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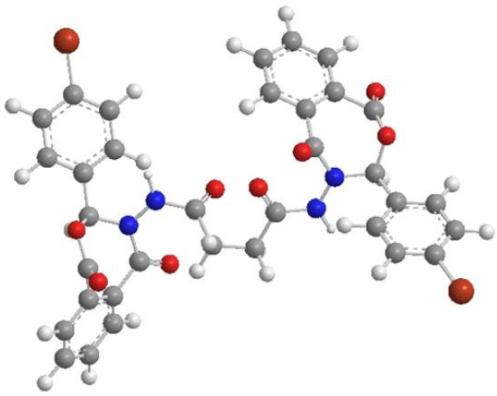

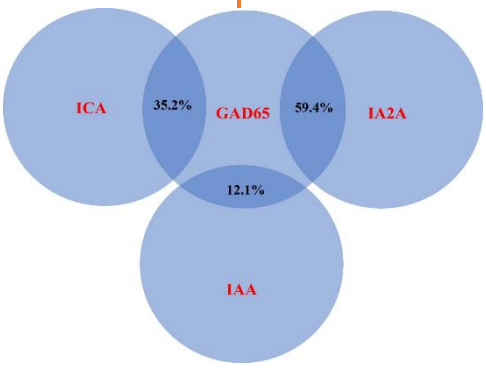

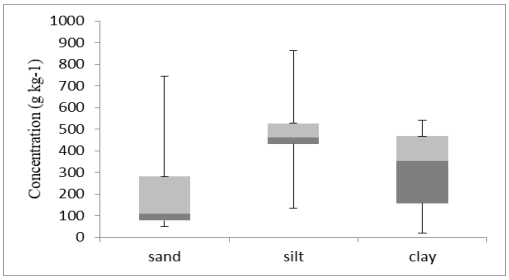

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Body Image and its Relation with Coping Strategies in Breast Cancer Patients: A Descriptive Study in Sulaimaniyah, Iraq

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Abstract

Background: Breast cancer is several of the worst severe illnesses for women, which influences their physical and mental quality of life and acceptance of their bodies. It affects patients' views of their bodies; thus, finding effective coping mechanisms is essential. **Objective:** This study aimed to discover body image and its relation with coping mechanisms in breast cancer patients admitted to Hiwa Hematology/Oncology Hospital in Sulaimaniyah, Iraq. **Materials & Methods:** This Cross-sectional study was conducted on women diagnosed with breast cancer admitted to the Hiwa Hematology/Oncology Hospital Sulaimaniyah, Iraq. A three-part questionnaire was utilized to gather information to determine body image and coping mechanisms that were demographic and clinical form, body image scale and Coping Orientation to coping or regulating cognitions in response to stressors (Brief-COPE). **Results:** The mean score for the body image was reported as 7.86±7.73, the mean score for coping strategies, including problem-focused /active coping strategies items was reported as 2.74±0.67, and functional items as 2.82±0.43. Considering the calculated mean scores, the distress or concerns of the participants about their body image were lower. The most frequent coping strategies were religious coping (3.88±0.32), while the least active coping approach was humor (1.96±1.08). Self-distraction (3.13±1.03) was the least avoidant coping strategy. A significant positive relationship between the coping strategies with body image was reported as (p=0.032, r=0.200). **Conclusions:** Good body image in women was associated with increased usage of practical acceptance. Therefore, it is advised to promote a positive view of physical appearance and having skilled nurses assess all breast cancer patients' capacity for coping following surgery. Nurses and patients can effectively communicate about body image and coping techniques through these assessments.

Introduction

Cancer is seen as one of the most significant medical problems in the modern world. Breast cancer is the most frequent cancerous tumour and the leading cause of death in women **[1]**. The United States is expected to see 1,918,030 new cancer cases and 609,360 cancer deaths in 2022, which amounts to nearly 5250 new issues daily. In the United States, around 31% of estimates for new cases and 15% of forecasts for death are made

for cancer **[2]**. Breast cancer, which accounted for nearly one-third of all cancer cases reported in the region in 2019, is the primary cause of mortality for women in Iraq. Breast cancer has the most significant prevalence and incidence rates of the top ten malignancies in 2019 (34.08%, and 35.95/100,000, respectively)**[3]**. Around 40.1% of women in Erbil, Iraq and 31.7% of women in Duhok, Iraq, had breast cancer **[4]**.

The right combination of surgical, radiological, chemotherapeutic, hormonal, and immunotherapeutic methods is used to treat breast cancer **[5]**. One of the most significant psychological issues breast cancer patients deal with is losing their body image **[6]**. Body image is typically described as a person's observation of their body shape, created by self-reflection and watching others' reactions **[7]**. A poor body image and other psychological issues may result for some people when their look changes. Negative body image in breast cancer patients includes concern regarding felt loss of femininity and physical integrity, difficulty showing their bodies, reduced sexual pleasure, self-awareness of appearance, and discomfort with surgical scars **[8]**. Positive body image is described as an "overarching love and respect for the body" that allows for love of look and function as well as understanding the body's requirements **[9]**. One of the main worries for women with breast cancer is their changing body image and feminine status. These issues are related to poor quality of life and low-grade breast cancer coping. As a result, breast cancer survivors employ various coping mechanisms to deal with changes to their body image **[10]**.

Any change in one's body image requires adapting to return to everyday daily life. The coping mechanism is a unique adaptation technique used purposely and clearly to deal with discomfort or a coming stressor **[11]**. However, the patient's coping mechanisms vary and can take many different forms, including emotional expression, positive cognitive restraint, specific activities like yoga, acceptance of the disease, wishful thinking, religious practice, and social and familial support **[12]**. Patients with cancer will feel psychological stress due to the cancer treatment, medication side effects, the course of treatment, and the absence of social support **[13]**.

Adaptive coping strategies include emotional-focused coping and problem-focused to manage stressful conditions or associated emotional distress **[14]**. Problem-focused coping is a therapeutic technique used by cancer patients to deal with complex needs, such as stress brought on by treatment side effects. However, emotional-focused coping is a therapeutic technique to deal with stressors **[15].** Cancer patients recently diagnosed may use effective coping mechanisms by managing their emotional stress to prevent anxiety and sadness **[16]**. Coping techniques can be selected by focusing on the reactions that influence coping. For example, wealth, physical attractiveness, psychiatric disorder, lifestyle, and religious condition affect coping techniques **[17]**. When given a breast cancer diagnosis, women learn coping mechanisms to deal with their new reality's psychological, social, and spiritual aspects and improve survival **[18]**.

Coping is described as the person's present cognitive and behavioral ability to manage some external and internal pressures or worries that are regarded as challenges and are out of their control and resource range **[19]**. Because women in some societies compete with one another for men's attention, they need to appear beautiful and appear confident. Because breast cancer treatments require significant physical changes, separation anxiety from the husband or partner may happen. Nihayati et al. (2020) showed a moderate connection between psychosocial stress and ineffective coping in breast cancer patients **[20]**. In contrast, women in Muslim societies wear the hijab. Most hijab-wearing women see it as a continuous warning that they do not beautify their bodies for males. As a result, it is presumed that women in Muslim countries deal with issues differently or rate their body image differently than those in the West because appearance in public is not their priority. The current study's objective was to investigate body image and its relation with coping strategies in breast cancer patients at Hiwa Hematology/Oncology Hospital Sulaimaniyah, Iraq.

Materials and Methods

Study design

This was a cross-sectional descriptive study conducted at the Hiwa Hematology/Oncology Hospital in Sulaimaniyah in 2022.

Participants

The statisticians (Bijan Noury) according the study of Sajadian et al. **[21]**, determined that the sample size of 115 patients was appropriate or sufficient for our study.

Inclusion criteria

Patients aged over 18 with confirmed breast cancer that a physician diagnosed received treatment; 6 months have passed since breast cancer diagnosis and voluntary participation in the study.

Exclusion criteria

Cases with incomplete questionnaire responses, psychological problems or disease, other complications (amputation, death), and records of other cancers were excluded from this study.

Instruments

Data were collected by using a three-part questionnaire: (a) demographic and clinical characteristics, (b) body Image Scale (BIS) and (c) coping orientation to problems experienced inventory (Brief-COPE).

Demographic and Clinic Characteristics

Age, marriage, children, education, employment, residency, income, received treatment, mastectomy, mastectomy side, breast reconstruction, and breast reconstruction side.

Body Image Scale

BIS was designed by Hopwood et al. (2001) with ten items completed by the Likert scale **[22]**; it looks at how cancer patients believe about their appearance and any alterations brought on by their illness or therapy. It is arranged in a 4-point Likert range (Not at all = 0, A little= 1, Quite a bit=2, Very much = 3). This tool's minimum and maximum scores are 0 and 30, respectively, and a high score indicates more distress or concerns than the body image. The permission to use the BIS was obtained after the principal researcher using interviews with patients completed the translation to Kurdish. Alpha Cronbach considered the tool's reliability after completing it by 20 patients who non-participated in the research (α=0.89).

Coping Orientation to Problems Experienced Inventory (Brief-COPE)

The Brief-COPE is a 28-item self-report questionnaire prepared to determine the efficacy of various coping strategies for stressful events. "Coping is generally described as work done to reduce the discomfort brought on by unpleasant life situations—Brief-COPE designed by Rand et al. (2019) **[23]**. The scale is frequently used in healthcare settings to determine how patients emotionally react to a problematic situation. In addition, it can be used to evaluate how someone is managing a variety of difficulties, such as a mental illness diagnosis, a heart condition, injuries, attacks, significant hazards, or a cancer diagnosis. In addition, the scale is effective in counselling situations for determining a person's good and harmful stressors responses. The following three subscales' scores can be used to detect a person's main coping mechanisms: Problem-Focused Coping (Items 2, 7, 10, 12, 14, 17, 23, 25), Emotion-Focused Coping (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28), and Avoidant Coping (Items 1, 3, 4, 6, 8, 11, 16, 19).

In addition, the following facets of coping are reported: Self-distraction (Items 1 & 19), Denial (Items 3 & 8), Substance Use (Items 4 & 11), Behavioral disengagement (Items 6 & 16), Emotional Support (Items 5 & 15), Venting (Items 9 & 21), Humor (Items 18 & 28), Acceptance (Items 20 & 24), Self-Blame (Items 13 & 26), Religion (Items 22 & 27), Active Coping (Items 2 & 7), Use of Instrumental Support (Items 10 & 23), Positive Reframing (Items 12 & 17), and Planning (Items 14 & 25).

Scores are presented for three overarching coping styles as average scores (sum of item scores divided by the number of the items), indicating the degree to which the respondent has been engaging in that coping style (1= I have not been doing this at all, 2= A little bit, 3= A medium amount, 4= I have been doing this a lot).

Daryaafzoon et al. (2021) evaluated the Brief-COPE psychometrically in Breast Cancer patients in Iran **[24]**. They recommend interpreting the results in two categories; Functional (Behavioral disengagement, Emotional Support, Humor, Acceptance, Religion, Active Coping, Use of Instrumental Support, Positive Reframing, and Planning) and Dysfunctional (Denial, Substance Use, Self-distraction, Venting and Self-Blame). It was translated into Kurdish and completed by the principal researcher using patient interviews. Alpha Cronbach considered the tool's reliability after completing it by 20 patients who non-participated in the research (α=0.72).

Ethical consideration

Among the moral considerations was getting the Ethics Code (IR.MUK.REC.1401.055), an introductory letter from the Research Ethics Committees of Kurdistan University of Medical Sciences for Sulaimaniyah General Directorate of Health to Scientific Research Unit in Hiwa Hematology/Oncology Hospital, giving the necessary information regarding the completing of the questions, Before starting the interviews, participants were informed of the study's objectives and offered assurances that the information they supply would be kept private.

Data collection procedure

After approval from the Scientific Research Unit and receipt of the Ethic Code, the author began gathering data during several work shifts. The researcher presented at these clinics and used the practical sample method to choose the breast cancer patients receiving treatments, getting checked out, and having follow-up visits there. Next, the researcher conducted direct interviews with women who agreed to answer questions in a private room in the Hiwa Hematology/Oncology Hospital It took about 15 minutes for all patients. Finally, there were no exclusions, and 115 women were included in the study. In the information gathered, all questions were properly answered.

Data analysis

Data were analyzed using SPSS vs 23. The significance level was set at $p<0.05$. First, the frequency distribution table is estimated for the qualitative variables and the mean and standard deviation for the quantitative variables. Then, Mann-Whitney, Kruskal-Wallis test and Pearson and Spearman's coefficient correlation was applied to examine the relationship between demographic variables, body image and coping strategies.

Results

Women's personal-social characteristics and clinical information are shown in Table 1; participants' age range was between (30-50) years old, the time of breast cancer diagnosis was between 6 to 68 months, regarding marital status, 87.83% of participations were married with 88.46% of women were having children, the majority 31.30% of participations were primary school level, more than half 73.91% of the women were housewives, more than half 69.57% of the patients were living in city areas, the majority income status of 39.13% of people was insufficient, most of the patients received treatment 48.70% were all types of treatments, more than half (60.87%) did not undergo mastectomy, and the majority (95.65%) had one side mastectomy. In addition, almost all (99.13%) women had no breast reconstruction.

The mean score was 7.86±7.73 (range 0-30) for body image and 2.74±0.67 for coping strategies. Most coping strategies used by participants were problem-focused /active coping strategies (2.74±0.67) and functional (2.82±0.43). Prevalent active coping techniques were religious coping techniques (3.88±0.32), while the least active coping was humor (1.96±1.08) (Tables 2, 3, and 4).

Table 1: Demographic characteristics and clinical information of the study population.

Variable		**Number**	**Percentage**
Marriage	Single	14	12.17
	Married	101	87.83
Children	Yes	92	88.46
	No	9	11.54
Level of education	Illiterate	28	24.35
	Primary school	36	31.30
	High school diploma	25	21.74
	University degree	26	22.61
Employment status	Housewife	85	73.91
	Employment	30	26.09
Residency	Village	35	30.43
	City	80	69.57
Income	Sufficient	27	23.48
	Semi-sufficient	43	37.39
	None-sufficient	45	39.13
Received treatment	Chemotherapy	14	12.17
	Radiotherapy	1	0.87
	Surgery	11	9.57
	More than one	33	28.70
	All	56	48.70
Mastectomy	No	70	60.87
	Yes	45	39.13
Mastectomy side	One side	44	95.65
	Tow side	2	4.35
Breast reconstruction	Yes	1	0.87
	No	114	99.13
B reconstruction side	One side	1	100.00
	Tow side	0	0.00

Table 2: Distribution of the coping strategies of the studied population.

Variable	**Mean**	**Standard deviation**	**Range**
Problem-focused coping	2.74	0.67	1.00 – 4.00
Emotion-focused coping	2.64	0.33	1.00 – 4.00
Avoidant coping	2.07	0.41	1.00 – 4.00

Table 3: Distribution of the coping strategies of the studied population.

Variable	**Mean**	**Standard deviation**	**Range**
Self-distraction	3.13	1.03	1.00 – 4.00
Denial	1.70	0.96	1.00 – 4.00
Substance use	1.00	0.04	1.00 – 4.00
Behavioural disengagement	2.47	0.61	1.00 – 4.00
Emotional support	2.42	0.87	1.00 – 4.00
Venting	2.63	0.85	1.00 – 4.00
Humor	1.96	1.08	1.00 – 4.00
Acceptance	3.72	0.55	1.00 – 4.00
Self-Blame	1.27	0.60	1.00 – 4.00
Religion	3.88	0.32	1.00 – 4.00
Active coping	2.69	0.81	1.00 – 4.00
Use of instrumental support	2.94	1.06	1.00 – 4.00
Positive reframing	2.75	0.88	1.00 – 4.00
Planning	2.59	0.92	1.00 – 4.00

Table 4: Distribution of the coping strategies of the studied population.

Variable	Mean	Standard deviation	Range
Functional	2.82	0.43	1.00 – 4.00
Dysfunctional	1.94	0.39	1.00 – 4.00

According to the findings, there was no significant correlation between the demographic variables (age, marital status, children status, employment status, Residency status, the mastectomy, the mastectomy side, the breast reconstruction, the level of education, income status, received treatment, time of breast cancer) and body image ($p<0.05$). However, considering the study's findings, there was a significant relationship between demographic (marital statuses, mastectomy side) with coping strategies. The results showed a meaningful relationship ($p=0.032$, $r=0.200$) between body image and coping strategies (dysfunctional coping strategies) (Table 5).

Table 5: The relationship between body image and coping strategies the studied population.

Variable		*M* ± *SD*	*P-value*
Body Image		47.39±10	
Coping strategies	*Functional*	2.88±*0.11*	P=0.785 r=0.025
	Dysfunctional	1.81±*0.32*	P=0.032* r=0.200

*: Significant difference

Discussion

The result of the current study proved a significant relationship between body image and coping strategies among women with breast cancer. Body image was demonstrated to be directly associated with fixing and camouflaging disliked aspects of their appearance but not with positive rational acceptance. In reality, negative body image led to an increased application of coping strategies. Women who had unfavorable self-image feelings were reported to use avoidance and appearance repair as coping strategies significantly. In contrast, those who used positive rational acceptance felt better about their body image. In the present study, the positive reasonable accepting approach had a mean score greater than avoidance and appearance repair. Still, it was interesting to note that this strategy was not significantly linked with body image scores. We know that sociocultural values and beliefs significantly affect Muslim women's psycho-behavioral reactions, including the choice and use of coping mechanisms **[10]**. Islamic culture puts greater weight on modesty and chastity than on how a person appears or how pretty they are, particularly when it comes to wearing Hijab. According to the findings of one Iranian study, depending on family support empowers women to perform most of the coping with complications **[25]**. According to the current study's findings, the body image of the breast cancer patients was 7.86 ±7.73 (range 0-30), which means the distress or concerns of the participants about their body image was lower than the mean. In the study by Zhou et al. (2020), the body image of Chines female patients with breast cancer was 55.84±11.13 (range:14-90); 52.5% (n=213) of the patients reported negative body image (median score > 56) **[26]**. Under the result of the present study, Yamani Ardakani et al. (2020) demonstrated the body image of Iranian female breast cancer was 14.31±6.61 in the range of 0–30, indicating a relatively positive body image **[27]**.

The mean score of coping strategies of the breast cancer patients were problem-focused /active coping strategies (2.74±0.67) and functional (2.82±0.43), and the most active coping plans were religious coping (3.88±0.32). In contrast, the least active coping was humor (1.96±1.08). Accepting and positive attitudes involve continuing to live one's life as one had before getting the diagnosis, understanding that one would have to live with some deficiencies, and accepting that one had the disease **[28]**.

An avoidance-based emotional coping strategy is associated with higher discomfort, sadness, and low psychological and physical health levels both during and after treatment for breast cancer patients, and it appears to be continually unsuitable for dealing with the disease **[10]**.

Comparable to the findings of our research, Benson et al. (2020) results indicate that most women commonly used active coping mechanisms; humor was the least adopted, and religious coping was the most common. The primary and least common avoidant coping mechanisms were self-distraction and substance use **[29]**; unlike the findings of this research, Nihayati et al. The results indicated that 71 respondents (58.7%) used a maladaptive coping method, which is the majority of participants. In addition, it showed that most respondents had little success distracting themselves from their pain and took little work to deal with pain **[20]**.

Breast cancer patients employ various coping mechanisms: the usage of coping mechanisms is determined by multiple variables, one of which is one's own culture. However, depending on the results of the relevant studies described above, acceptance and positive and constructive thinking, such as the religious approach, spiritual fight, positive thoughts, and continuous hope that the disease has been beaten, are the most effective coping mechanisms for breast cancer.

The outcomes of this study show that there was no significant association between the demographic variables (age, marital status, children status, employment status, Residency status, the mastectomy, the mastectomy side, the breast reconstruction, the level of education, the income status, received treatment, time of breast cancer) and body image ($p>0.05$). For example, Age and body image were not significantly correlated. This outcome shows that younger women were more concerned and distressed with their body image. However, there was no correlation between body image score and age. This result has been approved by Tariq and Hasan (2015) **[30]**. Beauty influences primarily young people, especially women, according to the researcher, who also believes that body image is a dynamic process that alters and grows over time.

As an outcome, time helps patients adapt psychologically and enhances their body image **[31]**. Like our result, this study didn't find a connection between the body image score and the time that passed from the diagnosis **[32]** considering the indirect relationship between demographic characteristics and the body image of breast cancer patients in the present study. It is recommended that nurses, while paying attention to individual differences in care units, investigate other factors affecting body image among the patients.

The different results of the research are due to other questionnaires and sample sizes. Additionally, the duration of diagnosis may have an impact on the findings. For example, in some studies, the average time since diagnosis was over two years, but in other studies, the tests were conducted during adjuvant therapies or at the time of primary diagnosis.

According to the present research, there was a significant relationship between demographic (marital status, mastectomy side) and coping strategies. Lake et al. (2019) study reported that most patients in the younger age group from the mastectomy cohort employed either behavioral disengagement or psychological support as coping techniques, as opposed to the younger age group from the reconstruction cohort **[33]**. Like the present study's result, the findings of an Iranian survey by Roudi et al. (2019) stated that women who married having their husbands' support are strong and able to cope with conditions and do not have to worry about future married like single women **[25]**. The breast symbolizes gender, femininity, and maternal identity in most nations and cultures. Therefore, having a mastectomy means losing your femininity and becoming less attractive to males, especially young women, who regard beauty as detrimental to women's mental health.

This study confirmed a significant positive relationship between coping strategies (Dysfunctional coping strategies) with body image. Similar to our findings, Xu et al., 2020 demonstrate that body image scores and effective coping mechanisms were positively connected in the group of physical disabilities ($r = 0.558$, $p<0.01$), also showed the physical disability group, results revealed significant effects of body image on positive coping strategies ($p<0.01$) **[34]**. Furthermore, the study of Yamani Ardakani et al. (2020) demonstrates a significant relationship between body image and coping strategies ($r =0.34$, $p=0.001$). Also, a significant association was found between patients' body image scores and dimensions of appearance-fixing and

avoidance strategies ($p<0.001$) **[27]**. Based on our findings, dysfunctional coping strategies were positively related to body image, which means breast cancer patients may use dysfunctional coping strategies with negative body image.

Patients with breast cancer typically experience psychological stress, which can result in several psychosocial disorders. As a result, these patients struggle to maintain a high quality of life and report disintegrated feeling, suffering from multiple diseases- and treatment-related coping issues. Therefore, nurses must be aware of breast cancer patients' body image and design care plans to inform patients about functional coping strategies and motivate them to use them instead of dysfunctional ones.

A limitation of our study was the participants' language and their perception of questions; therefore, alongside the translation of the questionnaire to Kurdish, the data was collected by interview method to remove any misunderstanding of items of questionnaires. Conducting more research in the context of the study by quantitative and qualitative methods is recommended.

Conclusions

Depending on the results of the current study, participants' body image was lower than the mean, meaning the participants' distress or concerns about their body image were soft. The most frequently used coping strategies among breast cancer patients were problem-focused /active coping strategies and functional ones; the most active coping plans were religious coping, while the least active coping was humor. The study confirms a significant positive relationship between coping strategies (Dysfunctional coping strategies) with body image. In addition, the relationship between marital status and mastectomy side with coping strategy was substantial. At the same time, there was no significant association between other variables and coping strategies. In addition, I have not found any relationship between variables and body image.

Conflict of interest

The authors confirm that they are not affiliated with or involved in any organization or entity with financial interests.

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