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Psychosocial impact of mastectomy on female breast cancer patients presenting at an academic radiotherapy oncology centre in Ghana

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Abstract

Introduction: Mastectomy is a treatment option for patients diagnosed with breast cancer. There is very limited research into the psychosocial impact of mastectomy on female breast cancer patients, especially in the sub-Saharan African setting which has unique cultural norms. The study aimed at assessing the psychosocial impact of mastectomy on female breast cancer patients attending a radiotherapy/oncology centre in Ghana.

Methods: A cross-sectional design was used to undertake this study. A total of 80 female mastectomy breast cancer patients participated in this study. A semi-structured questionnaire was used for data collection over a 5-month period, January to May 2018. The data collected were analysed with Statistical Package for Social Science (SPSS) version 22.

Results: Most of the participants were adversely affected psychologically and emotionally by mastectomy. In particular, many (56·7%) agreed that they felt less feminine, and 71% reported they experienced psychological distress as a result of their mastectomy, while 63% of them reported loss of self-confidence. A large proportion of them (51, 63·8%) agreed that their lifestyles had changed following mastectomy, while 58% of them admitted that they felt treated as outcasts by society, and 75% resorted to the use of breast prostheses to reduce attention.

Conclusion: The study revealed that mastectomy for breast cancer patients had a negative impact on their psychological, emotional and social well-being. The availability of affordable breast prostheses, involvement of clinical psychologists in the care of post-mastectomy women, provision of emotional, psychological and even financial support could alleviate the psychosocial impact of affected women.

Background

Breast cancer is the most frequently diagnosed cancer in women globally. The World Health Organization (WHO) reported an approximate annual increment of 2·1 million new cases of diagnosed breast cancer worldwide.[1] The increased prevalence of female breast cancer cases has been attributed to modern lifestyle, and the incidence rate is reported to increase with advancing age, frequently affecting women aged over 40 years.[2–4]

Breast cancer is a significant cause of morbidity and mortality among women and is also the most common cancer-causing death among women.[5,6] Statistically, breast cancer mortality rates differ on the basis of race, ethnicity and geographical location. Although there is inadequate national statistics and information about the disease in Ghana, Ohene-Yeboah & Adjei[7] reported that breast cancer is the second leading cause of cancer mortality.

Mastectomy is a breast cancer treatment option requiring a surgical procedure to remove one or both breasts.[8,9] The procedure has been described as either modified radical involving the removal of the entire breast tissue along with the axillary contents, extended radical mastectomy with intrapleural *en bloc* resection of internal mammary lymph node by sternal splitting, or radical in which the entire breast, axillary lymph nodes, pectoralis major and minor muscles behind the breast are removed.[10] However, for women, the mastectomy also produces physical changes to the patient's body which presents challenges to their sexual identity, appearance, body image, confidence and personal esteem.[11,12]

In the Ghanaian setting, as may be the case in some sub-Saharan African countries, a myriad of economic, cultural norms and religious engagements, including superstitious beliefs shape how female patients respond to life after mastectomy, which may be different from the rest of the world.[13] Understanding how mastectomy affects their psychosocial life would be very crucial in the management and rehabilitation process after mastectomy.[14] Therefore, this study

was undertaken with the aim of assessing the psychosocial impact of mastectomy on female breast cancer patients in a Ghanaian setting.

Material and Methods

The study investigated the psychosocial impact on a cohort of consenting post-mastectomy female breast cancer patients reporting for adjuvant chemotherapy, post-operative radiotherapy treatment at a radiotherapy and oncology treatment centre in Ghana. A cross-sectional study design was used in this hospital-based breast cancer study. Ethical approval and permission to carry out the research study were sought and granted by the Ethics and Protocol Review Committee of the study institution and the management of the study site, respectively (Ethics identification number: SBAHS-RD./10515989/AA/5A/2017-2018).

The minimally required sample size (80) for the study was determined using the sample size calculation formula (for cross-sectional studies/surveys) proposed by Charan & Biswas.[15] Due to lack of a fixed appointment schedule at the centre, a non-probability, convenient sampling was used for participant selection, over a 5-month period -January to May 2018. The recruitment was done while patients awaited treatment (adjuvant chemotherapy, post-operative radiotherapy), simulation or case reviews following their mastectomy procedures. Informed consent was sought from all participants. Prior to their approval to participate in the study, participants were given information sheets and consent forms to inform them about what was required of them by one of the researchers after introducing herself and speaking to them about the research project. The entire procedure for the study was also explained to them, and patients could ask questions for any further clarifications. No participant was coerced into participation. Assurance was given to participants concerning the confidentiality and anonymity of information provided in the study. Particularly, they were informed that their identities would not be included in the study or any publication. Moreover, they were assured their collected data would be saved on a computer and secured with a password. Consent forms were made available in the English language and with translations into local dialects as and when necessary. Participants were also given the free will to decline their involvement at any stage during data collection. Those who consented were given questionnaires to complete or helped to complete where necessary. They were asked to comment on only the effect of the mastectomy upon their lives.

A self-designed, five-sectioned, semi-structured questionnaire (Appendix 1) comprising close- and open-ended questions was used in this study. The questionnaire was designed following a review of relevant literature in the subject area. The questionnaire addressed indices such as patient demographics, psychological and emotional factors, quality of life (QoL), social factors and ways to improve their well-being. The preliminary questionnaire was later validated and tested for reliability. The content validity of the questionnaire was tested by a senior radiotherapist and a radiation oncologist at the study site who also rated the importance of each item on the questionnaire for the intended objective. A nominal scale of 0 (important) to 1 (important) was used to score each question. Questions which scored 0 were considered irrelevant and were removed from the questionnaire. After the expert validation of the questionnaire, a pilot study test was undertaken among five patients to further assess the tool's validity. It also solicited for the patients' point of view and understanding of the questions. They were also asked to provide suggestions to make the questionnaire much better. A test–retest reliability analysis test was conducted to assess the reliability of the questionnaire. The data obtained for the first and second questionnaires during the test–retest analysis were analysed with the Cohen's unweighted Kappa statistic to test the agreement between scores obtained. A reliability score/coefficient of 0·79 was observed to suggest a moderate reliability which was suitable for the study.

Statistical methods

Data from the closed-ended questions were directly entered into a Microsoft Excel 2013 spreadsheet. The responses to the open-ended questions were first grouped into common themes and their frequencies were assigned. Subsequently, all the data were organised, visually inspected for errors, cleaned in a Microsoft Excel 2013 spreadsheet and exported to IBM SPSS version 22 for statistical analysis by a statistician. Descriptive statistics were generated in the form of frequencies, percentages, means and standard deviations. Spearman's rank correlation was used to establish relationships since the data demonstrated a non-normal distribution. Independent *t*-tests were also used for comparisons owing to the unpaired nature of the data, and p-values $< 0{\cdot}05$ were considered as indications for statistically significant differences.

Results

Demographics

Table 1 shows the age distribution and marital status of the 80 post-mastectomy breast cancer patients. The mean age of the population (range: 21–70 years) was 48·6 years (SD = 15·4). The most prevalent age groups were 31–40 years (25%) and 41–50 (22·5%). Further details of the demographics are presented in Table 1.

Psychological and emotional impacts of mastectomy

All the 80 patients identified psychological distress and emotional disturbance as major problems for female breast cancer patients who had undergone mastectomy (Table 2). Some of the patients felt that they had lost their self-esteem as women (50, 62·5%), felt less feminine (56, 70·0%), and experienced psychological distress and emotional disturbance (57, 71·3%).

Further to addressing their new looks, all the patients responded to the question '*What are your fears in relation to your present situation?*' Possible metastasis to other regions (45, 56·3%), inability to get over mastectomy (48, 60·0%), stigmatisation (62, 77·5%) and eventual double mastectomy (69, 86·3%) were the patients' greatest expressions of fear. Comparatively, a smaller number of them feared that mastectomy would result in eventual divorce (31, 38·8%) or death (22, 27·5%). Further details of psychological and emotional impact of mastectomy are presented in Table 2.

Social impact of mastectomy

Patients experienced negative spousal reactions (30, 37·5%), expressed shyness when their spouses looked at their mastectomy scars (36, 45·0%) and confirmed that their marriages had adversely been affected (33, 41·3%), although approximately 21·3% to 25·0% of them disagreed. From Table 2, many

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Table 1. Age and marital status of patients

	Number	Percent, %
Age (years)		
21–30	9	11·3
31–40	20	25·0
41–50	18	22·5
51–60	11	13·8
61–70	14	17·5
70+	8	10·0
Marital status		
Single	9	11·3
Married	52	65·0
Separated	12	15·0
Divorced	7	8·8
Geographical home region		
Ashanti	8	10·0
Brong Ahafo	4	5·0
Central	11	13·8
Eastern	10	12·5
Greater Accra	15	18·8
Northern	6	7·5
Volta	14	17·5
Western	8	10·0
Upper East	2	2·5
Upper West	2	2·5

responded that their belief in God or association with religion was a source of strength or coping strategy (47, 58·8%), and their source of peace and comfort (58, 72·5%). Many (51, 63·8%) also stated that God or religion provided encouragement and also received support from church members. Further details of social impact of mastectomy are presented in Table 2.

Post-mastectomy improvement strategies

The well-being of breast cancer patients is important to their recovery following mastectomy. In answering the question: '*What improvement strategies do you recommend for your well-being?*', patients recommended availability of affordable breast prosthesis (46, 57·5%) and breast reconstruction (33, 41·3%) as listed in Table 3. The patients explained that breast prostheses or other substitutes reduced attention to the absence of their real breast (62, 77·5%), boosted their self-confidence and self-esteem to some extent (65, 81·3%), and improved their feminine appearance (70, 87·5%). On the contrary, only a few (7, 8·8%) indicated that breast prostheses or other substitutes had no meaningful impact on their well-being. Other suggested improvement strategies included counselling sessions for affected patients (36·3%) and their spouses (52·5%). Only 19 (23·8%) had no ideas to improving their well-being after undergoing mastectomy.

Patients' demographics and psychosocial impact

With respect to the psychological and emotional impacts experienced by the patients due to mastectomy, there was no significant difference ($p > 0{\cdot}05$) between single and married women, married and divorced women, and single and divorced women as shown in Table 4. A statistically significant difference however, existed between married and separated women ($p = 0{\cdot}001$). There were also significant differences between single and separated, and married and separated women ($p = 0{\cdot}002$) after mastectomy. The results of the statistical associations show statistically significant negative correlations between patients' age and psychological and emotional effects ($Rho = -0{\cdot}499$, $p = 0{\cdot}001$), and between patients' age and social impact ($Rho = -0{\cdot}656$, $p = 0{\cdot}001$). Further details of the patients' demographics and psychosocial impact are presented in Table 4.

Discussion

Psychological and emotional impacts of mastectomy

Studies[16–19] suggest that one psychological impact of mastectomy is loss of femininity and sexual attractiveness. In this study, 70% of the patients admitted that they felt less feminine after mastectomy and 63% further stated that they had lost their self-confidence as women. These findings are consistent with the literature, where Jetha, Gul & Lalani[12] reported that almost all the breast cancer patients who had mastectomy lamented of distorted body image and expressed feelings of weirdness, incompleteness and loss of femininity. Korcan & Gursoy[20] also reported that mastectomy can adversely affect a woman's feeling of femininity and self-confidence.

Our study reported that 71% of the patients agreed to experiencing psychological distress and emotional disturbance due to mastectomy. This shows that mastectomy causes further psychological trauma to the already existing case of breast cancer. The need to find in-depth solutions to promote a sound and practical psychotherapeutic treatment for affected women has been suggested by Arroyo & Lopez.[21] Lyons[22] also reported that breast cancer patients experienced negative psychological effects, such as bad feelings, fears, as well as moderate to high levels of anxiety and psychological distress.

It has been reported in the literature that depression and anxiety are the most common psychological effects or impacts of breast cancer and mastectomy.[23-25] In a Korean study, Kim et al.[26] also reported higher incidence of depression in the breast cancer patients with mastectomy. Die[27] observed that depression is highly prevalent in breast cancer patients with mastectomy, presenting a primary risk for suicidal ideas and intentions, if severe. On the contrary, the results of our study showed that only a few (10%) of the patients agreed to experiencing depression and having suicidal thoughts due to mastectomy, while many (84%) disagreed. A reason for this could be attributed to Ghanaian sociocultural values which frown on suicidal tendencies. Other possible reasons are old age and hence no need for child breastfeeding, as well as separated and divorced marriages which cared less about spousal concerns for their surgical scars.

Social impact of mastectomy

Social support such as happy and stable relationships, good and strong marriages, family and friends assistances are very important

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Table 2. Psychological, emotional and social impact of mastectomy on participants

Psychological and emotional impact				
		Response		
Closed-ended questions		Agree	Unsure	Disagree
Do you feel less of a woman after mastectomy?		56 (70·0%)	4 (5·0%)	20 (25·0%)
Have you lost your self-confidence as a woman?		50 (62·5%)	5 (6·3%)	25 (31·3%)
Do you now experience psychological distress and emotional disturbance after mastectomy?		57 (71·3%)	2 (2·5%)	21 (26·3%)
Do you experience depression, and have you had suicidal thoughts because of mastectomy?		8 (10·0%)	5 (6·3%)	67 (83·8%)
Has your present situation affected your mental stability?		10 (12·5%)	1 (1·3%)	69 (86·3%)
Open-ended questions	Responses			Number (%)
How did you embrace your new look?	Very poorly			56 (70·0%)
	Normally			20 (25·0%)
	Indifferently			4 (5·0%)
What are your fears in relation to your present situation	No fears			5 (6·3%)
	Divorce			31 (38·8%)
	Stigmatisation			62 (77·5%)
	Denial of privileges			18 (22·5%)
	Never getting over it			48 (60·0%)
	Hindered progress in life			28 (35·0%)
	Eventual double mastectomy			69 (86·3%)
	Possible metastasis to other regions			45 (56·3%)
	Death			22 (27·5%)
Social impact of mastectomy				
		Response		
Close-ended questions		Agree	Unsure	Disagree
Have you experienced negative spousal reactions to your new look?		30 (37·5%)	4 (5·0%)	20 (25·0%)
Are you shy to allow your husband look at you uncovered?		36(45·0%)	0 (0·0%)	17 (21·3%)
Has your marriage been affected after mastectomy and could it result in divorce?		33 (41·3%)	1 (1·3%)	20 (25·0%)
Has your relationship with your family changed after mastectomy		26 (32·5%)	8(10·0%)	46 (57·5%)
Are you are treated as an outcast by society?		46 (57·5%)	11(13·8%)	23 (28·8%)
Do you seek help from support groups?		37 (46·3%)	0 (0·0%)	43 (53·3%)
Has your dressing style changed after mastectomy?		47 (58·8%)	0 (0·0%)	33 (41·3%)
Do you use breast prostheses/other substitutes to reduce attention to your cut-off breast?		60 (75·0%)	0 (0·0%)	20 (25·0%)
Do you mind walking about without using breast prostheses or other substitutes?		25 (31·3%)	0 (0·0%)	55 (68·8%)
Has your lifestyle changed after mastectomy		51 (63·8%)	3 (3·75%)	26 (32·5%)
Open-ended questions	Response			Number (%)
What role does God or religion play in your current situation?	Source of strength to carry on			47 (58·8%)
	Source of peace and comfort			58 (72·5%)
	Source of hope for the future			36 (45·0%)
	Encouragement and support from church			51 (63·8%)

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Table 3. Post-mastectomy improvement strategies

Question	Response	Number
What improvement strategies do you recommend for your well-being?	Not sure how/no idea	19 (23·8%)
	Breast reconstruction	33 (41·3%)
	Availability of affordable breast prosthesis	46 (57·5%)
	Professional clinical counselling sessions for patients	29 (36·3%)
	Professional clinical counselling sessions for spouses	42 (52·5%)
How has breast prostheses or other substitutes improved your present state?	Reduces attention to cut-off breast	62 (77·5%)
	Boosts self-confidence to some extent	65 (81·3%)
	Makes one look like any normal woman	70 (87·5%)
	Have not helped much	7 (8·8%)

Table 4. Marital status, association between age and mean scores for psychological and emotional impact

	Psychological and emotional impact		Social impact	
Marital Status	Mean ± std dev	*p*-value	Mean ± std dev	*p*-value
Single	2·09 ± 0·78	0·845	2·29 ± 0·32	0·408
Married	2·05 ± 0·50		2·15 ± 0·46	
Single	2·09 ± 0·78	0·052	2·29 ± 0·32	0·002
Separated	1·48 ± 0·56		1·69 ± 0·40	
Married	2·05 ± 0·50	0·374	2·15 ± 0·46	0·383
Divorced	1·86 ± 0·75		1·98 ± 0·63	
Single	2·09 ± 0·78	0·558	2·29 ± 0·32	0·225
Divorced	1·86 ± 0·75		1·98 ± 0·63	
Married	2·05 ± 0·50	0·001	2·15 ± 0·46	0·002
Separated	1·48 ± 0·56		1·69 ± 0·40	
Association between patients' age and mean score for psychological, emotional and social effects of mastectomy				
Effects of mastectomy		*Rho*		*p*-value
Psychological and emotional		−0·499		0·001
Social		−0·656		0·001

for enhancing QoL of most women.[20,24] In general, improving patients' QoL is a primary goal of all breast cancer treatment options. An effective strategy of improving QoL, social well-being, and family dynamics in breast cancer patients is via involvement of the patient's family in the treatment regimes as well as seeking their support before, during and after the treatment.[28]

The results of this study also established that mastectomy had negative impacts on the patients' marital relations with their spouses. In particular, 38% of the patients answered yes to the question '*Have you experienced negative spousal reactions to your new look?*', while 45% of them stated that they felt shy to see their spouses look at them uncovered. Also, 41% of the breast cancer patients confirmed that their marriages had been negatively impacted after mastectomy and consequently expressed fear of divorce. This finding is consistent with the study by Elshami et al.,[28] where 95% of breast cancer patients worried about getting divorced as a result of their illness. Similarly, Koçan and Gürsoy[20] reported that some breast cancer patients suffered difficult relations with their husbands after mastectomy and abstained from social interactions. In answering the question '*Has your lifestyle changed after mastectomy*', about 63·8% of patients agreed. These findings demonstrate a common index of marital insecurity.

Body image and dressing style

The findings of this study related to the body image and dressing style, and the use of prostheses by the breast cancer patients. In particular, 59% of the patients accepted that their body image and dressing style had changed. The findings of this study are further supported by the work of Koçan and Gürsoy[20] which reported that breast cancer survivors who had undergone mastectomy expressed negative statements about their body image or appearances, felt part of themselves missing, were inclined to wearing loose-fitting clothing that altered their dressing style due to lack of breast and tried to cover their surgical incisions.

Religion and faith

The question: '*What role does God or religion play in your current situation?*' was posed to the patients. In particular, 59% answered that God was their source of strength to carry on in life, while 73% said God was their source of peace and comfort. Botwe et al.[29] had reported that in Ghana supernatural beliefs greatly influence a patient's willingness to receive health care. In a similar study, Koçan and Gürsoy[20] reported that some breast cancer patients with mastectomy expressed that they regarded their situation as the will of God and turned to God as a source of strength and acceptance. The findings of this study are further supported by Davis et al.[30] who also reported that the participants in their study indicated unequivocally that their faith in God formed the primary support for their continued survivorship.

Improvement strategies

External breast prostheses or other substitutes were identified as one of the main well-being improvement strategies. In support of the findings of this study, Shrestha[31] reported that most women regarded their appearances as deformed, irregular, non-proportional, and ugly after mastectomy, and had resorted to breast prostheses to hide their loss of breast. In a related Pakistani study on women's

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experiences with external body prostheses, Jetha, Gul, and Lalani[12] reported that 15 women aged 35 to 61 years (mean age: 45 years) who underwent mastectomy perceived their breasts as a sign of feminine identity and therefore resorted to using external breast prostheses to restore symmetry.

Breast reconstruction and the availability of affordable breast prosthesis were recommended by many of the patients as main well-being improvement strategies in this study. The findings are consistent with the literature which reported that breast reconstruction showed an increase in positive body image and satisfaction of patients.[32] Koçan and Gürsoy[20] also suggested that breast reconstruction options should be discussed as an improvement strategy in the treatment process, either before mastectomy or soon thereafter. In Ghana, breast reconstruction is not common and the few available options are very expensive beyond the financial means of the average Ghanaian. These challenges are affecting the usage of breast reconstructions in Ghana.

The findings of this study showed that counselling sessions for both affected breast cancer patients and their spouses were other effective improvement strategies for coping with mastectomy. In Ghana, the stigmatisation associated with mastectomy does not come from just the spouses, but other family members so they would also need to be counselled. This assertion is supported by Elshami et al.[28] who reported that assessing and addressing the social well-being and family dynamics among breast cancer patients was needful to enhance the provision of a holistic medical care.

Patients demographics and psychosocial impact

Statistically, significant differences were found between married women and separated women after mastectomy ($p = 0{\cdot}001$) in the psychological and emotional impacts (mean score = 2·050), and between single and separated ($p = 0{\cdot}02$), and married and separated women ($p = 0{\cdot}02$) after mastectomy with respect to social impact. Diji et al.[32] have indicated that married female with mastectomy, in particular, experience psychosocial effects compared with divorced females because they fear that their husbands may leave them. Comparatively, these results are similar to the findings of Elshami et al.[28] who reported a mean score of 2·46 in the overall pyschosocial impact on family dynamics (marital status) in about 49·2% of the populations. The present study also established statistically significant negative correlations between age and psychological and emotional effects ($Rho = -0{\cdot}499$, $p = 0{\cdot}001$), and between age and social impact ($Rho = -0{\cdot}656$, $p = 0{\cdot}001$) of all the groups of breast cancer patients after mastectomy.

Study limitations

Although this study has several strengths, in the data collection process, some patients felt it was not necessary to share their private and sensitive issues with the authors, so they declined to participate. This prevented the use of very large sample size (> what was used) which could have provided more reliable results with greater precision, although the number used was statically acceptable based on power calculator analysis indicated in the method. Also, a qualitative study using interviews or focus groups would have provided a wealth of information to strengthen the findings as to how women manage in Ghana with the issues outlined in this study.

Clinical implication

The study found that breast cancer patients who undergo mastectomy experienced various forms of psychosocial and emotional effects including psychological distress and suicidal thoughts. It was also found that professional counselling of both patients and their spouses by clinical psychologists was necessary to provide marital security. For some patients, the involvement of religious beliefs in their treatment could help in their care. This is because some participants indicated that, in the midst of the mastectomy, God was their source of strength, peace, comfort, hope for the future, encouragement and a means of support through church brethren.

Conclusion

The study found that breast cancer patients who undergo mastectomy experienced various forms of psychosocial and emotional effects including psychological distress, loss of self-confidence, loss of feminine identity, mental instability, stigmatisation, suicidal thoughts, fear of divorce, possible metastasis and death, among several others. The study further showed negative marital relations and spousal reactions, fear of a possible divorce, and abstention from social interactions were some social impacts of mastectomy experienced by breast cancer patients. Breast reconstruction and the availability of affordable breast prosthesis or other substitutes were identified and recommended as well-being improvement strategies which boosted self-confidence and body image, restored some degree of feminine identity, and reduced attention to their removed breast. Professional counselling of both patients and their spouses and family members by clinical psychologists was necessary to provide marital security and reduce the psychosocial impact of mastectomy on females. Some participants indicated that God was their source of strength, peace, comfort, hope for the future, encouragement and a means of support through church brethren. A qualitative study using interviews or focus groups could also provide a wealth of information as to how women manage in Ghana with the findings identified in this study.

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Conflict of Interest. None declared.

Data Availability Statement. The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Appendix 1: Questionnaire

APPENDIX I

QUESTIONNAIRE

SECTION A: DEMOGRAPHICS

Please tick appropriate box or otherwise specify.

1. Age: 10–20 ( ) 21–30 ( ) 31–40 ( ) 41–50 ( ) 51–60 ( ) 61–70 ( ) Above 70 ( )
2. Marital status Single ( ) Married ( ) Divorced ( ) Separated ( )
3. Which region do you hail from? Specify please .....

SECTION B: PSYCHOLOGICAL & EMOTIONAL IMPACT

Section B1: Close-ended Questions

Table I-1: Statements and responses of psychological & emotional impact

Statement	Response		
	Agree	Unsure	Disagree
4. You feel less of a woman after mastectomy			
5. You now experience psychological distress owing to the fact that you underwent mastectomy			
6. You have had suicidal thoughts because of your present situation			
7. You have lost your self-confidence			
8. Your present situation has affected your mental stability			

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SECTION C: SOCIAL IMPACT

Table I-2: Statements and responses of social impact

Statement	Response		
	Agree	Unsure	Disagree
9. Your spouse reacted negatively to your new look			
10. Your marriage has been affected after mastectomy and could result in divorce			
11. You are shy to allow your husband look at you uncovered			
12. The relationship you had with your family has changed after mastectomy			
13. You are now treated by society like an outcast			
14. You seek help from support groups			
15. Your style of dressing has changed after mastectomy			
16. You use breast prosthesis/ other substitute to reduce attention to your cut-off breast			
17. You don't mind walking about without using breast prosthesis or another substitute			
18. Your lifestyle has changed after mastectomy			

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SECTION D: PSYCHOLOGICAL AND EMOTIONAL IMPACT

Section D1: Open-Ended Questions

10. How did you embrace your new look?
11. What are your fears in relation to your present situation?

Section D2: Social Impact

12. What role does God or religion play in your current situation?

SECTION E: WAYS TO IMPROVE THE WELL-BEING OF THE AFFECTED WOMEN

13. How have breast prosthesis helped in your current situation?
14. How do you think your current situation can be improved?

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