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Mental Health Care Utilization and its Barriers among Iranian Breast Cancer Survivors: A Cross-sectional Study

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ABSTRACT

Background: Depression and anxiety are common comorbidities complicating the care of breast cancer patients, but many patients do not receive the needed care. We aimed to assess utilization of mental health care and its barriers in breast cancer survivors.

Methods: This cross-sectional study was conducted on 311 patients with breast cancer, in Iran, November 2021 to March 2022. Perceived need and utilization of mental health care and barriers to service utilization were measured based on self-report. Depression, Anxiety, and Stress Scale-21 and Multidimensional Scale of Perceived Social Support were used to assess depression, anxiety, and stress as well as social support, respectively. A linear and logistic regression model was used to analyze the data using SPSS version 22. A P-value less than 0.05 was considered statistically significant.

Results: 70.1% of the participants perceived need for mental health care, 28.0% of them had used mental health services, and 72% were classified as having unmet needs. The most common perceived barrier to service use was patients' self-adequacy. The prevalence of extremely severe levels of depression, anxiety, and stress was 14.8%, 23.5%, and 10.6%. Also, 48.6%, 78.5%, and 75.6% of patients received a high level of social support from friends, family, and significant others.

Conclusion: Findings highlight a substantial unmet need for mental health care and low utilization of mental health services among breast cancer survivors. Given the significant prevalence of depression, anxiety, and stress in this population, it is imperative to address the underutilization of mental health services and to further examine the barriers preventing patients from seeking the care they require.

Keywords: Breast neoplasms, Cancer survivors, Health services accessibility, Mental health services

INTRODUCTION

Breast cancer diagnosis is a distressing life event that affects the lives of over 2.3 million women every year.[1] Breast cancer is the most common cancer among women worldwide and in the majority of countries.[2] In the Iranian population, it is estimated that more than 14000 new cases of breast cancer are diagnosed annually.[3] The peak age of diagnosis and the median age of breast cancer patients in Iran are significantly lower than those in Europe and North America.[2] Implementation of improved screening programs and access to advanced diagnostic measures and treatment options have provided our patients with an increased survival rate.[4] As such, it is estimated that 80-89 percent of breast cancer patients survive over 5 years after the diagnosis.[5, 6] This has emphasized the need for an integrative plan of care that sufficiently encompasses mental health services.[4, 7, 8]

There is evidence that depression and anxiety are more prevalent in breast cancer patients than in the female population without a prior history of cancer.[9] The prevalence of depression and anxiety in breast cancer survivors varies in the literature from 9.4 to 66.1% and 17.9 to 41.9%, respectively.[4, 10, 11] However, according to the literature, the coronavirus disease 2019 (COVID-19) pandemic and the subsequent preventive measures have resulted in an increase in these figures.[12, 13] It has been shown that these psychiatric disorders are associated with poorer medication adherence, worse cancer treatment outcome, and a higher recurrence rate.[14, 15] Depression is thought to be the most common comorbidity in breast cancer survivors.[4] Furthermore, anxiety has been identified to be the most influential factor in the quality of life of these patients.[15] Early detection and treatment of these conditions would improve patient survival and quality of life.[7, 16, 17]

One of the predictors of depression and distress among breast cancer survivors is perceived social support.[18] Social support has also been associated with poorer health-related quality of life and health outcomes in breast cancer patients.[19-21] A qualitative study of the experience of social support in women with breast cancer reported that these women considered social support to give meaning to their life and create an empathic atmosphere for them in fighting cancer.[19] This highlights the importance of creating and maintaining a good social support network for these patients during their illness.

Proper management modalities for depression and anxiety are available. Psychotherapy has proven useful in treating depression and anxiety in cancer patients as well.[5, 15, 17, 22] Antidepressant medications have been studied in cancer patients and have shown to reduce the symptoms of depression and anxiety.[22] Although these effective options exist, many patients do not receive the care they need from the health care system.[15, 16, 23] Some of the major perceived barriers to psychosocial service use in this population have been defined in the literature; lack of feeling the need to seek psychosocial care was recognized as the most commonly stated barrier, followed by adequate support from elsewhere and lack of information about these services.[16, 24]

The majority of the research in the field of mental health aspect of breast cancer has focused on the presence of psychiatric illnesses in cancer survivors; also, few studies have explored the needs for mental health services and the associated barriers to service use.[16, 25] The significant impact of psychiatric illness on both patients' quality of life and breast cancer care warrants further evaluation of the need for mental health care and utilization in this population.[26]

The objectives of the current study were to firstly examine the perceived need for and utilization of mental health care and its barriers from the breast cancer survivors' point of view. Secondly, we aimed to assess the prevalence of depression, anxiety, and stress as well as their associated factors in order to obtain a more objective estimate of the need for mental health care in these patients.

Materials and Methods

This is a cross-sectional study. The data were collected at Motahari Multi-specialty Clinic, Shiraz, Iran from November 2021 to March 2022. This clinic is one of the largest centers for referral of breast cancer patients in Southwestern Iran. Cochran formula was employed to estimate the size of the sample in this study: z is 1.96 in the case of a 95% confidence interval, and p is the proportion of the population with depression; based on a recent meta-analysis,[4] this figure is about 0.468, and d is the desired margin of error (0.12p was used in this study).[27] Accordingly, a sample size of 303 individuals was required to conduct this study.

$$n = \frac{z^2 p (1 - p)}{d^2}$$

Women over 18 years of age, with diagnosis of breast cancer, and consent to participate in the study were considered as inclusion criteria. Individuals who were unable to understand the data collection forms due to a language barrier and those who incompletely filled out the forms, which was considered a lack of engagement or willingness to participate, were excluded from the study. Cancer stage and whether or not patients had completed the course of their treatment were not considered as inclusion criteria in the present study. Considering an estimated 5% drop-out, a total of 320 women were enrolled in the study. After applying the exclusion criteria, we removed 9 forms from the study. Finally, the sample of the study consisted of 311 breast cancer survivors visiting the afore-mentioned center for oncologic follow-up, and recruitment was done using convenient sampling. Sampling and data collection were performed minutes before the patients' visit with their surgical oncologist. This study has been reviewed and approved by the ethics committee of Shiraz University of Medical Sciences with the code number of IR.SUMS.REC.1400.498. Participants signed the written informed consent form before data collection which took place minutes before their outpatient follow-up visit with the oncologist.

Socio-demographic data (age, marital status, self and husbands' education, employment status, insurance, and socioeconomic status) were obtained based on the patients' self-report. Clinical data (time since cancer diagnosis, disease stage, past treatments, history of other diseases, and family history of cancer) were collected using the patients' records.

Assessment of the patients' perceived need for mental health care and utilization of these services are commonly achieved through a straightforward question for each of these variables.[28-30] In this study, two questions about the patients' perceived need for mental health care were asked based on their self-report: one regarding the perceived need for mental health care before the breast cancer diagnosis and the other since the diagnosis. Both questions are scored using a four-point Likert type scale, and the answers range from 'not having felt any sorts of need' (1) to 'strongly felt the need' (4). Participants with any needs (options 2 to 4) were asked regarding their mental health service utilization (yes/no). Patients with any need who used mental health services were classified as having "partially or fully met needs" and patients with any needs who had not used mental health services were classified as having "unmet needs." Based on the initial response, follow up questions instructed them to choose either the service provider, the type of service received, their overall satisfaction, and their perceived barriers to service use from the 12 listed options which included distance from service providers, inability to pay for services, dissatisfactory previous experience, concerns regarding privacy, long waiting lists, unwillingness, lack of knowledge about how to access care, lack of enough time, family disapproval of seeking mental health care, concerns about stigma, preference to deal with it alone (self-adequacy), and use of alternative/integrative medicine options. As to the service provider, type of service, and perceived barriers to service use, the respondents were able to

choose multiple options.

Depression, Anxiety, and Stress Scale-21 (DASS-21) is a self-report instrument that evaluates symptoms of depression, anxiety, and stress with seven items for each of the subscales. Participants rated how well each of the twenty-one statements applied to them on a four-point scale, ranging from 'does not apply to me at all' (0) to 'applies to me very much' (3).[31, 32] Higher scores indicate more severe psychological distress. Subcategories of DASS-21 scores include normal, mild, moderate, severe, and extremely severe levels of depression, anxiety, and stress. The DASS-21 has been tested in both clinical and non-clinical settings. Internal consistency of the instrument was found to be adequate for both depression and anxiety in cancer patients (Cronbach's alpha of 0.90 and 0.70, respectively) and control populations (Cronbach's alpha of 0.93 and 0.80, respectively). The construct of the questionnaire was found to be valid as the subscales showed a significant correlation with quality of life and depressed mood measurements.[33] The Persian version of the DASS-21 had been previously adapted and validated within a three-factor model, with calculated Cronbach's alpha of 0.75 to 0.86 across its domains, showing the reliability of the instrument.[32, 34]

Multidimensional Scale of Perceived Social Support (MSPSS) Developed by Zimet et al. with the 12-item MSPSS scale was used to assess the level of perceived social support of the respondents from three different sources including family, friends, and significant others. The instrument incorporates four statements for each subscale and uses a seven-point Likert type system ranging from 'very strongly disagree' (1) to 'very strongly agree' (7). Higher scores indicate stronger social support, allowing for grouping of social support into low, medium, and high levels.[35, 36] This instrument has been studied in cancer populations. One study found that Cronbach's alpha exceeded 0.90, showing its reliability; also, the 3 subscales significantly correlated with those of the Satisfaction with Life Scale, demonstrating that the tool offers a valid measurement of social support in these patients.[37] The reliability and validity of the MSPSS instrument in the Iranian population had been shown to be adequate. Cronbach's α coefficient was found to be 0.84 for the scale and 0.85 or higher for each of the domains, and was sufficiently stable (0.84) after a two-month period.[36]

SPSS version 22 and Graph Pad Prism software version 9 were employed to analyze the data. Qualitative variables were described by number and percentage and quantitative variables were reported as mean±standard deviation. Linear regression model was used to assess the factors related to depression, anxiety and stress based on DASS-21 questionnaire, and logistic regression model was used to assess the factors related to mental health service use. Also, Spearman correlation coefficient was used to assess the correlation between the perceived need for mental health care with DASS-21 questionnaire domains. A significance level of 0.05 was considered for this study.

RESULTS

The study enrolled 311 women with breast cancer, and the participants ranged in age from 30 to 84 years with a mean of 52.26±9.66 years. Two hundred and fifty-three patients were married (81.4%), duration of disease in 111 (35.7%) patients was more than five years, stage 2 disease had the highest frequency in patients (146; 46.9%), and 294 (94.5%) patients had a history of surgery. Other demographic and clinical characteristics of the participants are reported in Table 1.

The prevalence of the highest level of perceived need for mental health care was 21.5% before the breast cancer diagnosis and 25.1% after the diagnosis; this difference was statically significant (P<0.001). Also, based on the DASS-21 questionnaire, the prevalence of extremely severe level of depression, anxiety, and stress was 14.8%, 23.5%, and 10.6% (Table 2).

Table 1: Demographic and clinical characteristics of the participants

Variable	N (%)	Variable	N (%)
Marital status		Time Since Cancer Diagnosis	
Never married	20 (6.4)	Less than a year	49 (15.8)
Married	253 (81.4)	1-3 years	94 (30.2)
Widowed	32 (10.3)	3-5 years	57 (18.3)
Divorce	6 (1.9)	More than 5 years	111 (35.7)
Patient's Education		Time Since Cancer Treatment Started	
Elementary level or less	114 (36.7)	Less than a year	52 (16.7)
Not finished high school	48 (15.4)	1-3 years	92 (29.6)
High school graduate	93 (29.9)	3-5 years	63 (20.3)
Associate degree/ Bachelors	46 (14.8)	More than 5 years	104 (33.4)
Post graduate	10 (3.2)	Cancer stage	
Husband's Education (n=253)		Stage 0	26 (8.4)
Elementary level or less	65 (25.7)	Stage 1	74 (23.8)
Not finished high school	59 (23.3)	Stage 2	146 (46.9)
High school graduate	85 (33.6)	Stage 3	60 (19.3)
Associate degree/ Bachelors	33 (13.0)	Stage 4	5 (1.6)
Post graduate	11 (4.3)	Cancer Treatments	
Patient's Job		Neoadjuvant Chemotherapy	69 (22.2)
Housewife	224 (72.0)	Radiotherapy	188 (60.5)
Employee	32 (10.3)	Surgery	294 (94.5)
Worker	6 (1.9)	Adjuvant Chemotherapy	236 (75.9)
Self-employed	12 (3.9)	Positive Family History of Cancer	78 (25.1)
Retiree	32 (10.3)	History of other diseases	
Other	5 (1.6)	Diabetes Mellitus	54 (17.4)
Husbands' Job (n=253)		Hypertension	53 (17.0)
Unemployed	23 (9.1)	Cardiovascular diseases	22 (7.1)
Employee	33 (13.1)	Other cancers	4 (1.3)
Worker	40 (15.8)	Renal diseases	17 (5.5)
Self-employed	76 (30.0)	Hypothyroidism	26 (8.4)
Retiree	69 (27.3)	Gastrointestinal diseases	16 (5.1)
Other	12 (4.7)	Autoimmune diseases	12 (3.9)
Socioeconomic Status		Psychiatric diseases	17 (5.5)
Very Low	66 (21.2)	Other disease	18 (5.8)
Low	82 (26.4)	Having insurance	306 (98.4)
Middle	142 (45.7)	Having supplementary insurance	172 (55.3)
High	20 (6.4)		
Very High	1 (0.3)		

There was a significant correlation between the results of the level of perceived need for mental health care after the diagnosis with depression (r=0.35; P<0.001), anxiety (r=0.41; P<0.001), and stress (r=0.38; P<0.001).

Based on the results displayed in Table 3, among those who reported any needs (low to high perceived need) for mental health care since breast cancer diagnosis (218 patients; 70.1% of the total sample), 61 (28.0%) patients had used mental health care services, and this group was classified as having "partially or fully met needs". Most of them, comprising 38 patients (62.3%), received medications; 19 participants (31.1%) were more likely to seek care at private clinics, and 19 (31.1%) patients reported high levels of satisfaction. Also, 157 (72.0%) patients, who reported any perceived needs for mental health care, did not receive mental health services, and this group was classified as having "unmet needs." The most common perceived barriers for them were 'self-adequacy' in 56 (35.7%) and 'unwillingness' in 51 (32.5%) patients. Based on logistic regression, duration of the disease (OR 1.43; 95% CI: 1.04 to 1.96; P=0.029) and

Table 2: The patients' perceived need for mental health care and depression, anxiety and stress status

Variable	N (%)
Perceived need for mental health care before breast cancer diagnosis	
None	147 (47.3)
Low	51 (16.4)
Middle	46 (14.8)
High	67 (21.5)
Perceived need for mental health care since breast cancer diagnosis	
None	93 (29.9)
Low	81 (26.0)
Middle	59 (19.0)
High	78 (25.1)
Results based on DASS-21 questionnaire	
Depression	
Normal	144 (46.3)
Mild	37 (11.9)
Moderate	50 (16.1)
Severe	34 (10.9)
Extremely severe	46 (14.8)
Anxiety	
Normal	123 (39.5)
Mild	23 (7.4)
Moderate	67 (21.5)
Severe	25 (8.0)
Extremely severe	73 (23.5)
Stress	
Normal	143 (46.0)
Mild	38 (12.2)
Moderate	38 (12.2)
Severe	59 (19.0)
Extremely severe	33 (10.6)

Table 3: Mental health service utilization in patients who perceived any needs for mental health care (n=218)

	N (%)
Patients who used mental health services (n=61)	
Type of Mental Health Care Provider	
Family Physician / General Practitioner	10 (16.4)
Private-practice Psychiatrist / Psychologist	19 (31.1)
Psychiatric Hospital	2 (3.3)
Public-practice Psychiatrist (Outpatient Clinic)	17 (27.9)
Public Health Care Centers	5 (8.2)
Counseling Institutions	5 (8.2)
Tele-mental Health	3 (4.9)
Type of Services Received	
Getting information about the psychiatric illnesses	10 (16.4)
Receiving medication	38 (62.3)
Counseling and psychotherapy	23 (37.7)
Hospitalization	3 (4.9)
Overall Satisfaction with the Quality Services	
Low	11 (18.0)
Moderate	31 (50.8)
High	19 (31.1)
Patients who did not use mental health services (n=157)	
Barriers for not using mental health services	
Distance from service providers	22 (14.0)
Unable to pay for service	36 (22.9)
Dissatisfactory previous experience	5 (3.2)
Concerns regarding privacy	5 (3.2)
Long waiting lists	13 (8.3)
Unwillingness	51 (32.5)
Not knowing how to access care	25 (15.9)
Not having enough time	18 (11.5)
Family disapproves of it	4 (2.5)
Concerns about stigma	14 (8.9)
Prefer dealing with it alone (self-adequacy)	56 (35.7)
Using alternative / integrative medicine options	20 (12.7)

duration since the start of cancer treatments (OR 1.39; 95% CI 1.02 to 1.91; P=0.046) were significantly associated with mental health service use in those who reported any needs for mental health care.

Based on the MSPSS, 151 (48.6%), 244 (78.5%), and 235 (75.6%) patients had received a high level of social support from friends, family, and significant others (Table 4). According to the results shown in Figure 1, 72.3%, 75.4%, and 75.4% of patients who had extremely severe level of depression, anxiety, and stress did not report using mental health services, and these percentages were higher in lower levels of depression, anxiety, and stress.

The factors related to patients' depression, anxiety, and stress based on the

Table 4: Patients' perceived social support based on multidimensional scale of perceived social support

Variable	N (%)
Friends support	
Low support	67 (21.5)
Medium support	93 (29.9)
High support	151 (48.6)
Family support	
Low support	21 (6.8)
Medium support	46 (14.8)
High support	244 (78.5)
Significant Other support	
Low support	25 (8.0)
Medium support	51 (16.4)
High support	235 (75.6)
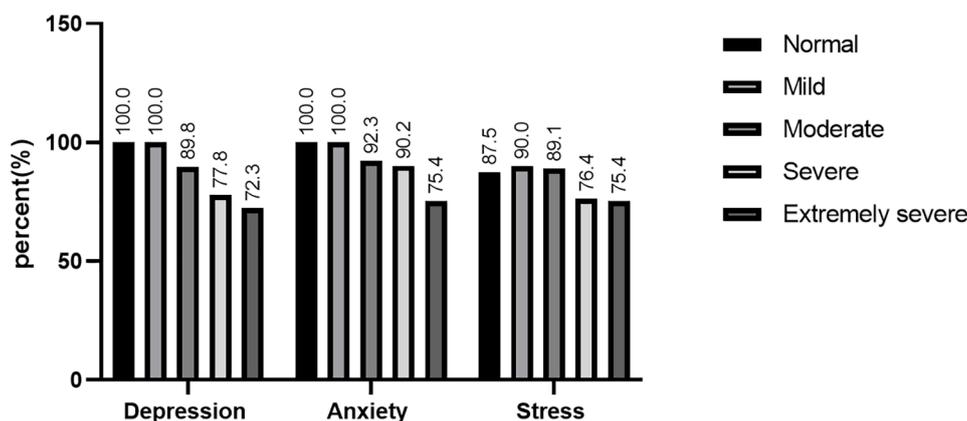
Figure 1: The percentage of patients who did not use mental health services based on depression, anxiety, and stress

Table 5: Factors related to patients' depression, anxiety and stress

Variables	B	SE	CI 95%	[a]P value
Depression				
Patients' Education	-1.60	0.52	-2.64 to -0.56	0.003
Husbands' education	-1.55	0.62	-2.78 to -0.33	0.013
Socioeconomic status	-2.92	0.69	-4.29 to -1.55	<0.001
History of cardiovascular disease	5.51	2.49	0.61 to 10.41	0.027
History of psychiatric diseases	7.44	2.79	1.93 to 12.95	0.008
Friends support	-2.08	0.80	-3.66 to -0.50	0.010
Family support	-5.79	1.05	-7.87 to -3.71	<0.001
Significant other support	-3.76	1.02	-5.77 to -1.75	<0.001
Anxiety				
Socioeconomic status	-1.83	0.63	-3.08 to -0.58	0.004
History of psychiatric diseases	8.65	2.49	3.74 to 13.56	<0.001
Friends support	-1.07	0.72	-2.51 to 0.35	0.139
Family support	-4.65	0.95	-6.54 to -2.77	<0.001
Significant other support	-3.08	0.92	-4.89 to -1.27	<0.001
Stress				
Patients' Education	-1.75	0.53	-2.80 to -0.69	<0.001
Husbands' education	-2.06	0.62	-3.28 to -0.83	<0.001
Socioeconomic status	-2.84	0.71	-4.24 to -1.44	<0.001
Radiotherapy	3.79	1.32	1.19 to 6.40	0.004
Surgery	3.08	1.40	1.08 to 7.51	0.029
History of psychiatric diseases	6.35	2.85	0.73 to 11.98	0.027
Friends support	-2.38	0.81	-3.98 to -0.78	0.004
Family support	-4.8	1.09	-6.99 to -2.68	<0.001
Significant other support	-2.20	1.05	-4.28 to -0.12	0.038

[a]Linear regression model

DASS-21 questionnaire are reported in Table 5. Higher levels of patients' education (β=-1.6; P=0.003), husbands' education (β=-1.55; P=0.013), socioeconomic status (β=-2.92; P<0.001), and perceived social support (friends (β=-2.08; P=0.010), family (β=-5.79; P<0.001) and significant others (β=-3.76; P<0.001) were significantly associated with a lower score of depression. Moreover, history of

cardiovascular disease (β=5.51; P=0.027) and psychiatric disease (β=7.44; P=0.008) were significantly associated with a higher score of depression. Socioeconomic status (β=-1.83; P=0.004), family (β=-4.65; P<0.001), and significant other's support (β=-3.08; P<0.001)) were significantly associated with a lower score of anxiety. Also, history of psychiatric disease (β=8.65; P<0.001) was significantly

associated with a higher score of anxiety. The score of stress was significantly decreased with a higher level of patients' education (β=-1.75; P<0.001), husbands' education (β=-2.06; P<0.001), socioeconomic status (β=-2.84; P<0.001), and social support (friends (β=-2.38; P=0.004), family (β=-4.8; P<0.001) and significant others (β=-2.20; P=0.038)); however, this score was significantly increased with a history of psychiatric disease (β=6.35; P=0.027), radiotherapy (β=3.79; P=0.004), and surgery (β=3.08; P=0.029).

DISCUSSION

In the present cross-sectional study of women with breast cancer, the majority of the participants had mild to extremely severe levels of both anxiety and depression; however, about two-thirds of the patients reported perceived need for mental health care since their cancer diagnosis, with only 28% of them having sought such care. Depression and stress were negatively associated with the level of education, socioeconomic status, and social support. Similarly, anxiety was negatively correlated with socioeconomic status and social support. It should be noted that all three subscales of the sources of social support, namely, friends, family, and significant others were found to be negatively associated with depression, anxiety, and stress.

In this study, mild to extremely severe levels of depression, anxiety, and stress based on the DASS-21 questionnaire were 53.7%, 60.5%, and 54.0%, respectively. According the results of meta-analysis studies, the prevalence of depression and anxiety in the breast cancer population is 49.9% and 41.9%, respectively.[11, 38] A meta-analysis of 18 studies reported that the prevalence of depression in women with breast cancer ranged from 14.0% to 95.90%. They emphasized the urgent need for psychological interventions and the will of care programs for these patients.[4] It seems that the economic changes and rising inflation in the recent years in different parts of the world, and prominently in Iran, have played a negative role in the patients' mental health.[39, 40]

Based on the results of the present study about 70.1% of the participants reported perceived need for mental health care. The results of a study in the United States showed that 33% of breast cancer patients needed psychosocial services after diagnosis.[41] Longer duration since the diagnosis of breast cancer and start of cancer treatments were significantly associated with higher use of mental health services. Evidence emphasizes the need for a preventive approach to mental health care in breast cancer patients, early recognition of signs and symptoms of depression and anxiety by the treating oncologist and primary care physician, and measures to be taken for proper referral to a mental health professional when necessary.[42]

Utilization of mental health care in the participants who expressed perceived need for receiving mental health services in the present study was 28%. This finding is comparable to prior research.[41] In a large observational study of anxiety and psychotherapy/integrative medicine service use on 1085 females with non-metastatic breast cancer treated with aromatase inhibitors concluded that 40% of patients with elevated anxiety had used those services.[15] The sample for the aforementioned study was unique in that it consisted of highly educated patients with 79.6% having a college education or higher. Another study which examined depression and anxiety in breast cancer patients with metastatic disease reported that only 29% of patients with significant anxiety or depressive symptoms had access to mental health services.[43]

In this study, self-adequacy and patients' unwillingness to seek professional help were the prominent reasons for barriers to mental health service use. Similarly, in a sample of 265 breast cancer survivors, more than half of the participants reported they could deal with their emotional problems themselves and did not feel the need for professional help.[16] In the present study, other frequently stated barriers to mental health service use were concerns related to financial aspects,

stigma, and accessibility of these services. Some researchers believed that mental health services were too expensive.[16] Addressing the needs of cancer patients may also require fighting barriers such as stigma. Evidence shows that relatively short educational programs can significantly improve attitudes about mental illness.[44] In another study, the lack of access to mental health services and the stigma associated with mental illnesses and psychological services were among the reported barriers to using mental health services in affected patients.[45]

Regarding the perceived economic barriers to mental health service use, in this study, a significant association was not observed between socioeconomic status and the use of mental health care. However, 22.9% of the patients who had any levels of perceived need for mental health care also reported financial barriers to accessing these services. We hypothesize that these patients are at higher risk of postponing seeking mental health care and refusing to pursue treatment when suggested by other clinicians due to the fear of inability to afford such treatments. This fear can be thought of as having multiple different economic aspects. It might be rooted in the inability to afford the out-of-pocket portion of the cost of the mental health care or its significant impact on the household economy, or an unrealistic image of the cost of mental health care.

Previous research indicates that social support is beneficial to breast cancer patients in coping with the stress and depression of the disease.[46, 47] The results of a study in Ethiopia showed that depression was associated with poor social support given by family, friends, and significant others.[48] We showed that more than 75% of patients received high social support from their family and significant others; also, high levels of perceived social support were associated with lower scores of depression, anxiety, and stress. These findings indicate the importance of strengthening the social support system for breast cancer patients.

The results of the present study showed that high socioeconomic levels and high education in patients were associated with a decrease in depression and stress. Also, an inverse correlation between anxiety and socioeconomic status was noted in this study. In line with our findings, other studies also showed that more care and support should be given to less educated patients and people with lower socioeconomic status because they are at high risk of anxiety and depression.[49, 50] This evidence shows the negative impact of low socioeconomic levels on mental health outcomes; therefore, timely identification of people at risk of mental problems is necessary for mental health interventions in this population.

The results of our study showed that the presence of psychiatric problems in breast cancer patients was associated with a higher score for depression, anxiety, and stress. Furthermore, in our study, cardiovascular diseases were linked with higher levels of depression. There is evidence of an additive or synergistic effect between a history of cardiovascular disease and cancer for depression in the literature.[51] The results of various studies show that the presence of comorbidities in breast cancer patients increases the risk of depression.[5, 52] These findings reveal that the presence of comorbidities at the time of diagnosis of cancer can be a very important predictor for the risk of depression and mental problems in these patients.

Our study has several strengths. To our knowledge this is the largest study of mental health care needs, utilization, and the related barriers among women with breast cancer. Moreover, assessment of depression, anxiety, stress, and social support in this study allowed for a better understanding of the state of the mental health of breast cancer survivors.

The results of the present study should be interpreted within the frame of the study limitations. The setting chosen for this study was a single tertiary care center with a large population of low-to-middle-income families, as it was also reflected in the study

sample. This limits the generalizability of the findings of the study to other populations and settings. Although the type of psychiatric treatments was provided by the respondents, the data gathered in this study did not include frequency and length of psychotherapy or hospitalization, modality of psychotherapy, and type, dosage and length of the medication treatment plan.

CONCLUSION

The results of the present study showed a high level of need for mental health care and the association it has with depression, anxiety, and stress in breast cancer patients. Mental health service use is low and many patients are not receiving the help they need. The findings of this study also note that these patients receive good social support and that it is linked with better psychological well-being. The initial step in addressing low care utilization is a qualitative research approach to further clarify the barriers to service use. Also, trials of different interventions, designed and tested for various breast cancer patient populations, would offer policymakers more insight into the available options.

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