

## FACTORS AFFECTING BODY IMAGE CHANGE AND SEXUALITY AT MASTECTOMY FEMALES ' REPRODUCTIVE AGE OF WOMEN

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**Abstract:** Mastectomy is the primary treatment of breast cancer in women. Scarce information is currently available on the factors affecting body image and sexuality at mastectomy females' reproductive age. **Objective:** to explore the factors affecting body image and sexuality at mastectomy females' reproductive age. **Design:** a descriptive design was used. **Setting:** Tanta university hospitals department of oncology (in and out-patient clinics). **Subjects:** a convenient sample of 78 women who had mastectomy. **Tool:** data was collected using the body image of mastectomy women scale. It consisted of **2 parts: 1:** socioeconomic characteristics (age in years, marital status, residence, levels of education, occupation, monthly, income and religion), and clinical information (follow up schedule after surgery, type of surgery, and who decided the type of surgery), **2:** The body image of mastectomy women scale (BIMWS) consists of 4 parts: women's emotion, women's body image change, women's self-consciousness, and women's sexuality. **Results:** Socioeconomic factors (age in years, marital status, and monthly income) significantly affected the studied women's body image self-consciousness ( $p=0.028$ ,  $p=0.003$ , &  $p=0.004$  respectively). Residence significantly affected the studied women's sexuality ( $p=0,001$ ). The type of surgery significantly affecting the studied women's emotion, body image change, and sexuality ( $p=0.001$ ,  $p=0.001$ , &  $p=0.026$  respectively). **Conclusion:** emotions, body image change, self consciousness and women's' sexuality after mastectomy significantly affected by the socioeconomic factors age, marital status, monthly income, residence and the type of surgery. **Recommendations:** Nurses should have a clear understanding of younger mastectomy females needs and develop care plans based on their socioeconomic and clinical conditions. **Key words:** Body image, Sexuality, Mastectomy, Reproductive age

### Introduction

Breast cancer is the most common cancer among women worldwide including the Arab world. It comprises 25% of all the cases of cancer. Worldwide, it is approximated that more than one million women are diagnosed with breast cancer yearly, and more than 400,000 will die from the

disease. Breast cancer is the second leading cause of death among women around the world<sup>(1-4)</sup>. It is estimated that one woman among each eleven women is affected by breast cancer during her life. Mastectomy is the primary treatment of breast cancer in at least one out of four women with its consequent effect on body image, sexuality, physical, psychological and social well-being<sup>(5-8)</sup>. Young age

is an independent risk factor for local recurrence after mastectomy and radiotherapy. Socioeconomic and clinical factors, such as age, race, gender, education and type of surgery were recognized to be related to body image and sexuality in women with breast cancer<sup>(9)</sup>.

Empirical evidence supports socioeconomic and clinical variables as important factors for the development of body image and sexuality. The impact of mastectomy on body image and sexuality of females' reproductive age varies greatly based on their physiological, psychological, socioeconomic and clinical factors<sup>(10, 11)</sup>. Previous studies recommended further research to measures body image, sexual satisfaction, and sexual dysfunction among diverse samples, especially younger women, minority or less-educated groups. The epidemiological literature indicates that women of higher socio-economic status are at increased risk of breast cancer and, therefore, comprise a higher proportion of the cases than in the general population<sup>(12)</sup>.

Early-stage breast cancer diagnosed in women aged 40 and younger has a worse overall prognosis than that in older women<sup>(10)</sup>. They choose to have mastectomy instead of lumpectomy, because they believe that it might improve their overall prognosis. The possibility to prevent breast cancer in families with known genetic inheritance by prophylactic surgery increases the demand for mastectomy. Mastectomy is the removal of the whole breast. It involves the loss of one or both breasts and creates the sense of losing one's femininity because breasts are intertwined with women's sexual identity and their subjective perceptions of their appearance<sup>(9)</sup>. There are five different types of mastectomy: "simple" or "total" mastectomy modified radical mastectomy, radical mastectomy, partial mastectomy, and subcutaneous (nipple-sparing) mastectomy<sup>(13, 14)</sup>. Young women were less comfortable with the changes and severe effects that occur in their bodies as a result of breast cancer treatment. They may suffer intense fatigue, malaise, nausea, vomiting, and

hair loss. Breast cancer treatment alters body reality and may influence body presentation<sup>(5)</sup>.

Mastectomy may be disfiguring, chemotherapy may cause abrupt menopause, and hormone replacement is not recommended. Mastectomy can alter a woman's body image, sex life and her feelings about being sexually intimate. The loss of women's breasts can also affect their self-esteem, sex drive, and how they feel about themselves as females<sup>(15)</sup>. Research studies provided evidence that age, marital status, job, education, religion, monthly household income, and elapsed time since diagnosis of breast cancer can affect the health-related quality of life (QOL) in women with breast cancer. Personal factors include demographic characteristics and optimism. Age has been considered as the important factor where younger women have been reported to have greater emotional distress<sup>(16, 17)</sup>. Body image, sexuality and sexual satisfaction are important quality of life multi-dimensional issues to mastectomy females' reproductive age, their families and social lives<sup>(18-20)</sup>. There are aspects of human behavior that depend upon one's vitality, physical, role and social functioning<sup>(12)</sup>.

Body image is defined as the mental picture of one's body, how one views oneself physically, and the image the individuals may have from their functional potentials based on their own belief. It is the individuals' attitude about the physical self, appearance, the state of health, wholeness, normal functioning, and sexuality. Body image is a component of a larger concept of self that for women includes feeling feminine and attractive<sup>(12)</sup>. It is the structure for understanding stresses about body changes and satisfaction with the body<sup>(5)</sup>. Body image is a multidimensional construct that encompasses cognitive (the patient's assessment of her body size), affective / emotional / imaginative (the patient's imagination of her body form) and behavioral components<sup>(13)</sup>. One's body enjoyment is a symbol of social expression, and as a way of being in the world. The way in which a woman experiences

her body is highly subjective, and is a product of her perceptions, thoughts, and feelings about body size, competence and function. The change in the body image and body form is a problem affects most mastectomy women<sup>(6, 7)</sup>.

Negative perceptions of body image include dissatisfaction with appearance, perceived loss of femininity and body integrity, reluctance to look at one's self naked, feeling less sexually attractive, less self consciousness about appearance, and dissatisfaction with surgical scars<sup>(12)</sup>. Body image change stress is the subjective psychological stress accompanies women's negative distressing feelings, emotions, thoughts, and behaviors. It is manifested by traumatic-like stress symptoms including re-experiencing (e.g., feeling upset with reminders of breast change), avoidance (e.g., attempts to limit exposure of the body to self or others), numbing (e.g. a loss of interest in activities or behaviors relevant to the body, such as limited sexual activity), and arousal symptoms (e. g. irritability, anger, etc.)<sup>(21)</sup>.

Sexuality is the quality or state of being sexual. Sexual functioning includes sexual desire, interest, attractiveness, arousal, orgasm, and satisfaction<sup>(22)</sup>. Women's sexuality can be particularly complex after breast cancer, with sexual changes often becoming the most problematic aspect of a woman's life<sup>(19, 20)</sup>. Research has documented a range of physical changes to a woman's sexuality following breast cancer treatment including mastectomy. The changes involve disturbances to sexual arousal, lubrication, orgasm, desire, and pleasure. Women's intra-psycho experience of changes to sexuality includes a fear of loss of fertility, negative body image, and feelings of sexual unattractiveness, loss of femininity, infertility, menopause, as well as alterations to a sense of sexual self, self-esteem and psychosocial status. Mastectomy is a major obstacle to and has a significant impact on the aspects of well being, losing libido and feelings of being sexually intimate, as well as increasing relationship problems. The exhausting radiation and chemotherapy treatments following mastectomy can cause vaginal dryness and drops in the frequency of

sex from once a week to once or twice a month<sup>(23, 24, 13)</sup>.

Women in many studies stated that they did not realize the significance of mastectomy and the irreversible changes that would take place in their body image, as well as in their physical, sexual, social, emotional status, and whole life. Nurses are on the front lines taking care of mastectomy women of different socioeconomic and clinical status before, during and after mastectomy. They must be aware of the mastectomy women's needs and what they could be experiencing<sup>(25)</sup>. Nurses can meet mastectomy women's needs, prepare them for some of the feelings that they could experience, ensure that they know what to expect and how to cope with the changes that will take place in their bodies. Nurses can educate, counsel, and help women to accept treatment procedures and adapt to their new conditions<sup>(24, 7)</sup>. Nurses can arrange for support groups and referrals after surgery, in order to promote a healthy view of their body image and sexuality based on their socioeconomic and clinical conditions. Although a large body of empirical literature exists on mastectomy, scant attention has been paid to the factors affecting body image and sexuality at mastectomy females' reproductive age. The discursive construction of femininity and sexuality following mastectomy shapes the way women construct and experience their illness and their body image leading many women to try to appear 'normal' to others post surgery. The woman's partnered relationship affects sexual health post-mastectomy reinforcing the importance of recognizing the inter-subjective nature of the factors and issues surrounding body image and sexuality at mastectomy females' reproductive age<sup>(26)</sup>. Nurses can play crucial roles in understanding and supporting mastectomy females' in their psychological, sexual and family live based on their socioeconomic and clinical conditions, before and after mastectomy<sup>(6)</sup>. Therefore, adequate information and communication are essential. This study provided evidenced and insight on the socioeconomic and clinical factors affecting body image and sexuality at mastectomy females'

reproductive age of women, and helps to select factors that need attention, and contribute to efficient and effective nursing management of these women.

### **Aim**

The aim of this study was to explore the factors affecting body image change and sexuality at mastectomy females' reproductive age of women.

### **Research question**

What are the factors affecting body image and sexuality at mastectomy females' reproductive age of women?

### **Subjects and Method**

#### **Research design**

A prospective descriptive design was used in this study.

#### **Setting**

The study was conducted at Tanta university hospital department of oncology (in and out-patient clinics).

#### **Subjects**

The study included a convenient sample of 78 women. They were selected from the above mentioned setting according to the following

#### ***inclusion criteria:***

1. Patients who had mastectomy
2. Patients age from under <30-45 years.
3. Patients willing to participate in the study.

#### ***The exclusion criteria*** were:

1. Patients 'age over 45 years
2. Patients who undergo mastectomy

#### **Tool**

-The body image of mastectomy women scale (BIMWS) was adapted from **Hopwood P et al (2001)**, **Dalton E et al (2009)** and **Penhollow T& el (2008)** <sup>(27,28,29)</sup>. **It consisted of 2 parts as follows:**

**Part 1:** socioeconomic characteristics and clinical information. It included age in years, marital status, residence, levels of education, occupation, monthly, income and religion. Clinical information included

follow up schedule after surgery (2 weeks, 3 months, 12 months, other), type of surgery (mastectomy, lumpectomy/breast conservation), and who decided the type of surgery (woman, surgeon).

**Part 2: The body image of mastectomy women scale (BIMWS)** evaluated the effect of mastectomy on body image and sexuality at mastectomy females' reproductive age. Each question was answered by a five options scale starting from strongly agree to strongly disagree. For negative statements, strongly agree was given a score of (4) and strongly disagree a score of (0). For positive statements, the reverse was done where strongly agree was given (0) and strongly disagree was given a score of (4). It consists of 4 parts:

1-effect of mastectomy on women's emotion included 24 items.

2-effect of mastectomy on women's body image change included 15 items.

3-effect of mastectomy on women's body image self-consciousness included 6 items.

4-effect of mastectomy on women's sexuality included 12 items.

The high score means poor perception about body image and sexuality of the at mastectomy females' reproductive age of Tanta women. The total included the following domains:-

1. Women' feelings: included 24 questions with a score maximum of 96.
2. Perception of body changes which included 15 questions with a maximum score of 60.
3. Awareness of body image included 6 questions with a maximum score of 24
4. Social and sexual life that included 12 questions with a total score of 48.

#### **Methods**

-Official permission was obtained from the responsible authorities to conduct the study.

-Ethical consideration: A written consent was taken from women to participate in the study after explanation of the purpose of the study. Privacy and

confidentiality were assured and kept. women's rights to withdraw from the study were respected.

-The tool was translated into the Arabic language by the researchers

- The tool was tested for its content validity by a focus group of 5 experts in the field of nursing the expert panels were asked to evaluate the developing questions after translation according to readability, language appropriateness to avoid biases, and ease of understanding items.

-A pilot study was also carried out on 10% (8) mastectomy women to ascertain the clarity, visibility, and applicability of the study tool and its translation, as well as to determine any obstacles that may be encountered during the time of data collection. Accordingly the necessary modifications were done and these women were excluded from the study subjects.

-Reliability of the tool was calculated using the Cronbach's alpha  $r = 0.97$ .

#### **Data collection**

-The studied women were selected after reviewing their records to choose them based on the inclusion criteria for participation in the study.

-They were individually interviewed by the researchers for keeping their privacy, and a professional communication was ascertained to establish rapport and trusting

-A written consent was obtained from each selected women, after explaining the aim, and the form of the study tool. The studied women were reassured that all information will be confidential and used only for the purpose of the study.

-The researchers distributed the BIMWS to the studied women and present during data collection for any help and guidance.

-Each interview was implemented on an individual basis and lasted for about 20-35 minute for fulfill the BIMWS according to women's attention and willingness.

-Data of the study were collected prospectively by the researchers using the BIMWS over a period of 4 months starting from January 2015 to April 2015.

#### **Statistical analysis**

The collected data was organized, tabulated and statistically analyzed using SPSS soft ware statistical computer package version 18. For quantitative data, mean, and standard deviation were calculated. The number and percentage distribution was calculated, t-test and ANOVA test were used as test significance. Significance was adopted at value  $<0.05$  for interpretation of results of test significance.

#### **Results**

**Table 1** shows the socioeconomic characteristics of the studied women: 3.8% of the studied women aged  $<30$  years, 41% -were 30-39 years, and 55.1% were 40-45 years old. The data also shows that 84.6% of the women were married, 52.6% were urban, and most of them (97.4%) were Muslim. Regarding their educational level 43.6% were read and write, 26.9% illiterate, 17.9% primary and secondary school and only 11.5% were graduated from university. As regards their job 79.5% were working and 20.5% were not work. Additionally, 55.1% of them had not enough monthly income.

**Table 2** presents the clinical information of the studied women: 33.3% of them followed up at 2 weeks after surgery, 20.5% at 3 months, 20.5% at 6 months, and 23% at 12 months or more. Regarding the type of surgery there were 74.4% had radical mastectomy and 25.6% had lumpectomy. The decision regarding type of the surgery was taken by the surgeon in 74.4% of the studied women and in 25.6% by both the women and the surgeons.

**Table 3** demonstrates that the socioeconomic factors age, marital status, residence, educational level, job and monthly income didn't significantly influenced the total scores of emotion ( $p=0.710$ ,  $p=0.960$ ,  $p=0.368$ ,  $p=0.888$ ,  $p=0.708$  &  $p=0.160$  respectively) at mastectomy females' reproductive age of Tanta women On the other hand, the clinical factor type of surgery significantly influenced the total scores of mastectomy women's emotion ( $p=0.001$ ).

**Table 4** displays that the socioeconomic factors age, marital status, residence, religion, educational level, job and monthly income didn't significantly influenced the total scores of body image change. (p=0.609, p=0.495, p=0.446, p=0.278, p=0.317 & p=0.312 respectively) at mastectomy females' reproductive age of Tanta women On the other hand, the clinical factor type of surgery significantly influenced the total scores of mastectomy women's body image change (p=0.001).

**Table 5** exhibits that the socioeconomic factors residence, educational level and job didn't significantly influenced the total scores of body image self-consciousness (p=0.117, p=0.215 & p=0.313 respectively), while their age in years, marital status and monthly income (p=0.028,

p=0.003,p=0.004 respectively), as well as the clinical factor type of surgery (p=0.026) significantly influenced the total scores of body image self-consciousness at mastectomy females' reproductive age of Tanta women.

**Table 6** reveals that the socioeconomic factors age in years, marital status, educational level, job and monthly income didn't significantly influenced the total scores of the studied women's sexuality (p=0.436, p=0.834, p=0.934, p=0.932 & p=0.595respectively). On the other hand, residence (p=0,001), as well as the clinical factor type of surgery (p=0.026) significantly influenced the total scores of mastectomy females' reproductive age of Tanta women.

**Table (1): Socioeconomic characteristics of the studied women**

Socioeconomic characteristics		Number (n=78)	%
Age in years	<30-39	35	44.9
	40-45	43	55.1
Marital status	Single	4	5.2
	Married	66	84.6
	Widow	5	6.4
	Separated	3	3.8
Residence	Urban	41	52.6
	Rural	37	47.4
Religion	Muslim	76	97.4
	Christian	2	2.6
Educational level	Illiterate	21	26.9
	Read & write	34	43.6
	Primary/secondary	14	17.9
	University	9	11.6
Job	Working	62	79.5
	Not working	16	20.5
Monthly income	Enough	35	44.9
	Not enough	43	55.1

**Table (2) Clinical information of the studied women**

Clinical information		Number (n=78)	%
Follow up after surgery	Two weeks	26	33.3
	3 months	16	20.5
	6 months	16	20.5
	12 months	16	20.5
	Others	5	6.4
Type of surgery	Radical mastectomy	58	74.4
	Lumpectomy	20	25.6
Decision of surgery	The surgeon	58	74.4
	Both women and surgeon	20	25.6

**Table (3): Factors affecting emotion at mastectomy females' reproductive age of Tanta women**

Factors affecting emotion	Women's emotion total score		t/F	P
	Range	Mean + SD		
<b>Age in years:</b> <30-39 40-45	30-92 20-90	58.29±17.09 56.93±14.99	0.373	0.710
<b>Marital status:</b> Currently not married Currently married	30-88 20-92	57.75±17.50 57.50±15.71	0.050	0.960
<b>Educational level:</b> Illiterate Read & write Educated	42-79 31-88 20-92	61.67±11.20 55.53±15.87 56.74±19.16	F= 1.012	0.368
<b>Residence:</b> Urban Rural	31-90 20-92	57.78±14.24 57.27±17.71	0.141	0.888
<b>Job:</b> Working Not working	30-90 20-92	57.19±14.67 58.87±20.40	0.376	0.708
<b>Monthly income:</b> Enough Not enough	38-88 20-92	60.26±12.78 55.33±17.85	1.419	0.160
<b>Type of surgery:</b> Radical mastectomy Lumpectomy	31-92 20-69	60.59±15.49 48.70±13.83	4.014	0.001*

\*Significant<0.001

**Table (4): Factors affecting body image change at mastectomy females' reproductive age of Tanta women**

Factors affecting body image change	Body image change for studied women total score		t/F	P
	Range	Mean + SD		
<b>Age in years:</b> <30-39 40-45	20-55 19-50	36.71±8.08 35.86±6.61	0.513	0.609
<b>Marital status:</b> Currently not married Currently married	20-55 19-50	34.92±9.40 36.49±6.87	0.685	0.495
<b>Educational level:</b> Illiterate Read & write Educated	29-46 20-55 19-49	37.38±4.89 35.06±7.36 36.96±8.83	F= 0.815	0.446
<b>Residence:</b> Urban Rural	20-47 19-55	35.39±6.30 37.19±8.19	1.093	0.278
<b>Job:</b> Working Not working	20-50 19-55	35.82±6.67 37.87±9.30	1.007	0.317
<b>Monthly income:</b> Enough Not enough	25-55 19-50	31.17±6.56 35.49±7.79	1.017	0.312
<b>Type of surgery:</b> Radical mastectomy Lumpectomy	26-55 19-43	38.02±6.35 31.10±7.45	4.014	0.001*

\*Significant<0.001

**Table (5): Factors affecting body image self-consciousness at mastectomy females' reproductive age of Tanta women**

Factors affecting body image self-consciousness	Women's self-consciousness total score		t/F	P
	Range	Mean + SD		
<b>Age in years:</b> <30-39 40-45	10-24 6-24	18.26+3.99 16.23+3.95	2.240	0.028*
<b>Marital status:</b> Currently not married Currently married	10-24 6-24	14.00+3.84 17.71+3.87	3.057	0.003*
<b>Educational level:</b> Illiterate Read & write Educated	12-24 6-24 12-24	16.62+3.44 17.47+4.70 18.04+3.30	F= 2.209	0.117
<b>Residence:</b> Urban Rural	10-24 6-24	16.59+3.34 17.76+4.73	1.251	0.215
<b>Job:</b> Working Not working	6-24 12-24	16.90+4.21 18.06+3.45	1.015	0.313
<b>Monthly income:</b> Enough Not enough	6-24 10-24	15.69+4.11 18.33+3.68	2.990	0.004*
<b>Type of surgery:</b> Radical mastectomy Lumpectomy	6-24 9-19	17.74+4.19 15.40+3.20	2.276	0.026*

\*Significant<0.001

**Table (6): Factors affecting sexuality at mastectomy females' reproductive age of Tanta women**

Factors affecting sexuality	Women's sexuality total score		t/F	P
	Range	Mean + SD		
<b>Age in years:</b> <30-39 40-45	14-43 12-45	26.86+9.17 25.35+7.83	0.783	0.436
<b>Marital status:</b> Currently not married Currently married	14-42 12-45	26.50+7.48 25.94+8.65	0.210	0.834
<b>Educational level:</b> Illiterate Read & write Educated	12-40 13-45 15-43	25.53+7.24 26.03+9.28 26.48+8.48	F= 0.069	0.934
<b>Residence:</b> Urban Rural	12-43 15-45	22.95+7.78 29.43+7.89	3.648	0.001*
<b>Job:</b> Working Not working	12-45 17-43	25.98+8.64 26.19+7.84	0.086	0.932
<b>Monthly income:</b> Enough Not enough	12-45 14-43	25.46+8.17 26.49+8.72	0.534	0.595
<b>Type of surgery:</b> Radical mastectomy Lumpectomy	12-45 13-37	27.95+8.37 20.45+5.85	2.276	0.026*

\*Significant<0.001



## Discussion

Breast is the symbol of femininity, reproduction, motherhood, female identity and sexual attraction. Any damage to breast can lead to worries, distress and harm women's whole life<sup>(9, 11)</sup>. Breast cancer is a threat to life of females' reproductive age. Mastectomy is the treatment of choice in 81% of women who have a breast cancer. **Tarkowski R et al 2017** reported that cancer survivors with reconstructed breasts reported a negative impact of cancer on their sexual lives more often than the mastectomy groups; however, they were younger, more likely to be in relationships, better educated and more likely to undergo aggressive adjuvant chemotherapy. Their quality of life was possibly affected by their psychosocial and medical aspects rather than the kind of surgery<sup>(30)</sup>.

The experience of mastectomy may be of minor or major importance to the woman, because it is extremely individual and contextual based on her socioeconomic and clinical condition<sup>(31)</sup>. Many psychosocioeconomic and other types' factors are associated with cancer, the treatment process, and changes in patients' body image, physical appearance and sexual function<sup>(32)</sup>. Health care providers need to be aware of the best options for their patients' conditions<sup>(9, 33)</sup>. This study aimed to explore the factors affecting body image and sexuality at mastectomy females' reproductive age. This is of major importance; because there is a scarce research in this topic. This study

provides evidence on the factors affecting mastectomy females' reproductive age emotions, body image change, self consciousness and sexuality.

The current study revealed that most of women were married (84.6%), 79.5% of them were working and 52.6% of them were urban. 43.6% were read and write, 26.9% illiterate, 17.9% primary and secondary school and only 11.5% were graduated from the university. More than half of them (55.1%) didn't have enough monthly income. This is in agreement with **Baptiste D et al 2017** as women in their study were predominantly married, employed and education and income varied. Most participants (n = 99, 88%) were identified as White, with the remainder Black (n = 12, 11%) and Hispanic (n = 2, 1.8%)<sup>(34)</sup>. The age of (55.1%) of the studied women in the present study ranged from 40-45 years old. This is in contradiction with **Baptiste D et al 2017** who studied motivations for contralateral prophylactic mastectomy as a function of socioeconomic status which shows that all participants were with an average age at diagnosis of 50.

The present study investigated the clinical information of the studied women where 33.3% of them followed up at 2 weeks after surgery, 20.5% at 3 months, 20.5% at 6 months, and 23% at 12 months or more. In this regard, **Hopwood P et al 2000** confirmed that women treated within the Manchester protocol receive two genetic

counseling sessions, a psychological assessment and a surgical consultation pre-operatively and annual follow-up post-operatively<sup>(35)</sup>. Also, **Velindre N (2015)** study outlined that it is currently common practice for women being followed-up after treatment to return to the National Health Service Breast Screening Programme (NHSBSP)/Breast Test Wales Screening Programme (BTWSP) after five years of follow-up or when they reach 50 years of age and invited women between 50 and 70 years of age for mammographic screening every three years<sup>(36)</sup>.

Regarding the type of surgery, this study confirmed that 74.4% had radical mastectomy and 25.6% had lumpectomy. Additionally, the decision regarding type of the surgery was taken by the surgeon in 74.4% and in 25.6% by both the women and the surgeons. **Venetis M et al 2016** results were inconsistent with the present study. They revealed that spouses, children, family, friends, and health professionals were reported as exerting a meaningful degree of influence on patients' decisions, while surgeons need to be perceived as having an opinion, specifically for complementary prophylactic mastectomy (CPM) for patients whom it is medically indicated<sup>(37)</sup>. Additionally, **Gumus M et al 2010** stated that patients who were older than 50 years, had more than 1 child, a history of lactation, and a positive family history of breast cancer mostly preferred mastectomy<sup>(15)</sup>.

The total scores of women's self-consciousness in this study was significantly affected by the age factor ( $P= 0.028$ ). On the other hand, emotions, body image change, and sexuality didn't significantly affected by age factor in years the studied women's total scores of ( $P= 0.710$ ,  $P= 0.609$ , &  $P= 0.436$  respectively), this is in disagreement with a study of **Hopwood P et al 2007** who studied the impact of age and clinical factors on quality of life in early breast cancer which revealed that age had significant effects on older and younger subgroups predicting poorer QOL for different domains. Mastectomy was associated with greater body image concerns ( $p<0.001$ ), Women <50 years (proxy pre-menopausal) had worse QOL in respect of anxiety, body image and breast symptoms<sup>(38)</sup>. Also **Paterson C et al 2016** found that age and treatment type had a significant impact on body image. In addition, poorer body image was found to have implications related to physical and psychological distress, sex and intimacy, the partnered relationship, and the potential for age to moderate body image in breast cancer survivors<sup>(39)</sup>.

The present study showed that the total scores of women's self-consciousness was significantly affected by the marital status ( $P= 0.003$ ). On the other hand, the marital status factor didn't significantly affected the studied women's total scores of emotions, body image change, and sexuality ( $P= 0.960$ ,  $P= 0.495$ , &  $P= 0.834$  respectively). This was not in accordance with **Loya F et al 2008** who assessed how marital status affects the emotional recovery of mastectomy patients of

different ages. Younger women who underwent a mastectomy one year earlier were more likely to fear recurrence of the disease and to worry about disfigurement resulting from surgery<sup>(40)</sup>. **Fobair P et al 2006** also was not in agreement with this study. They stated that greater sexual problems among sexually active women were associated with being married, reporting vaginal dryness, poorer mental health, partner's greater difficulty understanding one's feelings, and more problems with body image. Latina and Asian women reported fewer sexual problems than did Euro-Americans<sup>(12)</sup>.

The current study confirmed that the educational level didn't significantly affected the studied women's total scores of emotions, body image change, self-consciousness, and sexuality (P= 0.368, P= 0.446, P= 0.117, & P= 0.934 respectively). Also the residence didn't significantly affected the studied women's total scores of emotions, body image change, and self-consciousness (P= 0.888, P= 0.278, & P= 0.215 respectively). The monthly income didn't significantly affected the studied women's total scores of emotions, body image change, and sexuality (P= 0.160, P= 0.312), & P= 0.595 respectively). This is in contradiction with **the America's Essential Hospitals 2004** study which revealed that a large and growing body of evidence shows that socio-demographic factors age, race, ethnicity, and language, for example and socioeconomic status such as income and education, can influence health outcomes<sup>(41)</sup>.

The present study stated that the total scores of sexuality was significantly affected by the residence factor (P= 0.001), and the total scores of women's self-consciousness was significantly affected by the monthly income factor (P= 0.004), This is in accordance with **YeLou W et al 2005** who examined the prevalence, risk factors and sequelae of body image concerns. The study confirmed that women had stronger body image concerns if they are single, living in coastal areas, or if their relationship with their partner is poor. Moreover, women who perceive themselves as unattractive report more psychological distress<sup>(42)</sup>. The socioeconomic factor job didn't significantly affected the studied women's total scores of emotions, body image change, self-consciousness, and sexuality (P= 0.708, P= 0.317, P= 0.313, & P= 0.93). This result disagreed with **Razaei M et al 2016** who reported that most influential factors in patients with breast cancer were social (employment), economic (income, poverty, lack of support resources), and cultural status. Their studies have linked poor body image to low income levels. In addition, spouses' income level was related to body image. Women's employment as a social factor was predictive of the development of negative body image. Employed women tended to experience more stress- regarding body image, which could be due to a lack of social support<sup>(9)</sup>.

The clinical factor type of surgery (radical mastectomy, lumpectomy)

significantly affected the studied women's total scores of emotions, body image change, self-consciousness, and sexuality ( $P= 0.001$ ,  $P= 0.001$ ,  $P= 0.026$ , &  $P= 0.026$  respectively). These results agree with **Boughey J et al (2015)** who evaluated women's long-term satisfaction with Contralateral prophylactic mastectomy (CPM), factors influencing satisfaction, and psychological and social function after CPM<sup>(43)</sup>. Also the results of the present study are in line with **Onen S et al 2004** study of the effects of surgery type on body image, sexuality, self-esteem, and marital adjustment in breast cancer. Their results revealed that total mastectomy had a negative impact on breast perception, self-esteem, and sexuality. Avoidance and non-communication areas of sexual relations were the most frequent sexual dysfunctions seen among breast cancer survivors<sup>(44)</sup>.

### **Conclusion:**

The findings of this study showed that many factors can affect the body image and sexuality at females' reproductive age. The socioeconomic factors age, marital status, and monthly income significantly affected the studied women body image self-consciousness. The residence factor significantly affected their sexuality. The clinical factor type of surgery significantly affected the studied women's emotions, body image change, body image self-consciousness, and sexuality. On the other hand, the socioeconomic factors educational level, job, and monthly income didn't significantly affect the studied women's

emotions, body image change, and sexuality. These factors can affect the inter-personal and intra-personal relationships with younger women's partners and others who influenced various aspects of their lives. Thus, these factors must be identified and considered to make the most appropriate decisions for younger patients.

### **Limitations of the study:**

The limitation of this study included withdrawal of some mastectomy women due to the sensitive nature of its topic, as females reproductive age weren't like to expose their very personal senses and characteristics to others based on their culture, believes, and attitudes.

### **Recommendations**

1. Nurses should have a clear a more comprehensive understanding of younger mastectomy females needs and body image changes after diagnosis and treatment and providing them with the essential health education and support, because patients' education impacts the quality of life not only before surgery but also lifelong after finishing the treatment.
2. Development of care plans for younger females that include accurate and enough information about mastectomy, sexuality, body image, reconstruction, fertility and familial predisposition based on their socioeconomic and clinical conditions.
3. Nurses should also recognize and assess prior sexual satisfaction and sexual problems when providing sexual health care during treatment.

4. Nurses should counsel women about possible remedies for sexual dysfunctions and increasing their feelings of attractiveness that were altered by surgery or treatment.
5. Further research should be done on the effect of support and nursing teaching on the stress and worries about body image and sexuality, as well as on improving body image of mastectomy females' reproductive age who are treated with mastectomy.

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