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Psychological Impact of Mastectomy and Breast Reconstruction

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Abstract: ***The diagnosis and progression of cancer can be viewed as a traumatic event in the experiences of those who are affected and may cause fear of suffering, helplessness, disability and isolation. A substantial proportion of those who suffer from cancer express distress in the form of depression and hopelessness and a few number with loss of will to live or desire for hastened death. However, this could in turn affect their quality of life. In addition, the later may arise with inadequate relief of pain or other physical symptoms such as depression, hopelessness, social isolation or reluctance to depend on others for support. Systematic review of both quantitative and qualitative published research articles comprising of cross-sectional, prospective, longitudinal and observational studies. Eight research papers examined psychological impact of mastectomy and breast reconstruction and found that body image disturbances, low self-esteem and altered sexuality were the major reactions that are experienced by breast cancer patients who underwent mastectomy while another seven studies examined the quality of life in patients following mastectomy and breast reconstruction. In all, a total of twenty research articles were reviewed. Findings indicate that the quality of life of post-mastectomy patients is influenced by the stage of the disease and a more advanced stage of the disease is significantly related to poorer quality of life, which is a reflection findings that quality of life of patients with stage 111 breast cancer was significantly lower than stage 1 or 11 breast cancer. Meanwhile, pain occurred on the majority of the participants, which is a partial explanation of why surgical approaches that attempt to improve the negative impact of radical mastectomy failed in translating its benefits of achieving better body image into a better quality of life. Anxiety, depression and hopelessness were independent predictors of the desire for hastened death which mediated the effects of psychosocial and disease related variables on this outcome. The risk factor identified, support a holistic approach to palliative care in patients with lung cancer, which inclines to psychological, physical and spiritual factors to prevent and manage distress in patients with terminal illness***

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

1. Introduction

Breast cancer is the most common malignancy among women worldwide affecting over 44,000 in the UK alone (Cancer Research UK, 2012). Breast cancer ranges from stages 0-4 (0, 1, 2, 3a, 3b, 3c and 4) and may spread from where it began to other parts of the body (Canadian Cancer Society, 2012). Available evidence has shown that mastectomy is on the increase due to the rising incidence of breast cancer (Canadian Cancer Society, 2012). The cancer stage and individual patient's preferences determine the treatment option. However, either mastectomy or breast reconstruction is usually the available options. Sometimes, in order to reduce the psychological impact of mastectomy on the patients and to improve the women's physical appearances as well as to boost their self-image they may be advised to wear an external prosthesis (John and Okon, 2006).

Furthermore, for some various reasons, which include restoring the symmetry, contour and breast position breast reconstruction is recommended in order to maintain the women's maximum level of psychological well-being (Rosser, 2008). Other reasons for undergoing breast reconstruction are to enhance body image and retain a sense of femininity as well as wholeness (Verbrugge and Jette, 2010).

Everson *et al.,* (2006) explained that the two options available for breast reconstruction are in the form of prosthetic implant using silicone or autologous tissue flaps using the body tissues of the patient. However, the choice of which option to use is only dependent on the patient's preferences and their suitability in terms of having enough tissue, being able to afford the cost of the surgery as well as the need for radiotherapy. Pell *et al*., (2009) opined that due to the complications involved in prosthetic implant such as capsular contracture and the perception of it by some women as foreign to their body prefer not to have it.

Meanwhile, greater disturbances in terms of work, social and daily activities as well as reduced vitality are being reported by women who have undergone immediate breast reconstruction (Everson *et al.,* 2006). Delayed breast reconstruction has an advantage over immediate reconstruction especially for women who are overwhelmed by cancer diagnosis because it often follows adjuvant therapy which allows the skin flap to settle and heal before breast reconstruction (Ford *et al*., 2005).

Based on the patient's risk factors and on information from biopsy, the surgeon will have a general idea of the extent of the tumour. Unfortunately, the full extent of the cancer cannot be determined until the entire tumour is removed, and lymph nodes have been evaluated (Everson *et al.,* 2006). In some patients, prior to any surgery, there may be signs of advanced disease, or it may be determined that radiation will be required as part of the treatment plan (Ford *et al*., 2005). If this is the case, it may be in the patient's best interest to delay reconstruction until after all treatments have been completed.

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Apparently, the decisions around breast reconstruction and the actual process are complicated and associated with a range of psychological outcomes that may be influenced by beliefs about reconstruction and expectations of the outcome. Beck *et al.,* (2008) concluded that women often accept decisions that are satisfactory rather than ideal and likely to be influenced by the situation in which decision-making occurs when faced with emotive health situations, such as decisions around reconstructive surgery. Therefore, health professionals are necessary source of information in the decision-making process (Beck *et al.,* 2008).

Psychosocial reactions to surgical intervention among surgical patients are usually individualized and do not follow a definite pattern (Ford *et al*., 2005). Accordingly, Ford *et al*., (2005) opined that psychological reactions reflect deep-seated patients' psychosocial needs that they may or may not know its effect. However, Rosser (2008) enumerated some of the psychological reactions of patients following surgical intervention to include anxiety, depression and guilt, hopelessness, helplessness, frustration as well as withdrawal from social activities. Pasnau and Pfefferbaum (2006) concluded from their study that the psychological reactions are in some cases being masked by their real cause due to the manifestation of some somatic signs and symptoms such as phantom pain syndrome which is a typical example of somatic manifestation of psychological needs.

Furthermore, Everson *et al*., (2006) stated that some factors such as socio-cultural background and personality features usually influence the psychosocial reactions of patients following surgical interventions. Meanwhile, a clear understanding of the socio-cultural background of patients is essential in meeting their psychosocial needs. However, Pasnau and Pfefferbaum (2006) opined that it is difficult to evolve a standard solution to psychosocial problems among surgical patients due to the dynamic and varied nature of patients' backgrounds.

More so, the unmet psychosocial needs of patients have psychological and physical health implications. Generally, the overall quality of life outcome may be poor if the health care provider is unable to identify and effectively manage psychosocial problems of patients early enough (Pell *et al*., 2009).

Accordingly, Pell *et al*., (2009) posited that surgical intervention is the alteration in anatomic, physiologic or psychic disfiguration of any part of the body which can consequently result in some form of physical, psychological or social disability. In addition, the outcome of such interventions can attract social stigmatization onto the patients and reducing their capabilities of preventing them from performing activities of daily living that are normal for their sex and age (Verbrugge and Jette, 2010).

Furthermore, Verbrugge and Jette (2010) states that a woman's capability to breast feed are usually reduced by mastectomy or breast reconstruction. However, in all part of the world breast feeding has both personal and social significance: by interfering with a woman's capability to breast feed, mastectomy causes psychological, social and physiological disabilities (Verbrugge and Jette, (2010). They therefore, defined disability as the gap between capability and demand. A considerable concern for women especially those who are still actively reproductive are usually by mastectomy or breast reconstruction (Rosser, 2008).

The degree of severity caused by surgical interventions is often related to the alteration in the anatomic and psychic configuration and to the negative societal reactions which they usually evoke (Catalan *et al*., 2011). Unacceptable body image, poor self-esteem and poor self-concept usually experienced by patients who had disfiguring surgery often result in feelings of inferiority among them (Catalan *et al*., 2011). Consequently, feelings of hopelessness, worthlessness, and helplessness are common among this group of patients ultimately resulting in narcissistic delegation of the self (Rosser, 2008).

The crude incidence rate shows that there are 157 new breast cancer cases for every 100,000 females in the UK, and 1 for every 100,000 males. Available evidence shows that women who had mastectomy usually experience low self-esteem, sexuality issues, cosmetic problems, and problem of interpersonal relationship (Rosser, 2008). This highlights the need for adequate and proper care for patients who undergo mastectomy and breast reconstruction. Such nursing care should include psychological, physical, and social care for patients at all stages.

However, the focuses of the nursing care given to patients who undergo mastectomy especially in the developing countries are meeting their physical needs rather than their social and psychological aspects of life (John and Okon, 2006). Moreover, maintaining adequate food and nutrient supply, infection prevention and control, wound care and healing as well as the maintenance of personal and environmental hygiene are the typical nursing care rendered to mastectomy patients in the developing countries (John and Okon, 2006). The end result of patients' discharge from hospital is to home without being adequately equipped on how to deal with changes of life with one or no breast in a mammary-conscious society where breast is highly need for infant feeding and cosmetic reasons.

While some studies exploring the experiences and psychological impact of mastectomy and breast reconstruction on women have been conducted with of identifying and resolving their problems in the developed countries such as the UK, United States of America, only few of such studies have been carried out in some developing countries like Liberia and Zambia. The main focus of this therefore, was to explore the impact of mastectomy and breast reconstruction on the psychological aspects of life of women.

It is the utmost desire of the author that problems that which surround the physical, social and, psychological aspects of life of women who had mastectomy or breast reconstruction be tackled by the health care systems in other to improve their quality of life and sense of well-being. Accordingly, LoBiondo-Wood and Haber (2006) opined that nurses are required to deliver quality care that is highly effective in promoting the health and well-being of the patients and that evidence based nursing is the key that is necessary for the

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development of appropriate health services that can adequately care and manage the patients. Appropriate decisions should be made in other to enhance the health care systems in other to improve women's health and well-being.

2. Method

Fifteen selected research papers that used qualitative method which are related to the chosen topic were reviewed. Studies that used a qualitative approach were adopted due to the nature of the topic being reviewed. Papers reviewed were included based on the following reasons: primary article that aim at investigating the psychological impact mastectomy and breast reconstruction due to their robust and valid evidence (Hawker *et al.,* 2002). Articles that used English Language only. Peer reviewed published articles due to their credibility (Hawker *et al.,* 2002). Articles from 2006 are current and considered to provide recent evidence (Hawker *et al.,* 2002). On the other hand, the excluded articles were based on the following issues: primary articles not related to the psychological impact mastectomy and breast reconstruction. Articles that do not focus on the aim of research would help in answering the research questions (Hawker *et al.,* 2002). Articles not published in English languages. These would be difficult to comprehend. Articles not published. Findings from unpublished articles may not be accepted as valid ones.

The electronic databases searched include PsyInfo, science direct, MEDLINE, pubmed, CINAHL and the British Nursing index. To see if similar studies have been conducted the Cochrane Library was searched. Other databases were then searched from 2008 until date. Moreover, MEDLINE is a medical and Nursing database but it is seen to be incomplete, (Hawker *et al*. 2002).

The author made use of Boolean operators in combining different keywords, while searching through the different databases, i.e. '**AND/ OR'** commands. Accordingly, the use of '**AND**' helps to make available the key terms which is then combined and searched for appropriately as opined by Rycroft (2008). However, the number of hits generated was reduced by this process because each key word must be used in order to be reorganised by the database. On the other hand, Haynes (2005) posited that in order for each of key terms to be combined, there were represented in the articles generated by the search. The use of 'OR' commands was also made by the author, because it increases the number of hits which will in turn increase the chance of retrieving the relevant articles.

The following key words were combined while searching the databases, breast cancer, cancer, psychology, psychological impact, mastectomy, anxiety, breast reconstruction, body image, self-esteem. The use of terms such as breast cancer and psychology was made necessary by the nature of the study.

The search initially uncovered a large number of papers that were unrelated to the study. This is because sensitivity rather than specificity was chosen in the selection process. Reading of the abstract online was adopted to screen the result of the search initially and the relevant ones were retrieved. The retrieved studies were screened again to ensure that all the criteria required for the review were met.

Data extraction and methodological quality of the included studies

The results were analysed, presented and compared. Data was extracted from the multivariate analysis and noted the various impact of lung cancer diagnosis on patients. A well-structured critical appraisal approach was adopted. The author adopted a critical appraisal tool developed by the Critical Appraisal Skills Programme (CASP) in evaluating the quality of the papers because of its ability to assess all types of studies (Aveyard, 2010).

3. Result/findings

The author found and used fifteen research articles that investigated the psychological impact of mastectomy and breast reconstruction on patients. The most common psychological impact of mastectomy and breast cancer was low self-esteem, altered sexuality, and poor quality of life.

3.1 Body image disturbances, low self-esteem and altered sexuality

Eight research articles (Piot-Ziegler *et al*., (2010), Markopoulos *et al*., (2009), Ulrik *et al.,* (2013), Nicholson *et al.,* (2007), Bebbington *et al.,* (2013), Sandham and Harcourt (2007), Karen *et al*., (2011) and Ian *et al*., (2008)) were selected and critiqued on this theme. The studies examined psychological impact of mastectomy and breast reconstruction and found that body image disturbances, low self-esteem and altered sexuality were the major reactions that are experienced by breast cancer patients who underwent mastectomy.

The findings of all the studies indicate that mastectomy and breast reconstruction significantly affect negatively on the body image and identity of patients. They concluded that unacceptable body image, poor self-esteem and poor self-concept usually experienced by patients who had mastectomy often result in feelings of inferiority among them. Consequently, feelings of hopelessness, worthlessness, and helplessness are common among this group of patients ultimately resulting in narcissistic delegation of the self. However, good knowledge and awareness of the problems associated with sexual intimacy is important for the health care professionals in other to be able and prepared to provide basic information about the impact and implications, and reflect on the expectations versus reality together with the women was the recommendation made by the researchers.

3.2 Quality of life in patients following mastectomy and breast reconstruction

Seven peer-reviewed articles were reviewed in this thematic chapter. They are Volker *et al*., (2008), Grit *et al*., (2010), Janni *et al.,* (2011), Kin *et al*., (2011), Batool *et al.,* (2012), Orazio *et al*., (2009), and Irene *et al.,* (2009).The quality of life of post-mastectomy patients is influenced by the stage of the disease. A more advanced stage of the disease is significantly related to poorer quality of life, which is a reflection findings that quality of life of patients with stage

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111 breast cancer was significantly lower than stage 1 or 11 breast cancer. However, those with pain had worse quality of life. Meanwhile, pain occurred on the majority of the participants, which is a partial explanation of why surgical approaches that attempt to improve the negative impact of radical mastectomy failed in translating its benefits of achieving better body image into a better quality of life.

They concluded that surgical treatments such as immediate breast reconstruction and radical mastectomy do have significant impact on the quality of life of patients. However, several studies that attempted to compare the impact of the different surgical procedures found that while breast conservation and mastectomy with immediate reconstruction improves body image and quality of life of patients, breast-conserving surgery was rather more painful.

4. Discussion

Regarding body image, identity crisis, low self-esteem and altered sexuality, this study showed that most patients were dissatisfied with their post-mastectomy body images and consequently employed various means to improve their looks. Majority of the patients improvised for the absent breast with pieces of cloth or foams in the brassiere cups of the affected breast. However, 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 participants would prefer to wear breast prosthesis or brassieres specially made for this purpose.

The few who could use neither method were probably those who had more urgent needs than improving upon their looks. It is also possible that such patients could bear to live with the deception of presenting a feminine image knowing that they had only one breast. Rosser (2008) reported the case of post-mastectomy woman who could not wear breast prosthesis because she could not deceive herself, even though she may succeed in deceiving others.

Although most of the subjects desired to improve upon their post-mastectomy body images, only a few of them would like to have breast reconstruction for the same purpose. This may be explained based on the cost or fear usually associated with surgery or fear that such reconstructed breast may also become infiltrated by cancer. It may also be that their experiences with mastectomy could be contributory to their decision against having breast reconstruction.

A factorial analysis of the effect of demographic variables on the participants' cosmetic behaviour showed that age, marital status and occupation were significantly correlated to aesthetic/cosmetic behaviour after mastectomy. This showed that over participants below 50 years of age were more concerned about their outlooks than their counterparts over 50 years. Orazio *et al*., (2009) and Irene *et al.*, (2009) found that younger patients with altered and unacceptable body images had more psychosocial problems than older patients with similar problems.

The explanation given by Orazio *et al*., (2009) and Irene *et al.*, (2009) that the younger patients cheated out of life may be reasonable for the greater concern for body image by the younger participants in the reviewed studies. Consequently, this group of participants made greater efforts to hide their disfigurement. Moreover, the greater concern for body image by the younger women might probably have been motivated by fear of being rejected by their husbands. However, this may explain why the married subjects were more concerned about their looks that their widowed or separated counterparts. Rosser (2008) identified fear of possible rejection by spouses of mastectomy patients as a major concern of married mastectomy patients.

Furthermore, with respect to the altered sexuality, this showed that unmarried and older subjects (over 60 years) did not respond to the questions on sexual behaviour. This finding agrees with the report of Schoever *et al*., (2004) which showed that people who do not respond to surveys on sexual behaviour are usually older, less well educated and less liberal than responders. This study also showed that although many of the participants did not report any sexual neglect by their husbands, majority of them had reduced the frequency of their sexual activity. It may be possible that these women are repulsed by their nudity and anticipated similar reactions from their husbands.

The mastectomy patients' performance of their daily activities like bathing, grooming, cooking and house cleaning was also considered. From the review it was found that a few numbers of them could cook, clean and wash clothes unassisted as against the majority who could bathe and groom themselves without assistance. Moreover, majority of those who required assistance in these activities were mainly due to restricted movement and to post-mastectomy pain associated with lymph oedema on the affected hand.

McCarthy *et al.*, (2006) and Munstedt *et al.*, (2005) had identified lymph oedema as a common complication of modified radical mastectomy. The use of assistance in domestic work by majority of the respondents can be understood from the perspective of the intimacy involved in bathing and grooming which is less relevant in house work. The review shows that attendance and participation in social activities like naming, funeral and wedding ceremonies were also affected by mastectomy. Many of the subjects in the reviewed papers reported that attendance and participation in social activities were reduced. The reason given by them for the reduction was diminished physical strength. The review shows that the participants' attempts to hide their disfigurement from others could also have contributed to the reduced attendance and participation in social functions reported by many of them.

Their patterns of leisure activities were also reportedly affected by mastectomy. Findings from the review indicate that majority of the patients reduced the frequency of duration of such activities.

In terms of the quality of life of post-mastectomy patients, Akin *etal*., (2009) stressed the importance of discussing with each patient her fears and fantasies, prior to surgery as well as offering the patient and her family appropriate psychological support. In the opinion of Sobel (2005) health status, quality of life and functional status are better

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correlated with psychosocial factors than severity of physical disease.

Sobel (2005) also reported that a person's perception of health is better than medical and laboratory examinations in predicting future health. The researcher further cited studies that have demonstrated the possibility of improving health perceptions, attitudes and beliefs through health care interventions that target psychosocial adaptation to disease. In the opinion of the author, educational, behavioural and psychological interventions in addition to strategies that increase confidence, decrease isolation and encourage participation of patients in health care cost-effective means of improving health outcome.

5. Conclusion

An increase in the incidence of breast cancer and thus mastectomy among women worldwide has been reported (John and Okon, 2006). These are usually associated with various physical and psychosocial problems (Rosser, 2008). This review showed that identity crisis, pattern of cosmetic behaviours, leisure activity attendance and participation in social activities of the participants were adversely affected. However, studies have shown that the psychological problems associated with such adverse effects if not effectively and timely resolved could predispose the individual to psychiatric illness (Schoever *et al*., 2004). This review like some previous ones, has shown that psychosocial preparation of patients prior to surgery is capable of improving the overall health outcome of mastectomy and breast reconstruction patients. Nurses by virtue of their roles have a major responsibility in this regard. This study, however, showed that majority of the respondents were not psychologically prepared before mastectomy.

There is therefore the need to make psychosocial care a pre-operative care for mastectomy and breast reconstruction patients. Measures that will promote positive perceptions, attitudes and beliefs in the patients are some of the areas that could enhance the patients' psychosocial adaptation to mastectomy.

The author thereby recommend the following issues: counselling on improving post-mastectomy body image with special brassieres, breast prosthesis 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 and other health care givers caring for these patients should explore with each patient her fears, and concerns regarding mastectomy, identify interpersonal and extra personal resources that will aid the patients' rehabilitation into the society. Planned health education programs should be given to mastectomy patients and their significant ones on breast cancer, mastectomy and other management approaches, their possible side effects and ways of controlling each unwanted effects. This will allay unnecessary fears and assist the patients in coping with her condition.

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