recent report from cancer research UK 2022, National health system (NHS) England has introduced a new target called the Faster Diagnosis Standard (FDS). The target is that women should not wait more than 28 days from referral to finding out whether having cancer or not (NHS. 2022).

Regarding the time needed to initiate treatment after diagnosis, 60% of women took more than 4 weeks to initiate treatment,29.3% took 4 weeks, 15.6 took 3 weeks,24.5% took 2weeks and less (Mean:4.19, Median:4.00, Std:1.91). It's even better than NHS standards, which states that a woman should start treatment within 31 days after being diagnosed with BC (NHS, 2022). Based on the National Health Insurance in Korea (NHI) data, the median time from BC diagnosis to surgery was 14 days, and the proportion of BC patients who had undergone surgery within 4 weeks of the diagnosis of cancer was 74.1% (NHI, 2020). In the United States, a study based on the national cancer data base demonstrated that the time to treatment for breast cancer increased from 17 days (median) in the period from 1995-1997 to 23 days (median) in 2003-2005 (Cho et al,2014). recent analysis of Medicare patients in the USA reported median turnaround times ranging from

14 to 17 days for abnormal screening mammogram to biopsy, 39–52 days for mammogram to treatment and 20–27 days from biopsy to treatment (Selove et al,2016).

Women in the study are diverse regarding time passed since their BC diagnosis, more than half of them (54.1%) were diagnosed since 3 to 5 years, while 35.3% were diagnosed since 1to 3 years and only 10.6% were diagnosed recently since less than one year, (Mean:3.56, Median:4.00, Std:2.16).

4.1.4.2 Breast Cancer treatment

Chemotherapy was the main line of treatment received by most of the women, it was received by 82.7% of them, followed by surgery that was done for 74.5% of women, in line with the MoH national management standards (2017), that states that a minimum of 80% of all (non-metastatic) BC should be surgically treated.

hormonal treatment was received by 70.8%, while 68.4% of participants received radiotherapy. The least used line of treatment was biological for only 11.6% of women. Compared to Tsaras et al (2018) study results, all participants in his study had surgery, chemotherapy received by 46.1% of patients, radiotherapy by 15.8% (Tsaras et al,2018), while another study in Poland 71.3% had surgery (Konieczny et al,2019).

Regarding the number of treatment types received by women, nearly 40% received four types, followed by 30% received three types. In my study Surgery was the first line of treatment received by the majority of women (63.5%), followed by 34.7% started with chemotherapy, and only 1.8% started with hormonal treatment.

Table 4.5: Distribution of the study participants according to treatment received for BC (N=329)

Items	No	%
Type of treatment women received		
Surgery	277	84.2
Chemotherapy	272	82.7
Hormonal therapy	233	70.8
Radiotherapy	224	68.1
Biological	38	11.6
Number of treatment types women received		
One	18	5.5
Two	66	20.1
Three	100	30.4
Four	131	39.8
Five	14	4.3
Type of treatment women start with		

Surgery	209	63.5
Chemotherapy	114	34.7
Hormonal therapy	6	1.8
Place of surgery (N=209)		
Inside Gaza	194	92.8
Referred outside Gaza	15	7.2
Place of surgery in Gaza (N=194)		
MOH	142	73.2
Private	52	26.8
Type of surgery (N=209)		
Breast conservative surgery	127	60.8
Mastectomy	82	39.2
Time since mastectomy		
1 and less	11	15.5
2 to3	22	31
4to 5	38	53.5
Total	71	100.0
Mean:3.41, Median:4.00, Std:1.42		
Having axillary clearance (N=201)		
Yes	178	88.6
No	23	11.4
Having lymphedema (N=178)		
Yes	118	66.3
No	60	33.7
Finishing treatment		
Yes	65	19.8
No	264	80.2
Type of treatment women are still receiving (N=264)		
Chemotherapy	55	20.8
Radiotherapy	7	2.7
Hormonal therapy	202	76.5
Place of chemotherapy (N=272)		
Gaza	257	94.5
Referred	15	5.5
Place of radiotherapy (N=225)		
Egypt	31	13.8
Jordan	5	2.2
West Bank	14	6.2
Jerusalem	175	77.8
Receiving post-treatment physiotherapy		
Yes	96	29.2
No	233	70.8
Place of physiotherapy (N=96)		
MOH	38	39.6
UNRWA	8	8.3
Private	50	52.1
Receiving psychological support		
Yes	191	58.1
No	138	41.9
The need for additional psychological support		
Yes	202	61.4
No	127	38.6

The type of surgery was BCS for the majority of them (60.8%), mastectomy was done for 39.2%. Its expected as nearly 60% of the surveyed women were at early stages of BC (stage I and II), which makes them the best candidates for BCS. These findings were different from the results of Alagizy et al (2020), who found that more than two-thirds of the women in his study (71.9%) had mastectomy, 10.9% of them had BCS. Also, different from Fradelos et al (2017), whose results was 73% of patients had mastectomy and 27% had BCS (Fradelos et al,2017). Among Tarsa et al study participants, 69.7% had mastectomy, 30.3% had BCS. However, the results were close to what reported by Baldelli et al (2021) in Italy, who found that BCS was done for 63.5% and mastectomy was done for 36.5%.

The highest proportion (92.8%) did the surgery in Gaza, of them more than two thirds (73.2%) in MOH hospitals, while 26.8% in private hospitals. The remaining 7.2% were referred for surgery. It's part of the complex cancer care in Gaza, including BC as patients can't receive their treatment in one place. Referral abroad is part of the treatment pathway, to a lesser extent for surgery compared to radiotherapy that is not done in Gaza, and chemotherapy that may not be available for some patients. Which reflects on the continuity of care pathway and the health outcomes for women with BC. And emphasize the importance of policy makers commitment towards supporting having all treatment modalities including radiotherapy in Gaza. Quotes

Among women who underwent mastectomy, time since surgery was 4to 5 years for 53.5%, 31% since 2 to 3 years and 15.5% since 1year and less (Mean:3.41, Median:4.00, Std:1.42). The vast majority of women who had surgery (85.1%) reported that they had axillary clearance, 118 of them (66.29%) experienced lymphedema post-surgery. I'm not sure if they consider removing some of the lymph nodes as axillary clearance.

At the time of study 80.2% of the participants reported that they didn't finish their treatment yet, the majority of them 76.5% are on hormonal therapy, 20.8% on chemotherapy, and 2.7% on radiotherapy.

Most of the women (94.5%) received chemotherapy in Gaza hospitals, while the remaining 5.5% were referred. This could reflect the availability of most chemotherapeutic medications. While it's not the same for radiotherapy. All women received radiotherapy were referred. Jerusalem was the most common place for referral (77.8%) of women, followed by Egypt for 13.8%, then WB for

6.2%, only 2.2% were referred to Jordan. The situation is the same for any cancer patient from Gaza who needed radiotherapy, that is not available and referral is the only choice.

In addition, women were asked if they received post treatment physiotherapy, and 70.8% reported that they didn't. FGDs revealed there's gap in physiotherapy post treatment, a 47 housewife from Rafah *"I'm not sure if there's physiotherapy department in Turkish hospital and I can't afford coming to smile of hope in Gaza for physiotherapy, I don't know where to go in Rafah"*. On the other hand, when they were asked if they received psychological support, 58.1% reported they did. Participants in FGDs showed different perspectives regarding psychological support, some didn't even know there's such service. A housewife, aged 35 years, mother of 5 from Gaza with 3 years duration of BC said "*Consultation with the psychologist was useless and even harmful to me, at the end of the day I was surprised that every word I said in the session was told to my friend who I met and became friend with in Jerusalem while we both were receiving radiotherapy, how can trust them again*". In contrast another 50 years housewife from Khanyunis with 5 years duration of BC value psychological support services "*At least there's someone listens to me*"

The results were different from Shehadeh study results (2017), in his study 88.6% reported that they received psychological support. and 61.4% mentioned that they need additional psychological support. The results indicate a gap in the continuity of care for BC patients. Physiotherapy and psychological support should be part of care given to women with BC at all stages of her cancer journey, including post treatment. Specially for those who had axillary clearance.

4.1.5 Challenges faced related to diagnosis, treatment, referral and currently

The majority of women reported that during the diagnosis phase they never faced challenges, however, among those who reported facing challenges, 33% reported lack of female health providers was the main challenge, followed by lack of communication between providers (27%) the diagnosis pathway wasn't clear (26.3%). In FGDs it was obvious that psychological challenges were the major burden for most women during the diagnosis phase, An employed mother of 4, from Gaza, aged 43years, 2 years duration of BC said during FGDs *"To me the main difficulty was psychological, receiving BC diagnosis was a highly emotional experience, I felt I'm going to die and leave my family before living my dreams for them and for myself, it was a nightmare for me*". Another 60 years housewife, from middle area said "*I suffered from overthinking after the biopsy confirmed my BC diagnosis, of the treatment decision, of my kids and my future"*

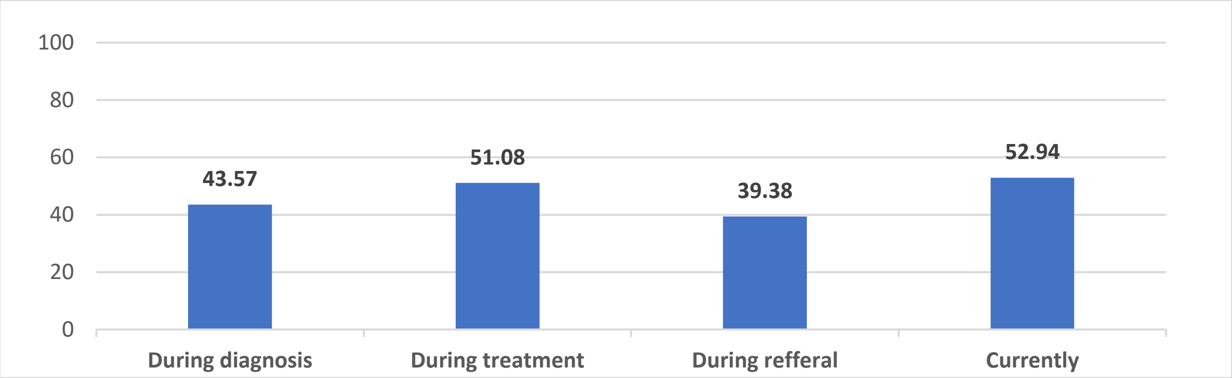

Figure 4.2: Distribution of participants by challenges

Table 4.6: Distribution of the study participants according to challenges they experienced

	Not Applicable		**Never**		**Sometimes**		**Always**		**Weighted Mean**
	No.	%	No.	%	No.	%	No.	%	
Main challenges during diagnosis									
The diagnosis pathway wasn't clear for me			241	73.7	53	16.2	33	10.1	45.3
Lack of coordination between providers			237	72.9	69	21.2	19	5.8	44.3
Delays in getting appointments			241	73.9	69	21.2	16	4.9	43.7
Delays in getting the results of the tests			240	73.8	76	23.4	9	2.8	43.0
Poor communication - the health team didn't listen to my concerns			260	79.5	52	15.9	15	4.6	41.7
Lack of female health providers			219	67	88	26.9	20	6.1	46.3
Privacy and confidentiality weren't as I wished			255	78.2	46	14.1	25	7.7	43.0
Mean:43.57, Median:38.10, Std:12.63									
Main challenges during treatment									
Availability of systematic treatment	36	11.1	101	31.1	168	51.7	20	6.2	51.0
Access to radiotherapy	105	31.9	103	31.3	88	26.7	33	10.0	38.3
Financial cost			214	66.0	91	28.1	19	5.9	46.7
Loss of hair			62	19.0	136	41.7	128	39.3	73.3
Reduced sexual interest and decreased sexual function.	87	26.9	91	28.2	87	26.9	58	18.0	45.3
Weight loss			169	52.2	101	31.2	54	16.7	55.0
Weight gain			215	66.0	71	21.8	40	12.3	48.7
Loss of appetite			124	38.0	153	46.9	49	15.0	59.0
Trouble sleeping			88	27.2	200	61.9	35	10.8	61.3
Lack of information			242	74.5	65	20.0	18	5.5	43.7
Coordination			206	63.4	88	27.1	31	9.5	48.7
Delays in getting appointments			228	70.4	76	23.5	20	6.2	45.3
The limited number of specialists			212	65.2	90	27.7	23	7.1	47.3
Privacy and confidentiality			96	29.4	198	60.6	33	10.1	60.3
Mean:51.08, Median:50.00, Std:9.85									
Main challenges related to referrals									
Delay of permission	43	13.5	167	52.4	68	21.3	41	12.9	44.7
Denial of permission	43	13.4	189	58.9	58	18.1	31	9.7	41.3
Interrupted treatment	43	13.3	215	66.4	55	17	11	3.4	36.7
Cost of transportation	43	13.2	194	59.7	67	20.6	21	6.5	40.0
Denial of companion	43	13.2	198	60.9	56	17.2	28	8.6	40.3
No suitable companions	43	13.2	238	73.2	33	10.2	11	3.4	34.7

Mean:39.38, Median:38.89, Std:20.04							
Current challenges							
Difficulty in performing your routine activities	97	29.8	186	57.2	42	12.9	61.0
Fear of BC recurrence	139	42.5	150	45.9	38	11.6	56.3
Feelings of vulnerability	136	41.7	149	45.7	41	12.6	57.0
Body image disruption	155	47.4	132	40.4	40	12.2	55.0
Intrusive thoughts about your illness	169	51.8	147	45.1	10	3.1	50.3
Experience of threats to safety	143	43.7	167	51.1	17	5.2	53.7
Feelings of social isolation	201	61.5	92	28.1	34	10.4	49.7
Concerns about future fertility	171	52.3	139	42.5	17	5.2	51.0
Concerns about Ability to work	252	77.1	55	16.8	20	6.1	43.0
Mean:52.94, Median:51.85, Std:12.07							

For most of the women physical symptoms related to side effects of treatment were the main challenges during treatment. The most common was loss of hair for 81% of participants, followed by trouble sleeping for 72.7%, Loss of appetite for 61.9%. Most women participated in FGDs mentioned that the hardest days they lived were during chemotherapy phase. A divorced woman from Rafah, aged 45 years, with 3 years duration of BC said *“I hated looking at the mirror because of chemotherapy as I lost my hair, my face didn’t look the same, chemotherapy has exhausted me and I’m afraid that my body will never recover from its side effects”*. Other challenges include privacy and confidentiality for 70.7%, availability of systematic treatment for 57.9%. It worth mentioning that during the FGDs there was different views regarding moving all cancer services to Turkish hospital, some women agreed that it causes improvement in care. As stated by 55 years employed single woman from Gaza said” *Now I can do the investigations, images and receive treatment at the same place that equipped well for us, also the building is better*”. In contrast another 54years woman from Rafah disagreed and said” *It was better to receive treatment in European hospital, I can’t afford private transportation so I had to stay standing in the hospital bus even after receiving my chemotherapy, as there’s no place for me to sit, the bus is crowded by companions more than the patients themselves”*. Also, most FGDs participants complained of the limited time they spent with the treating physician that is always not enough to ask questions. Also, the very long waiting time, as stated by 40 years mother of five kids from north “*I had to wait from 8am to 1 pm just to enter the physician room for two minutes to only write my prescription so I can take it from the hospital pharmacy”*. These results were close to literature, as according to Buzaid et al (2020) there were lack of communication between health professionals that result in inappropriate therapy (Buzaid et al, 2020).

Main challenges related to referral, according to 34.2% of participants delay of permission was the main challenge, followed by denial of permission for 27.8%, resulting in interruption of treatment journey, then the cost of transportation for 27.1%, and Denial of companion 25.8%, some of cancer patients had to be referred without companion and continue their treatment facing all the difficulties alone. A grandmother from Gaza, aged 55 years, said during the FGDs *"Telling me that my companions were denied was shocking and harder than informing me by the results of my biopsy and that I have BC, I couldn't imagine that the first time for me to travel to be alone and for radiotherapy".* These challenges are suffered by most of cancer patients in the Gaza strip not only BC patients because of unavailability of radiotherapy in Gaza, lack of some chemotherapy drugs, due to the occupation restrictions and the blockade of borders.

Regarding the current challenges' women face, difficulty in performing routine activities was the main challenge as reported by 70.1.3% of participants. Followed by feelings of vulnerability by 58.3%, fear of BC recurrence by 57.5%, Experience of threats to safety by 56.3%, then body image disruption by 52.6%. A housewife, aged 38years, mother of 3 from the middle area who underwent mastectomy said during FGDs" *I'm not the same after BC, I feel weak and I need someone to help me, also, despite all my efforts and my husband's support I can't overcome that part of my body is missed and won't be replaced*". That is consistent with literature, as in Ghana the majority of Iddrisu et al (2020) study participants complained of their inability to carry out their activities of daily living (Iddrisu et al,2020). Also similar to what reported by Rahool et al whose results was the lack of energy, followed by fatigue and financial issues (Rahool et al, 2021). And what reported by Ehrenstein et al (2021) in Germany as 80% of participants expressed a change in the field of body image and body awareness and pain (Ehrenstein et al,2021). Also, results of Sapkota et al (2016) study in Nepal, show the top most prevalent symptoms among participants were tiredness (61%), lack of energy (57%), forgetfulness (57%), lack of interest in sex (52%), general aches and pain (49%), feeling of worrisome and anxiousness about future (49%), and night sweats (43%) (Sapkota et al,2016)). The findings of the study highlight a gap in adherence to standards. Despite the fact that the national clinical standards for BC in MoH (2018) concerned about support and communication, and states that patients should fully informed of the different options for treatment and involved in decision making to the extent they wish. It is essential to reinforce the implementation of the national standards to promote effective communication and adequately informing client. Also, the findings show various challenges facing women throughout the BC journey, and point out to the need for healthcare professionals, caregivers and policy makers to elicit these challenges and provide the needed support to the women through organized programs.

4.1.6 Results of mental health scales (depression, anxiety and stress)

To measure prevalence of depression, anxiety and stress among women, I used the DASS-21 scale. As shown in figure 4.3 anxiety was the most prevalent among participants with 84.4% (mean 12.7 ± 4. 7), followed by depression 64.1% (mean 11 ± 4.3), then stress 42.4% (mean 13 ± 4.3).

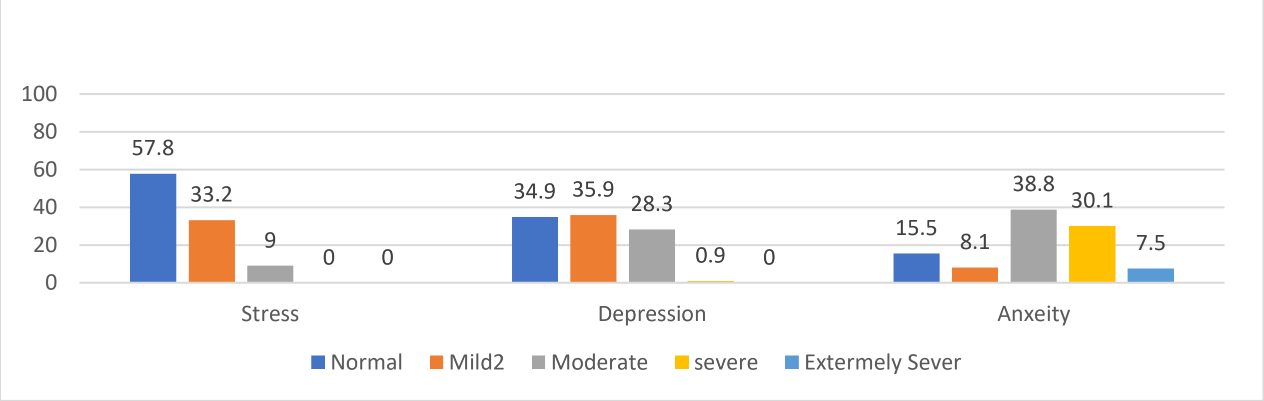

Figure (4.3) Distribution of the study participants according to DASS

Most cases of stress and depression were normal-to-mild levels (91% and 70.7% respectively), while 76.4% of the women had moderate-to-extremely severe anxiety. The results showed that the most frequents feelings suffered by more than two thirds of the participants (answered part of the time and most of the time), were being aware of dryness of mouth (77.4%), became rather touchy (75.4%), feeling that they were using a lot of nervous energy (70.5%%), found it difficult to relax (70.4%), tended to over-react to situations (69%). In general, FGDs revealed different feelings experienced by women after BC diagnosis. A grandmother, from Gaza, aged 62 years, with BC duration of 3 years said during FGDs *"I felt that the condition was beyond my control, I used to be a calm person, it made me nervous even with my grandsons"*. While the least frequent feeling was feeling not worth much as person (43%). A housewife, mother of 4, aged 37 years, with BC duration of 1.5 year said during FGDs "*I just want to die, after my BC diagnosis I was thinking of killing myself".*

Evidence shows diverse results, in Alagizy et al (2020) study, the prevalence of stress, anxiety and depression among participants were 78.1%, 73.3%, and 68.7% respectively (Alagizy et al,2020). While Ayalew et al (2021) results showed the prevalence of depression and anxiety symptoms among participants were 58.8% and 60% respectively (Ayalew et al, 2021).

Table 4.7: Distribution of the study participants according to DASS

Paragraph	Did not apply		Some of the time		Part of the time		Most of the time	
	No.	%	No.	%	No.	%	No.	%
I found it hard to wind down	75	23.1	88	27.1	124	38.2	38	11.7
I tended to over-react to situations	22	6.7	80	24.3	106	32.2	121	36.8
I felt that I was using a lot of nervous energy	26	7.9	71	21.6	79	24.0	153	46.5
I found myself getting agitated	25	7.6	96	29.3	119	36.3	88	26.8
I found it difficult to relax	20	6.1	77	23.5	116	35.5	114	34.9
was intolerant of anything that kept me from getting on with what I was doing	52	15.9	90	27.4	124	37.8	62	18.9
I felt that I was rather touchy	14	4.3	67	20.4	95	28.9	153	46.5
I couldn’t seem to experience any positive feeling at all	58	17.7	98	29.9	119	36.3	53	16.2
I found it difficult to work up the initiative to do things	20	6.1	98	30.0	96	29.4	113	34.6
I felt that I had nothing to look forward to	57	17.4	96	29.0	122	37.2	54	16.5
I felt down-hearted and blue	71	21.7	75	22.9	115	35.2	66	20.2
I was unable to become enthusiastic about anything	54	16.5	81	24.7	113	34.5	80	24.4
I felt I wasn’t worth much as a person	92	28.1	92	28.1	94	28.7	49	15.0
I felt that life was meaningless	75	22.8	73	22.2	85	25.8	96	29.2
I was aware of dryness of my mouth	29	8.9	45	13.8	84	25.7	169	51.7
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	47	14.4	72	22.1	112	34.4	95	29.1
I experienced trembling (e.g., in the hands)	62	18.9	64	19.5	95	29.0	107	32.6
was worried about situations in which I might panic and make a fool of myself	24	7.3	88	26.7	109	33.1	108	32.8
I felt I was close to panic	21	6.4	92	28.0	106	32.3	109	33.2
was aware of the action of my heart in the absence of exertion (e.g., sense of heart rate increase, heart missing a beat)	61	18.5	83	25.2	105	31.9	80	24.3
I felt scared without any good reason	69	21.0	71	21.6	125	38.0	64	19.5

These findings highlight the need to address mental disorders and psychological problems among women with BC, and the need for psychological support and management of mental problems to be an integral part of their care.

4.1.7 Formal support

Availability of different forms of formal support was assessed (informational, financial, instrumental, psychosocial and emotional). In term of informational support, more than half of women (58.2%) reported that educational workshops were never held through their cancer journey, 56.9% reported that they were never given detailed nutritional advices, more than half of women (56.7%) had never been educated about how to maintain a healthy lifestyle and about management of long-term consequences of cancer treatment. The same percent (56.7%) reported that BC care institutions never contacted them to provide psychosocial support.

Table 4.8: Distribution of the study participants according to formal support

Paragraph	**Never**		**Sometimes**		**Always**		**Weighted Mean**
	No.	%	No.	%	No.	%	
Informational							
The treating physician gave me detailed information about my health condition and the treatment recommendations for me	105	32.3	182	56.0	38	11.7	59.7
Treatment option and surgeon's decision was discussed with me	120	37.2	136	42.1	67	20.7	61.3
I was given medical brochures explaining my health condition	171	52.3	100	30.6	56	17.1	55.0
I was given detailed nutritional advices.	186	56.9	101	30.9	40	12.2	51.7
I was given phone number to call if I have any concerns	143	43.6	157	47.9	28	8.5	55.0
After completing treatment plan, I was educated about how to maintain a healthy lifestyle &about management of long-term consequences of cancer treatment.	186	56.7	121	36.9	21	6.4	50.0
Different BC care institutions contacted me to provide psychosocial support	186	56.7	124	37.8	18	5.5	49.7
Educational workshops were held regularly through the cancer journey	191	58.2	121	36.9	16	4.9	49.0
My Care was well coordinated	153	46.8	150	45.9	24	7.3	53.7
Mean:53.62, Median:51.85, Std:14.13							
Financial and instrumental							
Some institutions gave me financial assistance	292	89.3	32	9.8	3	0.9	37.3
institutions support was available throughout the diagnosis, treatment and recovery journey	251	76.8	68	20.8	8	2.4	42.0
some institutions helped me in transportations	270	82.8	46	14.1	10	3.1	40.0
Mean:39.57, Median:33.33, Std:11.00							
Psychosocial and emotional							
The health team shows empathy	118	36.0	176	53.7	34	10.4	67.00
The health team listens to my concern	161	49.2	140	42.8	26	8.0	62.50
I feel that the team took good care	158	48.5	142	43.6	26	8.0	63.75
I feel that the staff are available to support me whenever needed	135	41.5	167	51.4	23	7.1	65.25
The care I receive helped me a lot to deal with my disease	141	43.4	157	48.3	27	8.3	64.75
Overall, I am satisfied about the quality of care I received	142	43.7	154	47.4	29	8.9	64.50
trained HC provider gave supportive counselling to process	154	47.4	125	38.1	33	10.1	62.75
There were support groups for cancer patients in the treating hospital	170	51.8	141	43.0	20	6.1	61.25
Psychosocial support was accessible to me when I need it	180	54.9	127	38.7	21	6.4	58.50
Mean:53.60, Median:51.85, Std:15.80							

In general, FGDs reveals a gap in available information for women about their condition. A housewife from Gaza, aged 50 years said during FGDs "I don't know much about my condition, for instance I don't know what should I eat, I had to collect information from the internet or other women with BC, they gave me different advices that confused me more than being helpful". In term of financial and instrumental support, 89.3% of women reported that institutions never gave them financial assistance, 82.8% reported that institutions never helped them in transportations. It was obvious in FGDs that most of the financial load was on the women and her family and rarely there's formal financial assistance. A single 32 years woman said during FGDs "Referral for treatment is not only about receiving the required treatment, we need special diet and transportation, prices in Jerusalem are ten times the prices in Gaza, I couldn't afford that and no one helped me". These findings were consistent with the findings of many studies. In Hijian et al study (2017), women reported that they did not receive enough favorable support from healthcare personnel, including doctors and nurses. Also, a research done in the Middle East suggests that there are few supportive care services and limited educational programs available to cancer patients (Bingley and Clark, 2009). In Another study In Iran, cancer patients do not receive sufficient information about their disease with lack of printed materials (Montazeri et al, 2002). These results emphasized the importance of support for women with BC and its positive effects on the ability of women to deal with their new circumstances.

Psychosocial and emotional support in spite of being less than what required, but was better than other forms of formal support. Only 64.1% stated that the health team shows empathy with them, 58.5% felt that the staff was available to support them whenever needed. There was agreement among women in FGDs on the importance of psychological and emotional support; some of them consider it important as much as medical treatment. A housewife, aged 47 years, from Gaza said "*My treating doctor was very supportive, he always listens to me and to my complains, it's not his fault the unavailability of the medications".* Another 40 years, housewife from north stated *"As every woman with BC I experience hard days, I was in a real need for psychological support to help me overcome these hard days, to be able to go on my treatment journey".*

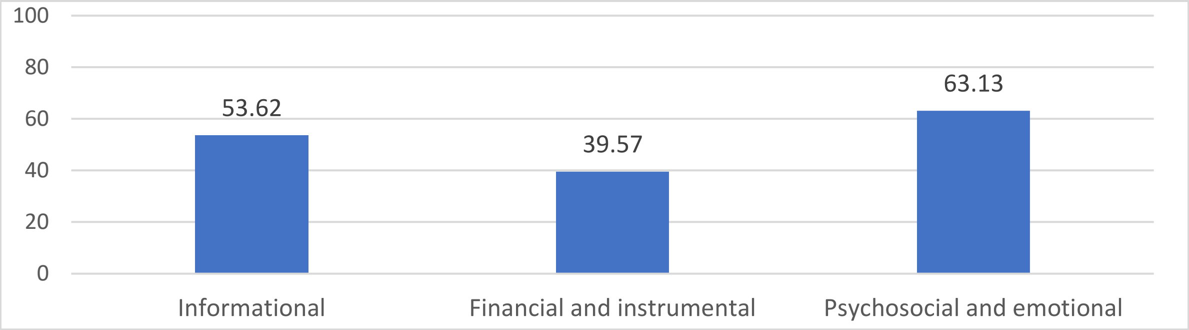

Figure (4.4) Distribution of the study participants according to Formal Support

These findings were consistent with literature (Hajian et al,2017, Abdollahzadeh et al, 2014). And emphasizes the importance of formal support and any other type of support for all cancer patients not only BC, Unfortunately, FGDs revealed that there was gap in formal support throughout the cancer journey as stated by participants in all aspects of care. An employed, 59years woman from Rafah said "*The treating oncologist only provides the most important information about my case as there is little time for each patient, not enough to explain comprehensively the whole process of treatment, or provide information on nutritional and life style changes that I need to follow or provide me with psychological support*". Another 48 years, housewife from the middle area said "*The employees in the hospital sometimes forget we are humans, they may lough loudly at the same time chemotherapy burning our bodies, I was dying from pain when I was talking to the receptionist while she was looking at her mirror and putting makeup*". The role of cancer care providers shouldn't be only limited to medical management but extended to a more holistic approach that considers informational, instrumental, psychosocial and other aspects of formal support.

4.1.8 Social support

To measure social support received by women, I used the social support scale. Table 4.9 illustrates availability of support to participants. It shows that the most frequent form of social support according to participants was presence of someone to take them to the doctor if needed (33.3 % answered all the time), presence of someone they can count on to listen to when they need to talk (29.5 %), Someone to prepare meals if they were unable to do it themselves (29%), Someone to help with daily chores if they were sick (28.4%). A study in WB showed that Social relations, together with faith and religion were the main source of support in facing BC (Almuhtaseb et al, 2021).

Table 4.9: Distribution of the study participants according to Social Support Scale

Paragraph	**None of the time**		**A Little**		**Some**		**Most**		**All the time**		**Weighted Mean**
	No.	%	No.	%	No.	%	No.	%	No.	%	
Emotional/informational support											
Someone you can count on to listen to you when you need to talk	8	2.4	25	7.6	79	24.2	118	36.1	97	29.5	76.60
Someone to give you information to help you understand a situation	5	1.5	27	8.3	79	24.3	153	47.1	61	18.6	74.60
Someone to give you good advice about a crisis	11	3.3	29	8.8	74	22.6	129	39.3	85	25.9	75.20
Someone to confide in or talk to about yourself or your problems	11	3.4	31	9.5	73	22.3	142	43.4	70	21.4	74.00
Someone whose advice you really want	6	1.8	28	8.5	71	21.6	150	45.7	73	22.3	75.60
Someone to share your most private worries and fears with	10	3.0	24	7.3	73	22.3	147	44.8	74	22.6	75.40
Someone to turn to for suggestions about how to deal with a personal problem	10	3.1	32	9.8	68	20.8	142	43.4	75	22.9	74.60
Someone who understands your problems	12	3.7	32	9.8	78	23.9	134	41.0	71	21.7	73.40
Mean:74.73, Median:80.0, Std:17.42											
Tangible support											
Someone to help you if you were confined to bed	40	12.2	62	18.9	64	19.5	79	24.1	83	25.3	66.20
Someone to take you to the doctor if you needed it	9	2.8	17	5.2	51	15.6	141	43.1	109	33.3	79.80
Someone to prepare your meals if you were unable to do it yourself	17	5.2	23	7.0	68	20.7	125	38.1	95	29.0	75.80
Someone to help with daily chores if you were sick	13	4.0	30	9.1	70	21.3	122	37.2	93	28.4	75.40
Mean:74.24, Median:75.00, Std:18.17											
Affectionate support											
Someone who shows you love and affection	2	0.6	22	6.7	70	21.4	147	45.0	86	26.3	78.00
Someone to love and make you feel wanted	5	1.5	21	6.4	82	25.0	137	41.8	83	25.3	76.60
Someone who hugs you	16	4.9	22	6.7	78	23.9	128	39.1	83	25.4	74.60
Mean:76.24, Median:80.00, Std:17.48											
Positive social interaction											
Someone to have a good time with	4	1.2	18	5.5	84	25.6	137	41.8	85	25.9	77.20
Someone to get together with for relaxation	3	0.9	20	6.1	80	24.5	141	43.1	83	25.4	77.20
Someone to do something enjoyable with	3	0.9	22	6.7	74	22.6	155	47.4	73	22.3	76.60
Mean:76.85, Median:80.0, Std:16.94											
Additional item											
Someone to do things with to help you get your mind off things	3	0.9	21	6.4	78	6.4	149	45.3	77	23.5	76.80

A single young woman with BC duration of one and half year from Gaza said" *My father was always there for me, he was my hero, he made the suffering from my disease easier*". Most FGDs participants mentioned that the members of their families, husband in particular, are the most supportive social sources. Also, mentioned that there was great value in involvement in support groups in different organizations that had a positive impact on them. A housewife, aged 50 years, with no children said "*I obtained a lot of support from support groups in smile of hope organization, I met women who had the same condition as mine and we became friends, I felt my life was just normal*". However, some participants in FGDs viewed BC as their own problem and no one can help or would only be able to offer little help. As stated by 39 years, mother from Rafah said" *Even the closest people to me will go on in their lives and forget about my suffering, I must be strong and I should be the major support for myself*".

The least frequent forms of social support that were available for the participants were presence of Someone to help if they were confined to bed (12.2%, none of the time), followed by presence of Someone to prepare meals if they were unable to do it (5.2%), Someone who hugs them (4.9%). FGDs showed that most women depend on themselves to do these duties despite their illness, A housewife, mother of 6, aged 46 years from north said during FGDs" *Despite my illness, I had to clean my house and cook for my husband and my kids, my sisters try to help but no one can do this the same way as mine*".In addition, the analysis was done to assess which of the major five social support dimensions (emotional, informational and positive interaction, affective, tangible-material) were available for the participants. As seen in figure 4.9. The analysis showed that in the five social support dimensions, the options "most and all the time" had the highest percentage, Positive social interaction was the most common dimension (mean 76.85±16.9), followed by Affectionate support (mean 76.24 ± 17.48), then Emotional/informational support (mean 74.73± 17.42), tangible support was the least common (mean 74.24 ± 18.17). These scores were different from what reported by Kolankiewicz et al (2014), average scores in his study ranged from 82.36±24.42 (positive interaction), 85.39±19.81 (informational), 87.98±18.68 (emotional), 88.52±18.56 (material) and 93.50±14.44 (affective). (Kolankiewicz et al,2014).

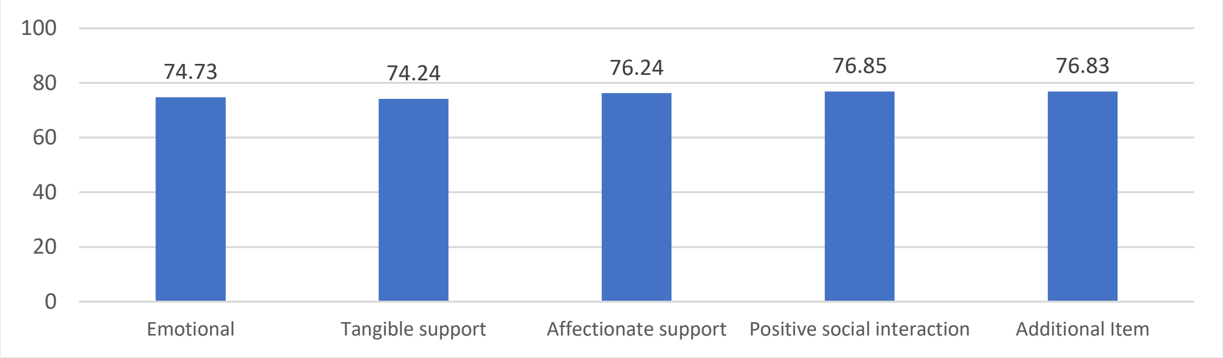

figure (4.5) Distribution of the study participants according to social Support dimensions

The results show gap in available support for women, and the need for more organized support programs for both the women and their family members. Women participated in this study have survived a life-threatening illness and experienced major life changes that make them feel powerless and uncertain and in need for support from others.

4.1.9 Coping

I used Brief COPE scale to assess coping strategies adopted by participants, the most frequent coping strategies adopted by women were praying or meditating (75.5% answered doing it a lot), followed by trying to find comfort in religion or spiritual beliefs (55.2 %), learning to live with it (40.1%). A single, employed woman, aged 51 years said in FGDs *“After my diagnosis with BC I become closer to god, praying more and I was thankful that I can take care of myself”*. These results are not strange as women in Gaza depends to a large extent on religion to overcome any hard circumstances, and are similar to Shehadeh study results in WB (2017), in his study the most frequent coping strategies used by the women were, finding comfort in religion or spiritual beliefs, followed by praying or meditating. In FGDs a 40 years mother of four said*” Being strong was my only choice after BC diagnosis, I had to fight for myself before anyone then for my kids and my family”*. The same as Hajian et al (2017) results, most of the women in his study agreed on the effectiveness of spiritually and religion and mentioned that praying helped them to cope with problems produced by their illness. The next common coping strategies adopted by women in this study were doing something to think about it less, such as watching TV, reading, sleeping, or shopping (41.6%).

Table 4.10: Distribution of the study participants according to coping scale

Paragraph	**Not at all**		**A little bit**		**Medium amount**		**A lot**		**Weighted Mean**
	No.	%	No.	%	No.	%	No.	%	
Avoidant									
I've been turning to work or other activities to take my mind off things.	13	4.0	60	18.6	161	49.8	89	27.6	75.25
I've been saying to myself "this isn't real.".	67	20.6	73	22.4	87	26.7	99	30.4	66.75
I've been using drugs to make myself feel better.	73	22.4	94	28.8	81	24.8	78	23.9	62.50
I've been giving up trying to deal with it.	61	18.5	133	40.4	90	27.4	45	13.7	59.00
I've been refusing to believe that it has happened.	76	23.2	126	38.4	86	26.2	40	12.2	56.75
I've been using drugs to help me get through it.	56	17.1	103	31.4	90	27.4	79	24.1	64.75
I've been giving up the attempt to cope.	72	22.0	129	39.3	103	31.4	24	7.3	56.00
I've been doing something to think about it less, such as going to movies, watching TV.	19	5.8	50	15.2	123	37.4	137	41.6	78.75
Problem Focused									
I've been concentrating my efforts on doing something about the situation I'm in.	8	2.5	84	25.9	162	50.0	70	21.6	72.75
I've been taking actions to try to make the situation better.	5	1.5	74	22.6	167	50.9	82	25.0	74.75
I’ve been getting help and advice from other people.	16	4.9	81	24.8	139	42.6	90	27.6	73.25
I've been trying to see it in a different light, to make it seem more positive.	22	6.7	80	24.3	152	46.2	75	22.8	71.25
I've been trying to come up with a strategy about what to do.	18	5.6	68	21.0	163	50.3	75	23.1	72.75
I've been looking for something good in what is happening.	26	7.9	98	29.8	151	45.9	54	16.4	67.75
I've been thinking hard about what steps to take.	26	7.9	66	20.1	152	46.2	85	25.8	72.50
Emotional									
I've been getting emotional support from others.	10	3.0	82	24.9	151	45.9	86	26.1	2.95
I've been saying things to let my unpleasant feelings escape.	76	23.1	118	35.9	105	31.9	30	9.1	2.27
I’ve been criticizing myself.	90	27.4	111	33.7	91	27.7	37	11.2	2.23
I've been getting comfort and understanding from someone.	5	1.5	86	26.3	137	41.9	99	30.3	3.01
I've been making jokes about it.	189	57.6	60	18.3	55	16.8	24	7.3	1.74
I've been accepting the reality of the fact that it has happened.	8	2.5	72	22.3	135	41.8	108	33.4	3.06
I've been expressing my negative feelings.	62	18.9	141	43.0	88	26.8	37	11.3	2.30
I've been trying to find comfort in my religion or spiritual beliefs.	5	1.5	23	7.0	119	36.3	181	55.2	3.45
I've been learning to live with it.	7	2.1	42	12.8	148	45.0	132	40.1	3.23
I’ve been blaming myself for things that happened.	145	44.1	70	21.3	64	19.5	50	15.2	2.06
I've been praying or meditating.	3	0.9	10	3.1	67	20.6	246	75.5	3.71
I've been making fun of the situation.	109	33.2	74	22.6	78	23.8	67	20.4	2.31

The least frequent coping strategies were making jokes about it (7.3% that they do it a lot, 57.6 not at all), blaming self for things that happened (15% a lot, 44% not at all), giving up the attempt to cope (7.3 a lot, 22% not at all), saying things to let unpleasant feelings escape (9.1% alot,23.1% not at all). a housewife from Gaza, aged 53 years said during FGDs *"I kept telling myself that god will never let me, and will cure my illness and end my suffering"*. other coping strategies amongst the least adopted were that women criticizing themselves (11.2%, 27.4%), expressing negative feelings (11.3%,18.9%). As mentioned by 46 years, employed mother of 5 during FGDs" I *found comfort in talking to a friend of my family, who always listens to me and give me the chance to express my negative thoughts and feelings about my situation*", these results are consistent with literature (Shehadeh, 2017&Hajian,2017).

Table 4.11: Coping dimensions

Coping strategy		Mean	MD	Std
1.	**Avoidant**	**2.6**	**2.6**	**0.4**
1.1	Self-distraction	3.1	3.0	0.6
1.2	Denial	2.5	2.5	0.8
1.3	Substance use	2.5	2.5	1.0
1.4	Behavioral disengagement	2.3	2.5	0.8
2.	**Problem-Focused**	**2.9**	**2.9**	**0.5**
2.1	Active coping	3.0	3.0	0.7
2.2	Use of informational support	3.0	3.0	0.8
2.3	Positive reframing	2.8	3.0	0.7
2.4	Planning	2.9	3.0	0.7
3.	**Emotion-Focused**	**2.9**	**2.9**	**0.4**
3.1	Emotional support	2.9	3.0	0.6
3.2	Venting	2.3	2.0	0.8
3.3	Humor	2.3	2.0	0.7
3.4	Acceptance	3.1	3.0	0.7
3.5	Religion	3.6	4.0	0.5
3.6	Self-blame	2.1	2.0	0.9

In addition, the analysis was done to assess which major dimensions of coping strategies the women mainly used in general to cope with BC, as shown in table (4.11). Problem focused and emotion focused coping strategies were adopted more than avoidant strategies. Religion and use of acceptance as emotion focused coping strategies were the most frequently adopted coping strategies in this study (mean 3.6 ± 0.5, mean 3.1 ± 0.7 respectively). Participants in FGDs agreed on the value of faith and its role in their ability to cope with the challenges appeared with BC diagnosis. As stated by 62 years housewife from Rafah*" Everything is a gift from god, he will reward us for our belief and patience"*, another woman 47 year stated *"Praying and believing in god mercy was the only thing that helped me resist and get through the new situation"*. While the least used emotion focused coping strategies were self-blame (mean 2.1 ± 0.9), venting (mean 1.9 ± 0.94), humor and (mean 2.1 ± 0.7).

The most frequently used problem focused coping strategies was active coping (mean 3 ± 0.7), followed by the use of informational support, planning, emotional support and positive reframing (mean 3 ± 0.8; 2.9 ± 0. 7;2.9 ± 0. 6 and 2.8 ± 0.7respectively). While for avoidant coping strategies the most common was self-distraction (mean 3.1 ± 0.6). A38 years, employed from Khanyonis who had mastectomy said during FGDs *“I hated meeting people after my surgery, I felt everyone was looking to the surgery site, I preferred to stay away from people”*. Moreover, the least used was behavioral disengagement and Denial (. 2.1 ± 0.8 and 2.5±0.8 respectively).

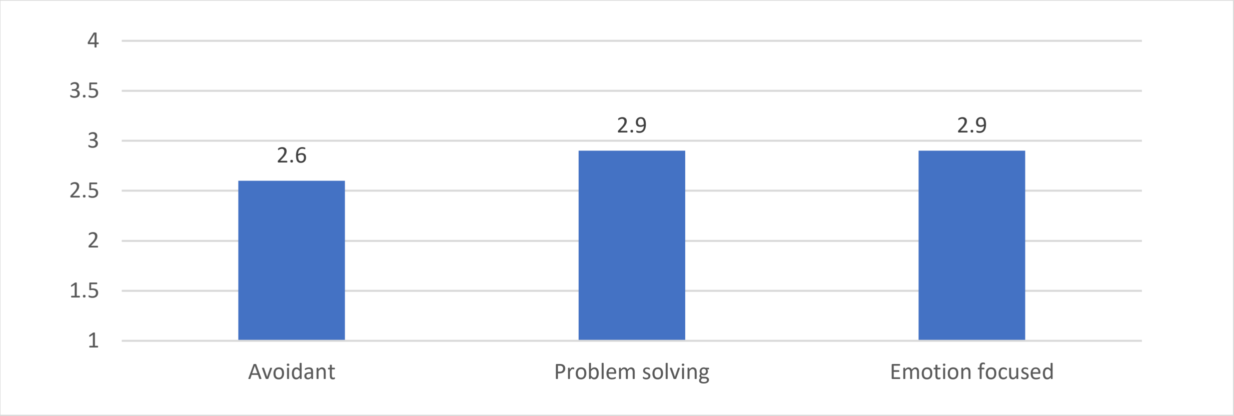

Figure (4.6) Distribution of the study participants according to coping strategies

These results are similar to literature, that found religious approach is the key active coping strategy among women with BC. Majority of Benson et al (2020) study participants frequently use emotion focused strategies. In his study, the most adopted emotion focused strategy was religious coping, while the least adopted was humor. Active coping and Positive reframing were the most and least used problem-solving coping strategies self-distraction and substance use were the most and least adopted avoidant coping strategies, respectively (Benson et al,2020).

Also, in a study conducted in Iran, majority of the BC patients used emotion-focused coping strategies included: Religion (7.14 ± 1.35), acceptance (6.83 ± 1.25), followed by problem focused coping including planning (6.04 ± 1.48). The most frequent avoidant coping strategies were self-distraction, (6.24 ± 1.42), denial (5.20 ± 2.17) (Khalili, N., et al,2013).

4.2 Inferential analysis:

To determine if there are differences among participants in challenges they faced, social support they received, availability of formal support and coping strategies they adopted, or not. the researcher conducted inferential analysis comparing difference in these dependent variables across the different sociodemographic characteristics and BC related variables (independent variables).

4.2.1 Differences in challenges

Table 4.12 shows that there are differences in the overall challenges reported scores in relation to age, with younger women under 40 years with BC eliciting higher mean scores of challenges (49.67) than older ones (46.46). However, the differences in challenges scores by age were not statistically significant. The differences can be attributed to the greater worry young women may experience especially around their families and their children than the older ones. In addition to the effect of body image on younger women more than older women. FGDs confirmed and explained the relationship between age and challenges faced," My *kids are young, they totally depend on me, I'm afraid that the disease won't allow me raise them until they became totally self-dependent"* as mentioned by a young mother with 2 years duration of BC in FGDs. Similarly, despite that there were some variations in reference to place of residency, education level, marital status, refugee status, number of children and type of the family these didn't reach statistical significance (see Table 4.16). Apparently, women from different categories face great challenges. On the other hand, the time passed since diagnosis makes a difference as those who have been diagnosed in the past 1 year, have elicited lower scores in challenges than those several years ago (see table 4.16), and the difference in this regard were statistically significant (P=0.003). The Least Significance Differences (LSD) test shows that the significant variations occurred for women diagnosed since less than one year with less challenges compared to other women (see annex 4). FGDs explained this relationship as those who were diagnosed since less than one year still at the beginning of their cancer treatment journey, while women diagnosed since 3 to 5 went through all the steps of cancer journey and most probably received more than two types of treatment and experience most of the challenges related to treatment and referral. A housewife, aged 48 years, from north said during FGDs*" When my breast was removed I thought it was the worst thing until I had chemotherapy and I lost my hair and wasn't able to do my simple daily activities without help*". On the other hand, despite presence of differences in overall challenges scores in relation to BC stage, type of treatment and type of surgery but the variations didn't reach statistical significance.

Table 4.12: Differences in overall challenges in reference to sociodemographic &disease characteristics

Independent variables		N	Mean	SD	Factor	Value	Sig.
Age	40 and less	68	49.67	8.73	F	1.774	0.152
	41 to 50	93	48.68	8.92			
	51 to 60	117	47.09	9.41			
	60 and above	51	46.46	9.85			
	Total	329	47.97	9.24			
Governorates	Gaza	169	48.89	10.60	F	1.120	0.347
	North	50	46.70	7.22			
	Middle area	39	46.34	7.09			
	Khanyounis	32	48.44	9.49			
	Rafah	39	46.87	6.25			
	Total	329	47.97	9.24			
Neighborhood	City	246	47.57	9.13	F	1.087	0.339
	Village	10	50.74	6.79			
	Camp	73	48.95	9.85			
	Total	329	47.97	9.24			
Refugee status	Refugee	227	47.96	9.16	t	0.050	0.960
	Non-Refugee	102	48.01	9.46			
Type of family	Nuclear Family	261	47.48	8.34	t	-1.88	0.060
	Extended	68	49.85	11.97			
Marital status	Single	27	45.75	10.69	F	0.989	0.398
	Divorce	21	49.07	8.90			
	Married	250	48.30	9.35			
	Widow	31	46.51	6.85			
	Total	329	47.97	9.24			
Having children	Yes	283	48.28	8.61	t	0.784	0.434
	No	19	46.59	14.72			
No children	6 and less	182	48.31	9.16	t	0.026	0.979
	Above 6	100	48.28	7.60			
Education	Primary and less	130	47.91	8.81	F	0.247	0.781
	High School	127	47.67	9.17			
	University	72	48.62	10.18			
	Total	329	47.97	9.24			
Working status	Not Work	307	47.93	8.95	t	0.357	0.722
	Work	22	48.65	12.83			
Income	Less than 1000	50	49.43	7.59	t	0.650	0.517
	1000 and above	43	50.80	12.47			
Regularity of income	Regular -monthly	125	48.34	9.46	F	1.742 1.742	0.177 0.177
	Regular - daily	48	45.68	5.95			
	Irregular	156	48.39	9.82			
	Total	125	48.34	9.46			
Receiving assistance	No	131	48.76	11.32	t	1.250	0.212
	Yes	198	47.46	7.55			
Stage of Cancer	Stage I	79	47.88	9.72	F	1.853	0.118
	Stage II	121	48.65	8.61			
	Stage III	70	49.11	10.11			
	Stage IV	16	47.28	5.31			
	Don't Know	43	44.66	9.28			
	Total	329	47.97	9.24			
Time Since Diagnosis	Less than 1 Year	35	42.75	11.86	F	4.674	0.003
	1 to less 3 years	116	48.07	8.74			
	3 to 4 years	92	49.38	8.95			
	5 Years	86	48.47	8.39			
	Total	329	47.97	9.24			
Chemotherapy	No	57	48.72	11.26	t	0.667	0.505

	Yes	272	47.82	8.77			
Radiotherapy	No	105	43.41	7.90	t	6.506	0.000
	Yes	224	50.11	9.06			
Hormonal therapy	No	96	48.36	11.26	t	0.487	0.627
	Yes	233	47.81	8.28			
Biological	No	291	48.35	9.08	t	2.047	0.041
	Yes	38	45.10	10.08			
Surgery	No	52	46.71	9.91	t	1.079	0.281
	Yes	277	48.21	9.11			
Type of surgery	BCS	126	11.26	4.31	t	1.922	0.167
	Mastectomy	78	10.42	4.26			

In addition, table 4.12 shows higher overall challenges scores for women who received radiotherapy (mean 50.11±9.06) compared to women who didn't (mean43.41±7.90). t test pointed that these differences are statistically significant (P=0.001). This finding is consistent with literature that radiotherapy leads to more challenges. Furthermore, FGDs participants confirmed that receiving radiotherapy is a cause for more challenges as in Gaza radiotherapy is not available and women must be referred either to Egypt, Jordan or WB. with all the added challenges due to referral. A housewife mother of 3, aged 35 years said *"I've never left Gaza before my BC diagnosis, and when it happened, it was for radiotherapy and I've to do it alone. I was terrified"*.

4.2.2 Differences in depression, anxiety and stress

Table 4.13 indicates there are differences in depression scores according to age. Younger women had higher scores than older women. The highest mean for depression scores (11.63) was among women aged 40 years and less, while the lowest (10.53) was among women aged 60 years and more, these differences were not statistically significant. the study shows differences in depression scores in relation to number of children, women having 6 children and less had higher depression scores than women having more children, mean 12.42, t test shows that these differences are statistically significant (P=0.008). On the other hand, results showed no statistically significant variance in regards to income, education and employment status despite presence of variances. these results are consistent with literature (Gauikci et al, 2018; Mystakidou, K., et al 2005).

Table 4.13: Differences in depression in reference to sociodemographic &disease characteristics

Independent variable		N	Mean	Std	Factor	Value	Sig
Age	40 and less	66	11.63	4.36	F	1.374	0.251
	41 to 50	92	11.45	4.01			
	51 to 60	114	10.57	4.48			
	60 and above	49	10.53	4.52			
	Total	321	11.03	4.34			
Governorates	Gaza	166`	11.45	4.27	F	1.605	0.173
	North	49	9.94	4.15			
	Middle area	37	10.57	4.89			

	Khanyounis	31	10.42	4.58			
	Rafah	38	11.61	3.97			
	Total	321	11.04	4.34			
Neighborhood	City	241	10.85	4.27	F	1.143	0.32
	Village	10	10.70	5.96			
	Camp	70	11.73	4.30			
	Total	321	11.04	4.34			
Refugee status	Refugee	222	11.17	4.26	t	0.827	0.409
	Non-Refugee	99	10.74	4.52			
Type of family	Nuclear Family	36	11.69	4.48	t	0.947	0.345
	Extended	155	10.89	4.62			
Marital status	Single	126	11.74	4.46	F	2.745	0.066
	Divorce	125	10.55	3.97			
	Married	70	10.64	4.63			
	Widow	321	11.04	4.34			
	Total	126	11.74	4.46			
Having children	Yes	276	10.91	4.40	t	-1.796	0.074
	No	18	12.83	4.44			
Number of children	6 and less	180	11.42	4.46	t	2.676	0.008
	Above 6	95	9.94	4.46			
Education	Primary and less	129	52.82	12.93	F	1.295	0.275
	High School	127	50.42	11.79			
	University	72	51.52	10.35			
	Total	328	51.61	11.98			
Employment status	Not Work	299	11.06	4.33	t	0.296	0.767
	Work	22	10.77	4.51			
Income	Less than 1000	48	11.04	3.50	t	-0.258	0.797
	1000 and above	43	11.26	4.41			
Receive assistant	No	130	10.47	4.55	F	-1.944	0.053
	Yes	191	11.42	4.16			
Regularity of income	Regular- monthly	125	10.73	4.12		1.148	0.318
	Regular- daily	47	10.62	4.19			
	Irregular	149	11.43	4.55	t		
	Total	328	51.61	11.98			
Stage of cancer	Stage I	77	10.00	4.05	F	2.727	0.029
	Stage II	117	11.27	4.47			
	Stage III	69	12.10	3.80			
	Stage IV	16	11.75	4.75			
	Don't Know	42	10.26	4.77			
	Total	321	11.04	4.34			
Time since diagnosis	Less than 1 Year	34	48.46	8.64	F	2.848	0.038
	1 to less 3 years	116	53.23	12.08			
	3 to 4 years	92	52.81	12.35			
	5 Years	86	49.37	12.16			
	Total	328	51.61	11.98			
Chemotherapy	No	54	11.41	4.90	t	0.687	0.493
	Yes	267	10.96	4.22			
Radiotherapy	No	102	10.70	4.31	t	-0.962	0.337
	Yes	219	11.20	4.35			
Hormonal	No	93	11.14	4.71	t	0.270	0.788
	Yes	228	11.00	4.19			
Biological	No	284	11.10	4.32	t	0.660	0.510
	Yes	37	10.59	4.52			
Surgery	No	52	11.56	4.29	t	0.945	0.346
	Yes	269	10.94	4.35			
Type of surgery	BCS	126	11.26	4.31	t	1.839	.177
	Mastectomy	78	10.42	4.26			

Regarding BC characters, BC stage had statistically significant influence on depression mean scores(P=0.029), the highest mean was for women with stage III (12.10), followed by those with stage IV then stage II (mean 11.75, 11.27 respectively), while women with stage I had the lowest mean scores (10.00). Participants in FGDs confirmed that the earlier the stage of BC at diagnosis, the lower the levels of depression. They attributed this to the realization of a potentially poorer prognosis in late stages than early stages. Also, they may experience more severe physical symptoms and more aggressive treatment choices. A housewife from Gaza, aged 42 years said during FGDs *“My treating doctor told me that I’m lucky to have stage II BC and this means they will just remove the malignant mass and keep my breast, I was happy despite my illness, my great fear after diagnosis was removing my breast”*. These results are consistent with Ayalew et al results (2021). In addition, ANOVA test shows statistically significant variations in depression score in relation to time since diagnosis (P=0.038), the highest mean scores were for women diagnosed since 1 to less than 3 years as it was 53.23, while the lowest was 48.46 for those diagnosed since less than one year. FGDs participants agreed with this relationship, some women who were recently diagnosed (since less than one year) only focus on fighting the disease which may temporarily overshadow the feeling of depression. Others have hope and optimism about their disease prognosis.

Table 4.13: Differences in anxiety in reference to sociodemographic &disease characteristics

Independent variable		N	Mean	Std	Factor	Value	Sig
Age	40 and less	66	14.10	4.50	F	6.009	0.001
	41 to 50	91	13.63	4.47			
	51 to 60	115	12.09	4.65			
	60 and above	50	11.02	5.19			
	Total	322	12.77	4.767			
Governorates	Gaza	166	12.70	4.55	F	0.698	0.594
	North	48	12.13	5.11			
	Middle area	39	12.90	5.11			
	Khanyounis	32	12.69	5.07			
	Rafah	37	13.84	4.72			
	Total	322	12.77	4.77			
Neighborhood	City	241	12.40	4.66	F	3.518	0.031
	Village	10	12.30	6.27			
	Camp	71	14.08	4.75			
	Total	322	12.77	4.77			
Refugee status	Refugee	222	12.93	4.75	t	0.884	0.377
	Non-Refugee	100	12.42	4.80			
Type of family	Nuclear Family	36	12.42	4.98	t	-0.705	0.482
	Extended	156	13.08	5.08			
Marital status	Single	26	13.81	4.83	F	1.041	0.374
	Divorce	20	13.40	4.03			
	Married	245	12.74	4.78			
	Widow	31	11.71	5.03			
	Total	322	12.77	4.77			

Having children	Yes	278	12.58	4.71	t	-1.474	0.142
	No	18	14.28	5.34			
Number of children	6 and less	179	12.92	4.16	t	1.681	0.094
	Above 6	98	11.93	4.41			
Education	Primary and less	127	13.08	4.47	F	1.399	0.248
	High School	125	12.22	4.79			
	University	70	13.20	5.21			
	Total	322	12.77	4.77			
Employment status	Not Work	300	12.78	4.73	t	0.136	0.892
	Work	22	12.64	5.40			
Income	Less than 1000	49	12.67	3.67	t	1.408	0.163
	1000 and above	43	11.44	4.71			
Receive assistant	No	130	12.17	5.18	F	-1.869	0.063
	Yes	192	13.18	4.43			
Regularity of income	Regular- monthly	124	12.11	4.80		2.098	0.124
	Regular-daily	46	12.83	4.53			
	Irregular	152	13.29	4.77	t		
	Total	322	12.77	4.77			
Stage of cancer	Stage I	76	11.41	4.35	F	5.055	0.001
	Stage II	119	12.44	4.91			
	Stage III	69	14.72	4.16			
	Stage IV	15	13.87	4.55			
	Don't Know	43	12.58	5.18			
	Total	322	12.77	4.77			
Time Since diagnosis	Less than 1 Year	34	48.46	8.64	F	2.848	0.038
	1 to less 3 years	116	53.23	12.08			
	3 to 4 years	92	52.81	12.35			
	5 Years	86	49.37	12.16			
	Total	328	51.61	11.98			
Chemotherapy	No	57	12.89	5.08	t	0.217	0.828
	Yes	265	12.74	4.71			
Radiotherapy	No	105	12.25	4.39	t	-1.370	0.172
	Yes	217	13.02	4.93			
Hormonal	No	95	12.81	4.76	t	0.098	0.922
	Yes	227	12.75	4.78			
Biological	No	284	12.85	4.76	t	0.843	0.400
	Yes	38	12.16	4.82			
Surgery	No	51	13.25	4.59	t	0.791	0.430
	Yes	271	12.68	4.80			
Type of surgery	BCS	124	12.75	4.94	t	.016	.901
	Mastectomy	80	12.84	4.81			

Also results of the study as shown in Table 4.14 indicate that there are variances in anxiety scores in relation to age, anxiety score increases with younger age. The highest scores were among women aged 40 years and less (mean=14.1) and decreases with older age, the lowest score among women aged 60 years sand above(mean=11.02). These differences were statistically significant as shown by ANOVA test (P=0.001). As shown in annex 4, LSD test shows that the statistically significant variance was between the four groups. These findings were consistent with literature which suggests that anxiety level increases among young age women with BC (Kyei et al,2020). The results also show statistically significant differences in anxiety mean scores in relation to neighborhood (p=0.031), women living in camps elicited the highest mean (14,08), followed by those living in cities(mean=12.40), and the lowest mean was for those living in villages (mean=12.30). LSD test shows that variance occurred between those living in cities compared to those living in camps (Annex 4). the results are consistent with literature (Çürük et al,2020), and could be attributed to the difficult living conditions and limited services in camps compared to cities. also, there were differences in relation to governorates, refugee status and marital status but not statistically significant. In regards to BC characters the study results show statistically significant variances in anxiety score in relation to BC stage in ANOVA test (P=0.001), as late BC stages associated with higher mean scores of anxiety it was 14.72 for stage III followed by 12.58 for stage IV, compared to lower scores for early stages, as it was 12.44 for stage II followed by 11.41 for stage I. The LSD test points out that the statistically significant variance occurred between the stage III compared to stage I and II but not stage IV. These results can be explained by that women with more advanced BC stages experience longer duration of the disease, with higher risk of metastasis that all could contribute to anxiety. The results are consistent with Fradelos et al findings (2017), and Ayalew et al (2021) that show that more advanced stages experience more anxiety. In addition, Table 4.17 shows statistically significant differences in anxiety mean scores in relation to time since diagnosis, as shown in table 4.17, type of surgery had influence on anxiety scores, as women who underwent mastectomy had higher mean score (12.75) than women who underwent BCS (mean=12.84), but these differences didn't reach statistical significance (P=0.90). Some participants in FGDs disagreed with this relationship pointing into that BCS may cause more anxiety than mastectomy and explained this by the worries of recurrence in the remaining breast tissue and the thoughts of not removing all the cancer cells, as stated by 58 years ,employed mother of 5said during FGDs " *I heard that doing a biopsy or excision of a lump will spread the disease, I don't feel safe, I would prefer if they excised the whole breast"*. These results were consistent with Fradelos et al results (2017). But different from Cohen et al results (2000), in his study women who underwent BCS experienced more anxiety.

Table 4.14: Differences in stress in reference to sociodemographic &disease characteristics

Independent variable		**N**	**Mean**	**Std**	**Factor**	**Value**	**Sig**
Age	40 and less	68	13.91	3.72	F	2.665	0.048
	41 to 50	90	13.42	4.04			
	51 to 60	114	12.94	4.57			
	60 and above	50	11.74	4.92			
	Total	322	13.09	4.35			
Governorates	Gaza	167	13.13	4.10	F	3.154	0.015
	North	46	11.35	4.57			
	Middle area	39	13.56	4.30			
	Khanyounis	32	13.09	5.22			

	Rafah	38	14.58	3.92			
	Total	322	13.10	4.35			
Neighborhood	City	242	12.93	4.35	F	0.814	0.444
	Village	9	13.11	5.80			
	Camp	71	13.68	4.19			
	Total	322	13.10	4.35			
Refugee status	Refugee	222	13.48	4.22	t	2.386	0.018
	Non-Refugee	100	12.24	4.55			
Type of family	Nuclear Family	37	12.84	4.48	t	-1.281	0.202
	Extended	156	13.92	4.63			
Marital status	Single	27	13.67	3.95	F	1.391	0.245
	Divorce	20	14.15	3.28			
	Married	245	13.10	4.41			
	Widow	30	11.83	4.73			
	Total	322	13.10	4.35			
Having children	Yes	276	12.92	4.45	t	-1.798	0.073
	No	19	14.79	2.94			
Number of children	6 and less	180	13.21	4.38	t	1.445	0.15
	Above 6	95	12.39	4.59			
Education	Primary and less	126	13.21	4.16	F	1.501	0.224
	High School	127	12.64	4.30			
	University	69	13.74	4.76			
	Total	322	13.10	4.35			
Employment status	Not Work	301	13.09	4.37	t	-0.102	0.919
	Work	21	13.19	4.20			
Income	Less than 1000	49	12.53	3.65	t	-0.163	0.871
	1000 and above	41	12.66	3.75			
Receive assistant	No	126	12.68	4.52	F	-1.369	0.172
	Yes	196	13.36	4.24			
Regularity of income	Regular- monthly	121	12.76	4.01		0.608	0.545
	Regular- daily	48	13.44	4.68			
	Irregular	153	13.25	4.52	t		
	Total	322	13.10	4.35			
Stage of cancer	Stage I	77	11.92	3.78	F	7.121	0.000
	Stage II	119	12.34	4.52			
	Stage III	68	15.21	3.37			
	Stage IV	15	13.67	5.52			
	Don't Know	43	13.77	4.62			
	Total	322	13.10	4.35			
Time Since diagnosis	Less than 1 Year	34	48.46	8.64	F	2.848	0.038
	1 to less 3 years	116	53.23	12.08			
	3 to 4 years	92	52.81	12.35			
	5 Years	86	49.37	12.16			
	Total	328	51.61	11.98			
Chemotherapy	No	55	13.25	3.69	t	0.296	0.768
	Yes	267	13.06	4.48			
Radiotherapy	No	102	12.48	4.20	t	-1.734	0.084
	Yes	220	13.38	4.40			
Hormonal	No	96	12.91	4.78	t	-0.510	0.611
	Yes	226	13.18	4.17			
Biological	No	284	13.12	4.27	t	0.264	0.792
	Yes	38	12.92	5.02			
Surgery	No	51	13.63	4.58	t	0.949	0.343
	Yes	271	13.00	4.31			
Type of surgery	BCS	124	13.23	4.19	t	.000	.985
	Mastectomy	80	13.24	4.31			

Table 4.15 shows differences in stress scores attributed to sociodemographic characters, regarding age, stress mean scores increases with younger age, the highest scores were among women aged

40years and less(mean=13.91), the lowest scores were among women aged 60years and above (mean=11.74), these differences were statistically significant (P=0.048). LSD test showed that the variance occurred for women aged 60years and above compared to others in table 4.20 except those aged 51-60 years (Annex 4). Women in FGDs confirmed and explained this relation between age and level of stress; they attributed this to the fact that younger women are more worried about their body image, and about their future and the future of their families, also some attributed this to the maturity of older women and their ability to deal with different circumstances more than younger women. A housewife, aged 63 years, with BC duration of 4.5 years said" *Having BC was hard but not the hardest thing happened to me, my husband died, my daughter had cancer so I must be strong and go on my life*".

Also, the governorates where women lives make a difference, as women living in Rafah elicited the highest mean scores of stress (14.58), those living in North shows the lowest (mean=11.35). and these differences were statistically significant (P=0.015). LSD test shows that variance occurred in the North governorate compared to all other ones expect Khanyounis (see Annex 4). also, the results show statistically significant differences in stress score that attributed to refugee status, as refugees had higher scores of stress than non-refugees according to T test (table 4.15).

BC stage positively associated with stress scores, women with stage III had the highest score, followed by stage IV (mean 15.21, 13.67 respectively), while women with stage I had the lowest scores followed by stage II (mean 111.92,12.34 respectively). This association was statistically significant (P=0.000). FGDs participants explained the relationship between stress and BC stage by the longer duration of treatment needed for women with advanced stages, as they are more likely to be subjected to more aggressive surgery and higher doses of chemotherapy, radiotherapy and other treatment with its complications and side effects, resulting in more stress. The results are similar to Ayalew et al study results (2021). Regarding time passed since diagnosis the highest scores of stress were among women diagnosed since 1-3 years (mean=53.23), the lowest scores were among women diagnosed since less than 1year (mean=48.46). The differences in this regard were statistically significant (P=0.038). As shown in table 4.14other disease characters as type pf treatment associated with stress scores but didn't reach statistically significant differences.

4.2.3 Differences in social support

As shown in table 4.16 there's differences in social support among women in relation to age as support increases with increased age, women aged 60 years and above received more support than other (79.58±14.32) these differences were not statistically significant. Participants in FGDs agreed on that relationship. A housewife, aged 59 years said during FGDs "*My daughters never left me since BC diagnosis, they cook, clean the house and do whatever I want, my grandkids are always around me they didn't want me to be alone or feel pain, and my husband became closer to me*". There were also differences in social support in relation to regularity of income, the highest level of support was for those with irregular income (76.55±15.43), while the least level was for those with regular income on daily basis (68.46±15.76), these differences were statistically significant(P=0.003). Also, table 4.15 illustrated positive association between overall level of support and BC stage, Results showed that the highest levels of social support were among those with early stages BC. Stage II, I (78.1±15.76,77.60±15.19 respectively), compared to less support to women with late stages cancer Stage III, Stage IV (70.30±15.06,72.57±14.16 respectively) and these differences were statistically significant (P=0.003). the LSD test points out that the statistically significant difference occurred between the 4 stages groups as listed in table 4.16 below (Annex 4).

Table 4.15: Differences in overall social support in reference to sociodemographic &disease characteristics

Independent variable		N	Mean	Std	factor	Value	Sig
Age	40 and less	68	74.44	15.57	F	2.615	0.051
	41 to 50	93	72.47	15.48			
	51 to 60	117	76.24	15.11			
	60 and above	50	79.58	14.32			
	Total	328	75.31	15.31			
Governorates	Gaza	168	76.28	15.48	F	2.452	0.046
	North	50	72.59	15.19			
	Middle area	39	77.35	14.29			
	Khan Younis	32	78.72	14.43			
	Rafah	39	69.77	15.28			
	Total	328	75.31	15.31			
Neighborhood	City	245	75.87	14.65	F	0.644	0.526
	Village	10	73.79	18.49			
	Camp	73	73.64	17.04			
	Total	328	75.31	15.31			
Refugee status	Refugee	227	74.69	15.63	t	1.104	0.270
	Non-Refugee	101	76.71	14.55			
Type of family	Nuclear Family	260	75.06	15.28	t	0.572	0.568
	Extended	68	76.25	15.49			
Marital status	Single	27	76.88	12.71	F	0.646	0.586
	Divorce	21	71.23	15.31			
	Married	249	75.58	15.65			
	Widow	31	74.50	14.76			
	Total	328	75.31	15.31			
Having children	Yes	283	75.58	15.14	t	1.842	0.066
	No	18	68.66	20.23			
Number of children	6 and less	182	74.20	15.29	t	1.976	0.049
	Above 6	100	77.91	14.58			
Education	Primary and less	129	75.19	16.32	F	0.258	0.773

	High School	127	75.96	13.98			
	University	72	74.36	15.83			
	Total	328	75.31	15.31			
Employment status	Not Work	306	75.14	15.55	t	0.744	0.457
	Work	22	77.66	11.46			
Income	Less than 1000	50	76.21	14.23	t	0.048	0.962
	1000 and above	43	76.06	16.49			
Receive assistant	No	130	75.79	15.50	F	0.461	0.645
	Yes	198	74.99	15.22			
Regularity of income	Regular -monthly	125	76.40	14.39	t	5.785	0.003
	Regular -daily	48	68.46	15.76			
	Irregular	155	76.55	15.43			
	Total	328	75.31	15.31			
Stage of cancer	Stage I	79	77.60	15.19	F	4.018	0.003
	Stage II	121	78.12	15.76			
	Stage III	70	70.30	15.06			
	Stage IV	16	72.57	14.16			
	Don't Know	42	72.28	12.63			
	Total	328	75.31	15.31			
Time Since diagnosis	Less than 1 Year	34	80.68	11.14	F	4.045	0.008
	1 to less 3 years	116	77.23	15.14			
	3 to 4 years	92	74.53	16.09			
	5 Years	86	71.42	15.28			
	Total	328	75.31	15.31			
Chemotherapy	No	56	73.33	18.22	t	1.064	0.288
	Yes	272	75.72	14.64			
Radiotherapy	No	104	77.16	15.12	t	1.492	0.137
	Yes	224	74.45	15.35			
Hormonal	No	95	80.33	15.93	t	3.876	0.000
	Yes	233	73.26	14.60			
Biological	No	291	75.30	15.21	t	0.023	0.982
	Yes	37	75.36	16.32			
Surgery	No	51	48.90	12.16	t	-1.76	0.079
	Yes	277	52.11	11.90			

Moreover, there's differences in social support scores in regards to time since BC diagnosis. the highest scores of social support were for those diagnosed with BC since less than 1 year (mean 80.68±11.14), while the least scores of support were for those who were diagnosed since 5 years (mean71.42±15.28), the results were statistically significant (P=0.008). FGDs explained this relationship by the fact that people always around at the beginning of any struggle including cancer diagnosis, but with time this support is declined and most of the time people continue their journey alone or with limited support from the closest. An employed mother of 5, aged 35 years, with BC duration of 2.5years said during FGDs "*At the beginning everyone tries to stay around me to support, but with time they get tired they begin to disappear, but the disease didn't and I continue my struggle alone, if BC killed me, even the closest persons will forget about me sooner or later and go on their lives. This is life".* t-test shows that differences in social support scores in regards to employment, income and type of treatment received are not statistically significant, expect in regards to hormonal treatment which resulted in statistically significant variance in social support score(P=0.000), scores were higher for women who didn’t receive hormonal treatment.

4.2.4 Differences in overall formal support

Findings of this study (see Table 4.17) indicate differences in formal support received by women in relation to neighborhood, women livening in villages had higher mean scores of formal support than others (58.73±15.22), these differences were not statistically significant. Also, there were no statistically significant differences in support in relation to marital status, single women received more support than others (54.09±10.42), while divorced women were the least to receive support (50.11±11.53). There was an explanation in FGDs for this relationship as there are more cultural barriers restricting divorced women from asking for assistance and communicating with others. Furthermore, staying away from supportive organizations and avoiding any form of formal support. A divorced woman, aged 43 years, from north with BC duration of 4 years said *“I lived with my brothers after my divorce, they barely let me go for treatment sessions*”. In contrast another 32 years, single woman from middle area said “*My parents encouraged me to attend support group sessions in CFTA, and smile of hope organization, and join recreation activities they did for us*”.

The study shows differences in formal support mean scores in relation to regularity of income, women who had irregular income had the highest mean (53.33), while women on regular daily income had the least mean as it was 47.06, these differences were statistically significant according to ANOVA test (P=0.006). Post hoc LSD test shows the variance occurs among women on regular daily income compared to others (see Annex 4). FGDs confirmed this relationship as those with no regular income need more support, they had more worries about treatment costs and family financial difficulties and are usually targeted by organizations support, and may receive aid from government or UNRWA even without their cancer diagnosis. A mother of 8, aged 50 years, from north with BC duration of 3 years” *My husband had left us 10 years ag, and I’m responsible for my family, I totally depend on aid from different organizations”.*

Table 4.16: Differences in overall formal support in reference to sociodemographic &disease characteristics

Independent variable		N	Mean	Std	Test	Value	Sig
Age	40 and less	68	52.96	11.07	F	0.492	0.688
	41 to 50	93	50.86	11.28			
	51 to 60	117	51.76	12.76			
	60 and above	50	50.79	12.69			
	Total	328	51.61	11.98			
Governorates	Gaza	168	52.06	12.62	F	1.217	0.303
	North	50	51.30	11.92			

	Middle area	39	53.44	10.51			
	Khanyounis	32	51.93	12.98			
	Rafah	39	47.94	9.24			
	Total	328	51.61	11.98			
Neighborhood	City	245	51.49	12.19	F	1.875	0.155
	Village	10	58.73	15.22			
	Camp	73	51.03	10.56			
	Total	328	51.61	11.98			
Refugee status	Refugee	227	50.76	11.31	T	-1.930	0.054
	Non-Refugee	101	53.51	13.22			
Type of family	Nuclear Family	260	51.04	11.58	T	-1.668	0.096
	Extended	68	53.76	13.26			
Marital status	Single	27	54.09	10.42	F	0.505	0.679
	Divorce	21	50.11	11.53			
	Married	249	51.50	12.02			
	Widow	31	51.31	13.43			
	Total	328	51.61	11.98			
Having children	Yes	283	51.44	11.95	T	0.341	0.734
	No	18	50.44	14.66			
Number of children	6 and less	182	50.81	10.88	T	-1.281	0.201
	Above 6	100	52.71	13.64			
Education	Primary and less	129	52.82	12.93	F	1.295	0.275
	High School	127	50.42	11.79			
	University	72	51.52	10.35			
	Total	328	51.61	11.98			
Employment status	Not Work	306	51.67	12.05	T	0.358	0.720
	Work	22	50.72	11.08			
Income	Less than 1000	50	51.46	11.25	T	0.357	0.722
	1000 and above	43	50.68	9.46			
Receive assistant	No	130	51.16	12.37	F	-0.547	0.585
	Yes	198	51.90	11.74			
Regularity of income	Regular-monthly	125	51.21	10.76	T	5.276	0.006
	Regular-daily	48	47.06	8.89			
	Irregular	155	53.33	13.33			
	Total	328	51.61	11.98			
Stage of cancer	Stage I	79	50.47	12.34	F	1.200	0.311
	Stage II	121	53.39	12.42			
	Stage III	70	50.98	10.51			
	Stage IV	16	51.79	15.65			
	Don't Know	42	49.58	10.54			
	Total	328	51.61	11.98			
Time Since diagnosis	Less than 1 Year	34	48.46	8.64	F	2.848	0.038
	1 to less 3 years	116	53.23	12.08			
	3 to 4 years	92	52.81	12.35			
	5 Years	86	49.37	12.16			
	Total	328	51.61	11.98			
Chemotherapy	No	56	51.90	11.79	T	0.200	0.841
	Yes	272	51.55	12.04			
Radiotherapy	No	104	51.91	12.33	T	0.310	0.757
	Yes	224	51.47	11.83			
Hormonal	No	95	52.75	14.28	T	1.103	0.271
	Yes	233	51.14	10.90			
Biological	No	291	51.44	11.74	T	-0.694	0.488
	Yes	37	52.90	13.80			
Surgery	No	51	48.90	12.16	T	-1.765	0.079
	Yes	277	52.11	11.90			
Type of surgery	BCS	127	50.92	9.85	T	1.136	.288
	Mastectomy	82	52.65	13.64			

Table 4.17 also shows differences in formal support in relation to time passed since BC diagnosis, women diagnosed since 1to 3 years received the highest level of support, followed by women diagnosed since 3 to 4 years (53.23±12.08, 52.81±12.35 respectively), while women diagnosed since less than 1 year received the lowest level of support followed by those diagnosed since 5 years (48.46±8.64, 49.37±12.16 respectively). These results were statistically significant (P=0.038). LSD test points out that the differences were between women diagnosed since 5 years compared to others expect those diagnosed since 3-4 years (Annex 4). These differences may be attributed to the fact that women in first year are unaware of the presence of supportive organizations, and unfortunately there's no organized support program for women with cancer and it's not a part of the management plan they receive. While after the first-year women usually recognize different organizations.

4.2.5 Differences in coping strategies

4.2.5.1 Avoidance coping

Table 4.18 shows differences in avoidant coping strategies scores in relation to age, younger women had higher scores compared to older women. The highest mean scores were among women aged 40 years and less (2.73), while the lowest were among women aged 60 years and above (2.49), these differences were statically significant as shown by ANOVA test (P=0.02). LSD test shows that variance occurs between women age 40 and less and the other age groups except those aged 41-50 year (Annex4). FGDs explained this relationship by the fact that younger women had more responsibilities towards their families, more feeling of uncertainty about their future, which leads them to avoid confronting their diagnosis and its related challenges. That's why they usually adopt the avoidant coping strategies. A housewife, mother of 6, aged 34 years, from Gaza said during FGDs "*I didn't believe it's real, I'm young and there's no history of cancer in my family*". Although avoidant coping strategies can be helpful in coping with short-term stressors, but had generally been tied to increased distress in the long term and may lead to negative mental and physical outcomes. Consistent with Benson et al results (2020). In his study, higher age was associated with less avoidant coping.

Table 4.17: Differences in avoidant coping in reference to sociodemographic &disease characteristics

Independent variable		N	Mean	Std	Factor	Value	Sig
Age	40 and less	66	2.73	0.49	F	3.203	0.024
	41 to 50	87	2.61	0.45			
	51 to 60	111	2.57	0.41			
	60 and above	50	2.49	0.46			
	Total	314	2.60	0.45			
Governorates	Gaza	161	2.62	0.41	F	1.122	0.346
	North	47	2.52	0.48			
	Middle area	39	2.53	0.54			
	Khan Younis	28	2.59	0.46			
	Rafah	39	2.69	0.47			
	Total	314	2.60	0.45			
Neighborhood	City	235	2.60	0.43	F	4.134	0.017
	Village	9	3.01	0.63			
	Camp	70	2.56	0.46			
	Total	314	2.60	0.45			
Refugee status	Refugee	214	2.57	0.43	t	-1.578	0.116
	Non-Refugee	100	2.66	0.48			
Type of family	Nuclear Family	248	2.60	0.45	t	-0.400	0.690
	Extended	66	2.62	0.45			
Marital status	Single	27	2.72	0.46	F	3.133	0.026
	Divorce	19	2.61	0.46			
	Married	238	2.62	0.46			
	Widow	30	2.38	0.34			
	Total	314	2.60	0.45			
Having children	Yes	269	2.59	0.45	t	-0.069	0.945
	No	18	2.60	0.43			
Number of children	6 and less	174	2.61	0.47	t	1.041	0.299
	Above 6	94	2.55	0.41			
Education	Primary and less	123	2.62	0.44	F	0.623	0.537
	High School	120	2.57	0.44			
	University	71	2.63	0.48			
	Total	314	2.60	0.45			
Employment status	Not Work	294	2.60	0.45	t	-0.947	0.344
	Work	20	2.69	0.45			
Income	Less than 1000	46	2.54	0.42	t	-0.889	0.377
	1000 and above	40	2.63	0.49			
Receive assistant	No	124	2.61	0.51	F	0.330	0.742
	Yes	190	2.59	0.41			
Regular income	Regular -monthly	116	2.60	0.44	t	0.378	0.685
	Regular -daily	47	2.55	0.43			
	Irregular	151	2.62	0.46			
	Total	314	2.60	0.45			
Stage of cancer	Stage I	74	2.48	0.42	F	3.295	0.012
	Stage II	115	2.63	0.45			
	Stage III	68	2.74	0.40			
	Stage IV	16	2.55	0.46			
	Don't Know	41	2.53	0.52			
	Total	314	2.60	0.45			
Time since diagnosis	Less than 1 Year	31	2.60	0.48	F	0.949	0.417
	1 to less 3 years	107	2.60	0.45			
	3 to 4 years	92	2.66	0.47			
	5 Years	84	2.54	0.41			
	Total	314	2.60	0.45			
Chemotherapy	No	51	2.55	0.46	t	-0.910	0.363
	Yes	263	2.61	0.45			
Radiotherapy	No	100	2.53	0.46	t	-1.899	0.06

	Yes	214	2.63	0.44			
Hormonal therapy	No	90	2.60	0.47	t	-0.142	0.888
	Yes	224	2.60	0.44			
Biological	No	279	2.58	0.45	t	-2.082	0.038
	Yes	35	2.75	0.43			
Surgery	No	47	2.62	0.51	t	0.344	0.731
	Yes	267	2.60	0.44			
Type of surgery	BCS	119	2.60	0.46	t	0.625	0.430
	Mastectomy	80	2.55	0.40			

Governorate also had an influence on avoidant coping scores, women living in Rafah had the highest scores, but the differences didn't reach statistical significance. Type of neighborhood had statistically significant influence on avoidant coping scores(P=0.017), the highest mean scores were among women living in a village (3.01), for those living in camp, it was the lowest (2.56). LSD test indicates that the difference occurs between those living in village compared to camps and cities (Annex 4). Regarding marital status, mean scores of avoidant coping among single women were higher than other women (see table 4.22), these differences were statistically significant (P=0.026). LSD test shows that the variance occurred between widows and married and single women but not divorced (Annex 4). A possible explanation could be that divorced and single women may experience more feelings of isolation and lack of emotional support that could be available for married women from their husbands and children.

Also, being employed and having higher education leads to variations in avoidant coping scores, but these variations didn't reach statistical significance (see Table 4.18), these results are consistent with literature (Benson et al, 2020). On the other hand, there are statistically significant differences in avoidant coping strategies scores in relation to BC stage as pointed out by ANOVA test (P=0.012), the highest mean scores were among women with stage III (2.74), and the lowest were among women with stage I (2.48), an explanation to these differences could be that women with advanced stages avoid discussing their situation and their prognosis trying to protect themselves and their families from distress and use avoidance coping strategies as a temporary escape from their situation. In regards to time since diagnosis, coping scores were higher in women diagnosed since less than one year than others, also there are differences in relation to BC stage and different types of treatment. However, these differences were not statistically significant.

4.2.5.2 Problem focused coping

Table 4.19 shows that there are differences in the problem focused coping scores in relation to Neighborhood, with women living in village eliciting higher mean scores (3.35) than others, as it was 2.90 for women living in a city and 2.85 for women in camps. These differences were statistically significant (P=0.038). LSD test shows that the variance occurred between women living in villages compared to others (see Annex 4).

Table 4.18: Differences in problem focused coping in reference to sociodemographic &disease characteristics

Independent variable		**N**	**Mean**	**Std**	**Factor**	**Value**	**Sig**
Age	40 and less	64	2.99	0.52	F	2.295	0.078
	41 to 50	89	2.85	0.56			
	51 to 60	113	2.96	0.57			
	60 and above	50	2.77	0.48			
	Total	316	2.91	0.55			
Governorates	Gaza	162	2.88	0.52	F	0.758	0.553
	North	48	2.89	0.63			
	Middle area	39	2.93	0.51			
	Khan Younis	31	2.88	0.54			
	Rafah	36	3.05	0.60			
	Total	316	2.91	0.55			
Neighborhood	City	236	2.90	0.55	F	3.313	0.038
	Village	9	3.35	0.46			
	Camp	71	2.85	0.54			
	Total	316	2.91	0.55			
Refugee status	Refugee	227	2.93	0.66	T	0.168	0.867
	Non-Refugee	102	2.92	0.59			
Type of family	Nuclear Family	261	2.90	0.64	T	-1.610	0.108
	Extended	68	3.04	0.63			
Marital status	Single	27	2.91	0.47	F	1.156	0.327
	Divorce	21	2.87	0.64			
	Married	237	2.93	0.54			
	Widow	31	2.74	0.58			
	Total	316	2.91	0.55			
Having children	Yes	283	2.92	0.64	T	0.680	0.497
	No	19	2.82	0.65			
Number of children	6 and less	182	2.95	0.63	T	0.881	0.379
	Above 6	100	2.88	0.65			
Education	Primary and less	126	2.87	0.48	F	0.838	0.433
	High School	121	2.91	0.59			
	University	69	2.97	0.58			
	Total	316	2.91	0.55			
Employment status	Not Work	307	2.91	0.63	T	-2.124	0.034
	Work	22	3.20	0.70			
Income	Less than 1000	50	2.73	0.61	T	-0.559	0.577
	1000 and above	43	2.80	0.64			
Receive assistant	No	131	2.92	0.67	F	-0.043	0.966
	Yes	198	2.93	0.63			
Regularity of income	Regular -monthly	120	2.95	0.55	t	2.474	0.086
	Regular -daily	46	2.74	0.64			
	Irregular	150	2.92	0.51			
	Total	316	2.91	0.55			
Stage of cancer	Stage I	73	2.78	0.55	F	1.818	0.125
	Stage II	117	2.90	0.47			
	Stage III	68	2.99	0.62			
	Stage IV	16	2.84	0.41			
	Don't Know	42	3.02	0.63			
	Total	316	2.91	0.55			
Time Since diagnosis	Less than 1 Year	35	2.87	0.48	F	1.377	0.25
	1 to less 3 years	107	2.99	0.49			
	3 to 4 years	89	2.88	0.59			

	5 Years	85	2.84	0.59			
	Total	316	2.91	0.55			
Chemotherapy	No	57	2.93	0.58	T	0.055	0.956
	Yes	272	2.92	0.65			
Radiotherapy	No	105	2.96	0.58	T	0.611	0.541
	Yes	224	2.91	0.67			
Hormonal	No	96	2.92	0.59	T	-0.066	0.947
	Yes	233	2.93	0.66			
Biological	No	291	2.91	0.65	T	-1.165	0.245
	Yes	38	3.04	0.54			
Surgery	No	52	2.92	0.55	T	-0.030	0.976
	Yes	277	2.93	0.66			
Type of surgery	BCS	122	2.89	0.52	T	0.483	0.488
	Mastectomy	79	2.94	0.59			

Also, there are statistically significant differences in the problem focused coping scores in relation to employment status according to t-test (P = 0.034). Working women showed higher mean scores (3.20) compared to not working women (mean=2.91). This could be explained by the fact that work may increase self-esteem and give confidence, it could be itself a coping strategy helping women to feel valuable and worthy and can overcome the challenging situation of having cancer. The results were consistent with literature as Benson et al study results (2020) showed that being employed positively associated with active coping (Benson et al.2020). My results show that the higher the education level, the higher the mean scores of problem focused coping (table 4.19), although it's not statistically significant (P=43). It's consistent with literature (Curuk et al,2020). FGDs emphasized that the higher level of education improves the understanding of health, and help women to take more responsibility over their health, and use more efficient coping strategies, dealing with the challenges caused by the disease in a better way. A housewife, university graduate, mother of 7, aged 49 years, from Gaza said *"I decided to join university again in a different specialty, and it won't be my last step in developing myself"*. Also, there were differences in relation to age, refugee status, place of residency, and marital status, However, these differences were no statistically significant. (see Table 4.19).

On the other hand, BC related characters had influence on problem focused coping scores, women with stage III and those who don't know the stage had the highest mean scores (2.99&3.02) followed by women with stage II, then stage IV and the least for stage I (mean= 2.90, 2.84, 2.78 respectively), but the variations didn't reach statistical significance as shown in Table 4.18. the same for time since diagnosis and type of treatment received (see Tab 4.19).

4.2.5.3 Emotional coping

Table 4.20 shows variations in emotional coping mean scores in relation to type of neighborhood as women living in village had the highest mean score (3.35), followed by those living in city, then in camp (2.94; 2.82 respectively), these variations were statistically significant (p=0.040). FGDs explained these results by the deeper connections among people living in villages compared to others, also the different nature of village with more open spaces, more personal interactions and less stressors than others. While the study findings show no statistically significant variances in emotional coping mean scores in regards to age, marital status, education level (see table 4.20). almost all participants in FGDs mentioned that BC made them closer to god, and that praying, finding comfort in religion and getting emotional support from others as emotional coping strategies were adopted by almost all women regardless of their age, marital status, education or stage of BC. A housewife, mother of 5, aged 36 years, from the middle area said "*Praying always makes me feel better, and overcome the hard times".*

Table 4.20: Differences in emotional coping in reference to sociodemographic &disease characteristics

Independent variable		**N**	**Mean**	**Std**	**Factor**	**Value**	**Sig**
Age	40 and less	68	3.02	0.64	F	2.162	0.092
	41 to 50	93	2.84	0.59			
	51 to 60	117	2.99	0.70			
	60 and above	51	2.79	0.56			
	Total	329	2.93	0.64			
Governorates	Gaza	169	2.90	0.63	F	1.674	0.156
	North	50	2.85	0.70			
	Middle area	39	3.00	0.57			
	Khanyounis	32	2.83	0.64			
	Rafah	39	3.14	0.67			
	Total	329	2.93	0.64			
Neighborhood	City	246	2.94	0.65	F	3.241	0.040
	Village	10	3.35	0.41			
	Camp	73	2.82	0.62			
	Total	329	2.93	0.64			
Refugee status	Refugee	215	2.63	0.39	T	-0.461	0.645
	Non-Refugee	100	2.66	0.45			
Type of family	Nuclear Family	247	2.63	0.41	T	-1.221	0.223
	Extended	68	2.69	0.43			
Marital status	Single	27	3.07	0.68	F	1.070	0.362
	Divorce	21	2.90	0.62			
	Married	250	2.93	0.64			
	Widow	31	2.77	0.63			
	Total	329	2.93	0.64			
Having children	Yes	272	2.63	0.40	T	-0.202	0.840
	No	18	2.65	0.38			
Number of children	6 and less	174	2.65	0.39	T	0.816	0.415
	Above 6	97	2.61	0.43			
Education	Primary and less	130	2.88	0.64	F	0.847	0.430
	High School	127	2.92	0.65			
	University	72	3.01	0.63			
	Total	329	2.93	0.64			
Employment status	Not Work	294	2.64	0.41	T	-0.754	0.452
	Work	21	2.71	0.37			
Income	Less than 1000	48	2.59	0.34	T	-0.441	0.661
	1000 and above	38	2.63	0.40			

Receive assistant	No	126	2.61	0.42	F	-1.125	0.262
	Yes	189	2.66	0.40			
Regularity of income	Regular -monthly	125	2.95	0.68	t	1.229	0.294
	Regular -daily	48	2.79	0.74			
	Irregular	156	2.95	0.57			
	Total	329	2.93	0.64			
Stage of cancer	Stage I	79	2.81	0.70	F	2.027	0.090
	Stage II	121	2.89	0.56			
	Stage III	70	3.06	0.66			
	Stage IV	16	2.84	0.63			
	Don't Know	43	3.06	0.68			
	Total	329	2.93	0.64			
Time Since diagnosis	Less than 1 Year	35	3.03	0.63	F	1.269	0.285
	1 to less 3 years	116	2.97	0.54			
	3 to 4 years	92	2.93	0.70			
	5 Years	86	2.82	0.70			
	Total	329	2.93	0.64			
Chemotherapy	No	54	2.70	0.44	T	1.08	0.281
	Yes	261	2.63	0.41			
Radiotherapy	No	100	2.66	0.44	T	0.682	0.496
	Yes	215	2.63	0.40			
Hormonal	No	91	2.70	0.47	T	1.746	0.082
	Yes	224	2.62	0.38			
Biological	No	278	2.63	0.40	T	-1.257	0.211
	Yes	37	2.72	0.46			
Surgery	No	49	2.74	0.43	T	1.774	0.077
	Yes	266	2.62	0.40			
Type of surgery	BCS	127	2.89	0.64	T	1.819	0.179
	Mastectomy	82	3.02	0.72			

In addition, table 4.20 shows variations in emotional coping in regards to BC characters. In regards to BC stage, women with stage III and those who don't know the stage had the highest mean scores (3.06) followed by women with stage II, then stage IV and the least for stage I (mean= 2.89; 2.84; 2.81 respectively). These variations are not statistically significant (P=0.09). findings of the study in regards to different coping strategies point to the importance of taking individual coping strategies into account as each women's experience and coping mechanisms is different, knowing that help to provide health care professionals better understanding of how women deal with the stressors and help planning for the appropriate care needed.

Chapter five

5 Conclusion and Recommendations

5.1 Conclusion

Women with BC had a long journey with their illness starting from diagnosis and not ended by finishing treatment, the study results have led to better understanding of the tremendous impact of BC on women's lives, and that several challenges are faced by women with BC in the Gaza strip related to diagnosis, treatment and even post treatment. Additional challenges and concerns are unique for women in Gaza because of the complicated political situation, and its consequences, including the fact that most women need referral to continue their treatment, the high unemployment rate, low income, and the fact that most families depend on aid from various sources. Main results indicate that psychosocial challenges were the most dominant during the diagnosis phase as revealed by FGDs, physical symptoms because of side effects of different treatment modalities mainly chemotherapy were the most common during treatment phase, financial challenges were a real concern for the majority of women through all phases of their cancer journey. Despite these challenges combined with the high incidence and mortality rates of BC in the Gaza Strip, little attention has been given to the issue of psychosocial challenges facing women and how they cope with them. psychological support and management of mental disorders and psychosocial problems should be an integral part of BC care. The study showed that psychosocial needs of women are not the same through cancer journey and not the same for all women, and its affected by sociodemographic characters as age, marital status and employment, in addition to different BC characters as stage of cancer, time since diagnosis, type of treatment received and type of surgery. Younger women under 40 years, and women who have been diagnosed with BC since 3-5 years eliciting higher mean scores of challenges All these challenges resulting in psychosocial impacts and needs, added to the physical burden caused by the disease and its treatment. The most common psychological outcomes experienced by women in the study are anxiety by the majority of participants, followed by depression, then stress.

These results highlight that psychosocial assessment and reassessment is necessary during and after treatment also during the recovery phase. The assessment must be sensitive to the changes in psychosocial needs. Survivorship issues like distress related to body image, cognitive function, sexual problems. Referral for treatment causes different types of challenges, delay of permission was the main, followed by denial of permission, resulting in interruption of treatment leading to more challenges. Assessments also must take into consideration the context of a woman's age and social situation.

Family, body image, sexual, and reproductive issues are at the forefront of concerns for younger women more than others. Younger women also suffer from depression, anxiety and stress more than others.

Participants of the study used various strategies to cope with these challenges and their psychosocial and physical impacts. Problem focused and emotion focused coping strategies were adopted more than avoidant strategies by women. Religion and use of acceptance as emotion focused coping strategies were the most frequently adopted in this study. In FGDs most of the women emphasized the effectiveness of religion and spiritual beliefs and remarked that praying and their relation with god helped them to cope with stressors associated with BC. The adopted coping strategies varied among women in relation to demographic and disease characters, younger, unemployed and non-educated women adopt avoidant coping strategies more than other women. On the other hand, women living in village, and employed women eliciting higher mean scores of problems focused coping strategies, the variance is statistically significant. The scores of Emotional coping strategies were higher among women living in villages. The study results show that women with stage III BC cancer elicited higher scores of three coping strategies compared to other women in the study.

Despite that support both Formal and informal are key factors in promoting recovery for women with BC, and is essential for both women and their family members, and that women with BC have survived a life-threatening illness and experienced major life changes that make them feel powerless and uncertain and in need for support from others. The study results revealed that women relay mainly on their family members particularly husbands, friends, and social relations, for support more than being involved in organized formal support programs.

Among the five social support dimensions, Positive social interaction was the most common, followed by Affectionate support, then Emotional/informational support, and tangible support was the least common, there were differences in social support scores in regards to demographic and disease characters, social support score increases with increased age of participant, The situation of social (informal) support was better than the formal, that show a huge gap in all its aspects informational, financial, instrumental, psychosocial and emotional. The main gap was in financial and instrumental support more than other aspects. There were variances in available formal support for women, single women received more support while divorced women were the least to receive it. There were statistically significant differences in support both formal and informal in relation to regularity of income, the highest level of support was for those with irregular income. Significant number of families in Gaza depend on aid to cover their daily requirements. Generally, each woman's experience with BC is unique, and tailored support and coping strategies can make a significant difference in their journey to recovery and wellbeing.

5.2 Recommendations

- Policy makers should take the advantage of the global initiatives for supporting BC to improve the services and outcomes especially in Gaza. Efforts need to focus on improving early detection and screening services which is considered the cornerstone for BC control and reducing mortality rates; nevertheless, filling gaps in BC management is also crucial.
- Psychological impacts of BC were more dramatic than physical and last for longer times, as reported by women. Integration of specifically-tailored psychosocial support services into the standard cancer care is a priority especially for BC.
- Introduce routine screening and assessment tools and protocols to identify psychological challenges and distress early in the cancer diagnostic and treatment journey, to provide timely interventions and support.
- Provide training for health care providers, to ensure high quality care for women with BC at all stages of their cancer journey. Training should focus on delivering comprehensive, integrated care, not only focusing on the medical aspects of care.
- As a part of women education programs, develop educational programs and resources to empower women with BC to actively participate in their care, make informed decisions, and access the support they need for their psychological wellbeing, gaining knowledge from trustworthy sources about BC, treatment options, and potential side effects.

- Map available resources and services that can support women and inform the women about these services. Also, link women with BC to the available services, through communicating with the community resources, and encourage women to seek support.
- Involve family members in the treatment plans and decisions related to care including their role in supporting women with BC.
- Ensure access to advanced mental health services for women with BC who scored abnormal in the DASS scale or showing signs of mental illnesses.
- The study concluded that young women with BC, who already had mastectomy, being recently diagnosed and/or in an advanced stage of cancer are more vulnerable and tend to face more challenges and psychosocial problems, therefore should be proactively targeted
- Women with BC should be proactively targeted by social protection programs including providing financial subsidizes to cover medical costs, psychosocial support, in-kind support and family support.

Research recommendations

- More commitment and fund should be allocated towards BC research to support personalized care.
- Conduct a large-scale national study on challenges and support for women with BC
- Conduct studies on other common types of cancer especially anorectal and column
- Conduct a longitudinal study to see how quality of life changes over time for women with BC.
- Conduct qualitative study about lived experience of women with BC as the war on Gaza hindered conducting a rich qualitative interview.
- Conduct a systemic review to see what are the consistent determinants that play a role in supporting women

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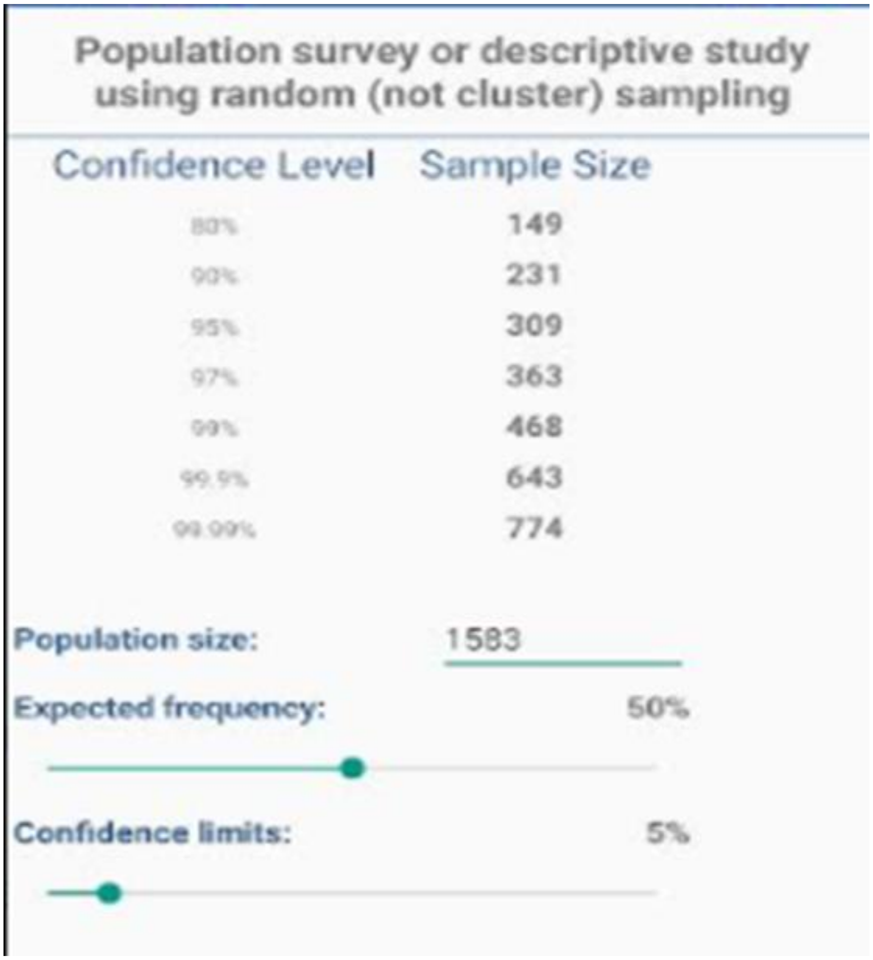
Annexes

Annex 1 Sample size calculation



Population survey or descriptive study using random (not cluster) sampling

Confidence Level	Sample Size
80%	149
90%	231
95%	309
97%	363
99%	468
99.9%	643
99.99%	774

Population size: 1583

Expected frequency: 50%

Confidence limits: 5%

Annex 2 Quantitative study instrument

Sociodemographic characters

1-Age in years **2- Place of Birth (country/city)**

3- Nationality

1-Palestinian only 2-Palestinian and another one; please indicate ----------------

3-Other than Palestinian; please indicate: ---------------

4- Governorates:

1-Gaza 2-North Gaza 3-Middle area 4-Khan Younis 5- Rafah

5- Classification of neighborhood	**6- Refugee status**
1City	1-Refugee (hold a refugee card)
3 .Village	2-non-refugee
4 .Camp	3-Other, specify please
Other--------------	

7- Current marital status: (After status selection, answer the relevant Questions as indicated in brackets)

1-Single (go to Q13) 2-Divorced (go to Q8,9,10,11,12) 3-Married (go to Q8,11,12)

4-Widow (go to Q8, 9b,9c,10,11,12) 5-Other, indicate (e.g., separated, suspended): -------------

8- At what age you got married? Age in years:___

9.a) Since when you got divorced? **9.b) Have you married again?**

Year ____________ 1-Yes 2-No

9.c) Do you think you will re-marry (again)? 1-Yes 2-No

10.a) Since when you lost your partner? Years: ………

10.b) At what age you become a widow? Age in years: ……………….

11. Do you have children? 1 - Yes, how many: ……… 2.No

12- Has your marital status been affected by your BC diagnosis? 1-Yes 2-No

If yes, how?
1. My relationship with my husband deteriorated, but still, we live together
2. My relationship with husband improved
3. Got divorced
4. Separated
5. My husband married another woman

13.How many people living together in the Household (HH size)?

14-How many rooms in the household

15- Your house is	**16.Do you live in**
Rented	Nuclear family
Family owned	Extended family
Yours	
Others specify	

17- Are you worried that your BC might affect the future of your family?

1. Yes negatively 2. Yes positively 2. No

18- What worries you the most? (Please choose one answer)

1.Family illness 2. financial situation 3. Death 4. work 5. nothing 6. other:_

Education, occupation, income and housing conditions

17- Education level attained/completed

1 - Illiterate 2-Elementary 3- Primary 4 -High school 5-university &Post graduate

18- Do you have a desire/plan to attend further education in the future? 1-No 2- Yes

19.a) Employment status before BC diagnosis:
1- Did not work
2- Did not work and seeking job
3- Working part time
4- Self-employer
5- Full Employment (working full time: 35 hours and above per week)
6- Retired

19.b) Current occupation,
19.c) does your Employment status affected by you BC diagnosis 1-Yes 2- No
If yes, Explain
you left your job
you do tasks that need effort
worked part time
-others specify ---------
was this your choice 1-Yes 2-No

20.Who is your employer?
1- Self employer
2-Private sector
3-Public sector (go to Q21)
4-NGO
5-UNRWA

21. if you are public sector (gov) employee, who pays your salary
1.Ramallah Government
2. Gaza Government

22. Did your colleagues/supervisors know in your work place about your BC diagnosis? 1-Yes 2-No
If yes, how? 1- You told them 2-You don't know how

23- Have you been given sick-leaves? 1-Yes 2-No
For how long? -----------------------

22. Your monthly income
1- --------------- ILS
2- Refused to answer
3- Don't Know

23. Monthly income of the household from all sources
1- --------------- ILS
2- Refused to answer
3- Don't Know

24. Does the family receive assistance from any governmental or nongovernmental aid
1-Yes, from where? ………… 2-No
What type of aid? 1- Cash 2. In-kind items 3. Food items

25.Did you received any kind of assistance after your BC diagnosis
1-No 2-Yes, from where? …………………………
What type of aid? 1- Cash 2. In-kind items 3. Food items 4. medications

26. What is the primary source of family income?
1-Work of breadwinner
2-Aid from governmental organizations
3-Aid from non-governmental organization.
4-UNRWA
5-Aid from relatives or friends
6-Other, please indicate

27. How regular your family income is
1-Regular on monthly basis
2-Regular on daily basis
3-Irregular

28. Do you think family income meets your basic needs?
s, completely
s partially, to what extend? %

29. How your disease has affected household expenditure
1-More expenditure(Q30) 2-The same, no changes 3-Less expenditure

30. a Extra Costs related to the diseases (Choose as much as applied to you)	**Is it affordable?** 1-Yes 2-No	**If no how you cope**
		I reduce my household expenses
Costs of medical consultations		I borrowed money
Transportations		I sold my assets
Medications		I asked my children to drop out school and work
Special diet		
Rehabilitation		
Someone to take care of you		

31. Do you have a valid Health insurance? 1-Yes, indicate the type of insurance 2- No

32. How your disease affected your life?

It affects my relationships with friends and family
It prevents me from spending time with friends and family
It affects my activity
It prevents me from getting married
It restricts my ability to work
It restricts my ability to take care of my family
It restricts my ability to enjoy life
It affects my psychosocial status negatively
It increases my determination and resilience
Others specify ----------------------------

33. What Approaches you applied since your BC diagnosis to cope with your disease
(Choose as much as applied to you)

I pray more often
I practice sport more often
Do charity work more
I learn life skills
I listen to music more
I watch TV more
I socialize more
Use social media more
Read more
I did nothing
Avoid people
Do not participate in social events
others

Breast Cancer related variables

1. How were you first diagnosed with cancer?

1-Accidently discovered by you
2. Accidently discovered by HC provider
3- Routine breast self-examination BSE
4-routine breast clinical examination BCE
5-screening mammogram
6- abnormal symptom/ sign

1.a - If the problem is discovered by you, how long did it take you to go to seek for diagnosis?
…………. days …………weeks

1.b - If the problem is discovered by HC provider, was it in **1-** MOH 2- UNRWA 3-Private 4-hospital

2. What was the Stage of BC at diagnosis?
1- stage I 2-stage II 3- stage III 4- stage IV 5-don't know

3.a- Has a biopsy been taken? 1- Yes 2-No
If yes, what type of biopsy? 1-Open (excisional) 2-FNAB 3-Core biopsy
3.b- Where were the biopsy done? 1- MOH 2- Private

4- Did you pay for the biopsy? 1-Yes 2-No
If no, where? 1. In MOH 2. Referred from UNRWA
3. Reimbursed from UNRWA 4. Referred from NGOs, specify …………….

5. Who informed you about BC diagnosis?
I was told at the pathology department while receiving the biopsy result
I was told by the referring surgeon before the biopsy result
I was told by the referring surgeon after receiving the biopsy result
I was told by the radiologist before the biopsy result
I was told by the navigator nurse
By a family member who was informed before me
Others specify

6. What do you think about the way you were informed about your BC diagnosis?
1-Wasn't accepted 2- Was Okay/good 3-Shocking

7. Who was the first one you talked to about your BC diagnosis?
1.Parent 2. Husband 3. Brother 4. Sister 5. Friend
6. Doctor 7. Other family member, specify…... 8. no one

8.How long did it take to receive the final diagnosis since you presented to HCP? ……………weeks

9. How long did it take to initiate treatment after diagnosis? ……………weeks

11. Time since diagnosis …… years

12. Type of treatment you received (choose as much as applied to you)
1-Chemotherapy 2- Radiotherapy 3-Hormonal Therapy 4- Biological 5- Surgery

13. What type of treatment you start with 1-Chemotherapy 2-Hormonal therapy 3-Surgery

If surgery was done(Q14a,b,c,d,e,f)
14.a Where did you do the surgery 1-Gaza 2- referred
14.b If in Gaza, where 1-MOH 2-Private
14.c What Type of surgery was done **14.d If mastectomy was done, since how long?**
1.Breast conservative surgery 2. Mastectomy

14.eDid you have axillary clearance **14.f If yes, did you experience lymphedema**
1-Yes 2-No 1-Yes 2-No
15. Did you finish your treatment 1-Yes 2- No
16. If no, what treatment are you receiving now 1-chemotherapy 2- radiotherapy 3-hormonal therapy others
17.Where did you receive chemotherapy 1-Gaza 2-referred
18.Did you receive radiotherapy 1-Yes 2- No

19.Where did you referred to receive radiotherapy 1. Egypt 2. Jordan 3. West Bank 4. Jerusalem
20. Did you receive post-treatment physiotherapy 1-Yes 2-No
If Yes, Where? 1-MoH 2-UNRWA 3-Private
21. Did you receive psychological support? 1-Yes 2-No
22.Do you need additional psychological support? 1-Yes 2-No

Scale Questions:

Please listen to the following questions and give your opinion considering that you need to select one of the provided options in each scale

0 not applicable	**1 never**	**2 sometimes**	**3 always**

Statement	**Score**
Main Challenges during diagnosis	**0 1 2 3**
The diagnosis pathway wasn't clear for me	
Lack of connections between providers	

Delays in getting appointments
Delays in getting the results of the tests
Poor communication - the health team didn’t listen to my concerns
Lack of female health providers
Privacy and confidentiality weren’t as I wished

Main Challenges during treatment

Availability of systematic treatment
Access to radiotherapy
Financial cost
Loss of hair
Reduced sexual interest and decreased sexual function.
Weight loss
Weight gain
Loss of appetite
Trouble sleeping
Lack of information
Coordination
Delays in getting appointments
The limited number of specialists
Privacy and confidentiality

Main challenges related to referrals

Delay of permission
Denial of permission
Interrupted treatment
Cost of transportation
Denial of companion
No suitable companions

Current challenges

difficulty in performing your routine activities
Fear of BC recurrence
Feelings of vulnerability
Body image disruption
Intrusive thoughts about your illness
Experience of threats to safety
Feelings of social isolation
Concerns about future fertility
Concerns about Ability to work

Formal support, do you experience any of the following?

0 not applicable	1 never	2 sometimes	3 always

Statement	Score
Informational	
The treating physician gave me detailed information about my health condition and the treatment recommendations for me	
Treatment option and surgeon’s decision was discussed with me	
I was given medical brochures explaining my health condition	
I was given detailed nutritional advices.	
I was given phone number to call if I have any concerns	

After completing my treatment plan, I was educated about how to maintain a healthy lifestyle and about management of long-term consequences of cancer treatment.

Different BC care institutions contacted me to provide psychosocial support

Educational workshops were held regularly through the cancer journey

My Care was well coordinated

Financial and instrumental

Some institutions gave me financial assistance

institutions support was available throughout the diagnosis, treatment and recovery journey

some institutions helped me in transportations

Psychosocial and emotional

The health team shows empathy with me

The health team listens to my concern

I feel that the team took good care of me

I feel that the staff are available to support me whenever needed

The care I receive helped me a lot to deal with my disease

Overall, I am satisfied about the quality of care I received

trained HC provider gave me supportive counselling to process

There were support groups for cancer patients in the treating hospital

Psychosocial support was accessible to me when I need it

DASS 21
Depression, anxiety, stress scale

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.
0= Did not apply to me at all
1= Applied to me to some degree, or some of the time
2= Applied to me to a considerable degree or a good part of time
3= Applied to me very much or most of the time

1	(s)	I found it hard to wind down	0	1	2	3
2	(a)	I was aware of dryness of my mouth	0	1	2	3
3	(d)	I couldn’t seem to experience any positive feeling at all	0	1	2	3
4	(a)	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	(d)	I found it difficult to work up the initiative to do things	0	1	2	3
6	(s)	I tended to over-react to situations	0	1	2	3
7	(a)	I experienced trembling (e.g., in the hands)	0	1	2	3
8	(s)	I felt that I was using a lot of nervous energy	0	1	2	3
9	(a)	was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	(d)	I felt that I had nothing to look forward to	0	1	2	3
11	(s)	I found myself getting agitated	0	1	2	3
12	(s)	I found it difficult to relax	0	1	2	3
13	(d)	I felt down-hearted and blue	0	1	2	3
I4	(s)	was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	(a)	I felt I was close to panic	0	1	2	3
16	(d)	I was unable to become enthusiastic about anything	0	1	2	3

17	(d)	I felt I wasn’t worth much as a person	0	1	2	3
18	(s)	I felt that I was rather touchy	0	1	2	3
19	(a)	was aware of the action of my heart in the absence of exertion (e.g., sense of heart rate increase, heart missing a beat)	0	1	2	3
20	(a)	I felt scared without any good reason	0	1	2	3
21	(d)	I felt that life was meaningless	0	1	2	3

Coping scale- Brief COPE						
Please read each statement and circle a number 1, 2 ,3 or 4 which indicates how much the statement applied to you. There are no right or wrong answers. Do not spend too much time on any statement. 1= I haven't been doing this at all 2= I've been doing this a little bit 3= I've been doing this a medium amount 4= I've been doing this a lot						
1	A	I've been turning to work or other activities to take my mind off things.	1	2	3	4
2	P	I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3	A	I've been saying to myself "this isn't real.".	1	2	3	4
4	A	I've been using drugs to make myself feel better.	1	2	3	4
5	E	I've been getting emotional support from others.	1	2	3	4
6	A	I've been giving up trying to deal with it.	1	2	3	4
7	P	I've been taking actions to try to make the situation better.	1	2	3	4
8	A	I've been refusing to believe that it has happened.	1	2	3	4
9	E	I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10	P	I’ve been getting help and advice from other people.	1	2	3	4
11	A	I've been using drugs to help me get through it.	1	2	3	4
12	P	I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
13	E	I’ve been criticizing myself.	1	2	3	4
14	P	I've been trying to come up with a strategy about what to do.	1	2	3	4
15	E	I've been getting comfort and understanding from someone.	1	2	3	4
16	A	I've been giving up the attempt to cope.	1	2	3	4
17	P	I've been looking for something good in what is happening.	1	2	3	4
18	E	I've been making jokes about it.	1	2	3	4
19	A	I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20	E	I've been accepting the reality of the fact that it has happened.	1	2	3	4
21	E	I've been expressing my negative feelings.	1	2	3	4
22	E	I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
23	P	I’ve been trying to get advice or help from other people about what to do.	1	2	3	4
24	E	I've been learning to live with it.	1	2	3	4
25	P	I've been thinking hard about what steps to take.	1	2	3	4
26	E	I’ve been blaming myself for things that happened.	1	2	3	4
27	E	I've been praying or meditating.	1	2	3	4
28	E	I've been making fun of the situation.	1	2	3	4

Annex 3 Qualitative study tool

FGDs (women with BC)

1) How are you, please tell me about your life, how it looks like. How you perceive your health?
2) In life, we sometimes face some challenges, what are the challenges you encounter in your life? Probe for current challenges, challenges during diagnosis, treatment? Probe for social, financial, health, treatments related challenges
3) How you and people like you face these challenges, how you deal/dealt with these challenges? How much the approaches used were successful in overcoming these challenges? Coping approaches
4) Who supports you? Currently, previously at each stage, how the support has changed by time, explore family support, friends, network, NGOs
5) Tell me about your experiences with health services, services you received, quality of these services, services you need but didn't receive. Probe for psychosocial services, information, interaction with staff
6) From your perspectives, what are the unmet needs of women with BC that should be given further attention?
7) What you liked the most in the provided services/support? What benefited you more?
8) What you didn't like, or increased the difficulties you are facing?
9) What could be done to improve the quality of life of women with BC?

Annex 4 LSD- Post hoc test results

Multiple Comparisons

LSD

Dependent Variable	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Sig.
Challenges overall	40 and less	41 to 50	4.03987*	.032
		51 to 60	7.46000*	.000
		60 and above	7.25054*	.001
	41 to 50	40 and less	-4.03987-*	.032
		51 to 60	3.42012*	.038
		60 and above	3.21067	.121
	51 to 60	40 and less	-7.46000-*	.000
		41 to 50	-3.42012-*	.038
		60 and above	-.20945-	.916
	60 and above	40 and less	-7.25054-*	.001
		41 to 50	-3.21067-	.121
		51 to 60	.20945	.916

*. The mean difference is significant at the 0.05 level.

Dependent Variable	(I) Governorates	(J) Governorates	Mean Difference (I-J)	Sig.
Challenges overall	Gaza	North	5.75542*	.004
		Middle	5.25970*	.017
		Khanyounis	1.24947	.601
		Rafah	7.21330*	.001
	North	Gaza	-5.75542-*	.004
		Middle	-.49573-	.851
		Khanyounis	-4.50595-	.108
		Rafah	1.45788	.581
	Middle	Gaza	-5.25970-*	.017
		North	.49573	.851
		Khanyounis	-4.01023-	.175
		Rafah	1.95360	.486
	Khanyounis	Gaza	-1.24947-	.601
		North	4.50595	.108
		Middle	4.01023	.175
		Rafah	5.96383*	.044
	Rafah	Gaza	-7.21330-*	.001
		North	-1.45788-	.581
		Middle	-1.95360-	.486
		Khanyounis	-5.96383-*	.044

Dependent Variable	(I) Education level	(J) Education level	Mean Difference (I-J)	Sig.
		High School	.92158	.757
Challenges overall	Primary and less	High School	-.23285-	.876
		University and Post Graduate	-4.72355-*	.008
	High School	Primary and less	.23285	.876
		University and Post Graduate	-4.49069-*	.012
	University and Post	Primary and less	4.72355*	.008

	Graduate	High School	4.49069*	.012

Dependent Variable	Stage of BC at diagnosis	Stage of BC at diagnosis	Mean Difference (I-J)	Sig.
Challenges overall	Stage I	Stage II	1.42623	.428
		Stage III	3.45130	.092
		Stage IV	5.39858	.114
		Don't Know	8.29864*	.000
	Stage II	Stage I	-1.42623-	.428
		Stage III	2.02507	.279
		Stage IV	3.97235	.230
		Don't Know	6.87241*	.002
	Stage III	Stage I	-3.45130-	.092
		Stage II	-2.02507-	.279
		Stage IV	1.94728	.572
		Don't Know	4.84733*	.045
	Stage IV	Stage I	-5.39858-	.114
		Stage II	-3.97235-	.230
		Stage III	-1.94728-	.572
		Don't Know	2.90006	.426
	Don't Know	Stage I	-8.29864-*	.000
		Stage II	-6.87241-*	.002
		Stage III	-4.84733-*	.045
		Stage IV	-2.90006-	.426

Dependent Variable	(I) Time since diagnosis	(J) Time since diagnosis	Mean Difference (I-J)	Sig.
Challenges overall	less than 1 Year	1 Year to less 3 years	-4.81644-*	.011
		3 to 4 years	-5.49468-*	.005
		5 Years	-5.54343-*	.005
	1 Year to less 3 years	less than 1 Year	4.81644*	.011
		3 to 4 years	-.67823-	.619
		5 Years	-.72698-	.601
	3 to 4 years	less than 1 Year	5.49468*	.005
		1 Year to less 3 years	.67823	.619
		5 Years	-.04875-	.973
	5 Years	less than 1 Year	5.54343*	.005
		1 Year to less 3 years	.72698	.601
		3 to 4 years	.04875	.973
Challenges overall	less than 1 Year	1 Year to less 3 years	-7.68569-	.053
		3 to 4 years	-11.34511-*	.006
		5 Years	-11.60772-*	.005
	1 Year to less 3 years	less than 1 Year	7.68569	.053
		3 to 4 years	-3.65942-	.188
		5 Years	-3.92203-	.166
	3 to 4 years	less than 1 Year	11.34511*	.006
		1 Year to less 3 years	3.65942	.188
		5 Years	-.26261-	.930
	5 Years	less than 1 Year	11.60772*	.005
		1 Year to less 3 years	3.92203	.166

		3 to 4 years	.26261	.930
Challenges overall	less than 1 Year	1 Year to less 3 years	-5.31700-*	.003
		3 to 4 years	-6.62468-*	.000
		5 Years	-5.71982-*	.002
	1 Year to less 3 years	less than 1 Year	5.31700*	.003
		3 to 4 years	-1.30768-	.303
		5 Years	-.40282-	.756
	3 to 4 years	less than 1 Year	6.62468*	.000
		1 Year to less 3 years	1.30768	.303
		5 Years	.90486	.507
	5 Years	less than 1 Year	5.71982*	.002
		1 Year to less 3 years	.40282	.756
		3 to 4 years	-.90486-	.507

LSD

Dependent Variable	(I) regularity of income	(J) regularity of income	Mean Difference (I-J)	Sig.
Formal support overall	Regular on monthly basis	Regular on daily basis	4.15582*	.039
		Irregular	-2.12063-	.137
	Regular on daily basis	Regular on monthly basis	-4.15582-*	.039
		Irregular	-6.27646-*	.001
	Irregular	Regular on monthly basis	2.12063	.137
		Regular on daily basis	6.27646*	.001

LSD

Dependent Variable	(I) Time since diagnosis	(J) Time since diagnosis	Mean Difference (I-J)	Sig.
Formal support overall	less than 1 Year	1 Year to less 3 years	-4.76995-*	.040
		3 to 4 years	-4.35290-	.069
		5 Years	-.91308-	.705
	1 Year to less 3 years	less than 1 Year	4.76995*	.040
		3 to 4 years	.41705	.802
		5 Years	3.85688*	.023
	3 to 4 years	less than 1 Year	4.35290	.069
		1 Year to less 3 years	-.41705-	.802
		5 Years	3.43982	.054
	5 Years	less than 1 Year	.91308	.705
		1 Year to less 3 years	-3.85688-*	.023
		3 to 4 years	-3.43982-	.054

Multiple Comparisons

LSD

Dependent Variable	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Sig.
Social support overall	40 and less	41 to 50	1.96961	.417
		51 to 60	-1.79659-	.439
		60 and above	-5.13622-	.071
	41 to 50	40 and less	-1.96961-	.417
		51 to 60	-3.76620-	.075
		60 and above	-7.10583-*	.008
	51 to 60	40 and less	1.79659	.439

		41 to 50	3.76620	.075
		60 and above	-3.33963-	.194
	60 and above	40 and less	5.13622	.071
		41 to 50	7.10583*	.008
		51 to 60	3.33963	.194

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) 4-Governorates	(J) 4-Governorates	Mean Difference (I-J)	Sig.
Social support overall	Gaza	North	3.68872	.132
		Middle	-1.07673-	.690
		Khanyounis	-2.43891-	.405
		Rafah	6.50762*	.016
	North	Gaza	-3.68872-	.132
		Middle	-4.76545-	.143
		Khanyounis	-6.12763-	.075
		Rafah	2.81889	.385
	Middle	Gaza	1.07673	.690
		North	4.76545	.143
		Khanyounis	-1.36218-	.707
		Rafah	7.58435*	.028
	Khanyounis	Gaza	2.43891	.405
		North	6.12763	.075
		Middle	1.36218	.707
		Rafah	8.94652*	.014
	Rafah	Gaza	-6.50762-*	.016
		North	-2.81889-	.385
		Middle	-7.58435-*	.028
		Khanyounis	-8.94652-*	.014

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) regularity of income	(J) regularity of income	Mean Difference (I-J)	Sig.
Social support overall	Regular on monthly basis	Regular on daily basis	7.93088*	.002
		Irregular	-.15430-	.932
	Regular on daily basis	Regular on monthly basis	-7.93088-*	.002
		Irregular	-8.08517-*	.001
	Irregular	Regular on monthly basis	.15430	.932
		Regular on daily basis	8.08517*	.001

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Stage of BC at diagnosis	(J) Stage of BC at diagnosis	Mean Difference (I-J)	Sig.
Social support overall	Stage I	Stage II	-.51932-	.811
		Stage III	7.30085*	.003
		Stage IV	5.03581	.223
		Don't Know	5.32090	.065
	Stage II	Stage I	.51932	.811

		Stage III	7.82017*	.001
		Stage IV	5.55513	.166
		Don't Know	5.84022*	.031
	Stage III	Stage I	-7.30085-*	.003
		Stage II	-7.82017-*	.001
		Stage IV	-2.26504-	.587
		Don't Know	-1.97995-	.500
	Stage IV	Stage I	-5.03581-	.223
		Stage II	-5.55513-	.166
		Stage III	2.26504	.587
		Don't Know	.28509	.949
	Don't Know	Stage I	-5.32090-	.065
		Stage II	-5.84022-*	.031
		Stage III	1.97995	.500
		Stage IV	-.28509-	.949

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Time since diagnosis	(J) Time since diagnosis	Mean Difference (I-J)	Sig.
Social support overall	less than 1 Year	1 Year to less 3 years	3.44881	.242
		3 to 4 years	6.15022*	.043
		5 Years	9.26129*	.003
	1 Year to less 3 years	less than 1 Year	-3.44881-	.242
		3 to 4 years	2.70141	.201
		5 Years	5.81248*	.007
	3 to 4 years	less than 1 Year	-6.15022-*	.043
		1 Year to less 3 years	-2.70141-	.201
		5 Years	3.11106	.171
	5 Years	less than 1 Year	-9.26129-*	.003
		1 Year to less 3 years	-5.81248-*	.007
		3 to 4 years	-3.11106-	.171

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD with age

Dependent Variable	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Stress	40 and less	41 to 50	.48954	.69425	.481	-.8764-	1.8554
		51 to 60	.96440	.66205	.146	-.3381-	2.2669
		60 and above	2.17176*	.80494	.007	.5881	3.7554
	41 to 50	40 and less	-.48954-	.69425	.481	-1.8554-	.8764
		51 to 60	.47485	.60926	.436	-.7238-	1.6735
		60 and above	1.68222*	.76211	.028	.1828	3.1816
	51 to 60	40 and less	-.96440-	.66205	.146	-2.2669-	.3381
		41 to 50	-.47485-	.60926	.436	-1.6735-	.7238
		60 and above	1.20737	.73290	.100	-.2346-	2.6493
	60 and above	40 and less	-2.17176-*	.80494	.007	-3.7554-	-.5881-
		41 to 50	-1.68222-*	.76211	.028	-3.1816-	-.1828-
		51 to 60	-1.20737-	.73290	.100	-2.6493-	.2346

Anxiety	40 and less	41 to 50	.47969	.75333	.525	-1.0024-	1.9618
		51 to 60	2.01910*	.71952	.005	.6035	3.4347
		60 and above	3.08606*	.87357	.000	1.3674	4.8048
	41 to 50	40 and less	-.47969-	.75333	.525	-1.9618-	1.0024
		51 to 60	1.53942*	.65372	.019	.2533	2.8256
		60 and above	2.60637*	.82022	.002	.9926	4.2201
	51 to 60	40 and less	-2.01910-*	.71952	.005	-3.4347-	-.6035-
		41 to 50	-1.53942-*	.65372	.019	-2.8256-	-.2533-
		60 and above	1.06696	.78929	.177	-.4859-	2.6198
	60 and above	40 and less	-3.08606-*	.87357	.000	-4.8048-	-1.3674-
		41 to 50	-2.60637-*	.82022	.002	-4.2201-	-.9926-
		51 to 60	-1.06696-	.78929	.177	-2.6198-	.4859

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

						95% Confidence Interval	
Dependent Variable	(I) Governorates	(J) Governorates	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Stress	Gaza	North	1.78391*	.71551	.013	.3762	3.1917
		Middle	-.43237-	.76420	.572	-1.9359-	1.0712
		Khanyounis	.03799	.82920	.963	-1.5934-	1.6694
		Rafah	-1.44721-	.77231	.062	-2.9667-	.0723
	North	Gaza	-1.78391-*	.71551	.013	-3.1917-	-.3762-
		Middle	-2.21628-*	.93532	.018	-4.0565-	-.3761-
		Khanyounis	-1.74592-	.98914	.079	-3.6920-	.2002
		Rafah	-3.23112-*	.94196	.001	-5.0844-	-1.3778-
	Middle	Gaza	.43237	.76420	.572	-1.0712-	1.9359
		North	2.21628*	.93532	.018	.3761	4.0565
		Khanyounis	.47035	1.02491	.647	-1.5461-	2.4868
		Rafah	-1.01484-	.97946	.301	-2.9419-	.9122
	Khanyounis	Gaza	-.03799-	.82920	.963	-1.6694-	1.5934
		North	1.74592	.98914	.079	-.2002-	3.6920
		Middle	-.47035-	1.02491	.647	-2.4868-	1.5461
		Rafah	-1.48520-	1.03097	.151	-3.5136-	.5432
	Rafah	Gaza	1.44721	.77231	.062	-.0723-	2.9667
		North	3.23112*	.94196	.001	1.3778	5.0844
		Middle	1.01484	.97946	.301	-.9122-	2.9419
		Khanyounis	1.48520	1.03097	.151	-.5432-	3.5136

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

						95% Confidence Interval	
Dependent Variable	(I) neighborhood	(J) neighborhood	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Anxiety	City	Village	.10249	1.52654	.947	-2.9009-	3.1058
		Camp	-1.68202-*	.63873	.009	-2.9387-	-.4254-
	Village	City	-.10249-	1.52654	.947	-3.1058-	2.9009
		Camp	-1.78451-	1.59769	.265	-4.9278-	1.3588
	Camp	City	1.68202*	.63873	.009	.4254	2.9387

		Village	1.78451	1.59769	.265	-1.3588-	4.9278

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Stage of BC at diagnosis	(J) Stage of BC at diagnosis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Stress	Stage I	Stage II	-.41406-	.61385	.500	-1.6218-	.7937
		Stage III	-3.28380-*	.69845	.000	-4.6580-	-1.9096-
		Stage IV	-1.74459-	1.18455	.142	-4.0752-	.5860
		Don't Know	-1.84536-*	.79903	.022	-3.4174-	-.2733-
	Stage II	Stage I	.41406	.61385	.500	-.7937-	1.6218
		Stage III	-2.86975-*	.63803	.000	-4.1251-	-1.6144-
		Stage IV	-1.33053-	1.14997	.248	-3.5931-	.9320
		Don't Know	-1.43131-	.74679	.056	-2.9006-	.0380
	Stage III	Stage I	3.28380*	.69845	.000	1.9096	4.6580
		Stage II	2.86975*	.63803	.000	1.6144	4.1251
		Stage IV	1.53922	1.19727	.200	-.8164-	3.8948
		Don't Know	1.43844	.81776	.080	-.1705-	3.0474
	Stage IV	Stage I	1.74459	1.18455	.142	-.5860-	4.0752
		Stage II	1.33053	1.14997	.248	-.9320-	3.5931
		Stage III	-1.53922-	1.19727	.200	-3.8948-	.8164
		Don't Know	-.10078-	1.25859	.936	-2.5770-	2.3755
	Don't Know	Stage I	1.84536*	.79903	.022	.2733	3.4174
		Stage II	1.43131	.74679	.056	-.0380-	2.9006
		Stage III	-1.43844-	.81776	.080	-3.0474-	.1705
		Stage IV	.10078	1.25859	.936	-2.3755-	2.5770
Depression	Stage I	Stage II	-1.27350-*	.62980	.044	-2.5126-	-.0344-
		Stage III	-2.10145-*	.71146	.003	-3.5012-	-.7017-
		Stage IV	-1.75000-	1.17918	.139	-4.0700-	.5700
		Don't Know	-.26190-	.82328	.751	-1.8817-	1.3579
	Stage II	Stage	1.27350*	.62980	.044	.0344	2.5126
		Stage III	-.82795-	.65145	.205	-2.1097-	.4538
		Stage IV	-.47650-	1.14397	.677	-2.7273-	1.7743
		Don't Know	1.01160	.77201	.191	-.5073-	2.5305
	Stage III	Stage	2.10145*	.71146	.003	.7017	3.5012
		Stage II	.82795	.65145	.205	-.4538-	2.1097
		Stage IV	.35145	1.19088	.768	-1.9916-	2.6945
		Don't Know	1.83954*	.83995	.029	.1869	3.4922
	Stage IV	Stage	1.75000	1.17918	.139	-.5700-	4.0700
		Stage II	.47650	1.14397	.677	-1.7743-	2.7273
		Stage III	-.35145-	1.19088	.768	-2.6945-	1.9916
		Don't Know	1.48810	1.26087	.239	-.9927-	3.9689
	Don't Know	Stage	.26190	.82328	.751	-1.3579-	1.8817
		Stage II	-1.01160-	.77201	.191	-2.5305-	.5073
		Stage III	-1.83954-*	.83995	.029	-3.4922-	-.1869-
		Stage IV	-1.48810-	1.26087	.239	-3.9689-	.9927
Anxiety	Stage	Stage II	-1.02908-	.68296	.133	-2.3728-	.3146
		Stage III	-3.31674-*	.77341	.000	-4.8384-	-1.7951-

		Stage IV	-2.45877-	1.31409	.062	-5.0442-	.1267
		Don't Know	-1.17350-	.88754	.187	-2.9197-	.5727
	Stage II	Stage	1.02908	.68296	.133	-.3146-	2.3728
		Stage III	-2.28766-*	.70378	.001	-3.6723-	-.9030-
		Stage IV	-1.42969-	1.27435	.263	-3.9370-	1.0776
		Don't Know	-.14442-	.82757	.862	-1.7726-	1.4838
	Stage III	Stage	3.31674*	.77341	.000	1.7951	4.8384
		Stage II	2.28766*	.70378	.001	.9030	3.6723
		Stage IV	.85797	1.32503	.518	-1.7490-	3.4649
		Don't Know	2.14324*	.90366	.018	.3653	3.9212
	Stage IV	Stage	2.45877	1.31409	.062	-.1267-	5.0442
		Stage II	1.42969	1.27435	.263	-1.0776-	3.9370
		Stage III	-.85797-	1.32503	.518	-3.4649-	1.7490
		Don't Know	1.28527	1.39473	.357	-1.4588-	4.0294
	Don't Know	Stage	1.17350	.88754	.187	-.5727-	2.9197
		Stage II	.14442	.82757	.862	-1.4838-	1.7726
		Stage III	-2.14324-*	.90366	.018	-3.9212-	-.3653-
		Stage IV	-1.28527-	1.39473	.357	-4.0294-	1.4588

*. The mean difference is significant at the 0.05 level.

Dependent Variable	(I) Age Group	(J) Age Group	Mean Difference (I-J)	Std. Error	Sig.
Avoidant	40 and less	41 to 50	.12520	.07269	.086
		51 to 60	.16313*	.06921	.019
		60 and above	.24545*	.08349	.004
	41 to 50	40 and less	-.12520-	.07269	.086
		51 to 60	.03794	.06376	.552
		60 and above	.12026	.07902	.129
	51 to 60	40 and less	-.16313-*	.06921	.019
		41 to 50	-.03794-	.06376	.552
		60 and above	.08232	.07584	.279
	60 and above	40 and less	-.24545-*	.08349	.004
		41 to 50	-.12026-	.07902	.129
		51 to 60	-.08232-	.07584	.279

Dependent Variable	(I) Neighborhood	(J) Neighborhood	Mean Difference (I-J)	Sig.
Avoidant	City	Village	-.41655-*	.006
		Camp	.03484	.566
	Village	City	.41655*	.006
		Camp	.45139*	.005
	Camp	City	-.03484-	.566
		Village	-.45139-*	.005
Problem focused	City	Village	-.44309-*	.017
		Camp	.05202	.480
	Village	City	.44309*	.017
		Camp	.49511*	.011
	Camp	City	-.05202-	.480
		Village	-.49511-*	.011
Emotional	City	Village	-.41098-*	.046

		Camp	.11711	.169
	Village	City	.41098*	.046
		Camp	.52808*	.014
	Camp	City	-.11711-	.169
		Village	-.52808-*	.014

Dependent Variable	(I) Current marital status	(J) Current marital status	Mean Difference (I-J)	Sig.
Avoidant	Single	Divorce	.11696	.381
		Married	.10720	.237
		Widow	.33889*	.004
	Divorce	Single	-.11696-	.381
		Married	-.00976-	.927
		Widow	.22193	.090
	Married	Single	-.10720-	.237
		Divorce	.00976	.927
		Widow	.23169*	.008
	Widow	Single	-.33889-*	.004
		Divorce	-.22193-	.090
		Married	-.23169-*	.008

Dependent Variable	(I) Current marital status	(J) Current marital status	Mean Difference (I-J)	Sig.
Avoidant	Single	Divorce	.11696	.381
		Married	.10720	.237
		Widow	.33889*	.004
	Divorce	Single	-.11696-	.381
		Married	-.00976-	.927
		Widow	.22193	.090
	Married	Single	-.10720-	.237
		Divorce	.00976	.927
		Widow	.23169*	.008
	Widow	Single	-.33889-*	.004
		Divorce	-.22193-	.090
		Married	-.23169-*	.008

Dependent Variable	(I) Stage of BC at diagnosis	(J) Stage of BC at diagnosis	Mean Difference (I-J)	Sig.
Avoidant	Stage	Stage II	-.14733-*	.027
		Stage III	-.25219-*	.001
		Stage IV	-.07158-	.559
		Don't Know	-.04738-	.584
	Stage II	Stage	.14733*	.027
		Stage III	-.10486-	.123
		Stage IV	.07575	.523
		Don't Know	.09995	.216
	Stage III	Stage	.25219*	.001
		Stage II	.10486	.123
		Stage IV	.18061	.144

		Don't Know	.20481*	.020
	Stage IV	Stage	.07158	.559
		Stage II	-.07575-	.523
		Stage III	-.18061-	.144
		Don't Know	.02420	.853
	Don't Know	Stage	.04738	.584
		Stage II	-.09995-	.216
		Stage III	-.20481-*	.020
		Stage IV	-.02420-	.853

Correlations

		Challenges	Formal Support	Social Support	Stress	Depression	Anxiety	Avoidant	Problem focused	Emotional
Challenges	Pearson Correlation	1	.198**	.049	.208**	.280**	.255**	.227**	.036	-.066-
	Sig. (2-tailed)		.000	.375	.000	.000	.000	.000	.521	.231
	N	329	328	328	322	321	322	314	316	329
Formal Support	Pearson Correlation	.198**	1	.444**	-.013-	.025	.096	.161**	.221**	.186**
	Sig. (2-tailed)	.000		.000	.820	.653	.086	.004	.000	.001
	N	328	328	328	321	320	321	313	315	328
Social Support	Pearson Correlation	.049	.444**	1	-.219-**	-.162-**	-.099-	-.015-	.197**	.202**
	Sig. (2-tailed)	.375	.000		.000	.004	.076	.786	.000	.000
	N	328	328	328	321	320	321	313	315	328
Stress	Pearson Correlation	.208**	-.013-	-.219-**	1	.657**	.751**	.420**	.204**	.134*
	Sig. (2-tailed)	.000	.820	.000		.000	.000	.000	.000	.016
	N	322	321	321	322	314	315	307	309	322
Depression	Pearson Correlation	.280**	.025	-.162-**	.657**	1	.735**	.454**	-.017-	-.060-
	Sig. (2-tailed)	.000	.653	.004	.000		.000	.000	.764	.280
	N	321	320	320	314	321	314	306	309	321
Anxiety	Pearson Correlation	.255**	.096	-.099-	.751**	.735**	1	.485**	.193**	.114*
	Sig. (2-tailed)	.000	.086	.076	.000	.000		.000	.001	.042
	N	322	321	321	315	314	322	308	309	322
Avoidant	Pearson Correlation	.227**	.161**	-.015-	.420**	.454**	.485**	1	.215**	.122*
	Sig. (2-tailed)	.000	.004	.786	.000	.000	.000		.000	.031
	N	314	313	313	307	306	308	314	301	314
Problem focused	Pearson Correlation	.036	.221**	.197**	.204**	-.017-	.193**	.215**	1	.755**
	Sig. (2-tailed)	.521	.000	.000	.000	.764	.001	.000		.000
	N	316	315	315	309	309	309	301	316	316
Emotional	Pearson Correlation	-.066-	.186**	.202**	.134*	-.060-	.114*	.122*	.755**	1
	Sig. (2-tailed)	.231	.001	.000	.016	.280	.042	.031	.000	

N	329	328	328	322	321	322	314	316	329

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

*. Correlation is significant at the 0.05 level (2-tailed).

دراسة حول التحديات النفسية والاجتماعية واستراتيجيات المواجهة وإمكانية الحصول على الدعم للنساء المصابات بسرطان الثدي في قطاع غزة

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ملخص الرسالة

لا تكمن صعوبة سرطان الثدي فقط في كونه مشكلة صحية شائعه حيث يعد اكثر انواع السرطان شيوعا لدى النساء حيث يمثل 11.75 % من إجمالي حالات السرطان في العالم و18% من حالات السرطان في قطاع غزة, او في الاثار الجانبية والمضاعفات الناتجه عن علاجاته بل تشمل التحديات النفسيه والاجتماعية المترتبه عليه نظرا لاهمية الثدي في تشكيل الهوية الجسدية للمراة. وفي قطاع غزة تتضاعف التحديات بسبب الوضع السياسي المعقد ومايترتب عليه من عوائق،من اهمها أن معظم النساء بحاجة إلى إحالة لخارج قطاع غزة لمواصلة العلاج، بالاضافه الى ارتفاع معدل البطالة، وانخفاض الدخل، وحقيقة أن معظم الأسر تعتمد على المساعدات من مصادر مختلفة للحصول على الدعم المادي.مما يستدعي التركيز على احتاجات النساء المصابات بسرطان الثدي في قطاع غزه وامكانية حصولهن على الدعم اللازم

تم إجراء الدراسة لاستكشاف التحديات النفسية والاجتماعية التي تواجه النساء المصابات بسرطان الثدي في قطاع غزة وتقييم استراتيجيات التكيف الخاصة بهن، وامكانية الوصول الي الدعم الرسمي وغير الرسمي خلال رحلة المرض في ظل الظروف الصعبة في قطاع غزة

اجريت الدراسة المقطعية بطريقة تثليث البيانات كميا ونوعيا. الجزء الكمي تم من خلال استبيان مع 329 امرأة مصابة بسرطان الثدي من مختلف محافظات قطاع غزة ويركز على استكشاف التحديات التي يواجهنها والدعم المقدم لهن. الجزء النوعي استكشف بشكل متعمق التجارب الحياتية للنساء المصابات بسرطان الثدي ووجهات نظرهن من خلال المناقشه في اربع مجموعات بؤرية مع 25 سيدة تم اختيارهن من فئات مختلفه لضمان التنوع بغرض اثراء وتفسير بعض النتائج

وأظهرت النتائج أن 35.6% من المشاركات تراوحت أعمارهن بين 51-60 سنة، نصفهن تقريبا من مدينة غزة، و76% منهن متزوجات، و93.3% ربات بيوت،اكثر من نصف المشاركات (53.8%) أفدن بأن دخل الأسرة الشهري أقل من 1000 شيكل. فيما يتعلق بمرحلة سرطان الثدي، فان ما يقرب من الربع (24٪) في المرحلة الأولى و 36.8٪ في المرحلة الثانية. كما أفادت النساء فان 60% منهن استغرقن أكثر من 4 أسابيع لبدء العلاج بعد تأكيد التشخيص بالمرض. تم تلقي العلاج الكيمياوي بنسبة 83% من النساء، وتم إجراء عملية جراحية لـ 84%، وتم تلقي العلاج الهرموني بنسبة 71%، بينما تلقى 68.4% من المشاركات العلاج الإشعاعي.

اظهرت الدراسة أن خلال مرحلة التشخيص كانت التحديات النفسيه والخوف من المرض والمستقبل هي الاكثر وضوحا, بينما في مرحلة العلاج التحديات ارتبطت بشكل اكبر بالاثار الجانبية للعلاجات وتاثيرها عل صحة النساء ايضا أفادت 31% من النساء أن السرطان قلل من مستوى نشاطهن وأثر سلبًا على حالتهن النفسية والاجتماعية.. كما اظهرت نتائج مقياس الصحة النفسيه ان القلق كان أكثر وضوحًا لدى النساء , يليه الاكتئاب, ثم التوتر.

أظهرت النتائج أنه من بين أبعاد الدعم الاجتماعي الخمسة، كان التفاعل الاجتماعي الإيجابي هو البعد الأكثر شيوعاً، في حين كان الدعم الملموس (توفير الموارد العملية والمساعدات المادية) هو الأقل شيوعاً. استخدمت النساء استراتيجيات مختلفة للتعامل مع مرضهن، وكانت استراتيجيات المواجهة الأكثر شيوعًا هي الصلاة أو التأمل (75.5%)، تليها محاولة العثور على الراحة في الدين أو المعتقدات الروحية(55.2%) .

أظهر التحليل الاستدلالي أن النساء الأصغر سنا (أقل من 40 عاما)، اللاتي تم تشخيصهن مؤخرا (سنة واحدة وأقل) والنساء اللاتي تم تشخيصهن في المرحلة الثالثة والرابعة يواجهن تحديات أكثر من نظيراتهن من المجموعات الأخرى بالاضافة الى درجات أعلى من الاكتئاب والقلق والتوتر. ، وايضا حصلن على درجات أعلى في استراتيجيات المواجهة التجنبية مقارنة بالنساء الأخريات. سجلت النساء اللاتي خضعن لعملية استئصال الثدي، درجات أعلى في التحديات التي يواجهنها، والاكتئاب والقلق والتوتر، وحصلن على المزيد من الدعم الاجتماعي والرسمي مقارنة بالنساء اللاتي خضعن لجراحة الثدي التحفظية، لكن هذه الفروق ليست ذات دلالة إحصائية.

ادت نتائج الدراسة إلى فهم افضل للتحديات التي تواجه النساء المصابات بسرطان الثدي في قطاع غزة والتي تتعلق بالتشخيص والعلاج وحتى ما بعد العلاج ، و تؤثر سلباً على الصحه الجسدية والنفسية. خلصت الدراسه إلى ضرورة التركيز على الجوانب النفسيه حيث ان علاج سرطان الثدي لا يقتصر فقط على

العلاجات الطبيه ، بل إنه يتطلب تدخلات متعددة بما في ذلك الدعم النفسي والاجتماعي المكثف والحماية الاجتماعية التي يجب دمجها كعنصر اساسي في الرعاية المقدمة للنساء مع الاخذ بعين الاعتبار الفروقات المختلفة بين النساء.