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The Supportive Care Needs of Breast Cancer Patients and Its Related Factors: A Cross-sectional Study

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Abstract

Background: Planning cancer supportive care programs require assessing patients' supportive needs.
Objectives: This study aimed to investigate breast cancer patients' supportive care needs and their related factors.
Methods: This cross-sectional study was conducted this Zahedan, Iran, in 2020. Patients with breast cancer, who referred to the clinical oncology departments of Khatam-Al-Anbia hospital and Ali ibn Abi Talib hospital were selected by the census method. Standard questionnaires were distributed among the participants to obtain information and analyze data in SPSS software version 19.0.
Results: This study examined 120 breast cancer patients with a mean age of 47.35 (SD 10.67) years. The patients' highest and lowest need for help were related to health system/information (63.23 $\pm$ 20.80) and sexual needs (6.73 $\pm$ 19.66). Spearman's correlation coefficient analysis indicated that social support and illness adjustment negatively correlated with many supportive care domains.
Conclusions: Supportive care services, especially in the information and psychology domain, are needed for breast cancer patients in Zahedan, Iran. Patients can benefit from social support and positive coping strategies to help them cope with their disease.

Keywords: Breast Cancer, Supportive Care Needs, Social Support, Emotional Adjustment

1. Background

Breast cancer is a global health problem, which is known as one of the leading causes of cancer morbidity and mortality worldwide (1). According to the Global Can 2018 report, breast cancer is the second most common malignancy, accounting for more than 11.6% of all female cancers and 6.5% of deaths around the world (2). The prevalence of breast cancer has grown dramatically among Iranian women in recent years (3).

Cancer patients experience more physical and psychological distress due to cancer diagnosis and treatment. Therefore, they have supportive care needs that should be met (4). Supportive care is aiding services for managing cancer and its physical and psychological consequences (5). Evidence found significant unmet needs in five main domains, including psychological, health system and information, physical and daily living, patient care, support, and sexual needs (6). Adequate supportive care is not always provided to breast cancer patients, particularly in Western Asia, to help them adjust to these challenges (7).

Social support positively effects cancer patients' challenges as an essential coping strategy for cancer patients' adaptation (8). Patients who use a positive coping strategy have the highest adjustment to cancer and face lower mental health problems and less psychological distress (9). In addition, evidence showed that social support reduces the need for supportive care (10).

2. Objectives

Evaluating supportive care needs is necessary for planning a supportive care intervention. Therefore, this study was conducted to assess the supportive care needs of breast cancer patients and its related factors in Zahedan, Southeast of Iran.

3. Methods

This cross-sectional study was performed in Zahedan, Southeast of Iran, from February to August, 2020. all women with breast cancer who referred to the Clinical Oncology Department of Khatam-Al-Anbia Hospital and the Radiotherapy Department of Ali ibn Abi Talib Hospital for therapy were examined using the census method. The inclusion criteria were a confirmed breast cancer diagnosis, being at least 18 years old, and desire to participate in this

study. Overall, 120 women with breast cancer participated in this study.

A researcher-made questionnaire and three standard questionnaires were used to roll up social and clinical factors of patients such as age, marital status, education level, household composition, diagnosis time, disease stage, treatment type, and surgery type. Since most of the women participants in the present study were illiterate or had a primary education level, the questionnaires were filled out through private interviews with participants in the hospital.

3.1. Supportive Care Needs Survey-SF34

The Supportive Care Needs Survey (SCNS)-SF34 is a 34-item instrument, which assesses a patient's level of supportive care needs for help across five domains, including psychological (10 items), patient care and support (5 items), health system and information (11 items), physical and daily living (5 items) and sexuality (3 items). The participants rated each item on a 5-point Likert scale ranging from 1 to 5 for no need (1), no need/satisfied (2), low need (3), moderate need (4), and high need (5).

The scores were calculated based on the following formula:

$([N\text{-}M] \times 100)/(M \times [K\text{-}1])$

N: Sum of all the individual items for each dimension

M: Number of questions in each dimension

K: Maximum response value for each item

Each domain has a score range from 0 to 100, and a higher score indicates more unmet needs (11). The Persian version of the questionnaire had a Cronbach alpha coefficient more than 0.9 in a previous study (7).

3.2. Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) was used to assess the perceived social support from family (4 items), friends (4 items), and those effective (4 items). This questionnaire consisted of 12 items, each of which was scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The MSPSS was highly reliable and valid in a previous study in Iran (12).

3.3. Strategies of Coping and Degree of Adjustment (AIMI-IBC)

We assessed the patient's degree of adjustment using the illness measurement inventory for Iranian women with breast cancer (AIMI- IBC). This instrument had 49 items divided into three domains (emotional turmoil, reasonable efforts, and avoidance coping strategy) on a five-point Likert scale ranging from 1 (Never) to 5 (Always). A previous study showed that the AIMI-IBC was a valid questionnaire for Iranian women with breast cancer (13).

3.4. Statistical Analysis

The SPSS Software version 19.0 was used to analyze the collected data. The frequency and percentage were used to describe the categorical variables and the mean and standard deviation (SD) were applied for continuous variables. According to the original Shapiro-Wilk test statistic, the data distribution was not normal. Therefore, we investigated the difference in mean scores in each SCNS-SF34-C domain between groups using the Kruskal Wallis and Mann-Whitney U test. In addition, we performed multiple pairwise comparisons following a significant result for the Kruskal-Wallis test. The Spearman's correlation evaluated the association between supportive care need domains with social support and illness adjustment. The P-value < 0.05 was considered significant for all the analysis procedures.

4. Results

The patients' mean (SD) age was 47.35 ± 10.67 years old, and approximately 90% of patients had a pre-high school education level, most of whom were married (75.8%). During the study, we found that 25% of patients were in stages I and II of cancer, 40.8% were in stage III, and 34.2% were in stage IV.

We compared supportive care needs according to the participants' characteristics. No statistically significant differences were found in most variables. However, the results indicated that patients who had less than a high school education level (35.37 ± 21.97) had higher needs for help in the physical and daily living domain ($P = 0.004$) compared to those with high school and higher education level (18.07 ± 15.21). Furthermore, patients in stage I and stage II (17.77 ± 31.69) scored higher for help in sexual need than those in stage IV of the disease (2.03 ± 9.27) ($P = 0.007$) (Table 1).

4.1. Domains of Supportive Care Needs

Participants reported the highest need for help with health system and information needs (63.23 ± 20.80), followed by psychological needs (51.47 ± 25.79), patient care and support needs (43.45 ± 19.70), physical and daily living needs (33.50 ± 21.96), and sexual needs (6.73 ± 19.66) (Table 2).

4.2. Relation Between the Supportive Care Needs Domains and Social Support, Ill Adjustment

According to Spearman's correlation coefficient test, social support was significantly correlated with physical/daily living ($r = -0.18$, $P = 0.03$) and sexual need ($r = -0.19$, $P = 0.03$). Illness adjustment had statistically significant and negative correlation with physical/daily living (r

Table 1. Characteristics of Participants by Supportive Care Need Domains

Variables	No. (%)	Supportive Care Need Domains				
		Physical and Daily Living	Psychological	Sexual	Health System and Information	Patient Care and Support
Age						
Mean (SD)	47.3 (10.6)					
≤ 45	59 (49.2)	33.13 ± 22.02	53.05 ± 26.06	8.61 ± 22.74	63.90 ± 21.69	41.52 ± 20.41
> 45	61 (50.8)	33.85 ± 22.08	49.95 ± 25.64	4.91 ± 16.12	62.59 ± 20.06	45.32 ± 18.97
P-value		0.85 [a]	0.54 [a]	0.35 [a]	0.57 [a]	0.21 [a]
Marital status						
Married	91 (75.8)	32.14 ± 21.18	51.37 ± 26.55	7.50 ± 20.60	63.63 ± 20.46	43.90 ± 20.10
Single	7 (5.8)	43.57 ± 30.51	37.50 ± 27.34	7.14 ± 18.89	66.23 ± 14.92	35 ± 16.07
Divorced/widow	22(18.3)	35.90 ± 22.28	56.36 ± 21.05	3.40 ± 15.99	60.64 ± 24.15	44.31 ± 19.16
P-value		0.50 [b]	0.18 [b]	0.49 [b]	0.91 [b]	0.44 [b]
Educational level						
Less than high school	107 (89.2)	35.37 ± 21.97	52 ± 25.44	6.07 ± 19	63.91 ± 20.71	44.11 ± 20.33
High school and above	13 (10.8)	18.07 ± 15.21	47.11 ± 29.20	12.17 ± 24.67	57.69 ± 21.51	38.07 ± 12.67
P-value		0.004 [a]	0.66 [a]	0.22 [a]	0.31 [a]	0.26 [a]
Household composition						
Husband and children	82 (68.3)	31.70 ± 21.70	51.12 ± 27.66	7.41 ± 20.24	63.69 ± 21.63	43.29 ± 19.29
Husband	15 (12.5)	32.66 ± 17.71	50.50 ± 18.49	5 ± 19.36	61.21 ± 18.35	50 ± 20.17
Children	12 (10)	39.16 ± 20.20	58.54 ± 17.69	6.25 ± 21.65	62.12 ± 20.81	43.33 ± 24.15
Parents	9 (7.5)	42.77 ± 33.17	45.83 ± 31.47	5.55 ± 16.66	67.42 ± 16.30	32.77 ± 16.41
Alone	2 (1.7)	37.50 ± 10.60	56.25 ± 8.83	0 0	47.72 ± 35.35	50 ± 0
P-value		0.71 [b]	0.73 [b]	0.89 [b]	0.86 [b]	0.31 [b]
Time of diagnosis						
Mean ± SD	23.6 ± 20.3					
< 12	65 (54.2)	33.61 ± 22.92	51.03 ± 25.24	8.71 ± 23.31	62.69 ± 21.52	46.92 ± 19.17
12 - 48	35 (29.2)	31.85 ± 21.38	53 ± 26.26	5.95 ± 16.61	63.18 ± 20.12	36.28 ± 19.11
> 48	20 (16.7)	36 ± 20.55	50.25 ± 27.92	1.66 ± 7.45	65.11 ± 20.50	44.75 ± 20.03
P-value		0.84 [b]	0.87 [b]	0.51 [b]	0.93 [b]	0.06 [b]
Stage of disease						
Stage I, stage II	30 (25)	28 ± 24.16	49.66 ± 26.60	17.77 ± 31.69	59.92 ± 20.31	46.66 ± 20.77
Stage III	49 (40.8)	31.93 ± 20.68	49.23 ± 26.93	3.91 ± 13.29	62.56 ± 19.96	42.85 ± 16.67
Stage IV	41 (34.2)	39.39 ± 20.92	55.48 ± 23.88	2.03 ± 9.27	66.46 ± 22.15	41.82 ± 22.29
P-value		0.09 [b]	0.72 [b]	0.01 [b]	0.25 [b]	0.76 [b]
Type of surgery						
Mastectomy						
Yes	64 (53.3)	36.25 ± 22.48	52.42 ± 24.49	5.07 ± 17.73	63.21 ± 22.35	43.82 ± 18.46
No	56 (46.7)	30.35 ± 21.12	50.40 ± 27.38	8.63 ± 21.67	63.27 ± 19.08	43.03 ± 21.18
P-value		0.18 [a]	0.80 [a]	0.26 [a]	0.73 [a]	0.75 [a]
Lumpectomy						
Yes	41 (34.2)	29.26 ± 20.44	50.30 ± 26.09	9.14 ± 22.26	62.36 ± 19.41	43.53 ± 20.19
No	79 (65.8)	35.69 ± 22.52	52.08 ± 25.78	5.48 ± 18.19	63.69 ± 21.59	43.41 ± 19.57
P-value		0.27 [a]	0.97 [a]	0.27 [a]	0.53 [a]	0.97 [a]
Type of treatment						
Chemotherapy						
Yes	113 (94.2)	34.15 ± 21.77	52.12 ± 25.66	7.15 ± 20.19	63.37 ± 20.91	43.62 ± 19.86
No	7 (5.8)	22.85 ± 24.12	41.07 ± 27.64	0.0 ± 0.0	61.03 ± 20.38	40.71 ± 17.89
P-value		0.19 [a]	0.24 [a]	0.30 [a]	0.69 [a]	0.66 [a]
Radiotherapy						
Yes	77 (64.2)	36.88 ± 22.95	53.53 ± 25.81	7.68 ± 20.97	63.31 ± 20.62	44.61 ± 19.01
No	43 (35.8)	27.44 ± 18.84	47.79 ± 25.64	5.03 ± 17.16	63.10 ± 21.36	41.39 ± 20.93
P-value		0. 28 [a]	0.11 [a]	0.43 [a]	0.95 [a]	0.22 [a]

Table 2. The Mean Score for All Domains of Supportive Care Need (SCN-SF34)

Domain	Number of Item	Mean (SD)	Min	Max	Range
Physical and daily living	5	33.50 (21.96)	0	85	0 - 100
Psychological	10	51.47 (25.79)	0	100	0 - 100
Sexuality	3	6.73 (19.66)	0	100	0 - 100
Health system and information	11	63.23 (20.80)	4.55	97.73	0 - 100
Patient care and support	5	43.45 (19.70)	0	95	0 - 100

= -0.40, $P < 0.001$), psychological (r = -0.32, $P < 0.001$), and patient care/support (r = -0.24, P = 0.007) (Table 3).

5. Discussion

The participated patients in this study reported the highest need for help in the information/health system and psychological domains. The lowest need for help was related to the sexual domain, which was consistent with another study (14). A meta-analysis showed that the most unmet needs were related to information/health system, psychology, and physical/daily life (15).

Evidence showed that supportive care services and limited training programs are available to cancer patients in the Middle East (16). A previous study in Iran reported that cancer patients do not receive sufficient information about their disease (17) and often use unreliable sources, such as relatives or other patients (18). As a result, it should not be surprising that Iranian women in the present study reported having many unmet information needs.

This study also showed that patients with less than high school education level need more help in the physical and daily life domain, while those in stages 1 and 2 of the disease need more help in sex. These results emphasize the need for improving the early care quality for patients in their treatment phase, including supporting patients through the decision-making process, treatment preparation, and providing open and supportive communication (19). Evidence showed no specific supportive care program for cancer patients in Iran (20). Therefore, supportive care programs, especially for breast cancer patients, should be a priority for health service providers.

In this study, the need for helping in physical/daily life and sex decreased with increasing social support. A previous survey of 250 cancer patients showed that patients' need for help in all areas decreased with increasing social support (10). According to the previous survey, the social support offered to breast cancer survivors provided women with intellectual, physical, and emotional advantages, which may play a vital part in their therapy continuance (21).

The present study showed that assistance needed in many areas of supportive care decreased with the increase upon adaptation to the disease. Studies have shown that positive coping strategies positively affected patients' psychological health, and health behaviors make women with breast cancer more compatible with their disease (22).

According to previous studies, breast cancer patients' religion helped them cope with the disease by preserving self-esteem, offering a sense of meaning and purpose, and providing emotional consolation and hope (23, 24). In addition, a systematic review provided evidence that spiritual or religious coping can help cancer patients to cope with their illness (25). Therefore, social support and religious factors play a crucial role in breast cancer patients' lives to deal with their health conditions.

This study had some limitations, including assessing the unmet supportive care needs of patients at one point due to the cross-sectional design of the study. Therefore, a longitudinal design can investigate the supportive care needs of breast cancer patients on several occasions during treatment and provide more precise information.

5.1. Conclusions

The results of this study showed that the highest unmet supportive care needs were related to the health system/information and psychological domain, and the lowest belonged to the sexual and physical/daily living domain. In addition, the need for help in many fields of supportive care decreased with increasing illness adjustment and social support. Therefore, providing supportive care services in information and psychology domains is highly needed for patients with breast cancer in Zahedan city. More research is recommended be conducted in the future with a larger sample size to clarify the supportive care needs and psychological challenges experienced by breast cancer patients in Iran.

Footnotes

Authors' Contribution: S. K., H. O. A., and A. A. M. designed the study. S. K. collected data. M. M. and S. K. analysed data. S. K. and H. O. A. prepared the manuscript. The

Table 3. Correlation Between Patients' Unmet Needs, Social Support, and Ill Adjustment

	Spearman's Correlation Coefficient				
	Supportive Care need Domains				
	Physical and Daily Living	Psychological	Sexuality	Health System and Information	Patient Care and Support
Social support total (MSPSS)	P = 0.03; r = -0.18	P = 0.64; r = 0.04	P = 0.03; r = -0.19	P = 0.72; r = 0.03	P = 0.95; r = 0.006
Ill adjustment (AIMI-IBC)	P < 0.001; r = -0.40	P < 0.001; r = -0.32	P = 0.97; r = -0.003	P = 0.76; r = -0.02	P = 0.007; r = -0.24

final manuscript has been read and validated by the writers.

Conflict of Interests: There are no conflicts of interest declared by the authors.

Data Reproducibility: The data presented in this study are openly available in one of the repositories or will be available on request from the corresponding author by this journal representative at any time during submission or after publication. Otherwise, all consequences of possible withdrawal or future retraction will be with the corresponding author.

Ethical Approval: The study was accepted by the ethics committee of Zahedan University of Medical Sciences (ethics code: IR.ZAUMS.REC.1399.010) (link: ethics.research.ac.ir/EthicsProposalView.php?id=128026).

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Informed Consent: Patients who signed a voluntary consent form were asked to participate in the survey.

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