ORIGINAL RESEARCH ARTICLE

The Relationship Between Psychological Distress and Quality of Life Among Women Undergoing Mastectomy in Iraq: A Descriptive Correlational Study

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ABSTRACT

Background: A mastectomy, the surgical removal of one or both breasts, is a significant experience that affects a woman physically, emotionally, and psychologically. This study aimed to investigate the relationship between psychological aspects and quality of life among women with mastectomy.

Methods: A descriptive correlational study was conducted at an oncology center in Thi-Qar Province, Iraq from January 21st to April 23rd 2024. The study sample consists of 131 women who undergo mastectomy using a standardized questionnaire. Data were collected through the interviews and analyzed by applying descriptive and inferential statistical approach.

Results: The results indicate that the average age of the participants is 42 years, and most of them are in their forties and fifties. Most of them were married, had primary education, were unemployed, and did not have sufficient income. Nearly half of the women (48.9%) showed high psychological profiles, and a significant portion (84%) reported poor quality of life. Statistical analysis revealed a negative relationship between psychological aspects and quality of life (p=0.000).

Conclusions: The results of this study highlight the enormous psychological distress and high cost to life experienced by women after mastectomy, highlighting the urgent need for integrated psychological support for their care.

Key-wards: Psychological Care, Quality of Life, Mastectomy, Post-mastectomy Care

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INTRODUCTION

The most recognized cancer among women worldwide is breast cancer, and it is the fourth leading cause of cancer death. According to projections, 2.3 million women or 11. Currently, 1 in 8 women, or 7% of the population, could be diagnosed with breast cancer, and 685,000, or 6.9% of all female cancer deaths will not only succumb to the disease but also die.[1] The incidence of breast cancer across the region is very unique [1]. Breast cancer in women in countries with a high/very high human development index ranks higher in cancer incidence than other countries such as Australia/New Zealand (95.5/100,000), Western Europe (90.7/100,000), and North America (89.9/100,000). Suicide rates are also highest in the 15–34 age group in these three regions (especially in Central Europe, where suicide rates are about 2.7 times higher), with the highest in Northern Europe (86.4/100,000) (1.39 deaths per 100,000) (maximum 1.39 per 100,000) in East Asia, and the lowest (41.2/100,000), Central America (39.5/100,000), and East Africa (33.1/100,000). Thus, the populations of South-East Asia (47.8/100,000), Central Africa (32.7/100,000), and South-Central Asia (22.1/100,000) are the most affected.[2]

The relationship between psychological elements and the first degree of life in women who have undergone mastectomy should not be ignored due to its importance in the perception of disorder and mental fitness in oncology.[3] Mastectomy, which is a common method of treating breast cancer, has many physical and mental repercussions that can significantly affect the patient's life.[4] Mental health outcomes can be anxiety, depression, and distorted body images, and patients' quality of life can be affected.[5] Research shows that psychosocial situations are important for short- and long-term recovery. This emphasizes the need for comprehensive care that does not only require a focus on mental assistance.[6] Recent studies show that women's quality of life in particular after mastectomy includes many elements, especially psychological, social, and physical. Emotional problems are widespread. For example, cancer survivors often face fear of cancer recurrence and grief over the loss of a part of their personality.

Moreover, mental problems that were already present can be exacerbated.[7] The mental line that a person with chronic pollution may suffer from is mitigated by the presence of social support networks, such as relatives, friends, and support organizations. Social support in terms of family and friends may be associated with higher mental fitness scores as well as more adequate adjustment to life after mastectomy as reported.[8] In addition, body image issues and feelings of flatness are not uncommon among women who have undergone mastectomy, and often, society and culture can ride the wave. Problems of this kind can significantly reduce self-confidence and sexual fitness, which in turn can impact a patient's quality of life.[9] Tools such as reconstructive surgery, prosthetics, and counselling have been shown to reduce the number of negative thoughts about amputation, but because there are not enough resources available for everyone to access these resources, it becomes more difficult for those who are ill.[10] Therefore, exploring the mental temperature capabilities and their relationship to quality of life is crucial for developing comprehensive treatment programs. Poor recovery even after surgery increases the risk of morbidity. By focusing on the emotional, social, and physical dimensions of recovery, healthcare providers can give these women the opportunity to live a better life after surgery.

METHODOLOGY

This study uses a descriptive correlational design to investigate the relationship between psychological distress and quality of life among girls who underwent mastectomy in Iraq. The study aims to discover whether there is a significant association between these two variables within the target population. The target population consists of women who underwent mastectomy in selected hospitals in Iraq. A convenience sampling method was used to recruit individuals who met the inclusion criteria underlying the study phenomenon. The study was conducted during the period from January 1 to April 23, 2024.

In this study, a convenience sampling technique was used to select participants. Convenience sampling is a non-probability sampling technique where participants are chosen based on their availability, accessibility, and willingness to participate in the study. It is typically used when researchers aim to recruit participants who meet certain inclusion criteria within a specific time frame and location, as described here.

The selection concerned with identifying an initial cohort of 192 girls who underwent mastectomy, selected from health facility statistics. This cohort was refined through multiple exclusion steps. Six women were excluded because they did not meet inclusion criteria (possibly due to certain health or demographic characteristics). Eleven women were excluded because they exceeded a pre-specified threshold (possibly age or type of treatment). Thirty-two women refused to participate, and 12 could not be contacted despite repeated attempts. Thirty-two women were excluded because their health status was too high compared to others in the study.

Following these exclusions, 131 women who had undergone modified radical mastectomy were selected as the final sample.

This sample was systematic in terms of applying exclusion criteria but was non-random in that it was based on participants' availability and consent to participate, rather than a random or probabilistic approach in general.

Inclusion criteria consisted of women who had undergone mastectomy for breast cancer, who were 18

years of age or older, and who had completed surgical treatment at least six months before the study. Participants must be able to provide informed consent and not have any cognitive impairment that would limit their ability to complete the study questionnaires.

Exclusion criteria would include women with a history of psychological problems before mastectomy, those who had undergone reconstructive surgery, and those currently undergoing chemotherapy or radiotherapy, as these factors may independently affect their mental health and quality of life. Women with other serious chronic diseases not related to breast cancer may also be excluded to reduce confounding factors that may affect the study results.

To improve the internal validity of the look-at, exclusion standards should cope with ability confounding variables: 1) Current mental health conditions: Exclude women with previous mental health issues to isolate the results of mastectomy on mental fitness. 2) Social aid: Assess tiers of social guidance all through the statistical series and manipulate this variable statistically in analyses. 3) Reconstructive surgical treatment: To ensure uniformity in body picture reports after mastectomy, exclude members who have undergone reconstructive surgery. 4)Ongoing cancer treatments: Exclude ladies currently receiving chemotherapy or radiotherapy, as these treatments can affect mental fitness and lifestyle delight. 5)Chronic illnesses: Exclude ladies with unrelated chronic ailments to reduce variation in fitness reputation among contributors.

Statistical reliability: The sample size of 131 participants was determined based on a power analysis conducted before the study. This assessment aimed to ensure that the test had sufficient statistical power (usually set at 0.80) to achieve a medium effect size (0.30) for the expected association between depression and quality of life. Given a significance level of 0.05, the power analysis indicated that at least 128 individuals were required to obtain robust results, thus validating the inclusion of 131 participants in the test. This sample size not only meets the minimum requirements for adequate statistical power but also conforms to the global requirements for scientific research.

Study Instrument: Data were collected through a questionnaire specifically designed to collect sociodemographic statistics about the participants. In addition, well-established scales were used to assess the psychological impact and quality of life of mastectomy:

DASS-21: The Depression, Anxiety, and Stress Scale-21 (DASS-21) is a 21-item self-reported measure that assesses the psychological impact of mastectomy on organs.[11] Each item is rated on a 4-point Likert scale ranging from 0 (almost always) to 3 (none). In this note, the Cronbach's alpha for the DASS-21 was determined to be 0.82, indicating good internal consistency and reliability.

WHOQOL-BREF: The World Health Organization Quality of Life Scale (WHOQOL-BREF) was used to measure the best overall quality of life in 4 domains: physical health, psychological well-being, social relationships, and environmental health.[12] The WHOQOL -BREF consists of 26 items. In this study, the reliability of the WHOQOL-BREF was strong, with a Cronbach's alpha of 0.89, indicating high internal consistency.

While the DASS-21 has been validated in different cultural contexts, there is limited evidence of its validity, particularly among the Iraqi population. Therefore, cultural modifications or issues need to be made to ensure its relevance and accuracy when used among Iraqi individuals. Like the DASS-21, the WHOQOL-BREF has not been significantly validated in Iraq. Therefore, it is very important to not forget cultural differences and adapt the instrument to ensure that it accurately reflects the quality-of-life elements relevant to Iraqi patients.

Data Collection Procedure

Recruitment and Data Collection: Women who met inclusion criteria were contacted via mobile phone using contact details provided by the organization. During these initial calls, the test's purpose was identified, and participants were allowed to choose a convenient interview time. In-person interviews were then scheduled, where follow-up questionnaires were administered. Each interview lasted approximately 20–25 minutes, creating an environment conducive to open communication and ensuring that participants felt comfortable discussing their responses.

Dealing with Missing Data: Monitoring Dropouts: During the study, we closely monitored participant participation and attendance. In cases where participants did not attend their scheduled interviews, follow-up calls were made to understand the reasons for their absence. We aimed to reschedule interviews at every possible opportunity to minimize dropout costs.

Evaluating Missing Responses: During the log series section, we identified that some participants might ignore positive questions. To address these interviewers were trained to detect and address potential areas of confusion or pain regarding nuanced questions. This approach helped reduce the likelihood of missing responses during the interview. The use of fixed questionnaires provided clear suggestions, but we maintained the flexibility to allow individuals to express issues in their minds, when necessary, which helped ensure a comprehensive record series. In cases where data were missing after the interviews were completed. For any statistically significant factors that were missing, we decided to exclude those responses from the rigorous analyses. This method became applicable primarily to variables critical to the primary outcome of the study, as it reduced the

risk of bias. For inconclusive missing responses, we used a simple imputation technique where the method or mode of the available responses for that unique item was used to replace the missing values. This method helped maintain the size of the dataset and allowed for more robust statistical analyses without significantly compromising the integrity of the information. Throughout the process, we carefully documented all instances of missing records and the strategies used to deal with them. This transparency in reporting ensured that our methods were clean and that potential biases could be assessed.

Statistical Analysis: Data were analyzed using IBM SPSS version 20.0. Descriptive records, along with frequencies and probabilities, were used to summarize specific variables, while standard deviations and mean were used to explain continuous variables. The normality of data distribution was tested using the Kolmogorov–Smirnov (K–S) test. To assess relationships between test variables, Pearson's correlation coefficient was used, while simple linear regression analysis was performed to explore predictive relationships between variables. A significance level of $p < 0.05$ was considered statistically significant for all analyses.

RESULTS

The average age of the participants, as shown in table (1), is 42 (13.57), with the largest percentage (29.8%) being recorded for people in their 40s and 50s. In terms of marital status, 73.3 percent of mastectomy patients were married. It is clear from the level of education that elementary school graduates made up the majority (50.4%). According to occupation-related statistics, 85.5% of the sample under study was unemployed. 87% of people had insufficient income, which was the greatest rate.

Findings indicate that the (48.9%) of women with mastectomy exhibited a high psychological aspect and (84%) had expressed a poor quality of life (Table 2).

Table (3) results of the simple linear regression test reveal a negative relationship between psychological aspects among women with mastectomy and their quality of life ($\beta = -0.653$, $p = 0.000$).

The results in figure (1) indicate that for every increase in psychological aspects among women who have had mastectomies by 0.495 time, there is a possible decrease in their quality of life by 2.389 time.

The Kruskal-Wallis analysis in Table (4) demonstrates statistical significant differences in the psychological distress among mastectomy women with regard marital status (p=0.001).

The Kruskal-Wallis analysis in Table (5) demonstrates statistical significant differences in the quality of life among mastectomy women with regard marital status (p=0.006).

Table 1: Sociodemographic Characteristics

Classification	Participants (%)
Age/years (M± SD= 42±13.57)	
20-29	16 (12.2)
30-39	20 (15.3)
40-49	39 (29.8)
50-59	33 (25.2)
≥60	23 (17.6)
Marital status	
Single	16 (12.2)
Married	96 (73.3)
Divorced	15 (11.5)
Widower	4 (3.1)
Education level	
Illiterate	13 (9.9)
Read and write	10 (7.6)
Primary school	66 (50.4)
Middle school	9 (6.9)
Secondary school	8 (6.1)
College and above	25 (19.1)
Occupation	
Employee	7 (5.3)
Housewife	7 (5.3)
Retired	5 (3.8)
Unemployment	112 (85.5)
Income	
Insufficient	114 (87)
Moderate	11 (8.4)
Sufficient	6 (4.6)

Table 2: Overall DASS-21 and WHOQOL-BREF

Variables	Participants (%)
DASS-21	
High	64 (48.9)
Moderate	56 (42.7)
Low	11 (8.4)
WHOQOL-BREF	
Poor	110 (84)
Moderate	16 (12.2)
Good	5 (3.8)

Table 3: Relationship between DAS-21 scale and WHOQOL-BREF among Mastectomy Women

Variables	Unstandardized Coefficients		Standardized Coefficients	T	*Sig.*
	B	SE	Beta		
DASS-21	.495	.051	.653	9.780	.000

Dependent Variable: WHOQOL-BREF; SE= Standard Error

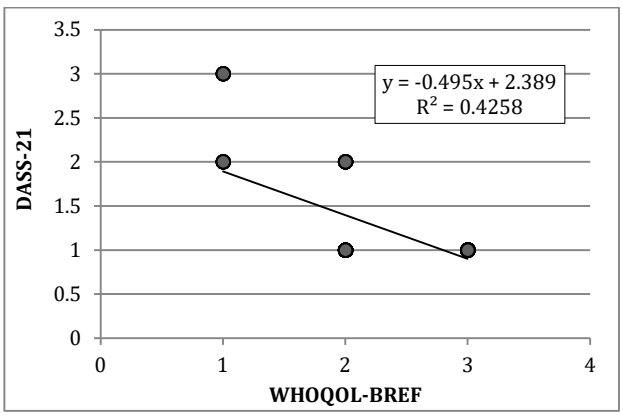

Figure 1: Psychological Aspects and Quality of Life among Mastectomy Women

Table 4: Statistical Differences in DASS-21 among Mastectomy Women with respect Socio-demographic Factors

Factors	N	Mean Rank	bχ2	Sig.
Age				
20-29	26	56.87	7.058	.133
30-39	20	68.23		
40-49	39	59.69		
50-59	33	74.32		
≥60	13	78.65		
Marital status				
Single	16	40.00	15.601	.001
Married	96	66.54		
Divorced	15	83.20		
Widower	4	92.50		
Education level				
Illiterate	13	54.08	6.478	.262
Read and write	10	68.50		
Primary school	66	64.32		
Middle school	9	85.83		
Secondary school	8	55.00		
College and above	25	72.02		
Occupation				
Employee	7	72.57	0.670	.880
Housewife	7	67.79		
Retired	5	56.50		
Unemployment	112	65.90		
Income				
Insufficient	114	66.20	2.231	.328
Moderate	11	73.73		
Sufficient	6	48.08		

b= Kruskal Wallis Test; N= number; sig.= significant level at 0.05.

Table 5: Statistical Differences in WHOQOL-BREF among Mastectomy Women with respect Socio-demographic Factors

Factors	N	Mean Rank	bχ2	Sig.
Age				
20-29	26	60.75	.901	.823
30-39	20	65.48		
40-49	39	69.23		
50-59	33	55.50		
≥60	13	64.27		
Marital status				
Single	16	59.44	12.134	.006
Married	96	63.70		
Divorced	15	85.60		
Widower	4	73.88		
Education level				
Illiterate	13	60.35	.826	.112
Read and write	10	68.05		
Primary school	66	62.34		
Middle school	9	55.50		
Secondary school	8	55.50		
College and above	25	66.92		
Occupation				
Employee	7	64.50	1.644	.650
Housewife	7	73.50		
Retired	5	55.50		
Unemployment	112	66.09		
Income				
Insufficient	114	64.80	.597	.122
Moderate	11	64.14		
Sufficient	6	55.50		

b= Kruskal Wallis Test; N= number, sig.= significant level at 0.05.

DISCUSSION

The findings that 48.9% of women who underwent mastectomy reported significant psychological distress and 84% reported poor quality of life are consistent with the current literature on psychological and physical impacts in this population. Research has consistently demonstrated that women who undergo mastectomy for breast cancer often experience extremely difficult psychological conditions. For example, a study by Elywy et al. found that a significant proportion of women reported experiencing stress and depression after mastectomy, attributing this to both the physical and emotional consequences of breast loss.[13] Psychological factors that contribute to this misery consist of fear of recurrence, changes in body picture, and impact on sexual relationships, which together impact girls' intellectual well-being. Furthermore, the high percentage of women reporting terrible first-rate lifestyles (84%) is consistent with the findings of a scientific review by Mishra et al., which highlighted that breast cancer survivors frequently experience a diminished nice of life because of physical, emotional, and social challenges after surgical procedure.[14] The authors stated that factors, together with fatigue, pain, and social isolation, were common among these patients, drastically impacting their normal exceptional existence.[15] Additionally, a study using Malih Radhi et al. Stated that emotional fitness changed into closely related to fitness perceptions amongst breast cancer survivors, in addition to assisting the belief that intellectual factors profoundly have an impact on the pleasant of existence sixteen.[16] Furthermore, the psychological misery skilled by those women may be exacerbated with the aid of the lack of good enough support systems. As Radhi et al. Suggested, social guide performs an essential position in alleviating psychological effects and enhancing the satisfaction of life for girl's present process breast most cancers remedy.[17] Women who sense supported by way of their own family and buddies are much more likely to record better mental health consequences, suggesting that mental distress can be mitigated via sturdy social networks and effective intellectual health interventions.

The results indicate that 48.9% of women who underwent mastectomy reported significant psychological distress and 84% reported negative quality of life. This is consistent with recent literature but also highlights important nuances that may be driven by the Iraqi sociocultural context. While the literature, including research by Elywy et al. [13] and Mishra et al.[14], supports the idea that psychological distress is common among breast cancer survivors, the sociocultural history of Iraq may exacerbate these difficult circumstances. Factors such as societal stigma surrounding breast cancer, cultural expectations regarding femininity and body image, and the ability to isolate in a conservative environment may exacerbate the emotional burden of mastectomy. In addi-

tion, limited access to psychological support services and a healthcare system that does not prioritize mental health may inhibit the coping mechanisms available to these women. The results also emphasize that the prevalence of appalling poor quality of life may be linked not only to physical challenges but also to a lack of strong social support networks; In many Iraqi communities, traditional roles may prevent women from seeking help or discussing their mental health struggles publicly. This highlights the need for targeted interventions that address both the psychological distress and sociocultural constraints of Iraqi women while emphasizing the importance of community support and culturally sensitive mental health resources to enhance their overall health. The results of a simple linear regression analysis indicate a significant negative association between psychological distress and quality of life among women who have undergone mastectomy, with a regression coefficient (β) of -0.653 and a p-value of 0.000. This finding suggests that as psychological distress increases, these women's quality of life decreases. Such an association is consistent with the biopsychosocial version of health, which posits that mental distress significantly impacts physical health outcomes. Previous research has confirmed this association, highlighting that emotional health is important for recovery and first-line quality of life in cancer patients. For example, a study by Oh et al. found that women receiving treatment for breast cancer often experience high levels of hysteria and depression, which can be directly associated with decreased quality of life.[18] Similarly, an evaluation study by Ye et al. confirmed that psychological distress negatively affects various domains of quality of life in cancer survivors.[19] This is consistent with the findings of a recent study, which suggests that the psychological factors experienced by women after mastectomy are critical to their normal well-being. Furthermore, the emotional challenges women face after mastectomy, such as body image issues and feelings of loss, can exacerbate psychological distress. According to a study by Al-Eqabi et al., women regularly report experiencing body image and self-esteem issues after breast surgery, which can cause increased psychological distress and, consequently, decreased quality of life.[20] These findings underscore the importance of addressing psychological fitness in clinical settings to improve the overall quality of life for women after mastectomy.

Furthermore, interventions targeting mental elements, including counseling or support organizations, have shown promise in alleviating distress and improving the quality of life in this population. Yasir et al., demonstrated that women participating in support organizations reported significantly better mental health and quality of life compared to those who did not.[21] This suggests that incorporating mental support into the care of women who have undergone mastectomy should yield significant benefits.

The recent findings on the poor relationship between mental elements and quality of life among women who have undergone mastectomy highlight the urgent need for comprehensive care that addresses both physical and mental health. Future studies should continue to explore effective interventions that can enhance mental resilience and thus improve the quality of life in this vulnerable population.

The results shown in Figure 2 show a significant relationship between psychological factors and quality of life among women who have undergone mastectomy. Specifically, the data confirm that a standardized increase in mental distress is associated with a significant decrease in quality of life by 2.389. This highlights the critical impact of mental fitness on normal fitness, mainly in the context of publishmastectomy recuperation. These findings are steady with preceding research that advocates that intellectual element, such as tension and melancholy, are commonplace in breast cancer survivors and substantially affect their excellent of life. For instance, an observe by Chen et al. Observed that higher degrees of strain and depression in breast cancer sufferers have been associated with lower quality of life, underscoring the need for an integrated psychological guide in post-surgical care.[22] Furthermore, the results show that each increase in mental factors among these women by 0.495 was significantly associated with a decrease in quality of life. This association underscores the bidirectional nature of mental health and quality of life. Research by Al-Eqabi et al. further supports this finding, showing that effective management of mental distress not only alleviates emotional distress but also leads to improved physical health outcomes and better quality of life.[23] Therefore, it becomes imperative for healthcare providers to address psychological issues as a problem in treatment plans for women recovering from mastectomy. The implications of these findings suggest that interventions aimed at improving mental health may be beneficial in improving the quality of life among post-mastectomy patients. Programs that include psychological counseling and support organizations have shown promise in improving emotional health, which in turn positively impacts measures of quality of life. For example, mental health interventions, such as cognitive behavioral therapy and mindfulness training, have been shown to significantly improve quality of life outcomes in cancer survivors, thereby reinforcing the perception that mental health is an important aspect of comprehensive cancer care.[24-27]

The outcomes of this observation, which monitor a massive terrible relationship between mental factors and the quality of lifestyles amongst women postmastectomy, align with findings from various global studies, illustrating a worldwide challenge concerning mental fitness in most cancer healing. For example, research carried out in nations with distinctive healthcare structures, such as the US and the United Kingdom, has in addition indicated that elevated psychological misery correlates with a diminished

best of lifestyles in breast cancer survivors.[26,29]

As the research highlights the interconnectedness of intellectual health and the nice of life, it invites a broader speech on the significance of psychological resilience in cancer recovery, emphasizing that addressing these issues is crucial no longer just regionally, but on a global scale. Future studies need to explore culturally tailor-made interventions that would decorate intellectual resilience, thereby enhancing the quality of life for girls recovering from mastectomy throughout diverse healthcare environments.

The findings from the study are closely consistent with the biopsychosocial model, which emphasizes the interaction between organic, psychological, and social factors in health outcomes. The high prevalence of psychological distress (48.9%) among women who have undergone mastectomy and the significant association between psychological factors and quality of life (β = -0.653, p = 0.000) suggest that psychological fitness is important for overall well-being in this population. Specifically, the data suggest that accelerated mental difficulties are associated with a significant decrease in quality of life, with regression analysis revealing that a 0.495 increase in psychological factors corresponds to a 2.389 percent potential decrease in quality of life. This supports the assertion that addressing psychological factors is essential to improving quality of life in women after mastectomy.[30] Therefore, interventions should adopt a comprehensive approach, taking into account the biopsychosocial dimensions to improve patient outcomes.[31]

The results of the Kruskal-Wallis analysis in Tables 4 and 5 show statistically significant differences in both psychological distress and life status among women who underwent mastectomy, based on marital popularity. Specifically, psychological distress differed significantly across marital status (p=0.001), suggesting that spousal support or lack thereof may also have an impact on emotional adjustment after surgery. Similarly, the large differences in best life status (p=0.006) confirm that marital status may influence coping mechanisms, likely due to varying levels of emotional and practical support, as highlighted by previous research. Studies, including those by Elywy et al.[13], suggest that married women with breast cancer often report better quality of life and psychological outcomes than their unmarried counterparts, likely due to superior social support and shared emotional burden. In addition, Juma Elywy et al.[8], have found that social and marital support can play an important role in alleviating psychological distress, in addition to emphasizing the importance of dating reputation in the recovery and mental health of women who have undergone mastectomy.

Limitations

Several limitations might also affect the consequences. First, the sample length won't have been sufficient or representative of all women present process of mastectomy in Iraq, proscribing the generalizability of the outcomes. Second, reliance on self-suggested measures of mental distress and quality of lifestyles can also introduce response bias, as participants can also underreport their distress due to stigma or cultural factors. Additionally, the pass-sectional design of the observation limits causal inferences, making it hard to determine whether mental distress directly affects the excellent of existence or vice versa. Finally, confounding variables of capability, along with socioeconomic popularity, guide structures, and comorbid fitness situations, might not have been effectively managed, potentially affecting the relationship between mental distress and first-rate life.

Conclusion

The implications of this study highlight the severe mental distress and high value of life experienced by women after mastectomy, highlighting the urgent need for integrated psychological support for their care. Mental health plays an important role in the overall recovery system. To address these challenging circumstances, healthcare providers need to implement comprehensive models of care alongside counselling, support agencies, and focused mental health interventions including cognitive behavioral therapy and mindfulness education. Future research should focus on developing and evaluating unique techniques to enhance cognitive resilience and improve the quality of life for this vulnerable group, emphasizing the importance of psychosocial technology in cancer care. Additional specific interventions should include integrating mental health screenings into regular oncology follow-up care to identify patients who need more help early. Implementing network-based support interventions, such as peer-led helplines and mental health workshops, can foster a supportive environment for recovery. In terms of policy implications, it is important to note that mental health care should be included in national cancer treatment protocols in Iraq and that mental health services should be available and included within the complete treatment framework for cancer patients. Finally, future research guidelines should focus on longitudinal research that considers the long-term mental health effects of mastectomy and recovery, providing insights that can improve interventions and inform policy. Overall, these measures aim to alleviate the mental distress highlighted in practice, ultimately contributing to improved quality of life for women who undergo mastectomy.

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AUTHORS' CONTRIBUTIONS

Concepts and supervision: MMR, KZB, and SAL; Data collection: KZB, and SAL; Data analysis: MMR; Investigation, Writing original draft: MMR, KZB, and SAL; Writing-review and editing: KZB, and SAL.

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