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Review Article

Others Section

Sexual Health Needs of Women with Breast Cancer: A Rapid Review

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ABSTRACT

Introduction: The number of women diagnosed with breast cancer has been rising globally over the past few decades. Upon hearing of a breast cancer diagnosis, women face many challenges including emotional distress, body image issues and sexual dysfunction. Regarding the importance of sexuality for breast cancer patients, this paper aims to validate the sexual health needs of women with breast cancer.

Aim: To assess the sexual health needs of women with breast cancer and a need for further research.

Materials and Methods: This research is a rapid review conducted in Iran, in April 2020. Databases of PubMed, Cochrane Library, Scopus and Web of Science as well as the Iranian Scientific Information Database (SID), were searched with mentioned keywords, "Female Breast Cancer", "Sex Counselling", "Female Sexual Dysfunction" and "Sexual Health Needs".

Results: This review included 16 studies with one randomised clinical trial, four cross-sectional, four review articles, three qualitative articles, three mixed-method studies and one cohort study. This study highlights four major sexuality-related information regarding needs of women with breast cancer including: informational need about sexual activity; informational need about fertility-preserving options before starting breast cancer treatment; informational need about prosthesis or breast reconstruction surgery, and informational need about physical changes caused by breast cancer treatments.

Conclusion: This review highlight the importance of sexual health needs for female breast cancer patients. However, little attention has been received from women's health professionals, researchers and further research on sexuality and breast cancer is recommended to affirm these research findings.

Keywords: Carcinoma, Needs assessment, Sex counselling, Sex dysfunction

INTRODUCTION

Breast cancer incidence has been steadily increasing over the last few decades due to the dramatic changes in women's lifestyle including changes in their diet and daily routine [1,2]. According to the world cancer statistics, in 2018, the global incidence rate of female breast cancer was about 2.1 million or 24% of all cancer cases worldwide [3]. Also, in Iran, the breast cancer rate is reported about 13776 cases or 27% of all types of cancer nationwide [4].

Breast cancer is associated with many physical, psychosocial, economical and sexual complications which have a long-term negative impact on the quality of life in women with breast cancer [5,6]. According to the World Health Organisation (WHO), "Sexual Health" is not just the absence of sexual dysfunction or sexual disorder, but it is a combination of a person's physical, emotional, mental and socio-cultural health and well-being [7]. Based on the Maslow's hierarchy of needs, the sexual need is one of the basic physiological needs for human survival and as important as other biological requirements such as food, drink and sleep [8]. Since the number of breast cancer survivors is higher than the survivors of other types of cancer, therefore, paying attention to the needs of women with breast cancer should be prioritised by the women's health professionals worldwide [9-11].

Women with breast cancer face many physical and psychological health problems that may affect their sexual desire and sexual activities [12,13]. A mixed-method study on sexual dysfunction following the diagnosis and treatment of breast cancer in Chinese women by Wang F et al., (2013) found that women with breast cancer complain about the decreased sexual activity frequency, loss of libido, menopausal symptoms, and changes in body image as well as misconceptions about sex. Also, they found out that women need sexual health counselling before and after breast cancer treatment [14]. Furthermore, the results of a cross-sectional study by Leila M et al., (2016) on sexual activity after breast cancer showed a significant difference between sexual satisfaction in breast cancer patients and women without breast cancer (p-value=0.0003) [15].

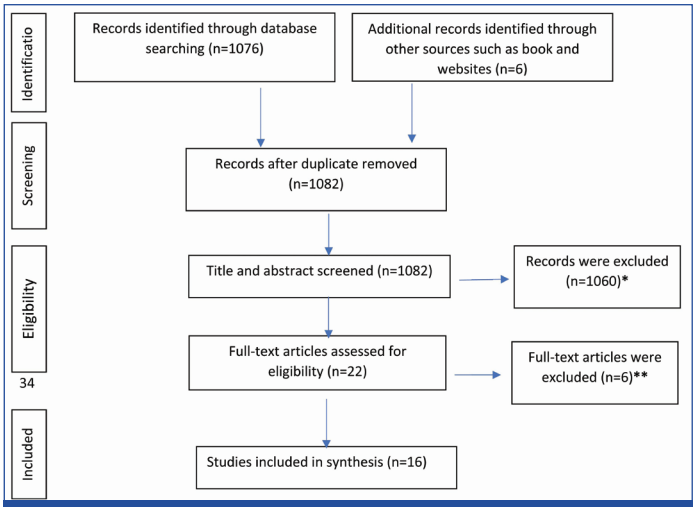
Overall, after reviewing the existing national and international literature, authors found that, so far, few researchers have addressed the sexual needs of women with breast cancer. Therefore, this rapid-review study was conducted to assess the sexual needs in women with breast cancer.

MATERIALS AND METHODS

Rationale for a rapid review: A rapid review is a type of research that can be conducted in a short period of time by simplifying the process of a systematic review study [16]. The present study is part of a research project in partial fulfilment of a master's degree in midwifery by course and was approved by the University's Human Ethics Committee with a reference number of IR.MAZUMS.REC.1399.513. Regarding the time limit for completion of a master's degree program, a rapid review approach was selected as the sui type of knowledge synthesis for this research.

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) was used for the methodological steps for this rapid review study [Table/Fig-1] [17].

Information sources and search strategy: The present paper is a rapid-review conducted in Iran in April 2020. The public health databases such as PubMed, Cochrane Library, Scopus, Web of Science and Google Scholar, as well as the Iranian Scientific Information Database (SID), were searched. The key terms used for the search were including "Female Breast Cancer", "Sex Counselling", "Female Sexual Dysfunction" and "Sexual Health Needs". Authors also checked the reference lists of the articles manually for relevant studies. All the research process and procedures such as searching titles and abstracts as well as screening the full-text papers and data analysis were conducted by the student and two experienced researchers independently.



[Table/Fig-1]: PRISMA flow diagram for sexual health needs of women with breast cancer: Rapid review.
*1060 articles were excluded because their abstracts were not relevant to the present study.
**6 articles were excluded because their introduction, results or discussion as well as the conclusions were not relevant to the present study

Inclusion and Exclusion criteria: All research articles concerning sexual health needs in women with breast cancer that have been published since 1990, published in English and Persian languages were included and studies in other languages were excluded.

Study selection screening: Firstly, after careful screening of 1082 articles' title and abstract, 1060 of them were excluded because of not being related to the title and abstract of this manuscript. Secondly, authors carefully screened the remaining articles' full-text and we excluded six more articles because of not being related to the full-text of this manuscript. Finally, 16 articles were selected including one randomised clinical trial study [12], four cross-sectional [15,18-20], four review articles [21-24] three qualitative articles [25-27], three mixed-method studies [14,28,29], one cohort [30] and the title, abstract and full-text related to this manuscript has been shown in [Table/Fig-2].

Study quality assessment: The assessment of methodological quality for the eligible articles was performed by using the 22-item STROBE checklist [31,32]. The 32-item Consolidated Criteria for Reporting Qualitative Studies (COREQ) checklist for eligible qualitative studies [33,34], the 5-item Mixed-Method Appraisal Tool (MMAT) checklist for eligible mixed-method studies [35], the 27-item PRISMA checklist for eligible systematic review papers [36] and finally 25-item Consolidated Standards of Reporting Trials (CONSORT) checklist for the randomised clinical trial studies [37].

Based on the STROBE checklist with minimum and maximum scores of 0-44, the eligible studies with less than 15.5 score categorised as the low-quality studies, articles with 15.5-29.5 scores were classified as the mid-quality articles and studies with 30-44 scores ranked as the high-quality articles [31]. In MMAT checklist for mixed-method's studies 5 is high score that means studies with 5 score have high quality [35].

RESULTS

In this current study, the selected articles were as follows: seven high-quality studies including one randomised clinical trial [12], three mixed-method [14,28,29] and three qualitative research papers [25-27], as well as, nine mid-quality studies (four cross-sectional studies [15,18-20] and four review articles [21-24] plus one cohort [30].

The main findings of this rapid-review study can be summarised as follows: 1) Women need more information about sexual desire and sexual activity during and after breast cancer treatment, 2) Women of reproductive age need more information about fertility-preserving options before starting breast cancer treatment, 3) Women need more information on a prosthesis or breast reconstruction surgery options and alternatives, and 4) women need more information about temporary and long-term physical changes caused by breast cancer treatments.

Women need more information about sexual desire and sexual activity during and after breast cancer treatment: The two mixed-method studies [14,28] on the misconceptions of sexuality

S. No.	Author, year and place of study	Study design	Sample size	Inclusion criteria	Instrument	Checklist	Quality score	Results
1	Albers LF et al., 2020, Netherland [18]	Cross-sectional l study	173 breast cancer patients and 76 of their sexual partners	Women with breast cancer whom cancer treatments have been performed.	57 items questionnaire in relation to demographic factors and sexual function before and after a breast cancer diagnosis	[1]STROBE	19	Total 24.9% of participants said directly that needed for receiving information about sexual needs and 48.6% of women needed to receive sexual information through brochures, 35.3% through websites, 27.2% through healthcare providers.
2	Hamzehgardeshi Z et al., 2017, Iran [12]	Randomised clinical trial	40 samples in 2 intervention groups and 40 samples in a control group	Women with breast cancer diagnosis, having the experience of mastectomy, age 30-60 years, having atleast primary educations, being married and receiving hormone therapy	Body image scale, Beck depression scale in six sessions and each session was 90 minutes include information about breast cancer, sexual issues, body image and ways to solve that	[2]CONSORT	25	Body image score in the intervention group before receiving support program was 21.82±1.66 and after receiving supportive program was 7.05±2.70, body image scale in the control group before receiving supportive program was 21.7±1.48 and after receiving supportive program was 22.92±1.49 That has shown a positive effect of the supportive program on the patients' body image.
3	Alianmoghaddam N et al., 2017, New Zealand [21]	Review	–	–	–	[3]PRISMA	21	It is better to use BCS surgery instead of mastectomy in the early stages of breast cancer in women of reproductive ages. These women needed to be informed before starting any treatment method.
4	Leila M et al., 2016, Tunisia [15]	Cross-sectional study	50 samples	Have passed atleast 3 months after treatment, doesn't receive any oncology drug on the time the study initiated, ability of communicate	Body image and sexuality questionnaire QLQ- BR23, Anxiety and depression scale HAD	STROBE	18	Mean score of sexual function and sexual satisfaction in women with breast cancer was 45.3 and 43.9% respectively. 42% and 44% of women had anxiety and depression respectively and lack of anxiety symptoms had significant differences with sexual satisfaction in these women (p=0.0003).

5	Male DA et al., 2016, Canada [24]	Literature review	–	Inclusion criteria: American, Europian, Asian and Middle east countries' breast cancer women	–	PRISMA	21	High proportion of women with breast cancer in comparision to general population had problems in relation to sexual health, body image, sexual function and fertility and some of them said that did not receive enough related cares. Receiving sexual care services from health care providers were so less than sexual needs in women with breast cancer
6	Jassim GA and Whitford DL, 2014, Bahrain [25]	Qualitative	12 samples	All Bahraini women with breast cancer	Interview	[4]COREQ	29	Results of study were classified in themes include spiritual issues, believes about aetiology of breast cancer, the impact of the disease on relationship changes, the role of spouse on the patient's quality of life, coping techniques, the reaction of people around
7	Taleghani F et al., 2014, Iran [27]	Qualitative	19 samples	Lack of metastasis or previous mental disease or previous cancer or another chronic disease, passing atleast one year from diagnosis time, lack of end-stage breast cancer, willingness to participate in the study and share their personal experiences	Interview	COREQ	32	Empowerment needs of participants' point of view were classified in three main groups include information (primary empowerment program such as timely and comprehensive, coordinating and continuing, easy and full-time access to information), believes (approve empowerment program to implement such as acceptance of reality, trust and hope and new beliefs), skills (effective implementation of the program such as communication skills, expression of needs, feelings, questions and use of the internet).
8	Hwang SY et al., 2013, Korea [19]	Cross-sectional study	534 samples	Ages between 20-80 years, stage 1,2,3 of breast cancer, lack of systemic metastasis, lack of psychosis, dimension and suicidal behaviour	Quality of life questionnaire QOL, Degree of cooperation with oncology groups Questionnaire ECOG_PS, Beck depression questionnaire BDI	STROBE	20	Mean score of sexual needs in women undergoing chemotherapy (Mean=6) was more than women who did not undergo chemotherapy (Mean=5)
9	Wang F et al., 2013, China [14]	Mixed-method	Quantitative phase: 180 samples, Qualitative phase: 20 samples	Age 30-60, breast cancer diagnosis and treatment in years 2007-2012, married and live with a spouse	Quantitative phase: researcher-made demographic questionnaire Qualitative phase: interview	[5]MMAT	5	Quantitative phase: 92% of patients needed sexual counseling Qualitative phase: in 7 themes include decrease number of sexual relationship, decrease sexual desire, menopausal symptoms, body image changes, Misconceptions about sexual relations and need of sexual counselling
10	Christinat A and Pagani O, 2012, Sweden [22]	Review	–	–	–	PRISMA	21	A multiple clinical approach of breast cancer care should be included planning for fertility after treatment.
11	Park BW and Hwang SY, 2012, Korea [20]	Cross-sectional study	52 samples	Having recurrent breast cancer, ages between 20-80 years, lack of Demensia or psycosis or suisidal behavior	Quality of life questionare QOL, Beck depression questionnaire BDI, Supportive care need's questionnaire SCNS, Breast cancer treatment's performance evaluating scale FACT-B	STROBE	18	There was significant relationship between depression and physical (p=0.001), psychological (p<0.001) and informational health (p=0.002) needs.
12	Ussher JM et al., 2013, Australia [29]	Mixed-method	1965 samples	Age >18 years, previous or recent experience of breast cancer	Quantitative phase: BCNA online questionnaire of sexual well-being after breast cancer Qualitative phase:interview	MMAT	5	Quantitative phase: 55% of participants had sexual problems and 68% need information about it Qualitative phase: Need to receive information about physical changes, sexual response, sexual relationship issues, psychological and body image problems

13	Klaeson K et al., 2011, Sweden [26]	Qualitative	12 samples	Age <50 years of breast cancer's diagnosis time, lack of menopause, passing atleast 6 months from breast cancer diagnosis time	interview	COREQ	32	Results were classified in 1 main group includes feeling equal to other people in the community and 4 subgroups include having different feelings with others, having an unjust body, changing sexual arousal and re-evaluating
14	Cruz MR et al., 2010, America [23]	Systematic review	–	–	–	PRISMA	21	These are several ways to reproductive preservation such as using GnRH analogue drugs and freezing the eggs
15	Ganz PA et al., 2003, America [30]	Cohort	577 samples	Age ≤50 years of breast cancer's diagnosis time, 2-10 years after treatment, stage 0, 1 or 2 of breast cancer	Sexual function questionnaire SF-36, Quality of life questionnaire QOL	STROBE	20	Only 12% of women wanted to have a regular plan for pregnancy and with age growing up women had less concern about reproductive status
16	Reaby LL, 1998, Australia [28]	Mixed-method	95 samples	Performing mastectomy in years 1986-1992	Quantitative phase: researcher-made demographic questionnaire Qualitative phase: interview	MMAT	5	Quantitative phase: 58% of women wanted to do breast reconstruction and 42% wanted to do prosthesis. Qualitative phase: Women with Breast cancer wanted to perform breast reconstruction surgery for reasons like regaining a sense of feminity, helping the balance and symmetry and beauty of breasts, forgetting the disease, enhancing the marital and sexual relationship. Reasons such as being old, scaring from people's perception and breast cancer recurrence led to avoiding from breast reconstruction surgery

[Table/Fig-2]: Summary of selected articles [12,14,15,18-30].
[1]Strengthening The Reporting of Observational Studies In Epidemiology; [2]Consolidated Standards of Reporting Trials; [3]Preferred Reporting Items for Systematic reviews and Meta-Analyses; [4]Consolidated criteria for reporting qualitative research; [5]Mixed-method Appraisal Tool

in women with breast cancer found that some women believe that having sexual activity after chemotherapy is not safe for themselves and their partners due to the side-effects of chemotherapy. They also believe that sexual activity stimulates the secretion of their sex hormone, oestrogen, which may increase the risk of breast cancer recurrence. All these sexuality misconceptions influence quality of life in women with breast cancer. Some women also decline reconstruction surgery after mastectomy due to their self-perceived stigma around breast implants and breast augmentation. They believe these types of procedures are luxury plastic surgery that is suitable for younger women. They also believe breast reconstruction surgery after mastectomy increases the risk of breast cancer recurrence significantly [14,28].

Women of reproductive age need more information about fertility-preserving options before starting breast cancer treatment: Results of three review studies [21-23] and one cohort study [30] about fertility in women with breast cancer have shown that future fertility status is one of the main concerns in women of reproductive age. These women are worried about being infertile because of chemotherapy and other cancer treatments. Since hot flashes are most commonly due to menopause, women may have become more concerned with the onset of hot flashes after starting chemotherapy and they need more information accordingly. For instance, women need more evidence-based information from their healthcare providers around hormonal therapies as well as ovarian tissue or egg freezing options before starting any breast cancer treatment and procedures [21-23,30].

Women need more information on a prosthesis or breast reconstruction surgery options and alternatives: One mixed-method study and one qualitative study [19,21,22,25,27,28] concerning breast reconstruction surgery found that women with breast cancer need the breast reconstruction surgery after mastectomy for many reasons including regaining a sense of feminity, improving symmetry and beauty of breasts, forgetting the disease, enhancing marital relationship by recovering sexual attractiveness. Some women report that they feel unattractive to their sexual partners during sexual activity due to the loss of their breasts. That's why they feel that their physical attractiveness has reduced, their self-confidence has increased and their marital relationship has improved after a breast implant surgery. Also, some women have stated that the scar tissues left by surgery make them nervous, while breast reconstruction surgery helps them to feel attractive again. Some women were reluctant to use external prosthesis every day because they are not comfortable, while others prefer to use an external prosthesis rather than going under a major surgery. Some of them also are not able to make any decision regarding having breast reconstruction surgery due to the social stigma surrounding breast implant surgery [19,21,22,25,27,28].

Women need more information about temporary and long-term physical changes caused by breast cancer treatments: The findings of one mixed-method, two qualitative, one review, four cross-sectional and one randomised clinical trial studies [12,14,15,18-20,24,26] have shown women complaining about the most common side-effects of breast cancer treatments including hot flushes, vaginal dryness, dyspareunia, obesity and dramatic body changes after mastectomy. These reported side-effects of breast cancer treatments can cause significant worry about their body image and sexual attractiveness which may affect their sexual activities. For instance, research has shown that women are too shy to discuss their sexual health problems with their health professionals. However, they need more information about temporary and long-term sexuality-related changes caused by breast cancer treatments to promote their quality of life [12,14,15,18-20,24,26].

DISCUSSION

The studies conducted by Alianmoghaddam N et al., [21] to determine the status of breast feeding, and fertility after mastectomy following breast cancer; Christinat A and Pagani O [22] concerning fertility status after breast cancer and Taleghani F et al., [27] about empowerment needs of women with breast cancer, all have highlighted the importance of an informed decision making before starting any treatment in women diagnosed with breast cancer. Also, they have shown that women should be aware of all kinds of cancer treatments and procedures as well as any sexual problems caused by those treatments before making any decision about their treatments. For instance, a Breast-Conserving Surgery (BCS) instead of mastectomy in the early stages of breast cancer may promote self-esteem and quality of life in women with breast cancer [21,22,27].

Moreover, Ussher JM et al., in a study of information needs about sexual health in women with breast cancer and Albers LF et al., about sexuality-related information needs of breast cancer patients and their partners found that women are too embarrassed to talk directly to their doctor about uncomfortable topics such as sexual dysfunction and sexual needs. Therefore, providing educational materials to address the patients' sexual health problems during the course of the disease may be a good option for women who feel embarrassed to talk directly with their health professionals [18,29]. Regarding the positive impact of midwifery-based counselling on sexual health in breast cancer patients, information regarding breast cancer and sexuality by a midwife may promote breast cancer patient's sexual health [12].

Limitation(s)

Some limitations might have influenced the present findings including the exclusion of research papers in languages other than English and Persian at searching and screening process. Also, authors had to use qualitative studies due to the limited numbers of papers that we found during the searching and screening process. Finally, this rapid review only highlights the importance of the information needs of women with breast cancer related to sexual health, while there are many unmet needs concerning sexual health in women with breast cancer that needs to be addressed by further research.

CONCLUSION(S)

The number of women diagnosed with breast cancer has been steadily increasing globally. Consequently, many women with breast cancer complain about emotional distress, body image issues and sexual dysfunction before and after the breast cancer treatment. This rapid review study highlights some unmet sexual health needs of women with breast cancer including the need for information about sexual desire and sexual activity, fertility-preserving options before starting any breast cancer treatment, information on a prosthesis or breast reconstruction surgery options and alternatives and also women need information about temporary and long-term physical changes caused by breast cancer treatments. Although the findings of this study validate the importance of sexuality for women with breast cancer, little attention has been received from health professionals, researchers and policymakers. Therefore, further research on the sexual health needs of women with breast cancer is recommended to affirm these research findings.

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Author contributions: (ZH) approved the research proposal with some revisions, contributed to the data analysis, and finalised the first draft of the manuscript in the role of Supervisor. (MD) critically reviewed the data analysis and interpretation. (ML) and (AG) contributed to the revisions of the manuscript. (MS) has made a significant contribution to the conception and design of the study, data collection as well as drafting the manuscript in the role of research student, revision of the paper and finalised the revised manuscript. All the authors approved the final version of the manuscript.

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