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Investigating the levels of depression, anxiety, sexual disorders, and other influencing factors in breast cancer patients

Turkish radiation oncology integrative group study (12-05)

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Abstract

The fear of death associated with cancer and the side effects of its treatments can have a detrimental psychological impact on breast cancer patients. Early detection and support services play a crucial role in alleviating the expected symptoms of depression, anxiety, and sexual dysfunction. The objective of our study is to assess the levels of depression, anxiety, and sexual dysfunction in breast cancer patients, as well as identify the factors that influence these conditions. The study involved 329 voluntarily participating breast cancer patients who had undergone surgery and were in the follow-up stage. Data were collected from 8 different centers after obtaining ethical approval. The assessment utilized tools such as the Sociodemographic Information Form, Beck Depression and Anxiety Scale, and Arizona Sexual Experiences Scale. Data analysis was performed using SPSS 20. The study included 329 breast cancer patients in the follow-up stage post-surgery. Their average age was 52.7 years (range: 27–83). Results indicated that 33.1% experienced moderate to severe depression, 18.2% reported severe anxiety, and 82.7% scored above 11 on the sexual scale. Factors linked to higher scores were mastectomy, surgical dissatisfaction, insufficient information on sexual side effects, and comorbidities like smoking and diabetes. The study emphasizes the importance of closely monitoring anxiety, depression levels, and sexual side effects in breast cancer treatment. It underscores the need to focus not only on reducing mortality rates but also on supporting patients' psychological and sexual well-being, ultimately improving their overall quality of life.

Abbreviation: BDI = beck depression inventory.

Keywords: ASEX, BDI, mastectomy, sexual health, sociodemographic

1. Introduction

Breast cancer, the most prevalent type of cancer among women, is experiencing a global increase in incidence.[1] Despite advancements in treatment, patients diagnosed with breast cancer continue to face significant challenges, including adverse psychological effects and physical issues resulting from the disease and its treatments.[2,3] Understanding the impact of these factors on patients well-being is crucial for providing comprehensive care and enhancing their quality of life.

Psychiatric disorders, particularly major depression, are highly prevalent among cancer patients, including those with breast cancer.[4,5] Depression not only affects their

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The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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psychological well-being but also has implications for treatment adherence, disease severity, and response to treatment.[1,6] While depression has been extensively studied, the rising incidence of anxiety among cancer patients often goes unnoticed.[7,8] Recognizing and addressing anxiety levels are essential for optimizing treatment outcomes and improving patients overall well-being.

Furthermore, breast cancer and its treatments can lead to a range of physical issues, such as pain, infection, tissue perfusion problems, and lymphedema.[9] Surgical interventions, like mastectomy, can significantly impact patients quality of life and satisfaction.[10] These physical changes, coupled with psychosocial challenges including body image deterioration, decreased self-esteem, loss of femininity, and sexual dysfunction, contribute to anxiety, depression, and other negative emotions experienced by breast cancer patients.[11]

Sexual dysfunction, specifically, is a major concern affecting a significant proportion of women diagnosed with breast cancer.[12] Various factors, such as age, gender, marital status, chronic diseases, body image, menopausal status, and psychological state, influence the occurrence of sexual dysfunction.[13] Mastectomy and the side effects of chemotherapy, radiotherapy, hormone therapy, and surgery further contribute to the development of sexual issues in these patients.[12,13] Recognizing the importance of addressing sexual dysfunction alongside other aspects of patient care is vital for improving their overall well-being and quality of life.

While breast cancer research has made significant progress in recent years, leading to advancements in diagnosis, treatment, and survivorship, a substantial knowledge gap persists regarding the psychological and sexual impact of breast cancer and its treatments.[14,15] While studies have explored the prevalence of depression, anxiety, and sexual dysfunction in breast cancer patients, further research is needed to understand the underlying factors contributing to these conditions and their impact on patients quality of life.

By addressing this knowledge gap, we can gain valuable insights into the specific challenges faced by breast cancer patients and develop targeted interventions to address their psychological and sexual well-being. This will not only improve their overall quality of life but also help healthcare professionals provide more comprehensive and patient-centered care.

Therefore, this study aims to fill the existing knowledge gap by investigating the levels of depression, anxiety, and sexual dysfunction in breast cancer patients and identifying the factors contributing to these conditions. The findings will contribute to the existing literature and provide a foundation for the development of evidence-based strategies to support the psychological and sexual health of breast cancer patients.

2. Materials and methods

The study comprised 329 patients who had received a breast cancer diagnosis, completed the required surgical procedures, and were subsequently monitored for any recurrence of the disease. All patients underwent an initial psychological and sexual evaluation. Those who exhibited normal psychological and sexual states at the outset were subsequently included in the study. These patients willingly participated in the study by providing responses to our questionnaire. Ethical approval for the study was obtained from the appropriate ethics committee, and data from a total of 8 centers were included in the analysis. The study was conducted in strict adherence to the Principles of Helsinki, and informed consent was acquired from all patients who voluntarily agreed to participate in the study. To evaluate various aspects of the patients experiences, we utilized the Sociodemographic Information Form, the Beck Depression and Anxiety Scale, and the Arizona sexual experiences scale. Additionally, the beck depression inventory (BDI), a self-assessment scale consisting of 21 items, was employed to assess the presence and severity of depressive symptoms. BDI is a widely used self-assessment scale comprising 21 items, with each item scored on a 4-point Likert scale (0–3). In Turkey, a cutoff point of 17 is employed, where scores below 17 indicate no depression, scores between 17 and 23 indicate mild to moderate depression, and scores of 24 or above indicate severe depression. The BDI was originally developed by Beck et al and has been validated and shown to be reliable for assessing depression in the Turkish population.[16,17]

BDI not only assesses depression but also provides valuable information about anxiety levels. The BDI includes an anxiety score range from 0 to 63, where scores between 0 and 7 indicate minimal anxiety, scores between 8 and 15 indicate mild anxiety, scores between 16 and 25 indicate moderate anxiety, and scores between 26 and 63 indicate severe anxiety. The validity and reliability of the BDI in measuring anxiety have been established.[18,19]

Arizona sexual experiences scale is a self-assessment tool designed to evaluate female sexual experiences. It consists of 5 Likert-type questions that assess sexual drive, psychological arousal, physiological arousal, capacity for orgasm, and satisfaction from orgasm. Each question is scored on a scale of 1 to 6, and the total score ranges from 5 to 30. A cutoff score of 11 is used, with higher scores indicating sexual dysfunction and lower scores indicating a healthy and satisfying sexual response. The scale was originally developed by McGahuey et al[20] and later adapted into Turkish by Soykan.[21]

The data analysis for the study was conducted using SPSS for Windows version 20. The results were presented in terms of means and standard deviations for continuous variables, while frequencies and percentages were utilized for categorical variables. To assess the normal distribution of continuous data, the Kolmogorov-Smirnov test was employed, whereas the chi-square test and Mann–Whitney *U* test were utilized for evaluating categorical data (Table 1). A significance level of $P < .05$ was adopted to determine statistical significance.

3. Results

The mean age of the patients who participated in the study was 52.7 years, ranging from 27 to 83 years. Detailed demographic information can be found in Table 2. Among the 329 patients, 220 individuals (66.9%) experienced minimal to mild depression, while 109 individuals (33.1%) reported moderate to severe depression. In terms of anxiety, 210 patients (63.8%) reported experiencing anxiety, with 60 patients (18.2%) reporting severe anxiety. The results from the sexual scale indicated that 272 patients (82.7%) scored above 11. Out of the total 329 patients, 250 (76%) were informed about breast cancer, while only 76 patients (23.1%) were informed about the sexual side effects associated with it. A detailed analysis of the scale results is presented in Table 3. The study findings revealed a higher prevalence of depression among patients over 42 years old (*P*: .004), and the sexual scores were higher in this age group as well (*P*: .008). However, no significant association was found between age and anxiety levels (*P* value: .6). Marital status did not demonstrate an impact on depression (*P*: .94), anxiety (*P*: .97), or sexual scale scores (*P*: .134). Interestingly, patients with less than a high school education exhibited significantly higher sexual scale scores (*P*: .032), while depression (*P*: .153) and anxiety (*P*: .136) did not reach statistical significance in this particular group.

The presence of children was found to have a significant effect on anxiety levels (*P*: .022), but it did not show a significant impact on depression (*P*: .102) or sexual scale scores. Smoking, on the other hand, had a significant impact on depression (*P*: .00), anxiety (*P*: .001), and sexual scale scores (*P*: .046). Alcohol use, however, did not demonstrate a significant effect on

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Table 1

Mann–Whitney U test results (total).

Grouping variable	Test	N	Group 1 (mean rank)	Group 2 (mean rank)	U	*P* value
Gender	Anxiety score	329	165.45	164.60	13684.000	.888
Gender	Depression score	329	166.22	163.72	13417.000	.733
Gender	Sexual score	329	168.68	161.32	12939.000	.501
Age	Anxiety score	329	158.93	173.34	11904.500	.072
Age	Depression score	329	168.17	162.88	13034.500	.571
Age	Sexual score	329	169.67	161.35	12877.000	.461
Operation type	Anxiety score	328	177.71	155.72	11173.000	.040
Operation type	Depression score	328	180.92	153.58	10752.500	.010
Operation type	Sexual score	328	190.86	146.97	9450.500	.000
Tumor size	Sexual score	329	152.96	180.28	11125.000	.009
Tumor size	Depression score	329	152.26	181.17	10995.000	.006
Tumor size	Anxiety score	329	159.21	172.34	12275.500	.214
Node status	Sexual score	329	157.35	171.65	12294.000	.172
Node status	Depression score	329	150.62	177.50	11263.500	.010
Node status	Anxiety score	329	153.29	175.18	11672.500	.037
Sexual side effect information	Anxiety score	329	165.84	162.21	9402.000	.770
Sexual side effect information	Depression score	329	167.63	156.24	8948.500	.360
Sexual side effect information	Sexual score	329	171.42	143.61	7988.500	.025
Operation satisfaction	Anxiety score	329	201.80	156.96	5794.000	.001
Operation satisfaction	Depression score	329	200.75	157.19	5856.000	.001
Operation satisfaction	Sexual score	329	207.48	149.38	5245.500	.000
Relationship satisfaction	Anxiety score	329	196.32	160.69	6317.000	.005
Relationship satisfaction	Depression score	329	197.75	159.27	6163.000	.003
Relationship satisfaction	Sexual score	329	203.66	154.40	5479.000	.000
Sexual activity frequency	Anxiety score	329	190.08	155.06	7050.000	.001
Sexual activity frequency	Depression score	329	191.93	153.19	6897.000	.001
Sexual activity frequency	Sexual score	329	197.64	148.60	5767.000	.000
Sexual function recovery time	Anxiety score	329	185.31	160.67	7528.000	.023
Sexual function recovery time	Depression score	329	184.76	161.25	7596.000	.027
Sexual function recovery time	Sexual score	329	194.23	153.81	6414.000	.002

This table presents the results obtained using the Mann–Whitney U test to analyze the relationship between independent variables (column 1) grouped across different categories and dependent variables (column 2).

depression, anxiety, or sexual scale scores. The family history of cancer was not found to have a significant impact on depression, anxiety, or sexual scale scores.

Patients who underwent mastectomy exhibited higher levels of depression (*P*: .01) and anxiety (*P*: .004), as well as worse sexual scores (*P*: .00) compared to those who underwent breast-conserving surgery. Patients dissatisfied with surgery demonstrated higher levels of depression (*P*: .001), anxiety (*P*: .001), and sexual scores (*P*: .002).

Smokers and patients with comorbid diabetes showed significantly higher levels of depression, anxiety, and sexual scale scores. Additionally, larger tumor size (*P*: .005 for depression and *P*: .009 for sexual scores), positive lymph node status (*P*: .01 for depression and *P*: .037 for anxiety), and lower education level (*P*: .03 for sexual scores) were associated with higher scale scores. Although low income showed higher scores, it did not reach statistical significance. However, lack of knowledge about sexual side effects had a significant impact on sexual scores (*P*: .025). Comorbid hypertension and family history of cancer did not demonstrate a significant effect on the scale scores.

4. Discussion

This study aimed to assess the levels of depression, anxiety, and sexual dysfunction among patients diagnosed with breast cancer, as well as to identify the factors influencing these conditions. Extensive research has consistently indicated that breast cancer diagnosis and treatment can lead to the development of depression, anxiety, and sexual issues in affected individuals. For example, Stanton et al[22] conducted a study involving 460 breast cancer patients, wherein they found that 16.6% of the participants met the diagnostic criteria for major depression. These findings align with the existing literature emphasizing the psychological impact of breast cancer on patients, particularly regarding depression, anxiety, and sexual problems.

The prevalence of depression in various studies ranges from 10% to 25%. However, when focusing specifically on female patients with breast cancer, it becomes evident that depression and anxiety levels are consistently high, irrespective of the medical variables associated with the disease and treatment status.[23–25] In our study, we observed signs of depression across a spectrum from minimal to severe in all patients. The rate of major depression was found to be 10.6%, and the rate of major anxiety was 18.2%, aligning with similar findings reported in previous studies. These results highlight the significant psychological burden experienced by breast cancer patients, emphasizing the need for comprehensive support and interventions to address depression and anxiety in this population. Women with breast cancer experience negative impact on their sexual life due to anxiety, depression from the cancer diagnosis, or from side effects of treatments such as surgery, chemotherapy, radiotherapy, and hormone therapy. The sexual well-being of women with breast cancer is often negatively impacted by the presence of anxiety and depression, either stemming from the cancer diagnosis itself or as a result of the side effects associated with treatments such as surgery, chemotherapy, radiotherapy, and hormone therapies. In a study conducted by Bruno et al, it was highlighted that breast cancer patients faced significant challenges with sexual function, and sexual dysfunction was particularly linked to younger age.[26] Another study by Takahashi and Kai focused on sexuality following breast cancer treatment, revealing that sexuality tends to be neglected in the period following a cancer diagnosis, particularly in studies conducted in Asian populations.[27] Additionally, Heather et al[28] found that 82% of patients undergoing active cancer treatment openly discussed their sexual concerns with healthcare professionals,

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Table 2

Sociodemographic findings of the included patients.

	n (number of patients)	Percentage (%)
Marital status		
Single	8	2.4
Married	276	83.9
Widower	26	7.9
Divorced	19	5.8
Educational status		
Literate	14	4.3
Primary-secondary school	167	50.8
High school	98	29.8
University	50	15.2
Having child		
Yes	310	5.8
No	19	94.2
Smoking		
Yes	19	5.8
No	310	94.2
Alcohol usage	11	3.3
Concomitant disease		
Hypertension		
Yes	23.1	76.9
Diabetes		
Yes	49	14.9
Monthly income		
Little	56	17
Middle	247	75.1
High	24	7.3
Diagnose age		
25–46	161	48.9
46–79	168	51.1
Operation type		
Mastectomy	131	39.1
Breast-conserving surgery	197	59.9
Operation satisfaction		
Yes	270	82.1
No	59	17.9
Applied treatments		
CT	13	4
RT	38	11.6
CT and RT	59	17.9
CT, RT and hormone therapy	219	66.6
Have been informed about sexual side effects?		
Yes	76	23.1
No	253	76.9
Lymph node dissection		
Axillary	175	53.2
Sentinel	154	46.8
Have been informed about breast cancer?		
Yes	250	76
No	79	24

Table 3

Summary of the Scale analyses of the obtained data.

	n (number of patients)	Percentage (%)
Depression		
Minimum	149	45.3
Light	71	21.6
Middle	74	22.5
Severe	35	10.6
Anxiety		
Light	75	22.8
Middle	75	22.8
Severe	60	18.2
None	119	36.2
Sexual scale score		
11 and under	57	17.3
11 above	272	82.7

whereas the remaining group of patients mentioned that sexuality was often the last thing on their minds during cancer treatment. These studies collectively emphasize the substantial impact of breast cancer and its treatment on women's sexual health and highlight the importance of addressing and supporting patients in this aspect.

Various demographic and disease-related factors have been identified as impacting the mental and social well-being of breast cancer patients. Several studies have indicated that young age, low education level, unemployment, early diagnosis, and undergoing mastectomy are associated with higher levels of mental symptoms.[24,29–32] However, a study conducted by Mariam et al did not find a significant relationship between anxiety/depression and age or education level.[33] On the other hand, some studies have reported that depression is most prevalent among individuals around the age of 44.[6] Furthermore, research has consistently shown that sociodemographic factors such as low education level, young age, and unemployment are associated with increased levels of anxiety and depression among breast cancer patients.[34–36] These findings underscore the significance of considering various factors that can influence the mental well-being of breast cancer patients and highlight the complex nature of the relationship between demographics, disease-related variables, and psychological symptoms in this population. Interestingly, marital status has not been found to have a significant impact on the levels of depression, anxiety, and sexual dysfunction in breast cancer patients.[37,38] However, various factors such as age, presence of chronic health conditions, body image, menopausal status, and psychological state have been identified as influencing sexual function among breast cancer patients.[39]

Typically, we would anticipate a higher occurrence of sexual disorders among postmenopausal patients. However, our study did not identify any statistically significant differences. This could be attributed to the commencement of hormone therapy in premenopausal patients and the decline in estrogen levels, offering plausible explanations for the observed outcome.

Due to the hormone-sensitive nature of many breast cancers, endocrine therapy plays a crucial role in breast cancer treatment. Endocrine therapy eliminates estrogen production or blocks estrogen receptors, thus preventing local and distant recurrences.[40,41] Therefore, the estrogen receptor modulator Tamoxifen is used to block estrogen receptors in the breast.[42] Aromatase inhibitors (Anastrozole, Letrozole, and Exemestane), on the other hand, exert a more potent effect on reducing hormone levels in breast tissue compared to Tamoxifen. However, in patients using aromatase inhibitors, due to the antagonistic effects of the drugs on the genital system, vasomotor symptoms, sleep disturbances, decreased vaginal lubrication, and urinary incontinence are more frequently observed. In addition to the deficiency in estrogen, changes in mood, as well as issues related to sexual functions such as hair and skin changes, weight gain, decreased libido, and orgasmic dysfunction, can also be experienced.[40–45]

Among breast cancer patients treated with aromatase inhibitors, 42% reported overall dissatisfaction with their sexual lives, and 50% experienced a decreased desire for sexual intercourse. However, these problems were reported less frequently in patients treated with tamoxifen.[46] Aromatase inhibitors are the preferred choice for hormonal treatment in postmenopausal women.[41,42] Since endocrine therapies also involve androgens, they can affect not only sexual and reproductive functions but also body image and feelings of attractiveness due to potential weight gain.[42] In women entering

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menopause due to treatment, a decrease in sexual desire due to dyspareunia and the development of vaginal atrophy can occur.[47]

Specifically, low education level has been shown to have a negative impact on patients sexual lives.[48] Consistent with previous studies, low education level was associated with higher sexual dysfunction scores. However, in our study, education level did not significantly impact depression and anxiety levels, possibly due to a high proportion of high school and university graduates in the study population. A study by Montgomery et al[49] demonstrated that well-informed patients had lower psychological problems and better coping skills during treatment, aligning with our findings regarding the impact of education level.

In our study, we observed that women with higher income demonstrated better sexual adjustment, which aligns with common findings as they tend to experience better overall life comfort. Although our study indicated that low income was associated with poorer scores, the impact did not reach statistical significance due to the small sample size. Furthermore, we found a significant association between depression and age, with higher levels observed in individuals over the age of 42. This could be attributed to increased frailty and declining estrogen levels that often accompany aging. However, we did not find a significant effect of family history of cancer, marital status, presence of hypertension, and alcohol use on depression and anxiety levels among the patients. It is important to note that cancer itself can directly contribute to the development of mental health issues, irrespective of these factors.

The psychological impact experienced by breast cancer patients is closely linked to the type of surgery they undergo. Studies have consistently shown that patients who undergo mastectomy tend to experience higher levels of depression and anxiety compared to those who have undergone breast-conserving surgery or breast reconstruction.[50,51] Similarly, in our study, we found that patients who underwent mastectomy, were uninformed about sexual side effects, expressed dissatisfaction with the surgery, were smokers, and had diabetes had significantly higher levels of anxiety, depression, and sexual dysfunction.

In the existing literature, it has been reported that patients diagnosed with stage 4 breast cancer exhibit higher levels of anxiety and depression compared to those diagnosed at an earlier stage.[52] Concerns related to chemotherapy and radiotherapy, fear of disease recurrence or progression, and apprehension about treatment outcomes contribute to anxiety and depression in postsurgical breast cancer patients.

Our study also revealed that patients with tumor sizes larger than 2.5 cm and those with positive lymph nodes had significantly higher levels of depression and sexual dysfunction. These findings suggest that these patients were at an advanced stage of the disease and were undergoing chemotherapy and radiotherapy, which could contribute to their psychological distress.

It is well-documented in various studies that anxiety and depression have a negative impact on sexual function among breast cancer patients. In line with these findings, a significant number of sexually active breast cancer patients, around 60%, have reported experiencing sexual dysfunction, which can be further exacerbated by factors such as mastectomy and post-treatment weight gain.[53] Patients undergoing radiotherapy often encounter a range of physical challenges that contribute to sexual difficulties, including fatigue, pain, skin irritation, burns, breast fibrosis, and decreased skin sensitivity. These physical changes can directly affect sexual desire, arousal, and overall sexual relationships.

Additionally, the visible skin changes caused by radiotherapy, such as lines and alterations in skin appearance, can have an adverse impact on body image and self-esteem, which in turn exacerbate sexual problems.[54,55] In our study, a significant proportion of patients (82.7%) reported high levels of sexual difficulties, highlighting the prevalence of this issue within the patient population.

Breast cancer patients may experience increased levels of anxiety due to concerns about mortality and the responsibility of caring for their children, which can contribute to sexual problems.[56,57] In our study, we found that the presence of children had a significant impact on anxiety levels (P: .022). However, we did not observe a significant difference in depression (P: .102) or sexual scale scores among patients with or without children. The lack of significant findings in relation to depression and sexual scores might be attributed to the relatively low number of participants without children in our study.

It is important to note that addressing the complexities and individual differences in the psychological and sexual experiences of breast cancer patients requires further research and understanding. The interplay of various factors, including parental status and smoking, with anxiety, depression, and sexual functioning, should be explored in larger and more diverse samples to gain comprehensive insights into these relationships.

Notably, younger patients around the age of 44 and those diagnosed with stage 4 breast cancer emerge as groups experiencing elevated levels of depression and anxiety, mirroring concerns related to chemotherapy, disease progression, and treatment outcomes. Surgical interventions also play a pivotal role, as mastectomy patients consistently report higher levels of depression and anxiety compared to those who opt for breast-conserving surgery or reconstruction. Socioeconomic factors, particularly low income, appear to affect sexual adjustment and mental well-being, underlining the importance of tailored support in addressing financial concerns. Tumor characteristics, including larger tumor sizes and positive lymph nodes, contribute to heightened levels of depression and sexual dysfunction, indicative of the psychological distress associated with advanced disease stages. Similarly, the presence of children among patients is linked to increased anxiety levels, necessitating attention to the challenges of balancing parental responsibilities with cancer treatment. These observed susceptibilities align with factors contributing to their psychological and sexual experiences. Surgical outcomes, physical alterations from radiotherapy, and treatment-related symptoms significantly impact body image, self-esteem, and sexual function, thus intensifying anxiety and depression. In response, our recommendations encompass a multifaceted approach. Tailored psychological support and coping strategies can effectively address the needs of younger patients, stage 4 breast cancer patients, and mastectomy recipients. Targeted body image and sexual counseling address the intricate interplay between physical changes and psychological well-being. Moreover, parental support mechanisms and holistic education can guide patients in balancing their responsibilities while undergoing treatment. Regular screening for anxiety, depression, and sexual dysfunction, integrated into standard follow-up protocols, enables early identification and intervention for at-risk patients. In essence, our elaboration on these higher-risk groups and subgroups, coupled with factors contributing to susceptibility, underscores the complexity of breast cancer patients' psychological and sexual challenges. Our tailored recommendations empower healthcare providers to extend precise, patient-centered support, fostering improved well-being and enriched quality of life for breast cancer survivors.

5. Limitations

Limitations of our study include the potential impact of cultural sensitivities on patient participation, particularly regarding questions related to sexual function. Some patients may have declined to participate in the study due to discomfort or cultural factors surrounding discussions about sexuality. This could introduce a selection bias and limit the generalizability of our findings to a broader population. To address this limitation, future studies should employ culturally sensitive approaches and ensure a safe and supportive environment for participants to discuss sensitive topics. Implementing strategies such as using

trained interviewers, providing clear explanations of the study objectives and procedures, and assuring strict confidentiality may help mitigate cultural barriers and increase participation rates.

5.1. Clinical significance

Oncologists must prioritize the mental and sexual well-being of their patients as it affects their overall treatment experience. With improvements in breast cancer treatments leading to longer survival, the goal should be not just to extend life but to also support patients psychological and sexual health for a better quality of life and finding solutions to address these needs.

The diagnosis and treatment of breast cancer can have a major impact on a patient's psychological well-being. Our study showed that depression and anxiety are common among breast cancer patients and sexual dysfunction is linked to high levels of anxiety and depression. It highlights the importance of monitoring patients mental health and providing psychiatric support when necessary. The study also revealed that information about sexual side effects was not always communicated to patients, which could contribute to their distress. To address these challenges, health programs should be developed to provide a holistic approach to the care of breast cancer patients, with the aim of improving their quality of life and reducing morbidity. Advances in treatment and early diagnosis have led to longer survival for breast cancer patients, and it is important to support them not just in terms of their physical health, but also their mental and sexual well-being. In Turkey, efforts should be made to create new programs that adopt a comprehensive approach to care for breast cancer patients. Advances in treatment and early diagnosis have increased the lifespan of patients, and thus it is crucial to support not just their physical health, but also their psychological and sexual well-being. This will lead to improved quality of life, reduced morbidity and ultimately, better health outcomes for patients.

6. Conclusion

In conclusion, our study contributes to the growing body of knowledge on the psychological and sexual aspects of breast cancer. By addressing these challenges through comprehensive support, healthcare providers can enhance the overall well-being and quality of life of breast cancer survivors, empowering them to lead fulfilling and satisfying lives beyond their diagnosis and treatment.

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