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Research Article

Symptom Experience and Coping Strategies Among Patients with Breast Cancer Receiving Chemotherapy

Maram M Alshahrani^{1*}, Fatmah Alsharif², and Asmaa Hamdi Khalil³

^{1*}Department of Medical Surgical Nursing, King Abdulaziz University, Jeddah, Saudi Arabia, Faculty of Nursing, Bisha University, Email: rn.maramm@gmail.com

²Department of Medical Surgical Nursing, Faculty of Nursing, King Abdul Aziz University, Jeddah, Saudi Arabia., Email: falsharif@kau.edu.sa

³Department of Medical Surgical Nursing, Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia, Ain Shams university, Cairo, Egypt. Email: akhleel@kau.edu.sa

***Corresponding author:** Maram M Alshahrani

*Email: rn.maramm@gmail.com

Abstract

Background.

Patients with breast cancer receiving chemotherapy are vulnerable to symptom experience and coping strategies. This study aimed to assess the symptom experiences and coping strategies of patients with breast cancer receiving chemotherapy.

Methods. A quantitative descriptive, cross-sectional study was conducted. An electronic questionnaire was used to gather data. A convenience sample of 103 female patients with breast cancer receiving chemotherapy was included. The first section of the questionnaire was designed to gather information about the study participants' backgrounds. More than half of the sample is in stage III (60 patients, 58.3%), and 45 patients (43.7%) had a bachelor's degree and higher.

Main Results. In the shorter version of the Memorial Symptom Assessment Scale, the most psychological symptom reported is "worrying" (mean \pm SD = 2.02 \pm 0.721), and the physical symptom with high prevalence is "weight loss" (mean = 2.55), whereas the physical symptom with low prevalence is "hair loss" (mean \pm SD = 3.89 \pm 0.313). According to the Arabic Brief COPE, the highest strategy of active coping is "I've been praying or meditating" (92.50%), the highest strategy of passive coping is "I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping" (71.00%), and the most seeking support strategy is "I've been trying to get advice or help from other people..." (mean \pm SD = 3.32 \pm 0.866).

Keywords: Breast, Cancer, Symptoms, Coping, Chemotherapy

**Author of correspondence: Email:* rn.maramm@gmail.com

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1. Introduction

Breast cancer is a condition characterized by abnormal and uncontrolled cell growth within breast tissue. This disease encompasses various subtypes, with

classification depending on the specific breast cells affected. The breast is composed of three primary structures: lobules (milk-producing glands), ducts (channels that transport milk to the nipple), and

connective tissue (a matrix of fibrous and fatty tissues that provides support and structure). While breast cancer can originate in different regions of the breast, the most common sites of origin are the ducts and lobules. The specific type of breast cancer a woman develops is determined by which of these cellular components becomes cancerous (1).

Cancer treatment often involves chemotherapy, a method that employs specific medications or chemical compounds to fight against both confined and widespread manifestations of the disease. Over 50% of individuals diagnosed with cancer undergo this form of therapy. Chemotherapy is rarely administered as a standalone treatment; instead, it's frequently combined with other interventions like surgical procedures or radiation treatments. The scheduling of chemotherapy can be adjusted strategically to maximize its effectiveness. In some cases, it's administered prior to surgery with the goal of shrinking tumors, thus making their removal less challenging. Alternatively, it may be given post-operatively to target and eliminate any lingering cancer cells that might have evaded detection or complete removal during the surgical process (2). Chemotherapy is associated with a wide range of physiological and psychological adverse effects. A patient could have psychological side effects, such as stress, anxiety, and depression, if using a medication. Given the stress, individuals engage in coping strategies to try to forestall the development of subsequent psychological problems. The presence of social support, particularly from a member of the patient's family who is closest to them, could affect the efficiency of the coping strategies that patients with cancer use (3).

In nursing field, the symptom experience of patients with cancer is a critical issue in research studies and practices. The perception and response to symptom manifestation and accompanying symptoms of unpleasantness from the basis of symptom experience (4). Patients with cancer have a low quality of life (QoL) due to persistent, constant symptoms that affect their everyday activities, social and emotional well-being, and interactions (4). The side effects of chemotherapy are severe, and they significantly decrease patients' QoL. Cancer-related lethargy, insomnia, and cognitive impairment are all unpleasant symptoms.

Chemotherapy-induced peripheral neuropathy affects the routine activities, functions, and behavior of patients with breast cancer, and they develop management strategies to reduce the impact (5).

Thoroughly assessing symptom experience and coping strategies is important to improve the QoL of patients with breast cancer receiving chemotherapy. Several studies have been performed worldwide regarding coping strategies and symptom experiences. However, in Saudi Arabia, few studies have focused on assessing coping strategies and assessing the symptoms experienced by patients. The present study focuses on assessing the symptom experiences and coping strategies of patients with breast cancer under chemotherapy. This study marks the initial research conducted in the Kingdom of Saudi Arabia (KSA) up to this point.

This study highlights the symptoms experienced by patients and their coping strategies and indicates the relationship between sociodemographic characteristics and clinical data with symptom experiences based on the Memorial Symptom Assessment Scale (MSAS) and coping strategies.

The transactional Model of Stress and Coping and the theory of unpleasant symptoms were the theoretical frameworks adopted in this study. The transactional Model of Stress describes the stress due to a disease (breast cancer) and how the patients appraise the stress through coping strategies (6). The theory of unpleasant symptoms is applied to patients with breast cancer and used to understand the subjective experience of unpleasant symptoms. The symptoms experienced by these patients can vary from patient to patient and can be impacted by various factors related to the disease, such as the stage of cancer, type of treatment, and individual patient characteristics.

2. Methods

2.1. Study Design. A quantitative descriptive, cross-sectional design was used in this study to assess the symptom experiences and coping strategies of patients with breast cancer receiving chemotherapy.

2.2. Sample/Participants. This study was performed at King Abdul-Aziz University Hospital (KAUH) in Jeddah City, KSA. The department included the daycare unit. The study was conducted on 103 female patients with breast cancer who received chemotherapy at any stage of cancer. Women who were diagnosed with a neurologic or psychiatric disorder and those who had more than one cancer diagnosis were excluded.

The sample size was calculated by using Raosoft, which is considered one of the most common techniques for determining sample size (Raosoft, 2014). The total number of BC patients per month in the daycare unit is 140. However, based on Raosoft calculation, the confidence level was 95%, and the percent margin of error was 5%. Thus, the minimum sample was 103 to complete an electronic survey questionnaire.

2.3. Instruments. The questionnaires were divided into three main parts. The first part was designed to gather information about the study participants' backgrounds. It was mainly composed of eight points: age; gender; marital status; educational level; work status; nationality; and clinical data such as tumor stage and presence of chronic diseases.

The second part included a shorter version of MSAS (MSAS-SF), which is a validated tool developed by (7). The Cronbach's alpha coefficients for the MSAS Short Form (MSAS-SF) subscales ranged from 0.76 to 0.87. MSAS-SF was used to evaluate each of the 32 symptoms on the basis of three dimensions: frequency of symptoms, severity of symptoms, and level of distress they cause. The severity scale ranges from 0 (indicating no severity) to 4 (indicating extreme severity). The frequency scale ranges from 0 (indicating no frequency) to 4 (indicating a constant frequency). The distress scale ranges from zero, which indicates no distress, to 4, which indicates a significant amount of discomfort.

Finally, the third part was about the Arabic Brief COPE developed by (8), with Cronbach’s alpha. The scores of the A-BC scale ranged from 0.23 to 0.70. The scale’s objects were modified in any manner to consider the concepts of culture. A concise COPE scale was linguistically transformed from English to Arabic and then retranslated into English by a distinct translator (9). A select group of Saudi Arabian native language speakers reviewed the Arabic version to verify that all elements were clear and intelligible (8). Instrumental loaded onto different factors with 28 items: factors 1–3 were labeled active coping, passive coping, and support seeking, respectively. The answers provided in response to the questions were as follows: a score of 1 signified complete non-participation in the activity, a score of 2 represented little involvement, a score of 3 suggested a moderate degree of engagement, and a score of 4 signified a high level of participation.

2.4. Validity and Reliability. The significant level (0.01), which proved the high degree of validity of internal consistency of MSAS-SF and A-BC, was considered true to what was set for measuring it. The Cronbach’s alpha coefficient (must be > 0.70) was used to measure the reliability of study scales on 103 individuals. The results showed that for MSAS-SF, the Cronbach’s alpha coefficient was 0.946 (> 0.70), which was extremely high and close to one, indicating that the scale of the study demonstrated excellent reliability and extremely high stability. For A-BC, the Cronbach’s alpha coefficient was 0.891 (> 0.70), which was extremely high and close to one, indicating that the scale of the study had excellent reliability and extremely high stability.

2.5. Data Collection. An electronic questionnaire was used to gather data. Informed consent was obtained from the patients by asking them to sign a consent form if they were willing to participate. The questionnaire was carefully designed to collect relevant information about symptom experiences and coping strategies. The researcher was available throughout the data collection process to answer any questions or concerns the patients may have. All patients were ensured to have received the same explanations whenever they asked about a particular issue or point to preserve uniformity in data collection. The patients were constantly enrolled as they were eligible for participation for the duration of data collection (10).

2.6. Data Analysis. SPSS software was used to analyze the research’s data. The data from the electronic surveys were gathered, processed, and then transferred into the SPSS program for analysis. The characteristics of the sample and the key variables of interest were summarized using descriptive statistics (11). An overview of the patients’ demographic and clinic data, symptom experiences, and coping strategies were calculated using descriptive statistics, including means, standard deviations, and frequencies.

The representation of the results was enhanced using relevant graphical representations, such as bar graphs or scatterplots, to visually portray the data. All necessary statistical procedures were followed throughout data analysis to ensure the reliability of the findings. In accordance with (12), confidence intervals were computed to check the accuracy of the estimations, and the significance level (alpha) was chosen to adjust for type I error.

2.7. Ethical Consideration. Ethical approval was obtained from the Ethical Committee of the Faculty of Nursing at King Abdul-Aziz University, Jeddah City, and KAUH. Each patient provided informed consent before participating. The researcher outlined the study’s objective, methods, risks, and benefits. The patients had time to decide, without penalty (13).The researcher worked with the nursing department head and all-day care nurses to create a friendly and collaborative atmosphere for the participants. The collaboration promoted ethical research and prioritized patients’ rights.

3. Results

103 breast cancer patients receiving chemotherapy provided complete responses. the surveys. The researcher had a 100% response rate and received excellent cooperation and collaboration from both the hospitals' administration and participants. **Table 1** represents the frequency distribution of a total of 103 patients with BC receiving chemotherapy that were recruited. According to that more than half of the sample is in stage III 60 patients (58.3 %). 45 patients (43.7%) of the total sample were Bachelor and higher and they are the majority. That (98) 95.1% of the total sample Married, that 62 (60.2%) of the total sample non-employed and they are the majority. 1 (1.0%) of them in (I) Tumor stage. That (53) 51.5% of the total sample have non-presence of chronic diseases.

Table 1: Sociodemographic characteristics of breast cancer patients receiving chemotherapy (n = 103)

Variables	Frequency	Percentage %
Age.		
25 – 31	11	10.7
32 – 41	48	46.5
42 – 51	32	31.1
52 – 62	12	11.7
Nationality.		
Saudi	79	76.7
Non-Saudi	24	23.3
Marital status.		

Single	5	4.9
Married	98	95.1
Work status.		
Non-employed	62	60.2
Full-time	30	29.1
Part-time	9	8.8
Contract	2	1.9
Presence of chronic diseases.		
<input type="checkbox"/> Non	53	51.5
<input type="checkbox"/> Hypertension	25	24.3
<input type="checkbox"/> Diabetes	16	15.5
<input type="checkbox"/> COPD\Asthma	5	4.8
<input type="checkbox"/> Heart disease	4	3.9
Tumor Stage.		
<input type="checkbox"/> I	1	1
<input type="checkbox"/> II	16	15.5
<input type="checkbox"/> III	60	58.3
<input type="checkbox"/> IV	26	25.2

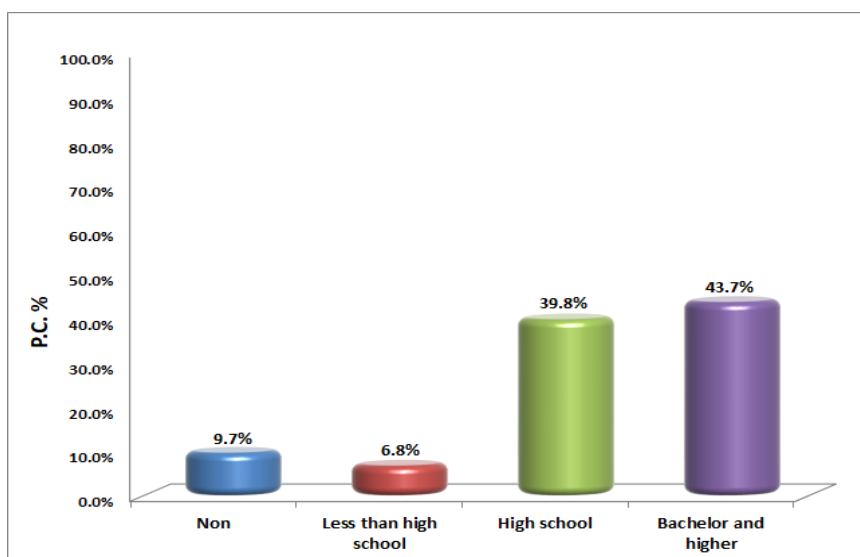


Figure 1: From figure 1. We found that (45) 43.7 % of the total sample were Bachelor and higher and they are the majority. And (41) 39.8 % were High school. And (10) 9.7 % were Non. At the end (7) 6.8 % were Less than high school.

Table 2: Symptoms experienced by breast cancer patients receiving chemotherapy.

Symptoms	Mean	SD	Percentage
Symptoms of PSYCH* : Worrying	2.02	0.721	50.5
Symptoms of PHYS H* : Weight loss	2.55	0.813	63.75
Symptoms of PHYS L* : Hair loss	3.89	0.313	97.25

- * PSYCH is the psychological symptoms
- * PHYS H is the high prevalence physical symptoms.
- * PHYS L is the low prevalence physical symptoms.

Table 3: Degree of Memorial Symptom Assessment Scale (MSAS)

Axes	Mean	SD	Percentage	Degree
MSAS Frequency	1.96	0.298	49	Occasionally
MSAS Severity	2.02	0.286	50.5	Moderate
MSAS Distress	2.07	0.285	51.75	Somewhat

Table 2. shows the results related to the frequency, severity, distress of PSYCH (psychological symptoms). It is clear from this table that the most frequently reported symptom is “worrying” (mean \pm SD=2.02 \pm 0.721). And the most frequently, severity, distress reported symptom from physical symptoms of high prevalence is “weight loss” (mean=2.55). It is clear from this table that most frequency, severity, distress of low prevalence physical symptoms reported is “Hair loss” (mean \pm SD=3.89 \pm 0.313).

Table 3. showed that the mean MSAS frequency was 1.96, indicating "Occasional" frequency (49.00%), with a low standard deviation of 0.298. The mean MSAS severity was 2.02, indicating "Moderate" severity (50.50%), with a low standard deviation of 0.286. Additionally, the mean MSAS distress was 2.07, indicating "Somewhat" distress (51.75%), with a low standard deviation of 0.285.

Table 4: Type of coping strategies among breast cancer patients receiving chemotherapy.

Items (Strategies)	Mean	SD	Percentage	Strategies rank
27. I've been praying or meditating. (Active coping)	3.7	0.557	92.5	1
28. I've been making fun of the situation. (Active coping)	2.15	0.89	53.75	14
22. I've been trying to find comfort in my religion or spiritual beliefs. (Active coping)	3.59	0.678	89.75	2
5. I've been getting emotional support from others. (Seeking support)	3.25	0.737	81.25	2
23. I've been trying to get advice or help from other people about what. (Seeking support)	3.32	0.866	83	1
15. I've been getting comfort and understanding from someone. (Seeking support)	3.21	0.848	80.25	4
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. (Passive coping)	2.84	0.926	71	1
21. I've been expressing my negative feelings. (Passive coping)	2.71	0.847	67.75	2
4. I've been using alcohol or other drugs to make myself feel better. (Passive coping)	1	0	25	10

Table 4. show that the using of strategies of active coping are as follows. The highest strategy is "I've been praying or meditating" Where its mean (3.70). That is, this strategy using by (92.50%). And followed by the second strategy is " I've been trying to find comfort in my religion or spiritual beliefs" where its mean (3.59). That is, this strategy using by 89.75%. In general, the findings from the sample study indicate that the average score for the utilization of active coping was 2.88, suggesting a medium amount of implementation. Specifically, 72.00% of the participants reported engaging in Active Coping to some extent. The strategies used in passive coping are as follows: The highest strategy is "I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping." Where its mean (2.84). That is, this strategy is used by (71.00%). And followed by the second strategy is " I've been expressing my negative feelings." where its mean (2.71).

That is, this strategy using by 67.75%.In general, we find that the total mean of the sample study responses about using of Passive coping mean (1.90) using by (47.50%). And the std. deviation (0.350), it is a small value, and this indicated that there is no dispersion of the sample study towards the degree of using Passive coping. Addition it is clear from this table that the most seeking support strategies reported is “I've been trying to get advice or help from other people...” (mean \pm SD=3.32 \pm 0.866) followed by “I've been getting emotional support from others” with mean \pm SD=3.25 \pm 0.737. while the least reported symptom is “I've been getting comfort and understanding from someone” with mean \pm SD=3.21 \pm 0.848. We find that the total mean of the sample study responses about using of Seeking support (3.26), suggesting "I've been doing this a lot" of implementation by (81.50%). And the std. deviation (0.757).

Table 5: There is a statistical relation between breast cancer patients' responses about symptom experiences of MSAS-SF and socio-demographic characteristics and clinical data.

Test of Significance	Mean	Demographic
	\pm SD	Variables
Marital status		
T= 1.130	2.14 \pm .234	Single
P= 0.261	2.01 \pm .288	Married
Education level		
F= 2.182	2.18 \pm .234	Non
P= 0.095	1.86 \pm .238	Less than high school
	2.04 \pm .261	High school
	1.98 \pm .312	Bachelor and higher
work status		
F= 6.678	2.08 \pm .255	Non-employed

P= < 0.001**	1.96 ±.282	Full-time
	1.87 ±.286	Part-time
	1.37 ±.137	Contract

Table 5. Show there are no statistically significant differences in patients' responses about MSAS-SF because of the nationality, marital status age, education level, tumor stage, presence of chronic diseases variables. While there is a statistically significant

differences in patients' responses about MSAS-SF because of the work status variable. whereas the (P-value) < 0.001. This means, that the MSAS-SF of patients vary because of the work status.

Table 6: There is a statistical relation between breast cancer patients' responses about symptom experiences of coping strategies and socio-demographic characteristics and clinical data.

Test of significance	Mean±SD	Demographic Variables
Nationality		
T= -1.014	2.56 ±.393	Saudi
P= 0.313	2.65 ±.372	Non-Saudi.
Marital status		
T= 0.646	2.72 ±.484	Single
P= 0.519	2.58 ±.384	Married
Age		
F= 0.097	2.59 ±.513	From 25 - 31
P= 0.961	2.58 ±.383	From 32 - 41
	2.60 ±.384	From 42 - 51
	2.53 ±.335	From 52 - 62
Education level		
F= 0.628	2.45 ±.296	Non
P= 0.598	2.52 ±.239	Less than high school
	2.58 ±.382	High school
	2.63 ±.429	Bachelor and higher
work status		
F= 2.828	2.61 ±.332	Non-employed
P= 0.042*	2.64 ±.442	Full-time
	2.27 ±.469	Part-time
	2.27 ±.025	Contract
Tumor stage		
F= 4.521	2.83 ±.259	II
P= 0.013*	2.54 ±.403	III
	2.53 ±.371	IV
Presences of chronic diseases		
F= 7.421	2.74 ±.306	Non
P= < 0.001**	2.32 ±.349	Hypertension
	2.55 ±.429	Diabetes
	2.26 ±.480	COPD
	3.75 ±.323	Heart disease

Table 6. Show There is no statistically significant differences in patients' responses about Coping strategies because of the (Age, Education level) variables. whereas the (P-value) is more than ($\alpha = 0.05$). This means, that the Coping strategies of patients not vary because of these variables. There is a statistically significant differences in patients' responses about Coping strategies because of the (work status, Tumor stage, Presence of chronic diseases)

variable. whereas the (P-value < 0.05 & < 0.001). This means, that the Coping strategies of patients vary because of the (work status, Tumor stage, Presence of chronic diseases).

We found that the effect size of work status (Eta Squared) = 0.079 (> 0.06 & < 0.14) so the effect size is medium. This mean that the work status has a medium effect on the Coping strategies of patients. And the effect size of Tumor stage (Eta Squared) = 0.083 (> 0.06 & < 0.14)

so the effect size is medium. This mean that the Tumor stage has a medium effect on the Coping strategies of patients. And the effect size of Presence of chronic diseases ($\eta^2 = 0.232$ (> 0.23)) so the effect size is very large. This mean that the Presence of chronic diseases has a very large effect on the Coping strategies of patients.

4. Discussion

This cross-sectional study was carried out to explore the experiences of patients with breast cancer undergoing chemotherapy. Specifically, it seek to identify the range of symptoms they encounter, the coping strategies they employ, and how these factors may be influenced by their sociodemographic characteristics. Data were gathered from 103 patients with breast cancer at KAUH in Jeddah who were undergoing chemotherapy.

Most patients were in the 32–41 age group, followed by the 42–51 age group, which is in contrast with the study of (14), who reported that the main age group of their study cases was 65–74 years. Most of the patients in the present study received high educational level. Cases with bachelor and higher education were the most presented, followed by high school. Similar trends were found by (15), who studied the effect of nausea and vomiting resulting from chemotherapy among patients with breast cancer in Jeddah, Saudi Arabia, and their effect on QoL. They studied the effect of sociodemographic factors of breast cancer on Saudi patients and found that the majority of their study cases were not employed nor retired. In the present study, most patients had no chronic disease. Among those with chronic diseases, hypertension was the most represented disease, followed by diabetes. (1) showed different results in their research. They found that type 2 diabetes mellitus was the most prevalent comorbidity among patients with breast cancer, followed by hypertension. Given that this study was conducted in Jeddah, Saudi Arabia, the majority of the cases had Saudi nationality. In regard to the stage of breast cancer, most participants were at stage III, followed by stage IV. Similarly, (16) studied the impact of treatment outcome on patients with breast cancer and revealed that stage III followed by stage IV had the highest prevalence.

The frequency, severity, and distress of psychological and physical symptoms of breast cancer and its chemotherapeutic treatment were assessed. Regarding psychological symptoms, worrying followed by feeling nervous and then feeling sad were the most frequent symptoms. Additionally, they were the most severe and distressing psychological symptoms. Difficulty concentrating, feeling irritable, and difficulty sleeping were less frequent, and they showed less severe and distressing effects.

The frequency, severity, and distress of physical symptoms with high prevalence were highly matched. Weight loss was the most frequent, severe, and distressing symptom, which can be explained by the prevalence of other symptoms. Lack of appetite, lack of energy, dizziness, and change in food taste were among the most reported symptoms.

The frequency, severity, and distress of physical symptoms with low prevalence were investigated. The

results demonstrated that hair loss was the most frequent, severe, and distressing low-prevalence symptom, followed by difficulties with sexual life and then “I don’t look like myself.” Cough and diarrhea were among the least reported symptoms. These results are supported by the study of (17), who found that hair loss was reported by the majority of study participants, accompanied by weakness, tiredness, and muscle and joint pain.

While crucial for treating breast cancer, chemotherapy can come with a range of side effects like premature menopause, fatigue, hair loss, and hormonal imbalances. Other treatment options, such as surgery, can leave physical scars that may contribute to body image concerns and feelings of diminished attractiveness or femininity (18).

Another study aligns with the findings of the present study that highlighted the significant impact of physical symptoms on the QoL of breast cancer survivors. Even after completing treatment, persistent side effects like fatigue, pain, and sleep disorders can negatively affect QoL. While many treatment-related symptoms improve over time, some, such as cognitive impairment and sexual dysfunction, may persist. These persistent symptoms can contribute to negative emotions, hinder a return to normalcy, and ultimately decrease QoL. Therefore, continuous and systematic symptom management is crucial for breast cancer survivors as they adjust to life after treatment (19).

MSAS was used to further quantify the impact of symptoms on patients. The results indicated that symptoms were experienced occasionally by nearly half of the patients. The severity of these symptoms was generally moderate, affecting about half of the patients. Furthermore, the symptoms were somewhat distressing for slightly more than half of the patients. The consistent pattern in symptom experience among the study participants underscores the substantial symptom burden faced by patients with breast cancer undergoing chemotherapy. Integrating the MSAS scores into the analysis highlighted the persistent and multifaceted challenges faced by these patients, reinforcing the need for comprehensive symptom management strategies. (20) employed MSAS to prospectively investigate symptom clusters in women with breast cancer undergoing chemotherapy. This instrument proved valuable in identifying three distinct symptom clusters: physical, gastrointestinal, and emotional. The core symptoms within each cluster remained stable throughout the treatment period.

The active and passive coping strategies taken by patients with breast cancer receiving chemotherapy were examined to identify the way this disease and its treatment affect these patients, their methods of coping, and to what extent these strategies are helping them. The results showed that about two-thirds of the participants reported engaging in active coping to some extent. Emotion-focused coping strategies were the highly adapted strategies. The majority reported that they had been praying or meditating to cope with the disease and its sequelae. They also revealed that they tried to find comfort in their religion or spiritual beliefs, followed by learning how to live with the disease and accept the

reality that this occurred. Telling jokes and having funny talks about the disease were among the least reported symptoms. This finding is in line with that of (21), who found that religious coping strategies were the most adopted active strategies, whereas humor was the least. Additionally, (22) found that religious practices were prominently utilized as a coping strategy, along with social support, positive thinking, and engaging in hobbies. In contrast to the study findings of the present study, (23) reported that women used more spiritual coping than religious coping. They added that higher negative religious coping was associated with less distress and higher spiritual well-being. This difference could be attributed to the difference in the religion of the participants in the two studies. The majority of Saudi Arabia population are Muslims, whereas the other study participants have mixed different religions. Less than half of the study cases used passive coping strategies to cope with the disease. Avoidant action, such as watching TV or reading to not to think about the disease, was the most reported passive coping strategy, followed by emotion-focused strategy as expressing negative feelings. Using alcohol or other drugs to feel better or get through the disease was the least adopted passive coping strategy. This finding is in agreement with that of (21), who reported that self-distraction was the most passive coping strategy, whereas drug abuse was the least.

These studies are supported by the work of (24), who investigated the coping strategies employed by women with metastatic breast cancer receiving palliative care in Bangladesh. The research found that humor and substance use were the least frequently used strategies. Denial and behavioral disengagement were used more often, but interestingly, these negative coping mechanisms (including denial and disengagement) were observed more frequently among patients with poorer performance status.

This study found that the majority of the participants were seeking support strategies from others and then emotional support. (25) added that strong social support, particularly from friends, can help reduce depression in patients. This finding aligns with past findings that showed that patients facing challenges with family support, communication with relatives and others, or even lacking spouse's accompaniment to hospital appointments, experienced higher rates of anxiety and depression, thus highlighting the crucial role of perceived social support in managing mental well-being. Researchers (26) assessed the effect of a nurse-led care program on the well-being of patients with breast cancer receiving chemotherapy. Their research involved a randomized controlled trial, where some patients received standard hospital care, whereas others participated in a nurse-led intervention alongside routine care. The results clearly showed that nurse-led care makes a significant difference.

The study results showed a significant association between MSAS frequency, severity, and distress and work status. Other sociodemographic data did not show this significance. Wealthier patients reported higher

QoL scores that those from middle and lower socioeconomic classes, whereas no correlation was found with regard to their occupational status, as supported by (27).

A significant association was found among coping strategies. The disease stage, associated comorbidities, and work status. The effect size of work status (Eta squared) was 0.079 (> 0.06 and < 0.14), indicating that it had a medium effect on the coping strategies of patients. The effect size of tumor stage (Eta squared) was 0.083 (> 0.06 and < 0.14), indicating that it had a medium effect on the coping strategies of patients. The effect size of presence of chronic diseases (Eta squared) was 0.232 (> 0.23), indicating that it had a very large effect on the coping strategies of patients.

The effects of disease stage and severity and the degree of hope among patients with breast cancer was studied by (28). Their findings revealed that hope levels among Chinese women undergoing breast cancer chemotherapy fall within a moderate range, suggesting potential for improvement. Furthermore, their study supported the concept that hope levels are lower during active treatment than post-treatment periods without relapse. This finding aligns with the research of (29), who reported higher hope scores in patients who had completed treatment and remained relapse-free for 5 years (mean score: 41.62 ± 5.36).

(30) examined the link between coping strategies and QoL in patients with breast cancer. An interesting finding was the negative association between QoL and destructive coping strategies. In other words, patients who relied more on unhealthy coping mechanisms, such as denial, substance abuse, or self-blame, reported a significantly lower QoL. This finding suggests that unhealthy coping strategies can have a detrimental impact on a patient's overall well-being.

5. Conclusions

A study of 103 breast cancer patients at KAUH in Jeddah found that participants were predominantly Saudi nationals in stages III and IV, mostly aged 32-41, well-educated, and unemployed. Psychological symptoms like worrying and sadness were most prevalent, while physical symptoms included weight loss and fatigue, with hair loss being particularly distressing. Religious and spiritual practices were the primary coping mechanisms, with less than half using passive strategies.

Work status, disease stage, and chronic conditions influenced both symptom severity and coping strategies. The findings emphasize the need for comprehensive symptom management approaches that integrate psychological support, patient education, and personalized interventions to improve treatment outcomes and quality of life for breast cancer patients undergoing chemotherapy.

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