



ORIGINAL PAPER

WOMEN WITH BREAST CANCER LIVING WITH ONE BREAST AFTER A MASTECTOMY

Tintin Sukartini<sup>1</sup>, Yulia Indah Permata Sari<sup>2</sup>

<sup>1</sup>Department Medical Surgical Nursing, Faculty of Nursing, Universitas Airlangga, East Java, Indonesia

<sup>2</sup>Department Medical Surgical Nursing, Faculty of Nursing, Universitas Airlangga, East Java, Indonesia (student)

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Abstract

**Aim:** To explore the impact of mastectomy on the body image of women with breast cancer. **Design:** A qualitative study with a phenomenological approach. **Methods:** Thirty women (n = 30) with post-mastectomy breast cancer were obtained through a purposive sampling technique. Data were collected using in-depth and semi-structured individual interviews to explore the experiences of the participants and the meanings they attribute to them. The data was analysed using the Van Manen method and with the help of NVivo 12 software. **Results:** Three main themes were identified in this study: “breast meaning”, “self-concept”, and coping strategies for women after mastectomy. Breasts are interpreted as a symbol of female status that reflects femininity and attractiveness. Mastectomy can cause changes in appearance, which can affect women’s body image, self-concept, and social interaction. Emotional intensive coping and problem-solving intensive coping are coping strategies used by women after mastectomy. **Conclusion:** Breasts are synonymous with femininity, beauty, and attractiveness. Therefore, many women feel that they have lost their femininity and self-confidence after losing their breasts due to mastectomy.

**Keywords:** body image, femininity, life experience, mastectomy, problem-solving, self-concept.

Introduction

Breast cancer is the leading cause of cancer deaths in women. Like the rest of the world, the prevalence of breast cancer in Indonesia continues to rise. In Indonesia, breast cancer is the cancer with the highest incidence, totalling 58,256 (16.7%). It was also the second-highest death rate in 2018, reaching 22,692 (11.0%) (Globocan, 2019). Among people of all ages in Indonesia, East Java Province ranks 11th in cancer prevalence, and breast cancer is the type of cancer with the highest number of cases in East Java (Kemenkes, 2015). Among women diagnosed with breast cancer early, nearly 90% have to undergo unilateral or bilateral mastectomy, with or without reconstruction (Lovelace et al., 2019).

Mastectomy is a method of breast cancer surgery that can permanently change a woman’s appearance (Moo et al., 2018). Breast loss caused by mastectomy is a traumatic event experienced by women (Arroyo & Lopez, 2017). Breasts are considered part of the female identity, representing femininity, sex, beauty, and motherhood and empowering them to breastfeed their babies (Astrid et al., 2013). Losing a breast can also cause self-concept obstacles, such as changes in body image, loss of self-identity, changes in social

roles, changes in self-ideal, and loss of self-esteem (Campbell-Enns & Woodgate, 2015; Chow et al., 2019; Heidari & Ghodusi, 2015; Lovelace et al., 2019). Negative self-concepts can easily lead to stress and depression (Aguado Loi et al., 2013)

Body image is defined as the mental impression of the body, the attitude to the physical self, appearance and health status, overall, normal function, and sexual behaviour (Pauwels et al., 2013). For some people, changes in appearance can lead to a decline in body image and various social and psychosocial problems (Philip & Merluzzi, 2016). Negative body image among breast cancer survivors include dissatisfaction with appearance, perceived loss of femininity and body integrity, reluctance to expose their nakedness, decreased sexual attraction, self-awareness of appearance, and dissatisfaction with scars from surgery (Fobair et al., 2016). Related literature emphasizes that with breast cancer, patients can experience changes in body images, self-concept, emotions, behaviour, family dynamics, and the roles of the patients and their families (Przedzicki et al., 2013).

The importance of a woman’s breast has a huge impact on her body image. Depending on the woman, breast shedding caused by mastectomy has many meanings and may trigger conflicting emotions. Therefore, the degree of psychological response to breast removal is closely related to the emotional

Corresponding author: Tintin Sukartini, Faculty of Nursing, Universitas Airlangga, Kampus C Mulyorejo, Surabaya, East Java, Indonesia; email: tintin-s@fkn.unair.ac.id

importance of breasts to women. Therefore, according to the negative changes in the female body, any perceived loss may lead to various psychological problems (Schmid-Büchi et al., 2011).

Providing psychosocial support to patients after mastectomy is one of the important duties of nurses (Daem et al., 2019). In the self-concept disorder caused by mastectomy, it is related to the change of body image (Heidari & Ghodusi, 2015). In the process of treating breast cancer, the body image of the patient and problems related to the condition will affect their physical and mental health (Arroyo & Lopez, 2017). Thoughts about body image, the possibility of metastasis, or breast reconstruction may dominate the patient's daily life. Research on breast cancer patients undergoing mastectomy can help us better understand and improve the health of patients.

### **Aim**

Based on those descriptions, the purpose of this study is to explore the impacts of a mastectomy on the lives of women with breast cancer.

### **Methods**

#### **Design**

A qualitative research design using phenomenological methods was selected to explore the effect of mastectomy on the body image of women with breast cancer after mastectomy. Phenomenological methods aim to study, develop, explore, or discover knowledge through scientific methods. In addition to explaining several things that are meaningful to humans, they can also be given meaning (Polit & Beck, 2013). The findings of qualitative research are based on the real-life experiences of the people directly involved in the phenomenon under study (Creswell, 2018). Phenomenology focuses on the life experience of human beings. It is a method to understand their life experiences and their meaning (Polit & Beck, 2013).

#### **Sample**

Thirty women (n = 30) with post-mastectomy breast cancer were recruited from the Reach to Recovery Surabaya (RRS) community. A purposive sampling method was used. The sample consisted of women who fulfilled the following inclusion criteria: women must be aged 21 years and more, have been diagnosed with primary breast cancer stage I–III, must be able to communicate verbally and in writing, and must be at least 6 months since the mastectomy. The exclusion criteria are: 1) having complications from mastectomy; and 2) having other comorbidities,

such as the diagnosis of secondary cervical cancer and ovarian cancer. Women who met the exclusion criteria were excluded.

#### **Data collection**

The study was conducted at the Reach to Recovery Surabaya community, a support group for breast cancer sufferers who live in Surabaya, under the guidance of the Surabaya Oncology Hospital and the Indonesian Breast Cancer Foundation. Data were collected from January–March 2020 using semi-structured individual interviews. The in-depth interview guidelines used are compiled from research goals that have been adjusted to Roy's Adaptation Model and then translated into questions that can explore information from participants in a broad and in-depth manner. The interview guidelines were approved by the Health Research Ethics Committee in the Faculty of Nursing Universitas Airlangga. Researchers and participants determined the location and time of the interview based on mutually agreed terms. Interviews were conducted face to face. The data-collection process was carried out only by the researchers and participants, who were not accompanied by family members or other people.

Researchers act as tools for conducting research, so researchers cannot be represented or delegated. Data collection tools include tape recorders, field notes and interview guidelines prepared according to the research objectives. The interview process began with some open questions, such as "Can you tell us about your experience since you first learned about breast removal?" The interviews lasted about 30–45 minutes. If more than half of the participants answered with the same keywords, the data was saturated. Three meetings were conducted during the interview. The first meeting was to introduce the participants and explain the purpose of the study. The second meeting was to conduct the interview process at the agreed time and place. The third meeting was to conduct interviews on questions that the participants had not yet answered. After listening to the interview results and reporting them word by word, the researchers and participants verified the written results to determine whether the interview results were appropriate. The data reached saturation in the 30th participant.

#### **Data analysis**

The subject analysis of the interview transcript has been analysed in detail, prominently and comprehensively (Van Manen, 1990). First, read the transcript carefully and repeatedly. In the overall study, the researchers must read the text carefully to understand its overall meaning. The researcher then highlights or selects sentences and statements that

seem important to the research. Second, researchers develop keywords and concepts through dialogue with the text. Researchers strive to gain an understanding and participation in the phenomenon, and finally analyse each sentence and find important topics in the process. Then restructure these themes into descriptions of the participants' life experiences (Polit & Beck, 2013). The data analysis process was carried out with the help of the NVivo 12 software.

The framework of Lincoln and Guba indicates that qualitative research must include the components of validity, credibility (internal validity), transferability (external validity), reliability, and confirmability (Lincoln & Guba, 1985). The credibility test is done through member checking. Ask participants to reconfirm the results of the interview. Afterwards, they agreed that the results of the study were consistent with the interviews conducted. The reliability test is carried out during the consultation activities, which is the preliminary determination of the research question, the way data analysis is conducted, the preparation of the research activity report, and the sharing of interview transcripts. The follow-up interview aims to clarify the understanding of their experience in order to increase trust.

## Results

Table 1 shows the characteristics of 30 participants who participated in this study. All interviewees were women from 38–65 years old (average age: 50 years old). Most of the participants were married (86.7%) and four were widowed. Most of the participants underwent a modified radical mastectomy, and three of them had nipple sparing. Most of the participants are in the second stage (50%). Most of the participants received chemotherapy and radiation therapy, and five participants received Herceptin.

The results of the study identified three main themes (in Table 2): 1) breast meaning; 2) self-concept; and 3) coping strategies. Breast meaning includes two sub-themes, namely the sexual role and additional reproductive "organs". Self-concept contains five sub-themes, namely self-image, self-identity, self-role, self-ideal, and self-esteem. The theme of coping strategies includes two sub-themes, namely emotion-focused coping and problem-solving focus coping.

### Theme 1: Breast meaning

The breast is an accessory gland of the female reproductive system. Breasts are also part of the difference between women and men. This theme is determined by sub-themes of 1) the sexual role; and 2) additional reproductive "organs".

#### 1) Sexual role

In terms of sexual function, breasts attract the opposite sex and can stimulate sexual desire. Breasts also have meanings related to femininity and motherhood, distinguishing women from men.

*„Anyway, breasts are part of the human body, although now they are no longer feminine“ (P5).*

*„Breasts show that we are different from men and show femininity, indicating that mothers can breastfeed“ (P7).*

*„One of the charms of being a woman here (while holding her breasts)“ (P9).*

#### 2) Additional reproductive "organs"

As an additional reproductive tool, participants stated that their breasts are the perfect female "organ".

*„Breasts are a part of me and make me the perfect woman“ (P2).*

*„Breasts are a symbol of female beauty. If they are still perfect, breasts will be more beautiful“ (P6).*

### Theme 2: Self-Concept

This theme was identified through the sub-themes of 1) self-image; 2) self-identity; 3) self-role; 4) self-ideal; and 5) self-esteem.

#### 1) Self-image

Removal of one or both breasts can cause changes in appearance. The appearance changes experienced include hair loss and darkening of the fingers due to chemotherapy, as well as breast shedding due to the mastectomy itself.

*„I think life is weird (while crying), but fortunately, now I have no hair, I am ashamed of my bald head“ (P3).*

*„These are the same (while holding her breasts) breasts that were operated on, so it's flat yeah“ (P5).*

*„Then this (while holding her bare head) fell out, my fingers turned black, I don't know why, but the doctor said it was because of the chemotherapy“ (P8).*

#### 2) Self-identity

Removal of the breast leads to a desire to hide its reality and change the way it is dressed. Most participants said that they wanted to alter their clothing style and start wearing loose clothes.

*„I wear loose clothes to avoid other's eyes“ (P10).*

*„I wear a veil covering my chest, one of which is to cover my chest, which is only one breast“ (P12).*

#### 3) Self-role

After a mastectomy, changes in activities may cause women to be unable to perform their roles and responsibilities. They feel useless and lose their

**Table 1** Participants' characteristics (Part I)

Participant (Age)	Marital status	Caregiver	Occupation (before / during sickness)	Stage	Type of mastectomy	Type of treatment
P1 (59 y / o)	married, 2 children	family (husband)	self-employed	I A	MRM sinistra	chemotherapy
P2 (47 y / o)	married, 2 children	family (husband)	housewife	II B	MRM dextra	chemotherapy
P3 (52 y / o)	married, 3 children	family (husband)	self-employed	II B	MRM dextra	chemotherapy herceptin
P4 (47 y / o)	married, 1 child	family (husband)	lecturer	II A	Nipple-sparing mastectomy	chemotherapy radiotherapy
P5 (51 y / o)	married, 2 children	family (husband)	housewife	II A	Nipple-sparing mastectomy	chemotherapy radiotherapy
P6 (50 y / o)	married, 2 children	family (husband)	housewife	III B	MRM dextra	chemotherapy radiotherapy
P7 (51 y / o)	married, 3 children	family (husband)	banker	II A	MRM dextra	chemotherapy herceptin
P8 (60 y / o)	married, 2 children	family (husband)	retired	II A	MRM sinistra	chemotherapy
P9 (53 y / o)	married, 3 children	family (husband)	civil servant	II B	MRM sinistra	chemotherapy radiotherapy herceptin
P10 (41 y / o)	married, 1 child	family (husband)	civil servant	III A	MRM dextra	chemotherapy radiotherapy herceptin
P11 (50 y / o)	married, 3 children	family (husband)	housewife	I	MRM sinistra	–
P12 (46 y / o)	married, 2 children	family (husband)	housewife	II A	MRM sinistra	chemotherapy
P13 (60 y / o)	married, 0 children	family (husband)	retired	I A	MRM sinistra	chemotherapy
P14 (53 y / o)	widow, 1 child	family (child)	merchant	III B	MRM dextra	chemotherapy
P15 (53 y / o)	married, 2 children	family (husband)	civil servant	III C	MRM sinistra	chemotherapy
P16 (40 y / o)	married, 0 children	family (husband)	banker	III C	MRM sinistra	chemotherapy
P17 (39 y / o)	married, 2 children	family (husband)	housewife	III B	MRM sinistra	chemotherapy
P18 (55 y / o)	married, 1 child	family (husband)	housewife	III B	MRM dextra	–
P19 (44 y / o)	widow, 2 children	family (husband)	housewife	II B	MRM dextra	chemotherapy
P20 (46 y / o)	married, 3 children	family (husband)	lecturer	II A	Nipple-areola complex skin sparing mastectomy	chemotherapy
P21 (44 y / o)	married, 2 children	family (husband)	housewife	III A	MRM sinistra	chemotherapy
P22 (43 y / o)	married, 2 children	family (husband)	housewife	III B	MRM dextra	chemotherapy
P23 (59 y / o)	widow, 3 children	family (children)	merchant	II B	MRM dextra	chemotherapy
P24 (65 y / o)	widow, 3 children	family (children)	housewife	III A	MRM dextra	chemotherapy
P25 (55 y / o)	married, 2 children	family (husband)	merchant	II B	MRM dextra	chemotherapy
P26 (55 y / o)	married, 3 children	family (children)	housewife	II B	MRM dextra	chemotherapy
P27 (40 y / o)	married, 2 children	family (husband)	housewife	III B	MRM sinistra	chemotherapy radiotherapy herceptin
P28 (51 y / o)	married, 2 children	family (husband)	journalist	II A	MRM dextra	chemotherapy
P29 (55 y / o)	married, 3 children	family (husband)	civil servant	III B	MRM dextra	chemotherapy radiotherapy
P30 (38 y / o)	married, 1 child	family (husband)	self-employed	II A	MRM dextra	chemotherapy

P – participants; y / o – years old; MRM – Modified Radical Mastectomy

social identity. Most participants reveal that they could not do housework as before.

„After the operation, I was bathed by my husband, so because I was still using the hose, I just sat on the chair and took a bath. Yes, my husband took care of me thoroughly“ (P2).

„After the operation, I cannot do any activities. My child helps to clean the house. I am very sad inside. I hope to be able to perform my duties at home, but I can't perform my duties yet“ (P6).

Mastectomy in women affects their relationship with the environment, leading to a limited social life and a tendency to avoid social interaction.

„I avoid going to the activities of many people. Now, I feel unsafe about my appearance“ (P10).

4) Self-ideal

Breast loss has also caused people to worry about their sex lives, because the husband may not feel that she is the ideal wife. „That affected the relationship with my husband. In the sex life of husband and wife, I felt that I could not fully serve my husband“ (P9).

5) Self-esteem

After mastectomy, most participants described themselves as imperfect. Participants also revealed that they did not feel beautiful due to their incomplete body. The participants were ashamed of losing a breast. Breast removal may mean that they lose their appeal as women.

„Before the operation, I felt like another woman with two breasts, but after the operation, I thought I was no longer perfect because my breasts were incomplete“ (P1).

„Sometimes I feel sad – you know, how I feel as a woman, as a wife, if it is not perfect“ (P2).

„Before I got sick, one of the attractions of women was breasts, but now that they are missing, I am no longer attractive“ (P6).

„I am sad, I am ashamed because a part of my body is missing“ (P7).

„After the operation, I think I was more beautiful before. In the past, I felt beautiful, but now I have lost my breast. To be honest, I feel worse now (her eyes started to flow with tears)“ (P9).

„I feel lost. I feel my body is not enough“ (P12).

**Theme 3: Coping Strategy**

Changes in their appearance and physical condition will cause patients to experience stressors, so coping strategies are needed to overcome these stressors. This theme is determined by two sub-themes: 1) emotional-focused coping; and 2) problem-solving focused coping.

1) Emotional focus coping

Coping strategies that focus on emotions include denial, self-blame, and withdrawal from social interactions. Denial is one of the accepted responses to conditions expressed by participants who are at odds with reality. This involves denying reality or refusing to accept the reality of losing breast(s).

„I never thought that I would be in this condition, suffering from breast cancer and having to lose my breasts“ (P5).

„At first I refused to believe it, thinking I can't get cancer...“ (P7) (P8).

Participants tend to blame themselves for their experience and hold negative views of themselves. „It's all my fault. I can't take care of my food, my lifestyle ...“ (P3).

Losing a breast can cause shame and make women after mastectomy withdraw from social environments.

„After being sick, I dare not leave home...“ (P3).

„I didn't leave my home and joined the family welfare development gathering“ (P8).

2) Problem-solving focus coping

Problem-focused coping strategies belong to the adaptive category. Participants can overcome the problems they encounter in a variety of ways, including improving their spirituality, relaxing, and sharing their experiences with other patients.

„Every time I want to do my prayer, I have to calm my heart“ (P1).

„I pray, pray that I can find peace in the face of the current situation“ (P4).

„Yes, I usually pray, hoping that this disease can be eliminated quickly“ (P6).

In addition to praying, participants also performed activities such as listening to music. Listening to music is part of the distraction technique and can be used to overcome the anxiety experienced. „When I'm alone, sometimes I listen to some favourite songs to reduce stress“ (P4).

Some participants engaged in alternative activities while waiting for treatment by reading books. „Read and read books so as not to get bored...“ (P7).

Talking and sharing experiences is one of the distracting activities. It can also help them take action to deal with stressors. „By sharing stories and experiences with other patients there, it can provide information without worry. All of them have gone through this process“ (P5).

**Table 2** Themes distribution

Themes	Sub-themes
Breast meaning	sexual role, additional reproductive 'organs'
Self-concept	self-image self-identity self-role self-ideal self-esteem
Coping strategies	emotional focus coping problem-solving focus coping

## Discussion

### *Theme 1: Breast meaning*

This study produced three themes that reflect the experiences of women who had a mastectomy. The first theme is breast meaning. Participants interpreted breasts as symbolizing femininity, beauty, and motherhood. In our society, breasts, as visible signs of femininity, are most strongly associated with two competing discourses of womanhood: the breast as an object of sexual desire versus the breast as a signifier of motherhood, which is often symbolically nonsexual. The breast can be a place for female sexual pleasure. This is a physical position from which they can have fun regardless of whether they are shared with their partners. Their breasts (regardless of age) can become part of the female and sexual identity, which may have a close effect on women's sexual intercourse and receptivity. Their breasts are not only a place of speech oppression, but also their chests are oppressed. They may also be places of empowerment, where women can gain a sense of personal accomplishment (Webb et al., 2019). Other studies have confirmed that women feel that the breast symbolizes femininity and is one of the most important features of womanhood (Fallbjörk et al., 2015).

### *Theme 2: Self-Concept*

In this study, most women had negative judgments about their self-image after mastectomy. This shows that women suffer from negative emotions due to physical changes caused by surgery. Studies related to this issue claim that women consider their appearance to be imperfect, disproportionate, and unattractive after mastectomy (Shrestha, 2012). Women who experience negative body image after breast loss often try to change their clothing style to overcome their discomfort. Many women find it difficult to wear clothes comfortably and adapt to their new body after mastectomy (Dahl et al., 2015).

Breast loss caused by mastectomy is considered by many women as a serious blow to their self-identity and feelings (Przedziecki et al., 2013). Therefore, many women lose their femininity and self-confidence after losing their breasts due to mastectomy (Sabo & Thibeault, 2017; Zeighami Mohammadi et al., 2018). Improving appearance is one of the main strategies used by participants. Previous studies have also reported that women in British Columbia use makeup, prostheses, wigs, scarves, veils, tattoos, and breast reconstruction to conceal or correct their physical defects (Zeighami Mohammadi et al., 2018). Physical changes make women feel limited control over their physical

appearance, thus making them frustrated and anxious and undermining their self-confidence. Therefore, appearance management is an effective strategy to maintain overall health and make women look better and normal. It can reduce the feeling of being different from other women, reduce their vulnerability, protect them from social stigma, and help them to engage in normal social interactions, which enables them to obtain greater benefits.

Previous studies reported that due to limited arm movements after surgery, women felt unable to carry out daily shopping, cleaning the room, and washing clothes (Fu & Rosedale, 2015), and after a mastectomy, women experience losses related to what they could easily do in the past. This situation may affect their emotional response and ultimately negatively affect their body image (Zeighami Mohammadi et al., 2018). After losing their breasts, some women want to avoid socializing because they feel unsafe to change their appearance (Begovic-Juhant et al., 2012). Other studies in some countries have also reported general findings about the negative effects of mastectomy on women's social life (Enache, 2012).

Women undergoing mastectomy worry that changes in appearance will harm their sexual life with their partners (Fouladi et al., 2018). According to previous studies, breast cancer patients are usually unable to carry on their function as women, they realize that their sexual attraction has disappeared, and they worry that their breasts are no longer beautiful (Gilbert et al., 2010).

The physical changes caused by mastectomy have been shown to reduce self-esteem and negatively affect body image. This includes feelings of shame and imperfect physical conditions that lead to reduced self-esteem (Dahl et al., 2015). The quality of life of breast cancer patients is affected by their self-esteem. According to this study, self-image significantly affects self-esteem, leading to shame and low body image in patients (Campbell-Enns & Woodgate, 2015). The previous research mentioned that self-esteem, quality of life, and depression have a significant relationship. Poor quality of life reduces self-esteem, while low self-esteem increases the incidence of depression (Giulietti & Aieta, 2016).

### *Theme 3: Coping Strategies*

The coping strategies focusing on the emotions expressed by the participants are maladaptive coping. Denial is the first reaction when someone suffers a loss (Corr, 2018). Denial is a form of avoiding all thoughts about the possible effects of cancer. This seems beneficial because although it may not eliminate their negative emotions, it can help women

with breast cancer stay away from negative thoughts and feelings, thereby inspiring a sense of hope for positive health outcomes (Elshehtawy et al., 2014; Hajian et al., 2017). Self-blame is a sense of helplessness, which refers to blaming one's own problems without the best self-assessment (Bennett et al., 2015).

Women with breast cancer who have undergone mastectomy often blame themselves for what they have experienced and have a negative view of themselves. This will affect their withdrawal from their current social structures (Kocan & Gursoy, 2016). According to this study, women with breast cancer will blame themselves after making a cancer diagnosis (Hajian et al., 2017). The time after diagnosis may be 4 months, 7 months, or even a year. Self-blame is associated with increased anxiety and depressive symptoms (Cieślak & Golusiński, 2018). Self-blame is a maladaptive behaviour that will have a long-term impact on the psychological adaptation of breast cancer patients (Bennett et al., 2015). Patient withdrawal was attributed to the shame of losing a breast due to surgery. The results of the previous studies indicate that patients who withdraw using coping strategies are at a significant risk of long-term psychological maladjustment. This will also disrupt their cortisol rhythm (Mehrabi et al., 2015).

Problem-focused coping strategies belong to the adaptive category. Participants can overcome the problems encountered in several ways, such as improving their spirituality, relaxing, doing their favourite activities, and talking with others. After long-term treatment of breast cancer and its psychological conditions, some participants participated in more activities. Praying is important to overcome psychological pressure and calm their emotions (Sabado et al., 2014). Praying is proven to be effective at helping them to heal (Nuraini et al., 2018). Research shows that compared with non-religious people, the percentage of patients who always pray to God is higher. Faith and spirituality are very sensitive things (Salsman et al., 2015). Listening to music is part of the distraction technique used to overcome anxiety. This is because music acts on the limbic system, which will be transmitted to the nervous system. This can regulate the contraction of body muscles and reduce tension. Music helps improve the quality of life by making positive changes in people's behaviour. Previous research has shown that listening to music is an option when seeking relief from symptoms of depression, fatigue, and pain. This is because listening to music affects the mood and psychological state of cancer patients (Bilgiq & Acaroglu, 2017). Reading is also

distracting techniques that can be used to overcome anxiety (Wu et al., 2018). Participants tried to improve their coping strategies by sharing stories about breast cancer experiences with other patients. This can reduce their depression levels and improve their psychological well-being. One way to improve the coping of cancer patients is to let them share stories about their experience to avoid depression and a decline in their psychological well-being (Azza et al., 2018).

#### **Limitation of study**

The limitation of this study is that it only focuses on body image changes experienced by women with breast cancer after mastectomy. Through more in-depth research on biological, psychological, social, spiritual, and cultural elements, this research may be better conducted. These five elements are inseparable, and destruction of one element is a threat to other elements. Hopefully this small exploratory study can provide a snapshot of the body image issues experienced by women after mastectomy, and hopefully it will help to improve the supportive care related to the body images of women suffering from cancer and undergoing mastectomy.

#### **Conclusion**

Breasts are synonymous with femininity, beauty, and attractiveness. Breast loss caused by mastectomy is a traumatic event experienced by women. This research explores the impacts of a mastectomy on the lives of women with breast cancer. The breast loss experienced by participants due to mastectomy can negatively affect body image and self-image. Therefore, many women lose their femininity and self-confidence after losing their breasts due to mastectomy. Improving appearance is one of the main strategies used by participants to hide its reality and change the way they dress. Most participants said that they wanted to alter their dressing style and wearing loose clothes. After a mastectomy, changes in activities may cause women to be unable to perform their roles and responsibilities. They feel useless and lose their social identity. Most participants revealed that they could not do housework as before. Breast loss has also caused participants to worry about their sex lives, because husbands may not feel that their wives are ideal. Participants use different coping strategies, and they are both adaptive and maladaptive in adapting to changes in their appearance. There are emotional-focused coping and problem-solving focused coping strategies adopted by women with breast cancer after mastectomy. The coping strategies focusing on the emotions expressed by the participants are

maladaptive coping. Participants experienced a grieving phase, such as denial and self-blame. Problem-focused coping strategies belong to the adaptive category. Participants can overcome the problems encountered in several ways, such as improving their spirituality, relaxing, doing their favourite activities, and talking with others.

### Ethical aspects and conflict of interest

The original study followed the Ethical Guideline for Nursing Research in the Faculty of Nursing Universitas Airlangga and was approved by the Health Research Ethics Committee (number 1869-KEPK). Participants were provided with written and oral information about this research and informed of their right to withdraw without negative effects. Participants' names will not be mentioned anywhere. All completed questionnaires and interview results will only be given a code number or initials, which cannot be used to identify participants' identity. The authors declare that there is no potential conflict of interest in this research, authorship, and / or the publication of this article.

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### Author contributions

The concept and study design (TI, YIPS), data analysis and interpretation (YIPS), processing the draft of the manuscript (YIPS), critical revision of the manuscript (TI, YIPS), article finalization (TI, YIPS).

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