Supportive Care in Cancer (2023) 31:84
https://doi.org/10.1007/s00520-022-07502-8

RESEARCH

A silence full of words: sociocultural beliefs behind the sexual health of Iranian women undergoing breast cancer treatment, a qualitative study

Sanaz Zangeneh[1] · Mitra Savabi-Esfahani[2,3] · Fariba Taleghani[4] · Mohammad Reza Sharbafchi[5] · Mehrdad Salehi[6]

Received: 2 April 2022 / Accepted: 10 November 2022 / Published online: 27 December 2022

Abstract

Purpose Therapeutic interventions lead to impaired sexual health in women undergoing breast cancer treatment. There are some problem such as vaginal dryness, decreased libido, decreased sexual satisfaction, and decreased frequency of sexual intercourse among breast cancer survivors. This study was conducted to discover the sexual experiences of women undergoing breast cancer treatment.

Methods A total of 39 semi-structured interviews were held with the women undergoing breast cancer treatment, husbands, and health care providers. Recorded interviews were transcribed and analyzed using qualitative content analysis.

Results Three categories of cultural and gender taboos, adherence to subjective norms, and hidden values in sexuality were revealed. The cultural and gender taboos category consisted of subcategories of learned sexual shame, fear of judgment, sexual schemas, and gender stereotypes. The adherence to subjective norms category consisted of subcategories of sexual socialization, being labeled as a disabled woman and the priority of being alive to sexuality. The hidden values in sexuality category consist of subcategories of Task-based sexuality, Tamkin, and Sexuality prevents infidelity.

Conclusions Socio-cultural beliefs affect the sexual health of women undergoing breast cancer treatment, so paying attention to this issue can improve the quality of sexual health services.

Keywords Breast cancer · Sexual health · Sociocultural · Beliefs · Qualitative study

✉ Mitra Savabi-Esfahani
M_savabi@nm.mui.ac.ir; Msavabi@yahoo.com

Sanaz Zangeneh
Sanazzangeneh.m@gmail.com

Fariba Taleghani
Taleghani@nm.mui.ac.ir

Mohammad Reza Sharbafchi
sharbafchi@gmail.com

Mehrdad Salehi
Salehimehrdad1346@gmail.com

[1] Student Research Committee, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

[2] Department of Midwifery and Reproductive Health, Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

[3] Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Hezar Jerib STR, P. O. Box, Isfahan 81746-73461, Iran

[4] Faculty of Nursing and Midwifery, Nursing and Midwifery Care Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

[5] Department of Psychiatry, School of Medicine, Isfahan University of Medical Sciences, Omid Hospital, Iranian Cancer Control Center (MACSA), Isfahan, Iran

[6] Behavioral Sciences Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

Background

Breast cancer is common in women living in developing countries and accounts for 11.6% of all cancers worldwide [1]. According to the World Health Organization (WHO) in 2020, breast cancer accounts for 12.5% of all female cancers in Iran [2]. In Iranian women, the age of breast cancer has decreased below 40 years [3]. However, the breast cancer screening has been effective in early detection of breast cancer and reducing mastectomy [4]. Recently, the COVID-19 pandemic has delayed the early detection of breast cancer and increased mastectomy surgeries [5]. Fazel et al. showed that in 81% of breast surgeries after breast cancer has led to mastectomy in Iran [6].

Moreover, women with breast cancer experience a number of problems, such as vaginal dryness, decreased libido, decreased sexual satisfaction, and decreased frequency of sexual intercourse [7–9]. Therapeutic interventions, such as chemotherapy and radiotherapy, and disturbance of the mental body image, as well as reduction of the sexual self-concept, which appear after these interventions, can also lead to impaired sexual health in women undergoing breast cancer treatment [10, 11]. Studies have reported a rate of sexual dysfunction of approximately 85% after breast cancer treatment [7, 12]. In addition, studies indicate that sexual dysfunction is more common in women after mastectomy [13, 14]. Femininity, sexual desire, and attractiveness are directly related to breasts [15]. Furthermore, breast loss changes the mental body image and self-concept, and leads to feeling of disappointment, fear of rejection, and consequently sexual dysfunction [16, 17].

Breast cancer is not only a medical disease but also a threat to women's sexual attractiveness, fertility, and maternal ability [18]. A study in Brazil showed that having perfect body organs for women is part of the culture of this country, and damage and lack of body organs, especially sexual organs, can cause severe mental and sexual dysfunction in women [19]. Nasiri et al. [20] found that due to feelings of shame about sexual issues, most couples did not talk to each other about their thoughts and feelings and ignored their sexual needs after being diagnosed with cancer. Therefore, sexual problems caused by cancer treatment disrupted their marital life. Other studies showed that in European countries, although patients and their spouses consider it important to receive sexual health information, they also refuse to discuss sexual problems with healthcare providers owing to cultural taboos [21, 22]. In most Asian countries, sexual issues are regarded as taboos, and there is a conservative view of sexual issues. Additionally, talking about sexual issues has been associated with feelings of shame and guilt. As a result, there is no communication about sexual concern between the cancer patient and the health care provider [14, 23, 24]. On the other hand, researches indicated that healthcare providers did not talk to patients about sexual issues and did not provide information about sexual health for patients and their spouses due to the taboo nature of sexual issues in Western countries [25, 26]. Healthcare providers were also concerned that if they talked to patients about sexual issues, they would invade their privacy, and would cause psychological distress in patients [27].They believed that sexual issues should be considered when the patients were willing to talk about them [28].

Studies demonstrated that socio-cultural factors, couples' relationships, and women's attitude toward breast cancer affected their sexuality [29, 30]. In some societies, breast cancer is considered as a debilitating disease. Consequently, women with breast cancer are worried about their husbands. They think that their husbands consider them as an imperfect woman and reject them. Despite the women do not have sexual desire, they may want to have sex with their husbands in order to satisfy sexual needs of them [18, 31]. Furthermore, in traditional societies, cancer is equated with death. Consequently, patients are concerned about the survival and future of their family and children and do not think about sexuality [18]. In Iran, most conducted researches in which studied the sexual health of women with breast cancer had been quantitative studies [8, 9, 32]. Also, socio-cultural perspectives affecting the sexuality of cancer patients have received less attention. Improvement of the quality of care and health services for cancer patients requires an understanding of cultural beliefs, social norms, and gender roles affecting breast cancer patients' health [18]. Recognizing these beliefs can help health care providers to provide sexual health services appropriate to their cultural beliefs and social norms. It can be beneficial in societies with similar cultures and beliefs too [33].

As quantitative studies were not suitable for understanding the cultural and social barriers of sexual health in women with cancer, a qualitative approach was selected. Qualitative research is a form of social research in which people interpret their experiences [34]. Due to the taboo of sexual topics, the sexual needs of cancer patients are usually not well met. As a result, a deep understanding of cultural and social beliefs in the field of sexual issues can help meet the sexual needs and improve the sexual health of women undergoing breast cancer treatment. Furthermore, qualitative studies provide a bridge between examining the needs and recognizing sensitivities of cultural and social in the target group and offering proper health services based on them [35]. The present qualitative study was conducted to discover the sexual experiences of patients undergoing breast cancer treatment.

Methods

Qualitative studies seek to identify a particular process, phenomenon or culture from the perspective of people that are involved in it [36]. Therefore, the aim of the study was to describe the sexuality of women undergoing breast cancer treatment and their experience in this regard.

This research was a descriptive exploratory qualitative study. Based on the definition of Polit and Beck "Descriptive exploratory qualitative study is the careful description of ordinary conscious experience of everyday life a description of "things" as people experience them. These "things" include hearing, seeing, believing, feeling, remembering, deciding, evaluating, and acting" [37].

Settings and participants

The research participants included women undergoing breast cancer treatment, their husbands, and healthcare providers. Participants were women who have been referred to oncology hospital and centers with services to cancer patients, and Healthcare providers who provided health services to the patients in these centers. Inclusion criteria of the study were as follows: women undergoing breast cancer treatment in the age range of 18–50 years, married (at least 1 year of marriage), 6 months after starting treatment, no disease development and no metastasis, and no history of sexual dysfunction before breast cancer and lack of sex therapy counseling due to sexual dysfunction before breast cancer. Inclusion criteria for healthcare providers and specialists were as follows: having at least 6 months of work experience in providing services to cancer patients. Women undergoing breast cancer treatment were women who received routine breast cancer treatment for at least 6 months.

After considering the inclusion criteria and describing the objectives of the research, participants were invited to participate in the study by telephone. The time and place of the interview were determined based on agreement of the participants. Participants were selected with maximum diversity (age, occupation, level of education, type of treatment, time elapsed from diagnosis). Informed written consent was received from the participants to participate in the study.

Data collection

Data were collected through semi-structured interviews using voice recording and field notes from December 2020 to April 2021. According to the agreement of the patients, interviews were conducted in the hospital and centers which provide services to women undergoing breast cancer treatment. Interviews with health care providers were conducted at clinics or hospitals too. They were held in a private and quiet place. The date, time and place of interview were chosen based on participant's preferences. The interviews were recorded with the consent of the participants. Data collection was continued until saturation. Saturation refers to the time when new information is not obtained [37].

The interviews began by asking general questions about the sexual health experiences of women undergoing breast cancer, and the impact of breast cancer on women's sexual health. Samples of the questions were "What needs have you felt in your sexual life since breast cancer is diagnosed?" and "Based on your experience, what problems do breast cancer patients encounter in sexual health aspect?" The interviews lasted from 35 to 90 min. Information saturation was achieved after 39 interviews with 37 participants.

Data analysis

Data analysis was conducted simultaneously with conventional qualitative content analysis. The interviews were transcribed verbatim, and then the analysis unit was selected. After immersing the researchers in the data and gaining an in-depth overview of them, the initial codes were extracted. The codes then formed subcategories according to their relationship and similarities and differences with each other. Finally, the main categories emerged.

Rigor

Four criteria, namely credibility, dependability, transferability, and conformability were considered to ensure the accuracy and rigor of the data. Spending sufficient time in the field, long engagement with the research topic, in-depth interviews, selection of participants with maximum diversity, and review by participants and research team were employed to provide the data credibility. In order to ensure dependability, the research steps were carefully recorded. Examples of how to extract the categories and examination of the process and product of the research study by an external audit with the aim of supporting the results with data were provided. The data transferability was confirmed through external review by the women undergoing breast cancer treatment outside the study. Data conformability was performed by preserving the documents at all stages of the research including all raw data, written field notes, data reduction and analysis products and process notes. Several interviews and categories were also presented to some faculty members familiar with qualitative studies and outside the research team, and they were asked to check the accuracy of the coding and extraction process of the categories [38].

Results

Thirty-nine interviews were conducted with 37 participants in the study, including women undergoing breast cancer treatment, husbands, and healthcare providers. The characteristics of women undergoing the treatment and their husbands are shown in Table 1.

The healthcare providers involved in the study included oncologists, psychologists, psychiatrists, gynecologists, midwives, sexual and reproductive health specialists, and nurses, and 81.2% of them had more than ten years of work experience. A total of 200 inferential codes were extracted from the analysis of 39 interviews. After integrating duplicate codes and similar concepts, the three categories of cultural and gender taboos, adherence to subjective norms and hidden values in sexuality and ten subcategories were revealed (Table 2).

Table 1 Sociodemographic characteristics of women undergoing the treatment and their husbands

Characteristics	N (%)
Age group (years) women	
30–34	1(5.9)
35–39	1(5.9)
40–44	9(53)
45–49	4(23.5
≥50	2(11.7)
Age group (years) husbands	
30–34	0(0)
35–39	2(11.8)
40–44	2(11.8)
45–49	6(35.3)
≥50	7(41.1)
Educational level women	
Primary school	0
Secondary school and high school	7(41.2)
College	10(58.8)
Educational level husbands	
Primary school	1(5.8)
Secondary school and high school	5(29.5)
College	11(64.7)
Time passed from cancer diagnosis	
1–5 years	13(76.5)
5 years	4(23.5)
Treatment	
Mastectomy	11(64.7)
Lumpectomy	6(35.3)
Chemotherapy and radiotherapy	
Yes	14(82.3)
No	3(17.7)
Number of children	
No children	1(5.9)
One child or 2 children	14(82.3)
Three or more children	2(11.8)
Work status	
Housewife	11(64.8)
Employed	5(29.4)
Retired	1(5.8)

Cultural and gender taboos

This category consisted of learned sexual shame, fear of judgment, sexual schemas, and gender stereotypes subcategories.

Most participants stated that feeling ashamed prevented them from expressing their sexual needs to their spouses and healthcare providers, particularly caregivers of the opposite sex. Some participants considered the reason for this feeling of shame as the behavior of family and society. They believed that the religious and cultural beliefs of the family and society made talking about sex openly, shameful, and contrary to social values.

> "I can never talk to my husband about sex, because I feel ashamed. Maybe it's because of my family's behavior because I have a religious family. I say myself that I was ashamed because I always wanted to cover myself." (42-year-old patient in chemotherapy).

Interviews with healthcare provider also indicated that they, especially male healthcare providers, were reluctant to talk about the sexual needs of women undergoing breast cancer treatment. They believe in cultural and social beliefs make shame.

One of the health care providers stated that the reason for feeling ashamed of sexual issues is cultural beliefs of the families. It seems that the lack of sex education by parents causes shame in their children and this shame will continue until adulthood.

> "It's rooted in our family's cultural beliefs. When breast development begins in a girl, she is embarrassed and wears loose clothing. Most parents are not intimate with their children, and this makes it difficult for them to talk about it when they grow up." (Psychologist).

Several participants stated that they did not share their concern about sexuality with their spouses and their sexual problems with health providers and specialists due to fear of judgment. They believed that it was taboo for women in society to talk about sex. So they preferred not to think about sex and hide their sexual problems.

> "Society does not accept a woman who talks about sexual affairs, especially the genital organs. You do not

Table 2 Categories and subcategories

Categories	Subcategories
Cultural and gender taboos	Learned sexual shame
	Fear of judgment
	Sexual schemas
	Gender stereotypes
Adherence to subjective norms	Sexual socialization
	Being labeled as a disabled woman
	Inducing the priority of being alive to sexuality
Hidden values in sexuality	Task-based sexuality
	Tamkin
	Sexuality prevents infidelity

want to talk about it. It seems humiliating to you, and you think you should not think about sexuality. Both your cultural beliefs and those around you, and even your doctor affect this issue. Some doctors may not have a good connection with the patient in this regard, and you prefer to say nothing, because you are worried about your doctor's feedback." (44-year-old patient in radiotherapy).

"I always think it's ugly to talk to my husband about my sexual desire. He may think how rude I am to say such things." (42-year-old patient in radiotherapy).

Other factor was mentioned by the participants, including the roles of sexual schemas. Cultural beliefs about the roles of breasts in women's beauty and the importance of breasts in sexual intercourse had a significant effect on the mental image of the patients' body, and their reluctance to have sexuality.

As the breast is involved in the creation of women's sexual identity, loss of breast(s) after mastectomy not only disrupted women's sexual identity but also caused them to feel sexually incompetent.

"We are taught in society that the beauty of a woman is in her breasts. When I see that our beauty has decreased from one hundred to fifty, it affects my spirit. After surgery, I used to say that what I should do if my husband is not as satisfied as before. You know, breasts are very important for men in sexual relationship." (45-year-old patient in hormone therapy).

Gender stereotypes in society, including the breast as a symbol of femininity and beauty, made women with cancer feel not being a perfect and beautiful woman after mastectomy. So they did not want to be naked in front of their husbands and have sex.

"After the mastectomy, I did not want to have sex and ask it at all, because I had lost a part of my body that showed I was a woman and it was very important to me. I think the most important part of a female body is her breasts. I had a conflict with myself for a while. I had lost an organ of my beauty and femininity. I no longer wanted to have sex. I always thought that I had a disability." (42-year-old patient after mastectomy).

Moreover, some patients define their femininity in satisfying their partner's sexual needs. Satisfying their partner's sexual needs is more important than their desire to have sexuality for them. Despite they don't have the proper physical and mental condition after treatment, they agree to have sex. They think that if they do not respond to their husband's sexual needs, their femininity will be damaged.

"Iranian women, especially women of previous generations, often consider the sexual satisfaction of their husbands as femininity. Therefore they not to put their sexual needs in their priority. I saw many patients are not physically and mentally able to have intercourse, but they do it to preserve their femininity." (Sexual and Reproductive Health Specialist).

Adherence to subjective norms

This category consist of subcategories of sexual socialization, being labeled as a disabled woman and inducing the priority of being alive to sexuality.

In addition to physiological issues, sexual behavior and function are formed under the process of sexual socialization, and this process leads to the formation of sexual identity and sexual attitude.

The participants considered the roles of society and acquaintances important in their sexual life. They referred to the role of society in creating men and women' mental beliefs about sexuality. In addition, the public thoughts about the role of breasts in women's beauty and the effect of mastectomy in reducing the sexual attractiveness of women with breast cancer are factors disrupting their sexual desire.

"The words of people and acquaintances have a great impact on sexual life. The higher the level of pub-

lic thinking, the more appropriate they react to the absence of woman's breasts". (40-year-old patient in radiotherapy).
"The public view is that the presence of breasts is important to a woman's beauty, and they are important sexual organs in women's beauty and sexual relationship. That's why it is so difficult for us to lose our breasts and it damages our sexual relationship." (34-year-old patient after mastectomy).

The participants stated that people labeled women with breast cancer as disabled ones and thought that they could not have sexual relation and were not sexually attractive for their husbands after a mastectomy. They believed that society's view of a sick woman and what others say about it made women and their husbands reluctant to sexuality.

"It's very difficult to go somewhere and then people tell your husband that your wife is disabled and you need another woman. They say that your wife is sick, you are always involved in the treatment of your wife, and it is better to get another wife." (50-year-old patient in radiotherapy).
"When your husband's family considers illness and lack of breasts as a negative point, their words negatively affect your sexual desire and your husband's reaction. Gradually, your husband become cold toward you, and your life falls apart." (40-year-old patient after chemotherapy).

The husbands in the study also referred to words of relatives and the public about the inability of women with breast cancer to meet their husbands' sexual needs and perform marital duties. They believed that the view of society could make them reluctant to continue living together and leave their wives.

"The interference of people around you is very effective. For example, my mother used to say that this woman is disabled any longer and she is useless. This woman is a dead person; she can no longer have children, and you must divorce." (34-year-old patient's husband).
"When I went to the hospital with my wife, I talked to the husbands of other patients. Some of them said that a woman who gets breast cancer is no longer alive. What good is a woman who cannot have sexuality with you? These words can have a negative effect on my life." (44-year-old patient's husband).

One of the issues addressed by the participants was the reaction of healthcare providers to cancer and its impact on their morale and life expectancy. They stated that their reaction to the patients makes them think that their death is imminent and as a result they cannot think about sexual issues. Patients also avoid asking their health professionals about their sexual problems because they think that patients' sexual issues are not a priority for health care providers and that they are only concerned about their survival. Health care providers also noted that attention to saving the patient's life has led to ignoring patients' sexual needs.

"Now one of my problems is that I think if I talk to my doctor about sexual problems, he may think that this woman lives in a fool's paradise and thinks about sex under chemotherapy, and she must only think about survival." (45-year-old patient in hormone therapy).
"We have not learned to think seriously about sexual problems in women. We think more about the cure of cancer than its complications. We are more concerned about the patient's life, and no longer pay much attention to the patient's sexuality." (Nurse).

Hidden values in sexuality

This category consist of subcategories of task-based sexuality, Tamkin, and Sexuality prevents infidelity.

The analysis of interviews indicates that some women have sex despite not having sexual desire to satisfy their husband's sexual needs and a sense of duty toward their husbands. They considered the fulfillment of the husband's sexual needs to be legally, and they prioritized meeting their sexual needs over their own ones.

"When I was undergoing chemotherapy, I had no sexual desire at all and I could not bear it, because I was tired, but due to my duty I used to tell my husband that I do not want my illness make you quit sex. I have married, so meeting my husband's desire is my task. He should not quit it because of my illness. I cannot put myself away when he needs sexuality." (49-year-old patient).

Health care providers also stated that cultural and social beliefs have led to the idea in the minds of women that a woman's duty is to satisfy her husband's sexual needs.

"The mental belief of these people is that my duty is just to satisfy my husband and I was just born to satisfy my husband." (Sexual and Reproductive Health Specialist).

Some women considered themselves legally obliged to meet their husband's sexual needs. They believed that God considered it a woman's task to satisfy her husband's sexual desire, and considered it a sin to disobey this command. In addition to their sense of duty to their husbands, these women considered it religiously obligatory to satisfy their husband's sexual needs.

"You know, I first separated my bed from my husband, because I was not in a good mood at all, and I did not want to have sex with him. But then I said, well, I am a woman and I have a legal duty to meet my husband's sexual needs." (50-year-old patient in radiation therapy).

Healthcare providers also point out that the religious beliefs of some women with breast cancer have led them to sexuality with their husbands, even though they do not want.

"You know, patients are different. Some women think that they have a religious task to satisfy their husband's sexual needs, so they do it even though they do not have any sexual desire." (Psychiatrist).

In addition to the religious task, some participants mentioned the fear of rejection, husband's infidelity, and having sex with other women as the reasons for having sex with their husbands. They believed that if they did not satisfy their spouse's sexual needs, they would be betrayed.

"Some women with breast cancer are worried that their husbands will betray them, so they are satisfied with having sex." (Psychologist).
"Since I found out that I had breast cancer, I have been more inclined to have sex because I do not want to lose my husband. I'm worried he will have sex with someone else." (40-year-old patient in hormone therapy).

According to healthcare providers, women with cancer, especially young women, are worried about being rejected by their husbands, so they try to maintain sexuality with their husbands. They noted that young women with cancer think that their husbands cannot accept long years of non-sexuality and engage in sexuality to prevent infidelity.

"Some women with breast cancer are worried that their husbands will betray them and because of this they will be satisfied with having sex." (Psychologist).
"Younger women try to have sex, because they are at the beginning of their marital lives. They think that their husbands cannot deal with it for many years. They are worried that their husbands will be attracted to other women because of this problem." (Psychiatrist).

Discussion

The present study aimed to gain a deeper understanding of the sexual experiences of women undergoing breast cancer treatment and their husbands. The participants mentioned socio-cultural challenges as the most significant factors affecting their sexual life after breast cancer treatment. Socio-cultural challenges included themes of cultural and gender taboos, adherence to subjective norms, and hidden values in sexuality.

Sociocultural beliefs have caused Iranian women to feel ashamed and guilty about sexual issues and have the fear of judgment. The shame has prevented women from talking to their sexual partners about their sexual concerns [20]. Sexual behavior and function in humans in addition to biological factors is the product of the process of sexual socialization [39]. Masoumi et al. showed that family and society structure are the two main factors in the process of sexual socialization and the lack of information on sexual issues is the most important concern of Iranian women. The conservative view of the family and society towards sexual issues leads to a passive approach to sexual issues in women [40]. Speaking and expressing sexual desires are limited by sociocultural norms hidden in society in Iran [41]. In another study, Masoumi et al. indicated that Iranian women believe that requesting sexual intercourse and talking about sexual desire should be made by men. Moreover, the expression of sexual desire by women is incompatible with the cultural values of Iranian society. Iranian women maintain that they should exhibit their sexuality indirectly. Gender stereotypes have caused most Iranian women to be passive in sexuality, and men manage sexual relations [42]. Pinar et al. showed that in Turkey, sexual issues are taboo and women with gynecological cancers cannot easily talk about it because of shame [23]. Furthermore, the culture of silence is the main process of expressing sexual desires among Iranian women [42]. The cultural belief has prevented women with breast cancer from raising their sexual problems with health care providers [43]. Not only in Iran but also in other Asian countries such as Turkey, China, and Indonesia, cultural and gender taboos have prevented women with breast cancer from expressing their sexual problems with healthcare providers and specialists. Talking about sexuality is considered taboo and embarrassing in these societies. This view has prevented cancer patients from expressing their sexual problems to the staff of oncology clinics due to fear of being judged. As there are conservative views about sexual problems, healthcare providers cannot easily talk to patients about them too [14, 44, 45]. Studies showed that the view is not unique to Asian and traditional countries. Talking about sexual health is one of the challenges of oncology departments in Western countries as well. So, the taboo of sexual issues has led to discussions between cancer patients and healthcare providers are limited [46, 47].

The study indicated that women's sexual schemas resulted from basic and nuclear beliefs about their sexuality may manifest in their experiences of breast cancer and guide their sexual behavior. Women with negative sexual schemas were conservative about sex and had negative attitudes and values about sex. These beliefs were manifested in the form of conservative behavior toward

sexual issues, sexual dysfunction, and impaired mental body image. The women's openness about sex is not culturally accepted in the Iranian society. So, it leads to the growth of negative sexual schemas in women [48]. Anderson [49] showed that women who have a negative sexual schema tend to be conservative about sexual issues and have negative attitudes and values about it, so they are shy and cautious about sexual issues. They also have a weak body image. Mojtabaei et al. examined the role of sexual schemas and body image on female sexual function. They revealed that women who had a shy-cautious sexual schema had a negative body image and as a result, poor sexual function [50]. Recognizing the factors affecting women's sexual function such as sexual schemas, and paying attention to these factors by health care professionals can improve communication patterns and provide sexual health services to them [51].

The research results indicate that the views of people and acquaintances of women undergoing breast cancer treatment about cancer and their cultural beliefs about breast cancer as a factor, disrupt women's attractiveness and femininity, as well as their sexual function and marital life. Therefore, the people's views about cancer affect the sexual life of women with breast cancer directly and indirectly [18]. Totally, there is belief that cancer is a debilitating disease and the belief is associated with loss of sexual attractiveness, desire, and function [52]. This thinking causes women with breast cancer to be labeled disabled to take care of the family and meet their husbands' sexual needs (40). A study by Abuidris et al. [53] also showed that women with breast cancer are labeled incapable to doing cares for their husbands and children in Sudan. This has led to women avoiding breast cancer treatment.

Cultural beliefs caused the women in the study to be committed to meeting their husbands' sexual needs despite their lack of sexual desire. In Iranian culture, sexual affairs are managed by men; and women have perceived their husbands' sexual needs as a priority, and consider it a part of their marital tasks [42]. Some participants regarded it as their legal task to satisfy their husbands' sexual needs. Besides, some women consider submission to their husbands' desire and satisfaction of their sexual needs as worship of God [41]. Sexual submission to the husband is a social norm in some countries and women are legally obliged to meet their husband's sexual needs. It is called "Tamkin" [54]. Observance of Tamkin is known as a godly act and a characteristic of an ideal woman [41]. In the present study, several participants regarded the fear of rejection and husband's betrayal as the reasons for conducting sexuality by women with breast cancer. A study in Bahrain indicated that women with cancer positively responded to their husbands' sexual needs under any circumstances due to fear of the husbands' remarriage and breakdown of their marital life [31].

In Pakistan, women after marriage legally consider themselves responsible for meeting their husbands' sexual needs. Therefore, if they do not succeed, their married life will be in trouble [55].

A study in Malaysia indicated that some women with breast cancer succumbed to the religious and cultural beliefs of the community and accepted remarriage after contracting the disease They believed that they could not satisfy their husbands' sexual needs and their husbands legally have the right to remarry [56].

Totally, the present study shows sociocultural beliefs behind the sexual health of Iranian women undergoing breast cancer treatment which can be useful in other countries with cultural similarities. Identifying these beliefs can help to improve sexual health services to breast cancer patients. Furthermore, it may be suitable for healthcare providers, if they encounter immigrant women in similar situation.

Limitation of the study

As in other qualitative studies, the transferability of the findings to other populations is limited. Considering that sexual issues are taboo in Iran, women did not easily talk about their sexual experiences. Therefore, the participants' cooperation and talking about their experiences may be limited. Consequently, the findings of the study may not reflect all sociocultural beliefs behind the sexual health of Iranian women undergoing breast cancer treatment.

Conclusion

The findings of the study showed that the sexual health of women undergoing breast cancer treatment is directly and indirectly affected by socio-cultural factors. Gender taboos, subjective norms, and hidden values in sexual relations affect the sexual health of women undergoing breast cancer, which should be considered in providing sexual health services to them.

Acknowledgements The authors would like to acknowledge the help of all the participants involved in this study.

Author contribution All authors contributed to the study conception and design. Material preparation, data collection, and data analysis were performed by SZ and MSE. The first draft of the manuscript was written by SZ, MSE and FT. All authors read, revised and approved the final manuscript.

Funding This study is part of a reproductive health PhD thesis funded by Isfahan University of Medical Sciences.

Declarations

Competing interests The authors declare no competing interests.

Ethics approval and consent to participate Ethical approval for this study has been obtained by the ethics committee affiliated with Isfahan University of Medical Sciences, Isfahan, Iran (IR.MUI.RESEARCH.REC.1399.501). Participation in this study was completely anonymous and based on written informed consent.

Conflict of interest The authors declare no competing interests.

References

1. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A et al (2018) Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin 68(6):394–424
2. WHO World Health Organization (2022) https://www.who.int/cancer/country-profiles/IRN_2020.pdf?ua=1. Accessed 2 dec 2021
3. Maleki M, Mardani A, Ghafourifard M, Vaismoradi M (2021) Qualitative exploration of sexual life among breast cancer survivors at reproductive age. BMC Womens Health 21(1):1–10
4. Burstein H, Curigliano G, Thürlimann B, Weber W, Poortmans P, Regan M et al (2021) Customizing local and systemic therapies for women with early breast cancer: the St. Gallen International Consensus Guidelines for treatment of early breast cancer 2021. Ann Oncol 32(10):1216–35
5. Song H, Bergman A, Chen AT, Ellis D, David G, Friedman AB et al (2021) Disruptions in preventive care: mammograms during the COVID-19 pandemic. Health Serv Res 56(1):95–101
6. Fazel A, Tirgari B, Mokhber N (2008) An investigation of effect of mastectomy on temperament and quality of life in breast cancer sufferers. J Shaheed Sadoughi Univ Med Sci 3:26–28
7. Chang Y-C, Chang S-R, Chiu S-C (2019) Sexual problems of patients with breast cancer after treatment: a systematic review. Cancer Nurs 42(5):418–425
8. Fahami F, Savabi M, Mohamadirizi S, Shirani N (2014) Relationship between sexual dysfunction and treatment modality in patients with gynecologic and breast cancers. Iran J Obstet Gynecol Infertil 17(116):15–22
9. Shandiz FH, Karimi FZ, Rahimi N, Abdolahi M, Anbaran ZK, Ghasemi M et al (2016) Investigating sexual function and affecting factors in women with breast cancer in Iran. Asian Pac J Cancer Prev 17(7):3583–3586
10. Cobo-Cuenca AI, Martín-Espinosa NM, Sampietro-Crespo A, Rodríguez-Borrego MA, Carmona-Torres JM (2018) Sexual dysfunction in Spanish women with breast cancer. PLoS ONE 13(8):e0203151
11. Teo I, Reece GP, Christie IC, Guindani M, Markey MK, Heinberg LJ et al (2016) Body image and quality of life of breast cancer patients: influence of timing and stage of breast reconstruction. Psycho-Oncol 25(9):1106–1112
12. Harirchi I, Montazeri A, Bidokhti FZ, Mamishi N, Zendehdel K (2012) Sexual function in breast cancer patients: a prospective study from Iran. J Exp Clin Cancer Res 31(1):1–6
13. Streb J, Jabłoński MJ, Słowik AJ, Babczyk D, Jach R (2019) Indications for sexology consultation in women after surgical treatment due to breast cancer. Ann Agric Environ Med 26(2)
14. Oskay U, Can G, Basgol S (2014) Discussing sexuality with cancer patients: oncology nurses attitudes and views. Asian Pac J Cancer Prev 15(17):7321–7326
15. Pikler V, Winterowd C (2003) Racial and body image differences in coping for women diagnosed with breast cancer. J Health Psychol 6:632
16. Kunkel EJ, Chen EI, Okunlola TB (2002) Psychosocial concerns of women with breast cancer. Primary Care Update for ob/gyns 9(4):129–134
17. Triberti S, Gorini A, Savioni L, Sebri V, Pravettoni G (2019) Avatars and the disease: digital customization as a resource for self-perception assessment in breast cancer patients. Cyberpsychol Behav Soc Netw 22(8):558–564
18. Tetteh DA (2017) The breast cancer fanfare: sociocultural factors and women's health in Ghana. Health Care Women Int 38(4):316–333
19. Ferreira SMdA, Gozzo TdO, Panobianco MS, Santos MAd, Almeida AMd (2015) Barriers for the inclusion of sexuality in nursing care for women with gynecological and breast cancer perspective of professionals1. Rev Lat -Am 23:82–9
20. Nasiri A, Taleghani F, Irajpour A (2012) Men's sexual issues after breast cancer in their wives: a qualitative study. Cancer Nurs 35(3):236–244
21. Wendt C (2017) Perception and assessment of verbal and written information on sex and relationships after hematopoietic stem cell transplantation. J Cancer Educ 32(4):681–689
22. Hill EK, Sandbo S, Abramsohn E, Makelarski J, Wroblewski K, Wenrich ER et al (2011) Assessing gynecologic and breast cancer survivors' sexual health care needs. Cancer 117(12):2643–2651
23. Pinar G, Pinar T, Akalin A, Saydam T, Ayhan A (2015) Problematic areas related to sexual life of individuals with gynecological cancer: a qualitative study in Turkey
24. Vahdaninia M, Montazeri A, Goshtasebi A (2009) Help-seeking behaviors for female sexual dysfunction: a cross sectional study from Iran. BMC Womens Health 9(1):1–7
25. Reese JB, Sorice K, Lepore SJ, Daly MB, Tulsky JA, Beach MC (2019) Patient-clinician communication about sexual health in breast cancer: a mixed-methods analysis of clinic dialogue. Patient Educ Couns 102(3):436–442
26. Albers L, Van Ek G, Krouwel E, Oosterkamp-Borgelink C, Liefers G, Den Ouden M et al (2020) Sexual health needs: how do breast cancer patients and their partners want information? J Sex Marital Ther 46(3):205–226
27. Stilos K, Doyle C, Daines P (2008) Addressing the sexual health needs of patients with gynecologic cancers. Clin J Oncol Nurs 12(3)
28. Julien JO, Thom B, Kline NE, editors (2010) Identification of barriers to sexual health assessment in oncology nursing practice. Oncol Nurs Forum
29. Vieira EM, Santos DB, Santos MAd, Giami A (2014) Experience of sexuality after breast cancer: a qualitative study with women in rehabilitation1. Rev Lat-Am Enferm 22:408–14
30. Yan R, Yu J, Tanimoto T, Ozaki A, Lu X, Che B et al (2020) The relationship between sexual activity and sexual attitudes among breast cancer survivors in China. Cancer Med 9(10):3425–3436
31. Jassim GA, Whitford DL (2014) Understanding the experiences and quality of life issues of Bahraini women with breast cancer. Soc Sci Med 107:189–195
32. Fathi Aghdam G, Haghighat S, Dorri S, Nazeri N, Ajorbandian A (2018) The comparison of sexual satisfaction and body image between women with breast cancer after treatment and healthy women. Iran J Breast Dis 11(2):46–55
33. Carter J, Lacchetti C, Andersen BL, Barton DL, Bolte S, Damast S et al (2018) Interventions to address sexual problems in people with cancer: American Society of Clinical Oncology clinical practice guideline adaptation of Cancer Care Ontario guideline. Am J Clin Oncol 36(5):492–511
34. Holloway I, Galvin K. Qualitative research in nursing and healthcare: John Wiley & Sons; 2016.
35. Rashidi BH, Kiyani K, Haghollahi F, Sighaldeh SS (2015) Sexual health definition from the perspective of Iranian experts and description its components. Tehran Univ Med J 73(3)

36. Grove SK, Burns N, Gray J (2012) The practice of nursing research: appraisal, synthesis, and generation of evidence: Elsevier Sci
37. Polit DF, Beck CT (2008) Nursing research: generating and assessing evidence for nursing practice: Lippincott Williams & Wilkins
38. Lincoln YS, Guba EG (1985) Naturalistic inquiry. Sage
39. Shirpak K (2013) Sexuality in human and sexual health. Tehran, Iran: Arjmand Pulication
40. Maasoumi R, Lamyian M, KhalajAbadiFarahani F, Montazeri A (2013) Women's perception of sexual socialization in Iran: a qualitative study. Qual Health Res 2(3):221–33
41. Khoei EM, Whelan A, Cohen J (2008) Sharing beliefs: what sexuality means to Muslim Iranian women living in Australia. Cult Health Sex 10(3):237–248
42. Maasoumi R, Taket A, Zarei F (2018) How Iranian women conceptualize the role of cultural norms in their sexual lives. Sex Cult 22(4):1376–1390
43. Faghani S, Ghaffari F (2016) Effects of sexual rehabilitation using the PLISSIT model on quality of sexual life and sexual functioning in post-mastectomy breast cancer survivors. Asian Pac J Cancer Prev: APJCP 17(11):4845
44. Zhang X, Xia L, Shi X (2019) A qualitative research on the postoperative sexual life states of women with cervical cancer in Ningxia. Chin J Hum Sex 28:157–160
45. Abraham J, Puteri M (2015) Sexual self-schema, perceptions of breast talk, and physical self-concept in breast cancer survivor. Int J Public Health 4(2):131–9
46. Charif AB, Bouhnik A-D, Courbiere B, Rey D, Préau M, Bendiane M-K et al (2016) Patient discussion about sexual health with health care providers after cancer—a national survey. J Sex Med 13(11):1686–1694
47. Stead ML, Brown J, Fallowfield L, Selby P (2003) Lack of communication between healthcare professionals and women with ovarian cancer about sexual issues. Br J Cancer 88(5):666–671
48. Mojtabaee M, Saberi H, Alizadeh A (2014) Women sexual function: the role of sexual–self schema and body image. J Health Psychol 3(9):45–60
49. Andersen BL, Cyranowski JM (1995) Women's sexuality: behaviors, responses, and individual differences. J Consult Clin Psychol 63(6):891
50. Mojtabayi M, Saberi H, Alizadeh A (2015) The role of sexual–self schema and body image on women sexual function. J Health Psychol 4(13):21–40
51. Salehi M, Moradi O, Arefi M, Yar AY (2019) The relationship between sex schemas and sexual satisfaction of couples: the mediating role of communication patterns. J Health Care 21(3):242–251
52. Vaughn M, Silver K, Murphy S, Ashbaugh R, Hoffman A (2015) Women with disabilities discuss sexuality in San Francisco focus groups. Sex Disabil 33(1):19–46
53. Abuidris DO, Elsheikh A, Ali M, Musa H, Elgaili E, Ahmed AO et al (2013) Breast-cancer screening with trained volunteers in a rural area of Sudan: a pilot study. Lancet Oncol 14(4):363–370
54. Abadi OSRR, Cheraghi MA, Tirgari B, Nayeri ND, Rayyani M (2018) Feeling an invisible wall: the experience of Iranian women's marital relationship after surgical menopause: a qualitative content analysis study. J Sex Marital Ther 44(7):627–640
55. Tahir K, Khan N (2021) Mediating role of body image between sexual functioning and marital intimacy in Pakistani women with breast cancer. Psycho-Oncol 30(2):260–266
56. Ya SNC, Muhamad R, Zain NM, Zakaria R, Ishak A, Hassan II et al (2021) Coping strategies for sexual problems and sexual dysfunction amongst Malay women with breast cancer. A qualitative study J Sex Med 9(3):100336