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STUDY OF QUALITY OF LIFE IN FEMALE BREAST CANCER SURVIVORS POST MODIFIED RADICAL MASTECTOMY

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ABSTRACT

Introduction and objectives: Breast cancer one of the common cancer in females worldwide. Incidence of breast cancer is rising in India as in all over world. This study was aimed at assessment of QOL after Modified radical mastectomy(MRM) in cancer survivors. **Material and methods:** One year after MRM, QOL assessed in 100 breast cancer survivors using WHOQOL-BREF questionnaire instrument at GND hospital, Amritsar, Punjab. **Results:** The mean age of the breast cancer survivors was 55.72 (SD 11.86). Mean(SD) of Overall quality of life was 7.3 (0.732), of Physical domain was 72.25(5.30), Psychological domain 71.3(6.72), Social domain scores67.67(6.19) and of environmental domain was 69.12(2.95) respectively. Highest domain was of physical, followed by psychological and environmental domain. Social domain represented with least scores. Younger patients with <50 years of age with better education and occupation and having high socioeconomic class have better general QOL perception. Younger age groups, unmarried, educated and high socio-economical classes have better perception of their physical and environmental factors. Social and psychosocial scores are better with increasing age, married life, higher education and good monthly income. **Conclusion:** QOL is affected in most of breast cancer survivors as all the domains of life get affected after diagnosis and treatment of cancer. Most of the patients appreciated optimum level of satisfaction after MRM. There is a definite role of education, counselling and support as well as need of strengthening of health care system to conquer these potential areas in life of any cancer survivor.

KEYWORD

Quality of life, Breast cancer, Modified radical mastectomy, Sociodemographic factors.

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Introduction

Breast cancer is a serious health and social problem in western Europe, the united states and in Asian countries. Although the incidence of breast cancer has increased worldwide over last several decades, the greatest increase has been in Asian countries.1 In Asia incidence of breast cancer peaks among women in their forties whereas in U.S. and Europe it peaks in their sixties. In India premenopausal patients constitutes about 50% of all patients6. Over 100,000 new breast cancer patients are estimated to be diagnosed annually in India. over the last 10 years or so, breast cancer has been rising steadily, and for the first time in 2012, breast cancer was the most common cancer in women in India, a way ahead of cervical cancer.2 However, the number of women electing mastectomy is increasing with an estimated 39% mastectomy rate in women with early stage breast cancer in the United states in 1998-2003.3-5

The survival rate for breast cancer has shown significant increase recently. Currently more than half of the patients of it survive owing to new effective treatments and earlier detection.6 The WHO defined quality of life as "an individual perception of their own position in life within the context of cultural and value system in which they live and in relation to their goals, expectations, standards and concerns". After diagnosis, the QOL of women is highly affected, due to emergence of physical, psychological and social effects which leads to change in attitude and expectations towards life. In this sense, professionals in the field of oncology have observed the necessity of knowing and assessing the life condition of patients in its entirety, with the purpose of increasing their survival rate and improving their QOL.24

Diagnosis of disease and starting treatments, its side effects are directly related to their QOL. Therefore, it is necessary for health care professionals to become familiar with QOL of breast cancer survivors. The purpose of this study was to understand, evaluate and assessment of quality of life, factors that could influence QOL and the main life areas where the women were more affected when they receive their diagnosis.

Aims and objectives

1.To determine and report the quality of life of breast cancer survivors in order to know and identify associated factors and areas of life in which these patients have been most affected

during and after breast cancer treatment. 2.To identify potential areas for education, counselling, support as well as the weakness of the medical care system in dealing with breast cancer survivors.

Material and methods

A cross-sectional study based on multiple questions using WHOQOL-BREF instrument among patient diagnosed with breast cancer reporting to Guru Nanak Dev Hospital, Amritsar (Punjab), a tertiary health care Centre in Punjab. The survey was conducted in 100 patients of breast cancer one year after completion of the surgery (Modified Radical Mastectomy).

This survey included a validated quality of life (QOL) measurement instrument: the WHOQOL-BREF (World Health Organization Quality of Life Assessment Instrument- BREF) Spanish version. This QOL measurement is a short version of a generic World Health Organization Quality of Life assessment instrument (WHOQOL-100). The survey in this study contained a total of 26 questions from WHOQOL-BREF which provides a fast profile of 4 areas (domains).

Measuring WHOQOL-BREF Instrument:

Every question measured positive direction except question 22, 23 and 26 having negative meaning so it is necessary to reverse their scores. All 26 questions will be assigned a score of 1-5. The scale scores will be converted to 0-100 and then further analysis of data will be done using SPSS software system for statistical analysis.

Result

In our study Quality of life (QOL) assessed in those breast cancer survivors after one year of modified radical mastectomy. The mean age of the breast cancer survivors was 55.72 (SD 11.86). Amongst 100 cases, cancer was observed in right breast in 48 cases and 52 cases in left breast. The lesions were most common in upper outer quadrant of the breast i.e. 56 (56%), followed by upper inner quadrant i.e. 16 cases (16%).

Following table showing younger patients with <50 years of age with better education and occupation and having high socioeconomic class have better general QOL perception. Younger age groups, unmarried, educated and high socio-economical classes have better perception of their physical and environmental factors. Social and psychosocial scores are better with increasing age, patients living with their spouse and children, in educated and well earning families.

Table 1: Median comparing Quality of Life variables with sociodemographic characteristics.

VARIABLES	General QOL (2-10)	PHYSICAL DOMAIN (0-100)	PSYCHOSOCIAL DOMAIN (0-100)	SOCIAL DOMAIN (0-100)	ENVIRONMENTAL DOMAIN (0-100)
AGE GROUP(Yrs)	8	75	50	69	69
<30	7	75	69	69	69
30-50	7	69	69	69	69
>50					
MARITAL STATUS	8	69	69	69	69
Married	8	81	44	44	72
Unmarried					
LEVEL OF EDUCATION	8	78	69	69	75
GD	7	69	69	69	69
BHS	7	75	69	69	69
CS					
EMPLOYMENT	8	75	81	69	69
Employed	7	69	69	69	69
Unemployed					
EDUCATION OF HEAD	8	78	69	69	75
Graduate	7	75	69	69	72
Intermediate	7	69	75	69	69
High-school	7	69	69	69	69
Primary	7	69	63	69	69
Literate					
OCCUPATION HEAD OF FAMILY	8	75	72	69	69
Skilled	7	75	69	69	69
Semiskilled	7	69	69	69	69
Unskilled	7	69	66	69	69
unemployed					

Table 2: Mean and Standard Deviation(SD) of different domains

WHOQOL-BREF	Mean(SD)	Mean(SD) (0-100)
Overall quality of life	7.3 (0.732)	_
Physical Domain	27.31(1.405)	72.25(5.305)
Psychological Domain	22.93(2.760)	71.31(11.670)
Social Domain	10.92 (0.720)	67.67(6.192)
Environmental Domain	29.5(0.859)	69.12(2.951)

Mean(SD) of Overall quality of life was 7.3 (0.732), of Physical domain was 72.25(5.30), Psychological domain 71.3(6.72), Social domain scores67.67(6.19) and of environmental domain was 69.12(2.95) respectively. Highest domain was of physical, followed by psychological and environmental domain.Table [2].

Differences in physical domain involve variability in all characteristics of patient like age, marital status, education and employment of patient, education and income of head of the family and the socioeconomic class. Psychological domain is having significant statistical differences with marital status and education of head of the family ($p<0.05$). However, it didn't show any significant difference with age, employment, patients' education, socioeconomic class and income of head of family ($p>0.05$). Social domain differs with different sociodemographic characters significantly($p<0.05$). It significantly differs with age, marital status and level of education of the patient and also with the education of head of the family($p<0.05$). Social domain showed no significant differences with employment of patient, occupation of head of the family and overall socioeconomic class of the family($p>0.05$). Environmental domain shows significant differences with level of education and employment of patient, income and education of head of the family and overall socioeconomic class of the family($p<0.05$). It shows no significant differences with age and marital status of the patients($p>0.05$).

Discussion:

It is known that breast cancer is most commonly diagnosed cancer among women, and is also the leading cause of cancer mortality in women worldwide. Breast cancer is the most

prevalent cancer among women in the world, with an estimated 4.4 million women living with breast cancer within 5 years of diagnosis.8 Breast cancer is most common cancer in urbanised females and holds 2nd rank in rural India only after ca cervical cancer.9 Incidence of breast cancer is continuously rising due to adaptation of western lifestyles although awareness is also increasing. It is not surprising that the majority of breast cancer patients in India are still treated at locally advanced and metastatic stages.10,11

Most women with early-stage breast cancer have 3 surgical options: (1) breast-conserving therapy (BCT), (2) mastectomy, or (3) mastectomy with breast reconstruction (immediate or delayed). There are no survival differences between BCT followed by radiation therapy or mastectomy alone.12 However, the number of women electing mastectomy is increasing with an estimated 39% mastectomy rate in women with early stage breast cancer in the United states in 1998-2003ref intro.3-5 In our centre most of the patients present with locally advanced breast cancer and already metastatic disease. We prefer to modified radical mastectomy as a surgical option in advanced, old aged, poor and in patients who are unable to follow up with us regularly.

The National Coalition for Cancer Survivorship (NCCS) pioneered the definition of survivor as being any person diagnosed with cancer, from the time of initial diagnosis until his or her death.13 The survival rate for Ca breast has shown significant increase recently. Currently more than half of the patients of it survive owing to new effective treatments and earlier detection.6 Understanding and assessment of quality of life is essential to address potential psychological, sexual and physical dysfunction caused by diagnosis and treatment of breast cancer. Health-related quality of life (QOL) is defined as the extent to which one's usual or expected physical, emotional, and social well-being are affected by a medical condition or its treatment.14 Other than diagnosis and treatment, individuals at high-risk for recurrence or mortality are at a higher risk for poor QOL. There is a need for the clinicians to better identify such individuals and help them in improving their QOL. Enquiry into and assessment of quality of life (QOL) provides benefit and change of perspective among breast cancer survivors as it gives some insight into their life.

In the present study four domains of life physical, psychological, social and environmental along with overall quality of life and general health are analysed. This provides insights into domains of life which are unaddressed like mental health, emotional aspects and psychosocial well-being, relationship in the family and society, their ambitions towards interpersonal relations, career, pursuing enjoyment and leisure in life.15

In our present study the total score of physical domain is highest (mean 72.25, SD 5.30). The mean(SD) of Psychological domain of 69.28(6.72) and of environmental domain are 69.12(2.95) respectively. Lowest domain is of social domain (Mean and SD; 67.6 and 6.19). These scores of domains are different from the study done in Sri Lanka by Munasinghe WH et al in 2016. They showed that environmental and social domains have higher mean scores than physical and psychosocial domains.16

In a study of QOL in breast cancer survivors in Panama, Barrios et al showed highest score was of social domain (mean =75) and least of physical domain (mean= 63).17 These kinds of differences in different studies may be related to geographical, cultural, economic variation in different region or countries of world and also due to different accessibility to health care facility and infrastructures.

In our study different sociodemographic variables affects all the four domains differently. According to the finding of our study age is significantly affecting physical ($p<0.001$) and social domains ($p<0.001$). In our study significant affection with physical and social domain may be due to routine involvement of housewives in daily household activities and non-sedentary lifestyles. Younger patients are more efficiently involved than older ones in performing routine physical activities. But older ages have more satisfaction level for interpersonal relationships. In rural areas, older patients are either satisfied in their personal relations and sexual life or they are less involved in it than younger ones. relations and sexual life or they are less involved in it than younger ones.

In the present study affection of marital status is significant in physical and psychosocial and social domains ($p<0.025$ and $p<0.001$ respectively). Marital status is not affecting environmental domains in our study. Married patients having more concern regarding health of their own and other family members so that they could give maximum output to perform daily life activities. Similar findings are suggested by study by Barrios in Panama. They found marital status affecting social domains positively with better outcomes in in patients having children and other family support.17 Married person may involve in better relations with multiple relatives, family friends and social support groups. This is easy to share your problems with your spouse than other family members and friends in society. Married females are better satisfied with their sexual life and personal relationship than unmarried ones. This is probably due to sex is still a taboo in many rural areas and people are not allowed to have sexual relations before marriage.

Employment of patient affects physical and environmental domains significantly ($p<0.05$). In a study on QOL by Munasinghe et al, they also supported that statistically significant difference in multiple domains with employment and income of patient.16 In our study employment and monthly income affects physical and environmental domains. In rural population employment and personal income is still very low or not available mostly among females compared to males. Affection of physical domain may be due to any kind of job or employment makes a person more active and mobile. They having a well-formed routine and sleep cycle in comparison to sedentary patient staying only at home, which makes their physical domain positively affected. Other domain like social and psychosocial are not affected with employment and income probably because of their affection by other social and interpersonal factors and is considered multifactorial. Level of education is an important socio-demographic characteristic influencing strongly many QOL domains. In our study, level of education affects physical, social and environmental domain significantly($p<0.05$). Our study finding is supported by another study of Awadalla et al. in 2007 where the marital and education status significantly affecting their QOL.18 There is better outcome in physical domain may be due to better knowledge about disease, treatment modality and its possible course in future. Safety and fear of death is better tolerated in educated people than illiterate. Environmental domain affection may be due to patient with better education have better opportunities and are better able to use of available information and health care and other resources.

Occupation and education of the head of family affecting significantly physical and psychosocial and environmental domain ($p<0.05$). Education of head of family also affecting social and psychosocial domain of QOL significantly ($p<0.05$). Occupation, income and education of head are important determinant of socioeconomic class of the patient. Socioeconomic class in itself determines other multiple sociodemographic parameters of the patient like their education, employment, structure of family and ultimately their economic and social interactions to others. A well-

educated and well earning head of family can provide better physical and psychosocial environment to the patient and family.

The negative impacts of cancer are well known, for example, depression is common among women diagnosed with breast cancer. The motivation for this study came from the interest towards understanding the outcome of MRM as a modality of treatment combined with other adjuvant therapies. There can be multiple modalities to improve overall quality of life in breast cancer survivors for e.g. cancer survivor support groups, education and counselling and availability of information when they require. A breast cancer support group, is formed by women, who have already undergone treatment for breast cancer and are still surviving in the fight with cancer. The importance of a support group is that, there is sharing of correct knowledge related to treatment of breast cancer so that the patient doesn't get biased against the different treatment modalities and it directly affects her ability to withstand the treatment and side effects. The literature on evaluations of community-based cancer support groups indicates that they offer a number of benefits, and that it is more reasonable to expect an impact of such interventions on psychosocial functioning and/or health-related quality of life than on survival. 19 Other area of interest that can modify outcome in breast cancer survivors is role of counselling to the patient. In a study to determine the role of counselling in improving QOL, by Naumann F et al, they found psychological counselling combined exercise program is both feasible and acceptable for breast cancer survivors and may improve QOL more than would a single-entity intervention. 20 Need of education and provision of information is necessary in all aspects of life related to disease condition. It helps in early diagnosis of symptoms, early reporting to health care systems, choosing a treatment plan and regular follow ups when required. In a study by Kaur N et al, they found the need of education, right information and active participation of health care personals in answering their queries. In that study almost 100% patients felt they wanted to have more information about their disease, their chance of cure and life expectancy, possibility of disease affecting other family members, the duration of treatment, the expense involved etc., so that they could plan for the future. 21 Altered body image is another factor which seems to impair QOL in the intermediate follow-up group. Some expresses their desire to have undergone conservative breast surgery. But due advanced stage of disease and low resource settings of ours breast conservation or reconstruction can be offered to a very limited number of patients. One important area of QOL, not openly discussed by either the patients or their clinicians are sexuality issues. Sexuality issues were noted in 37% of our patients or more in breast cancer survivors. 22,23

Fig: 1- Overall Quality of Life after one year of MRM

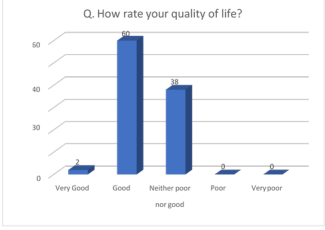

Fig:2 – Overall Satisfaction Level After one year of MRM

After one year of MRM, most of the patients were satisfied with their general overall quality of life. On question of rating their quality of life 60% responded with good and 38% responded with neither good nor bad as their experience. On asking about their overall satisfaction 66% were satisfied and 34% responded with neither satisfied nor dissatisfied. [fig. 1, fig. 2]

Conclusions:

All the domains like physical, psychosocial, social and environmental domain are affected by variable sociodemographic factors including age, marital status, education, occupation and socioeconomic class. Concluding our study, it was observed that younger patients with <50 years of age with better education and occupation and having high socioeconomic class have better general QOL perception. Younger age groups, unmarried, educated and high socio-economical classes have better perception of their physical and environmental factors. Social and psychosocial scores are better with increasing age, patients living with their spouse and children, in educated and well earning familiesThere is definite role of education, counselling and support system in improvement of QOL in breast cancer survivors.

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