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## Perceived spouse unsupportive behaviors in women with breast cancer and their spouses

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### ABSTRACT

**Introduction.** Unsupportive responses from relatives, particularly spouses, play a significant role in the psychological adjustment of breast cancer patients and their spouses. Failure to meet the physical and psychological needs of breast cancer patients and their spouses can lead to anxiety, depression, and numerous marital problems. The aim of this study was designed to describe perceived spouse unsupportive behaviors in women with breast cancer and their spouses.

**Material and methods.** This is a cross-sectional study. A total of 220 women with breast cancer along with their husbands participated in this study through random sampling. In the present study, data collection was performed using a demographic information checklist and a questionnaire.

**Results:** The mean perceived women's unsupportive behavior ( $20.73 \pm 8.44$ ) was higher than that of men's ( $18.80 \pm 5.83$ ), which was statistically significant ( $P = 0.003$ ). The mean score of perceived women's unsupportive behavior in the categories of marital status, companion, place of residence, men's and women's occupation, and the type of residential house, and the mean score of perceived men's unsupportive behavior in the category of current treatment were different.

**Conclusions.** Women perceive their spouses' behaviors as less supportive than their spouses' perceptions of women's behavior, which highlights the need for husbands to be more attentive to the impact of their behavior on their wives. Furthermore, talking with each other about problems is the most imperative factor in perceiving support by couples; accordingly, it can be concluded that couples who are reluctant to talk to each other concerning the problem perceive less mutual support.

**Key words:** unsupportive behavior; breast cancer; nursing; spouse

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### Introduction

Breast cancer is one of the most prevalent and disturbing health problems of women worldwide [1]. It comprises 30% of gynecological cancers [2]. This type

of cancer is the second leading cause of mortality in developed countries and the third cause in less developed countries [3]. Approximately 41,000 women lose their lives each year as a result of breast cancer [4]. As reported by the World Health Organization (WHO), by

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2050, 3.2 million women will develop breast cancer, yet in current statistics, 1 in 8 women suffer from this type of cancer (12.5%) [5].

Over recent decades, research has examined individuals' perceptions of cancer consequences. In addition to the physical effects, the psychological and social impacts have been realized [6]. Numerous supportive intervention strategies have been developed to help cancer patients deal with their problems during the disease course. The cancer incidence influences both patients and their closest relatives and might be manifested in various mutual behaviors in patients and their spouses. This experience may create stress in the spouse, resulting in their loss of emotional, social, and economic support to the patient and can have an impact on their daily life and behavior [7]. One of the principal consequences of a spouse's cancer diagnosis is anxiety, particularly a depressive state. Mood disorders in the spouse are closely related to a higher anxiety rate in the cancer patient [8]. Breast cancer diagnosed in women at a young age (under the age of 50) causes higher rates of health and social problems than in women diagnosed at an older age [8, 9].

Spouses are considered the best source of support for cancer patients [10]. Nevertheless, providing support may be challenging for spouses due to their anxiety or the impact of breast cancer on their relationship [11]. A supportive spouse may assist the patient to psychologically adjust to his or her illness. However, imperfect support can result in dissatisfaction, depression, and anxiety [12, 13]. Perceived unsupportive behavior is relatively uncommon yet excessively challenging due to the fact that it is significantly associated with anxiety in patients with cancer [14]. Previous studies indicate that spouse unsupportive behavior is a predictor of a higher level of avoidance behavior in patients with breast cancer [14] and is connected with increased anxiety levels [15].

Unsupportive behavior is considered as obviously critical or explicit avoidant behavior [16], and for women, spouse's support is defined as the expectations they have of their husbands. Women often describe their experience of the family's practical work (working, household chores, and child care) and roles in society (emotional tasks, parenting, and building relationships). A supportive spouse provides support equivalent to or beyond their expectations. As defined by these women, unreliable supportive spouses provide support inconsistently, and unsupportive spouses do not provide sufficient support and are reluctant to do so [17]. Persistent avoidant behavior negatively affects women's psychological adaptation to breast cancer [18, 19]. The negative effect of the spouse's avoidant behaviors on the patient's psychological adaptation is greater than the positive effects of the spouse's supportive behaviors [19]. Nevertheless, recognizing the spouse's empathetic feelings, for those who do not escape hardships, reduces their anxiety levels [20]. Marital satisfaction is connected with higher

reciprocal support, interdependence, and satisfaction with supportive needs [21]. On the contrary, individuals in unsuccessful marriages do not depend on their spouse as the main support source and seek support outside of marriage [22]. In a broken marriage, couples may have a negative perception of each other's behavior. Women who experienced dissatisfaction with their marital relationships three months after the diagnosis of cancer were expected to be separated or divorced during the 8-year follow-up as compared to women who had satisfactory lives during the first three months of diagnosis [23]. An increase in cancer treatments occurred in women receiving no emotional support from their husbands [24].

The degree of men's unsupportive behavior is strongly associated with their spouse's disease-related behaviors which may reciprocally result in the women unsupportive behavior. This behavior is also related to women's discomfort and maladaptation [14]. Studies have indicated that perceptions of spouse unsupportive behavior is a predictor of more adverse behaviors in patients with breast cancer and is associated with an increase in stress levels [15, 19]. The adverse effects resulting from the spouse's undesirable behaviors on the patient's mental balance surpasses the positive effects of their supportive behaviors [16]. According to Shiozaki et al., problem-avoidance behavior is an effort made to hide worries and anxiety, evade disease-related matters, and the sensitivity to areas that changed following surgery. Therefore, problem-avoidance behaviors have pervasive and extensive effects on patients' mental adaptation. Couples-focused interventions might be enhanced by focusing on reducing couples' problem-avoidance behaviors [20].

Improving health-related behaviors needs to be considered as one of the principal goals in cancer treatment. Certainly, women are one of the rudimentary constituents of the family and society. Subsequently, promoting the lives of women with breast cancer leads to improvement in their survival, enhances their lifestyle, and results in stronger family cohesion [25]. Researchers should focus on the impact of unsupportive behaviors rather than merely on the positive effects and social support. Spouses' unsupportive behaviors have a more significant effect on stress and mental health status compared to supportive behaviors. Receiving the spouse's negative support may increase the patient's negative feelings, including fear or selfishness [26].

Finally, several studies have been conducted on the marital satisfaction of patients with breast cancer, changes in a sexual relationship, intimacy after cancer treatment, the impact of cancer on the family, and the support provided by spouses to women with breast cancer [25]. However, a review of the literature shows that little is known about unsupportive behavior in women with breast cancer and their spouses, description of patients and their differences, and factors influencing couples' perceived unsupportive behavior. Evidently, it is of particular impor-

tance that studies identify and describe patients and the differences between them as well as the influential factors in different societies. The present study was conducted to describe perceived spouse's unsupportive behaviors.

## Material and methods

### Methods

This cross-sectional study was conducted in Tabriz, Iran in 2020 to describe unsupportive behaviors perceived by women with breast cancer and their spouses. The study was approved by the Vice-Chancellor for Research of Tabriz University of Medical Sciences with ethics code number IR.TBZMED.REC.1398.991.

### Participants and setting

Participants included women with breast cancer and their spouses who were recruited at oncology hospitals in Tabriz (Iran) from April to July 2020. Inclusion criteria were being married and suffering from breast cancer or having a spouse with breast cancer. Those suffering from a severe psychological problem and unwillingness to participate in the study were excluded.

There were 440 individuals over the age of 27 years who participated. According to the findings of Manne et al. (2014), regarding an estimate of the mean (standard deviation) of the main variable equal to 16.95 (34 ± 34), 95% confidence interval, and 15% acceptable relative error of the mean, the minimum sample size was calculated to be 171 couples. The final sample size increased to 220 couples, considering 20% sample attrition.

After receiving the patients' and their spouses' medical files, they were selected randomly (<https://www.randomizer.org/>), and subsequently, the researcher contacted them and arranged an appointment to meet and complete the questionnaire. It is worth noting that questionnaires were obtained from patients and their spouses separately in different places. Written consent to participate in the study was obtained from 220 eligible couples after the study was explained, including protections related to confidentiality of their information and their right to withdraw from the study at any stage.

### Measures

The demographic information checklist collected information about participants including age, residence, education level, occupation, companion, marital status, marriage duration, residence, disease stage, surgery type, current treatment, and time to diagnosis.

The Partner Unsuptive Behavior scale (Manne & Schnoll, 2001) was administered, consisting of 13 items

to measure couples' critical and avoidant responses to cancer [27]. Items were rated on a 4-point scale (1 = never responded this way, 4 = often responded this way), and scores ranged from 13 to 52. In this present study, internal consistency for patients and spouses was 0.91. The validity of the questionnaire was evaluated and confirmed through content and face validity by 15 nursing education specialists and ten oncologists after translation-retranslation. The reliability of the questionnaire was determined by test-retest with a two-week interval on 30 individuals and after identifying Cronbach's alpha coefficient (internal consistency) and Intra-class Correlation Coefficient (ICC). Thus, for women's and men's perceived unsupportive behavior were obtained 0.96 (CI 95%: 0.91–0.98) and 0.94 (CI 95%: 0.89–0.96), respectively.

### Statistical analyses

To analyze the data, we used SPSS version 16.0 (SPSS Inc., Chicago, IL). Number (percentage) and mean (standard deviation) along with Max-Min values were used to describe variables. The Kolmogorov test with skewness and elongation indices was used to evaluate the normality of the data. In the inferential section, independent t-test, ANOVA, and Chi-square test were used. Furthermore, where the ANOVA test was significant, the Hochberg post hoc test pairwise comparison was used to compare the categories of variables. A significance level of 0.05 was considered significant in all tests.

## Results

In this study, in which 220 couples participated, the mean age and the standard deviation were 45.65 ± 9.802 in female and 51.21 ± 10.703 in male participants. The female participants' age ranged between 27 and 83 years, and that of male participants ranged between 28 and 85 years. In addition, the highest percentage of participants (51.4%, 113 individuals) had 1 or 2 children and (95.9%, 211 individuals) lived with their spouses. Most participants' income (135, 61.4%) was fully inadequate for the cost of treatments. Findings also showed that a high percentage of female (72, 32.7%) and male participants (61, 27.7%) had an elementary education level. The majority of female participants (204, 92.7%) were housewives, while male participants (74, 33.6%) were self-employed. The maximum duration of marriage was between 20 and 30 years (78, 35.5%). The most common type of surgery performed on patients (549, 54.1%) was mastectomy, and more than half of patients (125.8, 56.8%) received chemotherapy. Furthermore, most of the participants' disease diagnosis was over 24 months (63, 28.6%), at stage 3 of the disease (91, 41.4%) (Tab. 1).

Table 1. Participants' demographic and disease information (n: 440)

Variables	Categories	Gender	
		Woman (n: 220) N (%)	man (n: 220) N (%)
Age in years	< 40	56 (25.5)	25 (11.4)
	60–40	141 (64.1)	146 (66.4)
	> 60	23 (10.5)	49 (22.3)
Number of children	0	32 (24.5)	32 (14.5)
	2–1	113 (51.4)	113 (51.4)
	4–3	16 (7.3)	16 (7.3)
	> 5	59 (26.8)	59 (26.3)
Residence	City	157 (71.4)	157 (71.4)
	Village	53 (24.1)	53 (24.1)
	Suburbs	10 (4.5)	10 (4.5)
Marital status	Married	211 (95.1)	211 (95.5)
	Single	7 (3.2)	7 (3.2)
	Divorced	2 (0.9)	2 (0.9)
Type of residential house	Personal	160 (72.7)	160 (72.7)
	On rent	53 (24.1)	53 (24.1)
	Organizational	2 (0.9)	2 (0.9)
	Relatives' house	5 (2.3)	5 (2.3)
Sufficiency of monthly income for treatment	Fully	4 (1.8)	4 (1.8)
	Relatively	81 (36.8)	81 (36.8)
	Not at all	135 (61.4)	135 (61.4)
Education	Illiterate	42 (19.1)	39 (17.7)
	Primary	72 (32.7)	61 (27.7)
	Secondary	37 (16.8)	42 (19.1)
	High school	43 (19.5)	45 (20.5)
	College	26 (11.8)	33 (15.0)
Occupation	House wife	204 (92.7)	–
	Employed	14 (6.4)	–
	Student	1 (0.5)	–
	Retired	1 (0.5)	21 (9.5)
	Unemployed	–	11 (5.0)
	Employed	–	21 (9.5)
	Laborer	–	60 (27.3)
	Self-employed	–	74 (32.6)
	Farmer	–	17 (7.7)
	Driver	–	16 (7.3)
	Companion	Spouse	114 (51.8)
Father		4 (1.8)	–
Mother		5 (2.3)	–
Child		25 (11.4)	–
Relatives		42 (19.1)	–
No companion		30 (13.6)	–

→

Table 1 cont. Participants' demographic and disease information (n: 440)

Variables	Categories	Gender	
		Woman (n: 220) N (%)	man (n: 220) N (%)
Duration of marriage (years)	< 10	23 (10.5)	23 (10.5)
	20–10	60 (27.3)	60 (27.3)
	30–20	78 (35.5)	78 (35.5)
	> 30	59 (26.8)	59 (26.8)
Type of surgery	Preserving the breast	90(40.9)	–
	Mastectomy	119 (54.1)	–
	No surgery	11 (5.0)	–
Current treatment	Chemotherapy	125 (56.8)	–
	Radiotherapy	31 (14.1)	–
	Both	8 (3.6)	–
	None	16 (7.3)	–
	Control	39 (17.7)	–
Duration of diagnosis (month)	< 6	55 (25.5)	–
	12–6	54 (24.5)	–
	24–12	48 (21.8)	–
	> 24	63 (28.6)	–
Disease stage	0	7 (3.2)	–
	1	27 (12.3)	–
	2	60 (27.3)	–
	3	91 (41.4)	–
	4	35 (15.15)	–

Due to the normal distribution of unsupportive behaviors in women and their spouses, the mean and standard deviation were used to summarize reported behaviors. The mean perceived unsupportive behaviors in women and spouses were equal to 20.73 (8.44) and 18.80 (5.83), respectively. The confidence intervals of women's unsupportive behaviors and their spouses were 19.61–21.85 and 17.79–7.47, respectively. Moreover, the mean perceived unsupportive behavior in women was higher than that of men, which was statistically significant ( $P = 0.003$ ). On the other hand, considering the cut-off point of 2.5 (median) for each item and the cut-off point of 32.5 for total items, the mean was 2.03 ( $SD=0.69$ ), the t-test was 2.95, and the degree of freedom was 438 ( $P = 0.003$ ). The rate of perceived unsupportive behavior in women and their spouses was equal to 22 (10.0%) and 8 (3.6%), respectively. The chi-square test results (after confirming Cochran conditions and independent random sampling) showed a statistically significant difference between the perceived unsupportive behavior in women and their spouses ( $P = 0.008$ ) (Tab. 2).

Table 3 shows the mean score of women's perceived unsupportive behavior in different marital status categories

( $P < 0.001$ ). The Hatchberg post hoc test results showed that the mean score of unsupportive behavior of patients living in the suburbs was different from other patients, and the mean score of women's perceived unsupportive behavior was different in categories of having a companion ( $P < 0.001$ ). In addition, the mean score of women's perceived unsupportive behavior in different categories of marital status, type of housing, and men's and women's occupation was different from men's perspective ( $P < 0.001$ ). The results of the Hatchberg post hoc test showed that the support mean score of patients who had been referred to the hospital alone was different from other patients. The mean score of support in different age groups, number of children, the sufficiency of monthly income, men's and women's education, and duration of marriage did not show a statistically significant difference ( $P > 0.05$ ). Finally, the mean score of perceived spouse unsupportive behavior in different categories of current treatment was different ( $P < 0.001$ ). The Hatchberg post hoc test results indicated that the mean score of unsupportive behavior in patients of untitled or control categories differed from other patients ( $P > 0.05$ ).

Table 2. Frequency distribution and relative frequency of support questionnaire items (n: 440).

NO	Items	Woman perceived (n/%)				Man perceived (n/%)			
		Never	Rarely	Sometimes	Often	Never	Rarely	Sometimes	Often
1	Seemed impatient with you	111 (50.5)	58 (4.26)	32 (5.14)	19 (6.8)	114 (8.51)	57 (9.25)	34 (5.15)	15 (8.6)
2	Seemed angry or upset with you when they did things to help you	129 (58.6)	52 (23.6)	22 (10.0)	17 (7.7)	127 (57.7)	60 (27.3)	24 (10.9)	9 (4.1)
3	Seemed not enjoy being around you	163 (74.4)	25 (11.4)	13 (5.9)	19 (8.6)	176 (80.0)	24 (10.9)	14 (6.4)	6 (2.7)
4	You had to wait a long time for help when you needed it	128 (58.2)	38 (17.3)	30 (13.6)	24 (10.9)	149 (67.7)	47 (21.4)	15 (6.8)	9 (4.1)
5	Avoided being around you when you were not feeling well	151 (68.6)	31 (14.1)	17 (7.7)	20 (9.1)	174 (79.1)	27 (12.3)	9 (4.1)	10 (4.5)
6	Gave you the idea that they really did not want to talk about the problem you were having	127 (57.7)	39 (17.7)	23 (10.5)	31 (14.1)	149 (67.7)	34 (15.5)	20 (9.1)	17 (7.7)
7	Shouted or yelled at you	146 (66.4)	29 (13/2)	28 (12/7)	17 (7/7)	151 (68/6)	25 (11/4)	33 (15/0)	11 (5/0)
8	Did not seem to respect your feelings	163 (74/1)	36 (16.4)	12 (5.5)	9 (4.1)	187 (85.0)	26 (11.8)	5 (2.3)	2 (0.9)
9	Complained about your illness or about helping you with a task you found difficult to do by yourself	148 (67.3)	43 (19.5)	20 (9.1)	9 (4.1)	146 (66.4)	46 (20.9)	18 (8.2)	10 (4.5)
10	Seemed uncomfortable talking to you about your illness	131 (59.5)	41 (18.6)	17 (7.7)	31 (14.1)	144 (65.5)	49 (22.3)	12 (5.5)	15 (6.8)
11	Criticized the way you handled your disease and/or its treatment	189 (85.9)	19 (8.6)	9 (4.1)	3 (1.4)	203 (92.7)	11 (5.0)	4 (1.8)	1 (0.5)
12	Seemed less accepting of you since you got cancer	169 (76.8)	31 (14.1)	9 (4.1)	11 (5.0)	174 (79.1)	35 (15.9)	7 (3.2)	4 (1.8)
13	Was not emotionally supportive of you, when you were expecting some support	135 (61.4)	41 (18.6)	17 (7.7)	27 (12.3)	155 (70.5)	41 (18.6)	14 (6.4)	10 (4.5)

**Table 3. Distribution of unsupportive behaviors by demographic characteristics and disease profile in the study participants (n: 440)**

Variables	Category	Perceived female support (n: 220)		Perceived male support (n: 220)	
		Mean (SD)	p	Mean (SD)	P
Women's age in years	< 40	20.37 (9.84)	*0.865	18.19 (5.39)	*0.704
	60–40	20.96 (8.27)		18.94 (5.98)	
	> 60	20.21 (5.58)		18.52 (5.13)	
Men's age in years	< 40	21.36 (11.65)	*0.898	17.92 (5.14)	*0.706
	60–40	20.56 (8.40)		18.78 (5.82)	
	> 60	20.91 (6.68)		18.89 (5.84)	
Number of children	0	17.62 (5.50)	*0.142	18.00 (6.37)	*0.721
	1–2	21.41 (8.91)		19.02 (5.74)	
	3–4	20.06 (6.29)		17.68 (4.14)	
	> 5	21.30 (9.09)		18.78 (5.80)	
Residence	City	20.82a (8.50)	*0.020	18.83 (5.72)	*0.878
	Village	19.24a (6.37)		18.39 (6.12)	
	Suburbs	27.30b (13.63)		18.40 (3.92)	
Marital status	Married	20.40a (7.89)	* < 0.001	18.59 (5.65)	*0.254
	Single	23.57a (13.52)		20.42 (7.69)	
	Divorced	46.00b (8.48)		24.50 (7.77)	
Type of residential housing	Personal	20.43b (8.1)	*0.041	18.75 (5.98)	*0.526
	On rent	20.77b (8.68)		18.39 (5.06)	
	Organizational	17.50a, b (4.94)		15.50 (3.53)	
	Relatives' house	31.20a (14.75)		21.80 (4.65)	
Sufficiency of monthly income	Fully	17.00 (6.16)	*0.334	16.00 (3.55)	*0.465
	Relatively	19.92 (6.21)		18.35 (4.98)	
	Not at all	21.33 (9.56)		19.00 (6.19)	
Women's education	Illiterate	20.02 (6.77)	*0.557	19.07 (6.80)	*0.394
	Primary	21.36 (7.87)		18.55 (4.70)	
	Secondary	21.97 (10.22)		18.59 (6.02)	

SD — standard deviation; \*Based on ANOVA analysis of variance; \*\*Based on two independent T test samples

## Discussion

The present study describes the perceived unsupportive behaviors of women with breast cancer and their spouses. Former studies have indicated that perceived unsupportive behaviors of family members play a central role in a patient's psychological adaptation to cancer. It also influences individuals' adjustment to other challenging life events. Perceived unsupportive behaviors and failure to meet cancer patients' needs

and related factors has been shown to affect breast cancer patients' quality of life and their relationship with their spouses [28]. Our study results can yield insight for conducting interventional studies in Iran and elsewhere to improve outcomes for women with breast cancer and their families.

Using the Spouse Unsatisfactory Behavior Questionnaire, we found the item *Does not want to talk with you about the current problem and talking is annoying for him/her* had the highest percentage, and women and

their spouses reported having perceived the occurrence of this item more than other items in their spouses. A study conducted in Israel found that being close to one's spouse and talking to each other were the best predictors of their quality of life and adaptation [29]. Another study found that regular male communication was based more on not expressing emotions and low intimacy. In contrast, female communication emphasized expressing emotions, greater intimacy, talking, and close communication [27, 30]. These days, there is no difference in expressing feelings by men and women [19, 31], which is similar in our study. In both genders, not talking about the problem is the most common item of perceived unsupportive behavior. This indicates that talking about the problem is of importance for both the patient and the spouse, while the absence of communication can be irritating. The study by Manne et al. similarly states that concerns about disease progression and death need to be addressed and discussed more. Similarly, in male patients, expressing emotions helps them adapt to the disease, feel more support from the other party, and experience less stress [32]. Manne et al., also state that if the spouse perceives unsupportive behaviors, this perception suggests a broken relationship in expressing concerns with that spouse [16].

Our findings show that the mean score of women's perceived unsupportive behavior is higher than that of men's. This indicates that women perceived more unsupportive behavior from men than what men perceived of women's behavior. A study in China found that women with cancer reported higher unmet support needs than men [33]. These findings are consistent with Burg's study [34] and another study conducted in Iran [28]. This high level of unmet support needs reported in studies among women underscores the importance of paying closer attention to expressing gender-specific support needs [33]. In other studies, it has been emphasized that women with ovarian and breast cancer who were on chemotherapy had higher unmet support needs and higher stress levels than men [19, 35]. Another study stated that traditional men's routine behavior is not related to unsupportive behaviors. Studies on gender and support showed that women show more emotional support than their husbands [19], which is similarly stated in the present study and indicates that it is identical in different societies. Another study showed that gender does not predict psychological needs [36], while another states that men have higher unmet supportive care needs than women [37]. Despite the results of previous studies [36, 37], most of which have been conducted in Western countries, it is predictable that Iranian women with cancer experience more psychological support needs.

The present study reveals that factors such as marital status, companion at the time of hospital visits, residence, men's and women's occupation, and type of

residential housing affected women's perceived unsupportive behaviors and the factor of current treatment (no treatment or only control) affected men's perceived unsupportive behaviors. A study of young adult cancer patients showed that those individuals with no children had greater levels of psychological, health system/information and physical/daily living unmet needs. Such individuals who were deprived of family support considered cancer to be much more lethal [38], which is consistent with our study. In the present study, there was a significant difference between patients who visited the hospital alone to receive treatment and those visiting with their spouse, parents, or children, and it is an influential factor in the perception of unsupportive behavior.

Moreover, in the present study, unsupportive behavior in individuals who were not currently receiving treatment or only referring for control was significantly different from those receiving chemotherapy or radiation therapy which were among the factors influencing the incidence of unsupportive behaviors due to the passage of time and prolonged disease and stress concerning the future of the disease. [39, 40]

Another study in Japan found that individuals in the chemotherapy phase perceived less support than other patients who did not receive chemotherapy, and their support needs were not met [38]. These results were inconsistent with our study. The difference might be due to a lack of investigation of the association between other treatments and unmet support needs. The researchers also noted that there was not a study on differences in perceptions of support needs of patients receiving treatment compared with those who completed treatment and the type of their treatments. Support needs can change during the transition from cancer treatment to the post-treatment or survival phases [41]. Another study in China found that people who survived long-term cancer had a greater fear of cancer recurrence, which could increase their unmet support needs [42].

Another influential factor was marital life. Divorced individuals had a higher perception of unsupportive behaviors, which was similar to another study conducted in Iran that found sick women living alone were expected to have more unmet support needs. Further, individuals diagnosed with cancer are more prone to marital problems such as divorce after being diagnosed with cancer [28]. Another study conducted in Mexico also confirms the present results [43].

In the present study, marital status, men's and women's occupation, residence, and type of residential housing were among the influential factors of perceptions of women's unsupportive behaviors. These results were moderately consistent with other studies conducted in Iran, in which being married, being a housewife, and living with the spouse and children were mentioned



as influential factors [28]. Furthermore, in another study, cancer patients had more unmet financial support needs [33]. In our study alike, residence and type of residential housing were introduced as influential factors in the category of financial needs. In another study, place of residence was reported as an influential factor in perceiving supportive behaviors. It was stated that people living in suburban and rural areas had more unmet support needs [44], which is consistent with our study results showing that living in suburban areas is an influential factor.

### Limitations

This study used self-report scales to gather data, which can be considered a limitation of the study. Another limitation of this study was the difficulty of accessibility to participants due to the prevalence of COVID-19 and the accurate observance of health protocols for participants' safety.

### Conclusions

The findings of this study demonstrated that women perceive their spouses' behaviors as less supportive than their husbands' perceive women's behavior. This is consistent with other studies conducted in other parts of the world showing women with breast cancer find their husbands' behaviors less supportive. Our findings suggest the need for husbands to be more attentive to their behavior's impact on their wives and talking with each other about problems is the most imperative factor for couples to perceive support. Accordingly, it can be stated that couples who are reluctant to talk to each other about problems perceive less mutual support. Therefore, along with medications, medical consultation, and mentioned treatments, policymakers and managers should also focus on other types of interventions, including psychological consultation, in order to remove the psychological pressures of the disease from families and help couples to provide better support to each other.

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### Conflict of interest

The authors hereby state that they have no potential conflicts of interest to declare.

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