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Behavioural Pattern of Post-Mastectomy Patients Attending Radiotherapy Clinic At Ahmadu Bello University Teaching Hospital, Zaria

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ABSTRACT

This study explored the pattern of some of the behaviours of post-mastectomy patients attending the radiotherapy clinic at the Ahmadu Bello University Teaching Hospital, Zaria and factors influencing some selected behaviours were identified. Six-five post-mastectomy patients who gave their informed consent to participate in their study were purposively selected. Data were collected using a structured questionnaire, which had been tested for face validity and reliability. Data generated from the study were analysed using descriptive and inferential statistical procedures.

A negative pattern of behaviour was observed where behaviour involved in public religious, social and outdoor activities as well as sexual behaviour were concerned. However, family relationships and cosmetic behaviours improved. Majority (76.9%) of the women experienced emotional trauma, which resulted in them making positive efforts to improve their cosmetic outlook. Some of the cosmetic enhancing behaviours included the use of special accessories and protective dressing. This behaviour pattern was observed more among married than single women and those who went out to work. Family relationships were improved as

most of them enjoyed a sustained or improved relationship with their children (96.9%), their husbands (80.0%), and readily accepted assistance with housework (69.2%). The emotional trauma experienced by these women was primarily responsible for the majority (72.3%) of them refusing with bathing and grooming. Many of them stopped attending parties whilst many (60.0%) had either excluded or reduced the frequency of outdoor activities e.g. games.

Sexual activities reduced among 41 out of 42 women of childbearing age and non-existent and the widows. Some women reduced the frequency of sex because they attributed the need for mastectomy to sex-related activities and therefore wanted to protect the other breast from disease. None had bilateral mastectomy. Peri-operative management showed that all women had skin care but only 22 (33.8%) were pre-operatively educated on the methods of improving their post-operative body image. Of those that were educated 13 (60.0%) had a positive perception of mastectomy.

Counselling on improving post-mastectomy body image using special brassieres, breast prostheses and breast reconstruction should be given to all patients and their husbands especially in the pre-operative period. These supportive measures should be made available and affordable to patients. Nurses caring for mastectomy patients should explore with each patient her fears and concerns regarding mastectomy, identify interpersonal and extra personal resources that will aid the patient's rehabilitation into the society.

Keywords: *Mastectomy, body image, psychological distress, sexuality, breast reconstruction and cosmetics*

Introduction

Ever since the issues, relating to psychology assumed the focus of attention in oncologic practice, the treatment of breast cancer was seen as traumatic especially to the sexual relationships among women (Scofield et al, 2005). John & Okon (2006) has commented on breast as the symbol of womanhood as well as sexuality and on the concomitant devastating psychosocial impact of mastectomy on a woman's feeling of sexual desire and attractiveness. Previously and in recent time, there is a belief that mastectomies were the frequent participants of divorce or separation among spouses or other breaks up of relationships (Rosser, 2008). Thus, Scofield et al, (2005) stated that breast conservative surgery or breast

reconstruction was expected to have a clear and significant advantage over mastectomy in helping women maintain their sexual activities and functionality, including the psychological stability after the diagnosis of breast cancer.

Available evidence reveals that breast conservative surgery and mastectomy when combined with radiotherapy can yield a similar survival rate for the patients in the early stages of breast cancer (Rosser, 2008). The decision for breast treatment by women with breast cancer have been shown to depend on their preference, however under some circumstances as having large tumour that is comparable to the size of the breast, multiple primary tumour, or an increased

risk of subsequent new tumours, only a mastectomy is prescribed (John & Okon, 2006).

Furthermore, there are substantial ramifications of psychological distress and disfigurement to which women can face after mastectomy due to loss of their breast (Catalan et al, 1996). The society today often place emphasis on the breast as the sign of femininity or sexuality (Scofield et al, 2005).

However, women prefer breast reconstruction in order to achieve more attraction or improve their beauty, and it is a universal belief that a woman's quality of life and well-being may be improved by breast reconstruction or mastectomy.

The incidence of breast cancer among women is reportedly on the increase, thus predisposing more women to mastectomy (John and Okon, 2006). Research has shown that women who had mastectomy usually experience low self-esteem, body image disturbance, sexuality problems, cosmetics problems and problems with interpersonal relationships (John & Okon, 2006). These problems highlight the need for adequate medical and nursing care for mastectomy patients. Such nursing care should include physical, psychological and social care for the patients at all stages of their management.

However, most of the nursing care given to mastectomy patients in the developing countries like focuses on meeting the physical needs of the patients and not on the psychosocial aspect and well-being, (Rosser, 2008).

Methodology

Research Design

This is a descriptive study of the behavioural pattern of post-mastectomy patients.

Setting of the Study

This study was conducted at the radiotherapy clinic of the Ahmadu Bello University Teaching, Zaria. The hospital is the centre of excellence for oncology and referral centre for the cancer cases requiring radiotherapy. Seventy post-mastectomy patients received radiotherapy at the clinic during the period of this study.

Sampling Technique/Sample size

Three hundred and twenty-one patients registered at the radiotherapy department of the hospital. Eighty-five of them received radiotherapy for breast cancer from mid August to mid November 2013. Those who had mastectomy and were receiving radiotherapy were purposively selected on each clinic day based on information in their medical records. During the three months period of data collection, only 70 women who had mastectomy came for radiotherapy. At the commencement of irradiation, the patients usually attend clinic three or five days per week for about four weeks. All those who had gone through this phase attended periodically.

Three out of the 70 patients declined to participate in the study. Two patients were so ill that they could not be interviewed and so were subsequently re-admitted into the ward. In all 65

post-mastectomy patients who gave their informed consent participated in the study.

Ethical Consideration

The ethical approval for this study was obtained from the Medical Advisory Committee of Ahmadu Bello University Teaching, Zaria. Through the departmental head of radiotherapy, while informed consent of each respondent was obtained.

Data Collection

A structured interview guide was used to collect data from post-mastectomy patients who had given their informed consent to participate in the study. The interview guide was made up of two sections-A and B. The items in section A sought relevant socio-demographic characteristics of the subjects. Information on age, main occupation, marital status, religion, level of education, and ethnic group were sought and obtained from the subjects. Section B was made up of 32 items that sought information on the areas such as impact of mastectomy on usual daily activities, interpersonal relationships, social, religious and spiritual activities, sexual behaviour, cosmetic behaviour, perceived family support as well as pre-operative preparation and perception of mastectomy.

Table 1. Socio-demographic characteristics of the respondents

| Age group (in Years) | No | % |
|----------------------|----|------|
| 31-40 | 14 | 21.5 |
| 41-50 | 28 | 43.1 |
| 51-60 | 13 | 20.0 |
| 61 and above | 10 | 15.4 |

The researcher, using interview guide in a consulting room, interviewed women who gave their informed consent to participate in the study individually. Each interview session lasted for about 20 minutes and took place while respondents awaited radiotherapy or consultation with their doctors.

Method of Data Analysis

Data generated from the study were analysed by both descriptive (percentages) and inferential (chi-square and factor analysis) statistical procedures. Percentages were used to analyse data from the socio-demographic variables of the respondents, their performance of usual self-care, housework and leisure activities. In addition, data on cosmetic, sexual behaviour, social, religious, interpersonal relationships and perceived family support were analysed by descriptive statistics.

On the other hand, the interrelationship between demographic variables and the cosmetic and sexual behaviours of respondents were estimated by factor analysis using the principal components method. There were seven factors for each behaviour studied. The factors were made up of the demographic variables and the behaviour whose interrelationship with the demographic variables is being studied.

Results/findings

| | | |
|---------------------------|----|-------|
| Total | 65 | 100.0 |
| Marital Status | 55 | 84.7 |
| Married | 9 | 13.8 |
| Widowed | 1 | 1.5 |
| Separated | 65 | 100 |
| Total | | |
| Level of Education | | |
| No formal education | 21 | 32.3 |
| Primary education | 8 | 12.3 |
| Post primary education | 20 | 30.8 |
| Tertiary education | 16 | 24.6 |
| Total | 65 | 100 |
| Main occupation | | |
| Trading | 23 | 35.4 |
| Teaching | 13 | 20.0 |
| Housewife | 13 | 20.0 |
| Civil servants | 6 | 9.2 |
| Artisans | 5 | 7.7 |
| Farming | 3 | 4.6 |
| Technologists | 1 | 1.5 |
| Nursing | 1 | 1.5 |
| Total | 65 | 99.9 |
| Religion | | |
| Christian | 58 | 82.9 |
| Islam | 7 | 10.8 |
| Total | 65 | 100.0 |
| Ethnicity | | |
| Hausa | 33 | 50.7 |
| Igbo | 13 | 20.0 |
| Edo | 8 | 12.3 |
| Yoruba | 4 | 6.2 |
| Ijaw | 2 | 3.1 |
| Urhobo | 2 | 3.1 |
| Tiv | 2 | 3.1 |
| Kalabari | 1 | 1.5 |
| Total | 65 | 100 |

Table 1 shows the age group, marital status, level of education, main occupation, religion and ethnic background of the respondents. It shows that 43.1% of the respondents were between 41 and 50 years. The remaining percentage was made up as

follows: 31-40 years (21.5%), 51-60 years (20.0) and 61 years and above (15.4%). On the marital status; (84.7%) of the respondents were, 13.8% were widowed while the remaining 1.5% were separated from their husbands. Meanwhile, a third

(32.3%) of the respondents had no formal education. The rest had primary education (12.3), post-primary education (30.8%) and tertiary education 24.6%. The traders constituted 35.4% of the respondents while professionals (i.e. Teachers, Technologists and Nurses) made up 23.0%, houses wives comprised 20.0% and 9.2% were civil servants.

In addition, 7.7% were artisans (i.e. hairdressers and tailors) and 4.6% were farmers. Most (89.2%) of the respondents were Christians, the remaining 10.8% were Muslims. On Ethnicity; about half (50.7%) of the respondents were Hausas. Igbos, Edos and Yoruba made up 20.0%, 12.3% and 6.2% of the population respectively. Ijaws, Urhobos and Tivs each made up 3.1% while Kalabaris constituted 1.5% of the population.

Table 2: Sexual behaviour of respondents after Mastectomy

| Responses | Sexually neglected by spouse N (%) | Dislikes spouse desire for sex N(%) | Reduced frequency of sex N(%) | Allows breast caressing N(%) | Dislikes spouse seeing breast N(%) |
|--------------|------------------------------------|-------------------------------------|-------------------------------|------------------------------|------------------------------------|
| No | 40(61.5) | 12(18.5) | 8(12.3) | 43(66.1) | 14(21.5) |
| Occasionally | 9(13.8) | 34(52.3) | 1(1.5) | 8(12.3) | 27(41.5) |
| Often | 3(4.6) | 6(9.2) | 43(66.1) | 1(1.5) | 11(16.9) |
| No response | 13(20.0) | 13(20.0) | 13(20.0) | 13(20.0) | 13(20.0) |
| Total | 65(100) | 65(100) | 65(100) | 65(100) | 65(100) |

The above table (5) shows the sexual behaviour of respondents after mastectomy. 20% of the subjects did not respond to the questions relating to sexual experiences. Majority of them (61.5%) reported that their spouses did not sexually neglect them; 13% reported occasional neglect, while 4.6% reported frequent neglect by their partners. About half of the subjects (52%) occasionally disliked their spouses desire for sex, 9.2% disliked such desires often while 18.5% did not.

Regarding the frequency of sex after mastectomy, 66.1% avoided sex often 1.5% did so occasionally, while 12.3% reported no change in the frequency of sexual activity. The table also shows that 66.1% of the respondents no longer allowed their partners to caress their breast, 12.3% and 1.5% occasionally and often allowed caressing respectively. The table also shows that 41.5% and 16.9% occasionally and often respectively disliked their spouses seeing their breasts. The remaining 21.5% of the subjects did not like their spouse seeing their breasts.

Table 3: Cosmetic behaviour of respondents after mastectomy

| Variable | Responses | | |
|--|-----------|-----------|------------|
| | Yes N(%) | No N(%) | Total N(%) |
| I. Comfortable without devices in bra | 37 (43.1) | 28 (43.1) | 65 (100) |
| II. Uses devices in bra | 50 (76.9) | 15 (23.1) | 65 (100) |
| III. Would like to wear special devices/prosthesis | 61 (93.8) | 4 (6.2) | 65 (100) |
| IV. Feels less attractive after surgery | 26 (40.0) | 39 (60.0) | 65 (100) |
| V. Would like to have breast reconstruction | 20 (30.8) | 45 (69.2) | 65 (100) |

The table above shows the effect of mastectomy on the subject's cosmetic behaviour and body image. Without improvising for the lost breast, 56.9% of the respondent still felt comfortable in their usual clothes, while 43.1% did not. Most (76.9%) of the subjects used devices (pieces of

foams/cloths) in the brassiere while 23.1% did not. Almost all the respondents (93.8%) will like to wear breast prosthesis or specially made brassiere to enhance their looks. Only 30.8% of the subjects however, will like to have breast reconstruction. Only 40.0% of the respondent felt less attractive than they did before surgery.

Table 4: Correlation between Respondents' Cosmetic Behaviour and their demographic Variables

| Parameters | Age | Occupation | Marital status |
|------------------------|------|------------|----------------|
| Eigen Value | 2.5 | 1.3 | 1.0 |
| Communality | 0.7 | 0.8 | 0.7 |
| Percentage of variance | 35.5 | 19.1 | 14.8 |
| Cumulative percentage | 35.5 | 54.6 | 69.4 |
| Factor loading | | | |
| Age | -0.8 | 0.3 | 0.1 |
| Occupation | 0.3 | 0.4 | -0.8 |
| Marital status | -0.7 | 0.4 | 0.1 |

Table 4 shows the Eigen values, communality, and percentage of variance, cumulative percentage and the factor loadings of the three demographic variables that are statistically significant in explaining the cosmetic behaviour of the respondents. Age has the highest Eigen value, the highest percentage of variance and the highest absolute figures for factor loadings. It is therefore

the principal factor in explaining the cosmetic behaviour of the respondents. Preliminary analysis showed that the younger respondents (31-50 years) showed more concern for their body image. Occupation had the second highest parameters for explaining the respondents' aesthetic behaviour. Preliminary analysis of data had shown that respondents whose occupation brought them in

contact with more outsiders showed more concern for their looks.

The least statistically significant factor in explaining cosmetic behaviour of the respondents is marital status. It has an Eigen value of 1.0 percentage of variance of 14.8 and factor loading

of 0.1-0.8 and 0.1. In a preliminary analysis, the married respondents were shown to be more concerned about their looks. The table showed that age is approximately twice as significant as occupation and 2.5 times that of marital status in explaining the respondents' cosmetic behaviour.

Table 5: Correlation between respondents' sex behaviour and demographic variables

| Parameters | Age | Occupation |
|------------------------|------|------------|
| Eigen Value | 1.8 | 1.3 |
| Percentage of Variance | 30.5 | 21.5 |
| Cumulative percentage | 30.5 | 52.0 |
| Communality | 0.4 | 0.6 |
| Factor loadings | | |
| Occupation | 0.3 | 0.7 |
| Age | -0.6 | -0.1 |

Table 5 shows the Eigen values, percentage of variance, cumulative percentage, communality and factor loadings of age and occupation, which the principal component factor method extracted as being significantly related to the respondents' sexual behaviour. The table showed that age has a higher Eigen value and is thus the principal factor in explaining the respondents' sexual behaviour. It explains 30.5% of the respondents' sexual behaviour. Occupation is the second variable extracted as having a significant association with the respondents' sexual behaviour. It has an Eigen value of 1.3 and explains 21.5% of the sexual behaviour of the respondents.

Preliminary analysis of data had shown that the sexual behaviour of younger subjects was more

adversely affected than their older counterparts of over 50 years. Similarly, preliminary analysis also showed that Teachers, Nurses, Technologists and Artisans reported more adverse effect on their sexual lives than did the farmers, housewives and traders.

Discussion

The demographic findings of this study showed that 28 (43.1%) of the respondents were between 41 and 50 years of age; while only 15.4% of them were over 60 years (Table 1). This may mean that the incidence of mastectomy may be highest among women between 41 and 50 years and gradually decreases as age increases either because of advanced state of the disease or death

from the disease or other disease. Mastectomy among Nigerian women appeared evenly distributed among all levels of education. However, the higher proportion of the respondents with formal education may reflect the influence of education on help seeking behaviour of the respondents in terms of seeking hospital care.

The finding that majority of the respondents (84.7%) were married may be attributed to the fact that all the respondents were over 30 years, at which age most women are usually married. This study also showed that majority of the respondents (77.0%) were either in unskilled or semi-skilled occupation or were full time housewives.

Findings regarding the respondents' ethnicity showed that the University Teaching Hospital, Zaria (setting of this study) as a centre of excellence attracts clients from all parts of the country for specialist care. About half of the subjects (50%) were Hausas- a finding that may be explained on the basis of the respondents' proximity to the setting of the study. The rest of the population made up of Igbos (20.0%), Edos (12.3%) and other tribes in varying percentages (Table 1).

Only two major findings of the three major religions in Nigeria i.e. Christianity and Islam were presented in the study. The absence of traditional religionists from population may mean that they seek care in non-orthodox health institutions whose approach to care may be more agreeable to their religious beliefs and faith.

Furthermore, with respect to the respondents' sexual behaviour, the study showed that the

unmarried and the older respondents (over 60 years) did not respond to the questions on sexual behaviour. The findings agree with the report of Schofield et al (2005) which showed that people who did not respond to surveys on sexual behaviour are usually older, less well educated and less liberal than responders are. This study also showed that although many of the subjects (63.1%) had reduced the frequency of their nudity and anticipated similar reactions from their husbands. In order to the agonies of such reactions, they reduced the frequency of sexual activities. In the opinion of Solano (2003), an individuals' functional health status is strongly influenced by mood, thought and feeling. Women who equate attractiveness to sexual desirability are likely to reduce the frequency of sexual activity due to the loss of an important aspect of feminine sexuality (Rosser, 2008)

Rosser (2008) further explained that the loss of this erogenous organ i.e. the breast, may result in reduced sexual arousability, interfere with organism, thereby reducing sexual satisfaction. This may also have contributed to the reduced frequency of sexual activity reported by many of the respondents in the study. Another possible explanation for the reduced sexual activity reported by majority of the subjects may be found in their husbands. It has been reported that breast cancer and mastectomy causes similar psychosocial problems in husbands of affected women (Scholfield et al., 2005). Probably, because of the psychosocial problems experienced by husbands of post-mastectomy women or out of

genuine concern for their wives (Rosser, 2008). Thus, affected may reduce the frequency of initiating sexual activity. In a society like Nigeria, where men are primary initiators of sex activity is more likely to be reduced among these subjects.

Fear of recurrence of cancer was the main reason given by 58.5% of the respondents for reducing the frequency of sexual activities. This fear may be associated with the uncertainty surrounding the aetiology, management and prognosis of breast cancer reported by Rosser (2008)

Factorial analysis of the respondents' sexual behaviour revealed that occupation significantly correlated with sexual behaviour after mastectomy. Analysis of sexual behaviour by occupation further showed that the sexual behaviour of subjects with skilled jobs (i.e. Teachers, Nurses and Technologists) were more adversely affected than that of house wives or those with semi-skilled or unskilled jobs. Explanations were artisans, all of whom reported gross adverse effect on their sexual behaviour.

More so, with respect to the effect of mastectomy on the respondents' behaviour, this study showed that most of the respondents were dissatisfied with their post-mastectomy body images and consequently employed various means to improve their looks. Majority of the respondents (76.9%) improvised for the absent breast using pieces of cloths or foams in the brassiere cups of the affected breast. The few subjects (23.1%) who did not use this method of re-creating a feminine image probably could not cope with the limitations of this method. This may explain why

most of the respondents (93.8%) would prefer to wear prostheses or brassieres specially made for this purpose. The few respondents who could not use either method are probably those who had urgent needs than improving their looks. It is also possible that such respondents could not bear to live with the deception of presenting a feminine image knowing that they had only one breast. Rosser (2008) reported the case of a post-mastectomy woman who could not wear breast prosthesis because she could deceive herself, even though she may succeed in deceiving others.

Factorial analysis of the effect of demographic variables on the respondents' cosmetic behaviour showed that age, marital status and occupation significantly correlated to the aesthetic/cosmetic behaviour after mastectomy. This study showed that respondents below 50 years were more concerned about their looks than their counterparts over 50 years. John and Okon (2006) found that younger patients with altered and unacceptable body image had more psychosocial problems than older patients with similar problems. The explanation given by John and Okon (2006) that the younger patients felt out of life may be responsible for the greater concern for body image shown by younger respondents in this study. Consequently, this group of respondents made greater efforts to hide their disfigurement. The greater concern for body image by the younger women might probably have been motivated by fear of being rejected by their husbands.

Rosser (2008) identified this fear of possible rejection by spouses of mastectomy patients as a

major concern of married mastectomy patients. This position was further supported in this study by accepting the hypothesis that the married respondents will experience more adverse effect on their cosmetic behaviour. In Nigeria, the emphasis on breasts as true sign of femininity, the personal and cultural significance of breastfeeding and the roles of the breast in sexual intercourse may further compound the problems of post mastectomy patients in this society.

Conclusion

The increasing incidence of breast cancer, according to John and Okon (2006), and the likely increase in mastectomy have great personal, social and health implications. From the review of available literature it appears that, the most far reaching effects of mastectomy on patients are as summarised by Pasnau & Pferfferbaum (2002). They are lowered self-esteem, alteration in the body image, invasion and occupation of thought by disability and acquisition of a new, total and undesirable identity. These effects in turn evoke negative reactions in these patients. Reactions such as anger, anxiety, fear, depression and withdrawal from intimate and social contacts are therefore common among post-mastectomy patients (Narthorst-Boos & Von Schoultz, 2002). Available literature also showed that individual reactions to mastectomy change over time and are influenced by several factors. In order to bridge the gap between their capabilities and environment, societal and activity demands on them, post mastectomates adopt several coping

strategies. Some of the coping strategies according to Munstedt et al., (2005) are activity accommodation, modification of structural built and laws of the society, psychosocial coping and use of external supports.

Breast reconstruction and mastectomy for women with breast cancer have been shown to be safe procedures and are generally associated with high satisfaction, (Verbrugge & Jette, 2004). Though breast reconstruction and mastectomy have generally been found to be associated with comparable psychosocial adjustment and quality of life, there are many times when women choose mastectomy or when mastectomy is recommended based on tumour size, location, or other factors. For these women, reconstruction should be discussed with them and offered (O'Hara et al., 2009). Although a great deal is known about how these procedures influence women's psychosocial adjustment following the surgery, there are many questions that remain unanswered. Additionally, as reconstructive procedures for women with breast cancer change and advance, additional studies are needed to determine the impact they have on women's short- and long-term psychosocial adjustment.

In summary, the task of effective rehabilitation and re-integration of post mastectomates into the society remains a challenge to health care providers.

Recommendations

- Counselling on improving post-mastectomy body image using special

brassieres, breast prostheses and breast reconstruction should be given to all patients and their husbands especially in the pre-operative period

- These supportive measures should be made available and affordable to patients
- Nurses caring for mastectomy patients should explore with each patient her fears and concerns regarding mastectomy, identify interpersonal and extra personal resources that will aid the patient's rehabilitation into the society.
- Planned health education programmes should be given to mastectomy patients and their significant ones on breast cancer, mastectomy and other management approaches, their possible effects and the ways of controlling such unwanted effects. This will allay unnecessary fear and assist patients in coping with their condition.

REFERENCES

1. Catalan, J; Beedor, A, Gazzar, R and Barton, S (2006); Women and infection; Investigations of its psychosocial consequences, *Journal of psychosomatic Research* 41(3) 39-47.
2. John, M.E and Okon, R.U (2006); The psychological impact of cancer on patient and family, *Advances in Nursing Research*; the African perspective proceedings of the third international conference. *A Nursing Research ed.*, 4 (3)97-121
3. Munstedt, K, Milch, W, & Reimer, C (2005); Breast forms after mastectomy-patients' issues, *supportive care in cancer*, 3 (6) 438-471
4. Narthorst-Boos, J & Von Schoultz, B (2002); Psychological reactions and sexual life after a 4year hysterectomy with mastectomy and without oophorectomy, *gynaecological and obstetrics investigation*, 34 (2) 97-107
5. O'Hara, M. W, Grownheim, M. M & Hindrichs, I (2009); Psychological consequences of surgery, *psychosomatic medicine*, 5 536-570
6. Paschali, E. A (2003); A holistic nursing response to mastectomy trauma syndrome, *journal of holistic nursing*, 11 (3) 258-270
7. Pasnau, R. O & Pferfferbaum, B (2002); Psychological Aspect of post amputation pain, *Nursing clinics of North America*, 11 (4) 679-685
8. Rosser, J.E (2008);" The interpretation of women's experience" A critical Appraisal of literature of breast cancer, *social science and medicine*, 15 (E) 257-265
9. Rush, A.M (2006); Cancer and Ostomy patient, *Nursing clinics of North America*, 11 (3) 405-412
10. Scholfield,W. S, Wellish, D.S (2005); The sooner the better. A study of the psychological factors in women undergoing immediate vs delayed breast reconstruction, *American journal of psychiatry*, 14 (2) 40-46

11. Solano, D. S, Casta, M, Salvati, S (2003); Psychosocial factors and clinical evolution in HIV infection: A longitudinal study, *journal of psychosomatic research*, 37 (1) 39-51
12. Stefanek, M. E & Helzlsoner, K. J (2005); Predictions of, and satisfaction with bilateral prophylactic mastectomy, *Preventive medicine*, 24 (40) 412-419
13. Tate, P.S (2003); Breast conservation vs mastectomy: patients' preferences in a community practice in Kentucky, *journal of surgical oncology*, 52 (4) 213-216
14. Verbrugge, L. M and Jette, A. M (2004); The disablement process, *social science medicine*, 38 (1) 1-14
15. Watson, G. O, Wood, R,Y, Wechster, N. L (2005); Comprehensive care of the ileostomy patient, *Nursing clinics of America*, 11(3) 427-444