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Breastfeeding outcomes, experiences and challenges, among breast cancer survivors: A systematic review of qualitative studies

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Abstract

Introduction: Breast cancer in pregnancy is diagnosed during pregnancy, during the first year after delivery or during lactation. It is one of the most common malignancies found in women. Although most women with breast cancer are postmenopausal, the number of premenopausal patients has been increasing in recent years. There are many issues related to the psychological management of gestational cancer that need to be addressed. Inadequate receipt of information and limited understanding of treatment options and outcomes may contribute to psychological distress in women. The purpose of this work was to record as closely as possible the data regarding the experiences and difficulties of breastfeeding in breast cancer patients, as well as breastfeeding outcomes.

Materials and Methods: A systematic review of articles was performed in Pubmed and Google Scholar databases, with language restrictions (only English papers) and without time limitation.

Results: The study included 7 qualitative studies. The participants invovlved were breast cancer survivors. They expressed all the difficulties related to breastfeeding and their need for emotional and psychological support**.**

Conclusions: The general conclusion that emerges is fear and uncertainty both for the mother herself and for her child, as well as anxiety, physical and psychological fatigue and changes in relationships in the family.

Key words: Breast cancer associated to pregnancy, breast cancer psychological factors, breast cancer and lactation, pregnancy related to breast cancer, psychooncology, breast cancer during pregnancy

Introduction

Many women with breast cancer experience a painless, palpable lump or thickening of the breast skin. The "milk rejection sign" appears less often, which refers to the refusal of the infant to breastfeed by the patient with breast malignancy. Pregnancy has a dual effect on breast cancer risk: it transiently increases the risk after delivery, but decreases risk in later years.[1] Regardless of a cancer history, the perinatal period is associated with increased stress.[2] Breast cancer in pregnancy must be treated by a team of specialized doctors (mammologist, oncologist, pathologist, radiation therapist, psychologist, neonatologist), in collaboration with the obstetrician-gynecologist, will make the necessary decisions to protect the life of the mother and the child. The prognosis of breast cancer during pregnancy depends on the stage of the disease and is good for cases that are diagnosed at an early stage. In general, the occurrence of breast cancer during pregnancy does not have a negative effect on survival. Breastfeeding from the healthy breast should be encouraged.[3]

The prognosis for pregnant women with breast cancer is the same as for non-pregnant women. The widespread belief that conditions are worse during pregnancy is largely due to late diagnosis in pregnant women, while the disease progresses. As long as the diagnosis is made early and in the right way, pregnant women can also be successfully treated for breast cancer, with good results for them and safety for their children.[4]

Many studies have shown that breastfeeding lowers the risk of developing breast cancer.[5,6]Breastfeeding appears to be associated with a mother's good physical and emotional health during delivery, lactation and throughout her future life. According to epidemiological studies, breastfeeding women reported seeking medical care less frequently than non-breastfeeding women, a lower incidence of respiratory, cardiovascular, and gastrointestinal diseases, and fewer symptoms related to emotional problems. Early breastfeeding of the breast area is one of the most important stimuli for the production of oxytocin, which is also responsible for the contraction of the uterus, accelerating the return of the organ to its normal size and reducing the possibility of postpartum bleeding and anemia. High levels of oxytocin can increase the pain threshold, reducing maternal distress and thus contributing to an increased feeling of love for the baby. Breastfeeding may also affect a mechanism that regulates cortisol secretion during the day, with a constant concentration of the hormone possibly reducing the risk of postpartum depression. Recent studies have shown that women who do not initiate or continue breastfeeding have a higher risk postpartum depression. There is an inverse correlation between these phenomena due to the hormonal and psychological conditions that occur during the first 6-8 weeks of parturition, as lactating hormone, oxytocin and prolactin can have anxiolytic effects.[7]

The time of pregnancy and childbirth (perinatal period) is a complex experience in a woman's life, as a plethora of changes occur in her biology, physiology , and psychology. Various mental disorders can be triggered during the process of organism adaptation, based on the organic and mental substrate of each woman, as well as the supporting framework.

The purpose of this work was to record as closely as possible the data regarding the experiences and difficulties of breastfeeding in breast cancer patients, as well as breastfeeding outcomes. To prepare the research, a systematic review of articles in the existing literature was carried out.

Materials and Methods

A systematic literature review was performed from June 2022 to October 2022 to investigate the experiences and difficulties of breastfeeding in patients with breast cancer. The search strategy in-

volved reviewing published articles related to the purpose of the study. Our systematic review followed the guidance of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). We searched published articles with the following databases: PubMed/Medline and Google Scholar , with language restrictions (only English papers) and without time limitation.

The search terms used were: breast cancer associated to pregnancy, breast cancer psychological factors, breast cancer and lactation, pregnancy related to breast cancer, psychooncology, breast cancer during pregnancy.

Quality assessment

The Critical Appraisal Skills Programme (CASP) Systematic Review Checklist 201725 was used to evaluate the quality of each article. This technique supports in verifying the reliability of research and, consequently, confirms that the selected literature was suitable for inclusion in the current review. Critical Appraisal Checklists were used as a guide and aide memoire to thoroughly and methodically examine studies in order to assess their reliability, value, and relevance in a specific context.[8]

Results

We found 136 papers in the databases PubMed/ Medline and Google Scholar. After manual screening of the titles and abstracts of the 136 studies, 89 studies were excluded. Therefore, a total of 47 studies were included for further evaluation. After next screening, 40 studies were excluded and only 7 articles were included in the systematic review (Figure 1). The methodological characteristics of included studies are presented in Table 1.

Gorman et al.[9] conducted a qualitative survey of breast cancer survivors' experiences with breastfeeding. They sampled 11 breast cancer survivors who had a child after their diagnosis and treatment. Study participants were highly motivated to breastfeed, but faced significant challenges. They described problems that are not unique to women with breast cancer, but they faced them to a much greater degree because they relied primarily or entirely on one breast. This study revealed the need for improved access to information and support and greater sensitivity to the barriers faced by breast cancer survivors. Ten of the study participants breastfed their children, and all discussed significant breastfeeding challenges. Chief among them was the lack of adequate milk supply because they relied primarily on one breast. All study participants who breastfed reported that it was physically and emotionally very difficult. Several women expressed frustration with the experience of low milk supply, which is why many started taking nutritional supplements. Physically challenged women also reported many physical challenges from feeding on only one side, including pain and physical appearance. Some of these challenges were physical (single breast, secondary health problems), others psychological (fear of failing to provide the best care for their child, fear of relapse, reduced confidence in bodily functions) or social (prejudice and prejudice from relatives, friends and professionals health), but some were common challenges for all breastfeeding mothers.[8] Anxiety about breastfeeding was something that many women reported experiencing during pregnancy, generally stemming from concerns about having a sufficient milk supply. Despite the physical and emotional challenges the women faced, in the end, they reported being glad they had the experience. Additionally, several mothers discussed their beliefs that breastfeeding may be beneficial to their own health, possibly reducing the risk of breast cancer recurrence.[9]

Connell et al.[10] also reported that decisions about breastfeeding were difficult for many women. However, these authors reported that women's anxiety was largely related to fear of recurrence. Participants

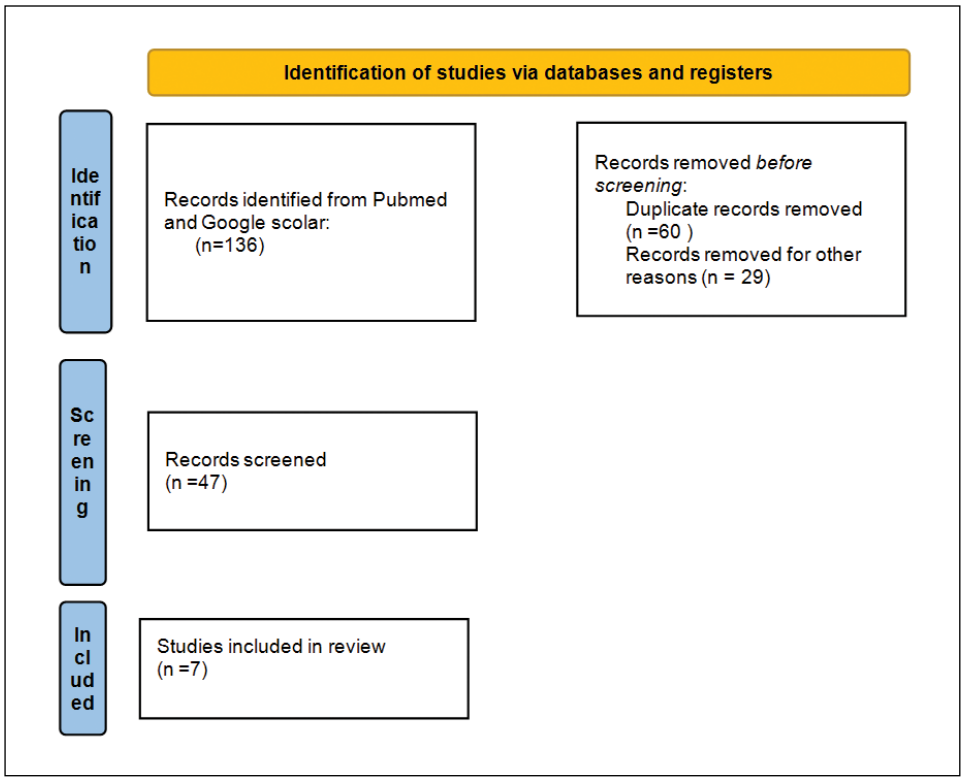

Figure 1. Search plot diagram.

in this study discussed fear of recurrence in relation to pregnancy, but only one participant identified this fear as a factor in her decision about breastfeeding. Several participants in this study reported that they spoke to a healthcare provider, typically an oncologist or obstetrician, about whether it would be possible and safe for them to breastfeed. Overall, women reported that their physicians encouraged them to breastfeed, but they did not provide additional education or support for breastfeeding. Some women looked to other sources for information; a few participants mentioned looking online, one went to a breastfeeding class, and others looked at breastfeeding books. Participants reported that information specific to breast cancer survivors was unavailable. Appointments such as prenatal visits would provide a valuable opportunity for providers to discuss the specific concerns and needs of breast cancer survivors who are interested in breastfeeding. This would also be an ideal time to connect women with support services that they might need postpartum, such as lactation consultation and breastfeeding support groups.[10]

In the study of Chertok et al.,[11] mothers shared their perceptions, barriers and experiences regarding infant feeding. Four themes were identified: the miracle of motherhood after breast cancer, medical misinformation or lack of available information contributing to mothers' concerns, feeding challenges after breast cancer, and the desire for support in feeding the infant rather than pressure.[11]

Azim et al.[12] performed a survey among breast cancer patients who completed their pregnancy following breast cancer management to examine

Table 1. Characteristics, key findings and limitations of included studies.

AUTHORS, YEAR	COUNTRY	PARTICIPANT CHARACTERISTICS	RESEARCH DESIGN	KEY FINDINGS	STRENGTHS (+) AND LIMITATIONS (–)
Azim Jr. et al., 2010[10]	Italy	Women with early invasive breast cancer aged ≤ 40 years(n=20) Median age at delivery was 36 Patients treated with breast conserving surgery (BCS) and radiotherapy	Telephone based survey	10 women (50%) attempted breastfeeding 4 women stopped breastfeeding after a month due to reduced milk production (n=2) and mastitis in untreated breast (n=2) Women, who breastfed for a median duration of 12 months, got lactation counseling (n=5) Reasons for not attempting breastfeeding: personal choice (n=1) and medical counseling against breastfeeding (n=9) Reason for not attempting breastfeeding from the treated breast were difficulty in latching (n=2), reduced milk production (n=2) and breast pain (n=1)	(+) Detailed information about breastfeeding pattern (–) Small sample size
Chertok et al.,2020[9]	USA	20 mothers who had experience with infant feeding after breast cancer, including exclusive breastfeeding, partial provision of human milk with formula supplementation, and exclusive formula feeding.	Qualitative interviews	Mothers shared their perceptions, barriers, and experiences of infant feeding. Four themes were identified: miracle of motherhood after breast cancer, medical misinformation or no available information contributing to the exacerbation of mothers' worries, post-breast-cancer feeding challenges, and desire for infant-feeding support rather than pressure.	
Connell et al., 2006[8]	Australia	Breast cancer subtype unknown (n=13) Median age at diagnosis: 37 6 women had lumpectomy and 7 women had mastectomy	Longitudinal qualitative design Use of semi-structured inperson/ telephone interviews conducted three times over 12–18 months Use of constructionist epistemology	2 women gave birth to infants after diagnosis One of them did not feel comfortable breastfeeding from the treated breast The other (7.7%; 1/13) breastfed for only a few weeks so that her breast could be in a non-lactating state for a mammogram	(–) Duration of breastfeeding was not assessed over time (–) Limited sample

Table 1. Characteristics, key findings and limitations of included studies *(condinued)*.

AUTHORS, YEAR	COUNTRY	PARTICIPANT CHARACTERISTICS	RESEARCH DESIGN	KEY FINDINGS	STRENGTHS (+) AND LIMITATIONS (–)
Faccio et al.,2020[13]	-	A total of 38 women were recruited, 19 women who experienced a BC diagnosis and 19 who had not.	qualitative study semi-structured interviews	Four main themes were identified: fears and worries, meaning of motherhood, mother–foetus relationship and partner support.	
Gorman et al., 2009[7]	United States	Stage I (27%) or II (73%) breast cancer survivors (n=11) 100% White 5 women aged ≤ 30; 4 women aged 31–34 and 2 women aged 35–40. 7 women underwent lumpectomy and 4 women went through mastectomy	Semi-structured, open-ended telephone interviews Use of Social Cognitive Theory to inform questions	10 participants (90.9%) initiated breastfeeding Participants breastfed their children for an average of 8 months Most participants supplemented with formula immediately or after between 1 to 4 months after starting breastfeeding Beliefs elicited from participants: cautiously hopeful, exhausting to rely on one breast, motivated despite challenges, support and lack of support, and encouraging to others	(+) Detailed information on perceptions of breast cancer survivors regarding breastfeeding (–) Small sample (–) All participants were White and most of them were at least college-educated
Higgins &Haffty, 1994[11]	United States	11 stage I (n=7) or stage II (n=3) breast cancer patients who had breast-conserving therapy 7 patients received irradiation 3 patients received chemotherapy	Phone and/or in-person interviews	4 participants experienced lactation from the treated breast but only one (9.1%) patient breastfed from the treated breast for 4 months Most women (% unknown) were able to breastfeed successfully from the untreated breast Milk production was lower in the treated breast Lactation was likely to be more difficult among women who had an incision near the areola-nipple complex (n=2)	(–) Small sample (–) Socio-demographic information not available
Kim et al., 2017[12]	Korea	Women with invasive breast cancer (n=15) Mean age: 30.4 7 received BCS and 5 had total mastectomy	Retrospective review of medical records combined with telephone surveys	12 women (80.0%) reported no difficulties in breastfeeding Women, who breast-fed, used contralateral breast for breastfeeding Duration of breastfeeding was 1 to 12 months	(–) Loss to follow-up occurred at the beginning of the study (–) Duration of breastfeeding for each woman not available

their lactation behaviors and its effect on breast cancer outcome. Out of 32 women identified, 20 were reachable and accepted to take the questionnaire. Ten women initiated breastfeeding, 4 stopped within one month and 6 had long-term success with a median period of 11 months (7–17 months). The latter were all previously subjected to breast conserving surgery and received qualified lactation counselling at delivery. The main reasons for not initiating breastfeeding were "uncertainty regarding maternal safety" and "a priori unfeasibility" expressed either by the obstetrician or by the oncologist. At a median follow-up of 48 months following delivery, all 20 women were alive with two relapses; one in each group (i.e., lactating and non-lactating). This analysis adds to the limited available evidence on the feasibility and safety of breastfeeding in breast cancer survivors. Proper fertility and survivorship counselling is crucial and requires more attention in breast cancer clinics.[12]

In the study of Higgins & Haffty[13], there were 11 patients at stage I (n=7) or stage II (n=3) breast cancer, who had breast-conserving therapy (lumpectomy). Seven of them received irradiation and 3 patients received chemotherapy. Most women were able to breastfeed successfully from the untreated breast, while milk production was lower in the treated breast and lactation was likely to be more difficult among women who had an incision near the areola-nipple complex.[13]

Kim et al.[14] studied women with invasive breast cancer (n=15). Seven of them received breast-conserving surgery and 5 had total mastectomy. The results have shown that 12 women (80.0%) reported no difficulties in breastfeeding and they used the contralateral breast for breastfeeding.

In the study by Faccio et al.,[15] four main themes were identified: fears and concerns, meaning of motherhood, mother-fetal relationship and partner support. In all topics, differences between prime interest and compound interest are reported. Women with gestational breast cancer described fear for their own and their child's survival. Women with previous breast cancer recall opposite feelings. All women with experience of breast cancer perceived breastfeeding as fundamental and the inability to do so caused concern.

Discussion

There are identified many reports that describe breast cancer survivors' experiences with breastfeeding. Although those who breastfed faced many barriers, they were generally positive about their experiences and encouraged other breast cancer survivors, who may be interested in breastfeeding not to let breast cancer stop them from trying. Milk supply was an important issue for most. Difficulties associated with having only one breast to breastfeed, including lower milk supply, physical pain, and exhaustion, were significant barriers for this group of breast cancer survivors. Anxiety about breastfeeding and lack of support for breastfeeding was something many women reported experiencing during pregnancy, generally stemming from concerns about adequate milk supply. Potential interventions include professional support through lactation consultants trained to meet the unique challenges of breast cancer survivors, encouraging spousal/partner support, and support from other breast cancer survivors who have breastfed. Breastfeeding is a struggle for many women and even more so for breast cancer survivors, who usually only have one breast to breastfeed.[9] Understanding the experiences of women who have given birth after breast cancer can help women in similar situations know they are not alone, locate resources, access peer support, and seek advice on infant feeding based on evidence from health care providers involved in their care.[11]Fear of disease recurrence due to pregnancy, worry of harm to the fetus, inability to care for the baby, anxiety of

the neglected child, and fear of harm to the baby due to disruption of the family structure were among the factors that led to reluctance to become pregnant. Lack of access to timely and complete information, fear of infertility and harm to the fetus in the event of pregnancy caused painful concerns about pregnancy. Fatigue resulting from the long treatment period and complications during pregnancy caused an unprecedented psychological impact on patients and their families.[16,17]

Conclusion

The general conclusion that emerges is fear and uncertainty both for the mother herself and for her child, as well as anxiety, physical and psychological fatigue and changes in relationships in the family. It is recommended that appropriate pregnancy and lactation advice be handled more thoroughly in breast cancer centers. This would improve these women's quality of life and assist them in returning to their usual lives.

Disclosure of conflicts of interest

The authors report no conflicts of interest.

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