

Impact of Radiotherapy on Psychological, Financial, and Sexual Aspects in Postmastectomy Carcinoma Breast Patients: A Prospective Study and Management

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ABSTRACT

Objective: The aim of this study was to assess the impact of radiotherapy (RT) on psychological, financial, and sexual aspects in postmastectomy carcinoma breast patients affecting their quality of life (QOL) before, during, and after RT with a strong emphasis on their management and rehabilitation aspects. **Methods:** A cross-sectional study carried out in a specialized institution, comprising sixty women. Two standardized questionnaires European Organization for Research and Treatment of Cancer (EORTC) 30-item Quality of Life Questionnaire and Quality of Life Questionnaire breast cancer-23 (QLQ-BR23) for health-related quality, translated and validated for the Hindi language were used. The scores' manual of the EORTC was used to calculate the domain scores of the questionnaires. **Results:** According to the first questionnaire, the emotional function was most affected even at onset of RT treatment and it was worst at the completion of RT treatment with a mean score of 63.75. The global QOL score was also worst at the end of radiation

treatment with a mean score of 32.36, while the score 3 months after completion of treatment was 68.16. The symptoms with the highest scores were insomnia with a worst scoring at completion of treatment (29.99), fatigue (26.57), and pain (23.05). According to the QLQ-BR23, the mean score for side effects such as sexual functioning was minimum 0.55 at the completion of RT, which improved to 11.66 on the first follow-up after 3 months. Mean future perspective score which was 57.22 before the start of RT which was reduced to 50.55 at completion, which means that many women experience side effects of RT and impaired sexual satisfaction. **Conclusions:** Women with breast cancer showed changes in the following domains: financial, emotional, sexual satisfaction, and future prospects. The most frequently mentioned symptoms were fatigue, insomnia, and pain.

Key words: Breast carcinoma, oncology nursing, quality of life, radiotherapy, woman health

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Introduction

Breast cancer is the leading cause of death among cancer patients worldwide.^[1] More than 100,000 patients are estimated to be newly diagnosed in India which depicts the disease burden. This neoplasm is probably the most feared by women, especially by the negative stigma brought by its diagnosis and its psychological effects, which affect the perception of sexuality and their own personal image. The cure rate of various cancers has increased the quality of life (QOL) of patients and its assessment has become fundamental. They are useful in offering a treatment that is better adapted to the characteristics of the patients and the development of her illness.^[2] The past decade has witnessed a growing interest in broadening the evaluation criteria employed in a cancer clinical trials beyond the traditional biologic markers of therapeutic outcomes – tumor response, time to progression, disease-free survival, and overall survival – to include an assessment of the impact of the disease and its treatment on the physical, psychological, and social functioning of the patient. Support for such “QOL” investigations has been expressed by prominent clinical trial groups in international cancer institutes and societies.

QOL is a subjective phenomenon and there is no generally agreed definition. The concept is broader than that of health status and includes consideration of at least the physical, psychological, and social impact of illness.^[3] Cella and Cherin^[4] defined QOL as “patient’s appraisal of and satisfaction with their current level of functioning as compared to what they perceive to be possible or ideal.” World Health Organization defines it as “the condition of life resulting from combination of the effects of complete range of factors such as those determining health, happiness including comfort in physical environment and a satisfying occupation, education, social and intellectual attainments, freedom of actions, justice and freedom of expression.”^[5]

A diagnosis of breast cancer may negatively affect a patient’s well-being. Psychological distress, sexual dysfunction, and altered body image have been reported in patients who undergo surgery and radiotherapy (RT).^[6] The value of measuring the QOL in breast cancer patients has been increasingly recognized. The measurement of QOL should identify and describe the damaging effects of disease or its treatment. This should help physician and patient choose more easily between alternative treatment options. When there is no difference in survival, it will be possible to recommend a treatment which leads to best QOL. However, if one treatment produces satisfactory QOL but unsatisfactory survival, then very difficult value judgments are likely

to remain whatever methods for measurements are developed.

There are many instruments to measure QOL, but the European Organization for Research and Treatment of Cancer (EORTC) 30-item Quality of Life Questionnaire (QLQ-C30) is a reliable and valid measure in cancer patients as tested in multicultural clinical research trials. It is cancer-specific, multidimensional appropriate for self-administration and is applicable across a range of cultures. EORTC QLQ-C30 has been translated into 36 languages including Hindi or the Devanagari dialect (language spoken in India and few Asian countries) till now. To the best of our knowledge, there are very few studies worldwide, which have evaluated the QOL before, during, and after RT in breast cancer patients using EORTC QLQ-C30 and EORTC Quality of Life Questionnaire breast cancer-23 (QLQ-BR23) (breast cancer module). In view of above observation, the present study was planned to determine QOL in breast cancer patients before, during, and after receiving RT.

Methods

This study has been carried out on sixty histopathologically proven post-modified radical mastectomy (MRM) patients of carcinoma breast attending the Department of Radiotherapy, Army Hospital Research and Referral, New Delhi, India. The study included a statistically significant convenience sample of sixty pre- and post-menopausal women with breast cancer who were undergone RT in the period between April 2014 and April 2016, with the following inclusion criteria: age greater or equal to 18 years, diagnosed with breast cancer at any stage of disease, being on RT after surgery and chemotherapy from the day they reported for adjuvant radiation, and being present 5 days a week.

The instruments used were sociodemographic and clinical forms such as EORTC QLQ-C30 version 3.0, in Hindi QLQ-BR23. The EORTC QLQ-C30 and the QLQ-BR23 are questionnaires of QOL related to health, translated and validated in Hindi; the use of both questionnaires is authorized by EORTC.^[7]

Interview technique was used as method to gather data, and the questionnaires were filled out during patient’s interview. All the patients were selected from outpatient department, formal consent was obtained, and all of them agreed to participate in this study.

The Statistical Package for the Social Sciences, version 20.0 (Armonk, NY: IBM Corp), was used for data analysis. The principal for scoring these scales is same in all cases. In the present study, all the scores were calculated as per the EORTC scoring manual procedures as follows:

1. The average of the items that contribute to the scale was estimated; this was raw score (RS)
2. A linear transformation method was used to standardize the RS so that the scores range from 0 to 100.

In practical terms, if items I_1, I_2, \dots, I_n are included in a scale the procedure is as follows:

The RS was calculated as $RS = (I_1 + I_2 + \dots + I_n)/n$

The linear transformation was applied to 0–100 to obtain score S,

Functional scales: $S = (1 - [RS - 1]/range) \times 100$

Symptom scales/items: $S = ([RS - 1]/range) \times 100$

Global health status/QOL: $S = ([RS - 1]/range) \times 100$

Range is the difference between the maximum possible value of RS and minimum possible value. The scoring approach was identical for QLQ-BR23. Mean scores were calculated for all patients and different groups. Student's paired *t*-test was applied to find out the significance of QOL mean scores variation with time. Unpaired *t*-tests were used to find out the significance of group-wise (age, stage, Karnofsky Performance Scale, disease status at last follow-up) difference in mean scores.

All mean scores were transformed linearly into a scale from 0 to 100 points, as described above, where 0 represents the worst health status and 100 represents the best state of health, except for the symptom scale, in which the higher score represents more symptoms and the worst QOL. Thus, a high score on the functional scale meant a healthy functional level, while a high score on the symptom scale represented a high level of symptoms and side effects. The development of the study met national and international standards of ethics in research involving human beings.

Results

The sample consisted of sixty women who were on RT post-MRM for breast cancer. The socioeconomic status of patients was assessed by modified Kuppuswamy scale.^[8] The mean age at presentation was 47.6 years (range 30–75). Seven-five percent patients belonged to low socioeconomic status and 63.3% belonged to rural areas. Lump breast was the presenting symptom in all patients. Stage-wise distribution at presentation was Stage IIB 33.3%, Stage IIIA 45%, and Stage IIIB 21.7%. Infiltrating duct carcinoma was the most common histopathology, with an incidence of 93.3%. In 58.33% of patients, tumor was present on the left side while site-wise distribution showed upper outer quadrant as the most common involved site at 73.33% [Table 1].

Regarding clinical data, all sixty patients included in this study had undergone MRM either upfront or after neoadjuvant chemotherapy. After completion

of adjuvant chemotherapy, the patients received external beam RT by tangent pair technique with three-dimensional conformal technique. All patients received postoperative RT to chest wall and drainage area to a dose of 50 Gy in 25 fractions 5 days a week as an institutional protocol. All patients completed treatment and treatment interruption was not required in any patient because of radiation reactions.

In this study, all patients developed some sort of cutaneous radiation reactions. Forty-five percent of patients had Grade-1 reactions while 18.33% patients had Grade-3 reactions. Only 5% patients had Grade-3 nausea. Other side effect which troubled the patients was esophagitis though it was mild in intensity. It usually manifested as mild difficulty in swallowing between 10 and 13 fractions and was relieved by mild soluble analgesics. It is noteworthy that the score of the global QOL (65.80) is nearer to 100 at the beginning of RT treatment which at the end of treatment was worst (32.80) [Table 2].

With regard to the functions according to the EORTC QLQ-C30 scale, scores were high in the following items: physical function (90.11), role performance (81.91), cognitive function (91.38), and social function (79.99), indicating a level between regular and satisfactory. Most patients showed no confinement in bed, did not need help with bathing, dressing, and eating, were not prevented from doing leisure activities, and presented no difficulty with concentrating and/or remembering information, and also, the physical condition and the treatment did not interfere with family life and social activities. The lowest score was the emotional function (average 70.27), with a significant *P* value (0.002). All the functional scores were worst at the end of radiation therapy treatment [Table 3], indicating feelings of slight tension, anger, depression, or worry.

Table 1: Sociodemographic data of patients

Variables	n (%)
Age range (years)	
Up to 39	14 (23.33)
40-49	28 (46.66)
50-59	9 (15)
60-69	7 (11.66)
70-79	2 (3.33)
Mean ± SD	47.65 ± 10
Socioeconomic status	
Low	45 (75)
Medium	15 (25)
High	0
Rural-urban distribution	
Rural	38 (63.33)
Urban	22 (36.67)
SD: Standard deviation	

In the symptom scale, the highest scores were insomnia (15.55), fatigue (15.32), and pain (16.38). Thus, a few women had some (albeit little) difficulty with pain, sleep, and fatigue. Only symptom which showed significant *P* value (0.001) between the first and third assessment was pain, which can be explained by development of radiation reactions on the skin [Table 4]. The result of this research showed the mean value of the low score for symptoms of nausea and vomiting (1.38), dyspnea (4.44), and constipation (3.33). This may mean that these symptoms had negligible interference in daily activities. In this sample, the physical condition and the treatment caused significant financial difficulties (average 62.22) since RT is a long-drawn treatment mostly done on outpatient basis, leading to daily commuting or staying out of home for the patients.

Table 2: Side effects of radiation therapy graded as per radiation therapy oncology group criteria

Clinical characteristics	n (%)
Cutaneous reactions	
Grade-1	27 (45.00)
Grade-2	22 (36.67)
Grade-3	11 (18.33)
Nausea and vomiting	
Grade-0	30 (50.00)
Grade-1	27 (45.00)
Grade-2	3 (5.00)
Esophagitis	
Grade-0	14 (23.33)
Grade-1	46 (76.67)

Regarding the subscales of the QLQ-BR23 instrument, the result shows that the body image with a mean score of 49.58 and future perspective with a mean score of 57.22 are the least effected parameters, while the worst effected were sexual functioning (8.88) and sexual enjoyment (0.00), leading to a conclusion that sexual activity kept on decreasing during radiation treatment [Table 5]. However, body image scores had a significant *P* value (0.001) between the first and third visits, which can be explained by hyperpigmentation and skin changes because of radiation resulting in worsening of chest wall cosmesis, leading to further worsening of body image as the patient progresses in radiation treatment. The most affected scores were arm symptoms (15.36) with a significant *P* value (0.002) between the first and third assessments again as a result of RT side effect [Table 6]. The high score on body image (49.58) in general means that there was good acceptance of this feature. The worst score for sexual function, on its turn, revealed that the practice of sexual intercourse and the sexual satisfaction was unsatisfactory or impaired.

Discussion

The limitations of the results of this study are related to the cross-sectional design that does not allow establishing relations of cause and effect. The patients with breast cancer receiving RT showed considerable changes in the global QOL and its various dimensions. The women in this study considered their state of health and the QOL as satisfactory, which was evidenced by the score of the global QOL (65.80).

Table 3: Radiation therapy for carcinoma breast quality of life Organization for Research and Treatment of Cancer scores (*n*=60)

EORTC QLQ C-30 Variables	Mean±SD			
	First fraction (start of RT)	Thirteen fraction (midway of RT)	Twenty-fifth fraction (at completion of RT)	At 3 months on follow-up
Functioning scale				
Physical	90.11±8.18	84.36±5.53	79.88±5.13	92.27±11.30
Role	81.91±10.67	75.83±9.29	74.30±9.11	85.83±11.81
Cognitive	91.38±8.40	88.33±7.70	85.27±11.92	91.66±8.40
Social	79.99±15.58	68.22±11.89	60.27±16.55	80.55±15.69
Emotional	70.27±11.10	66.11±10.27	63.75±10.83	74.02±10.52
Global QOL	65.80±13.79	36.94±10.99	32.36±9.34	68.16±15.23
Symptom scale				
Fatigue	15.32±19.71	21.84±17.10	26.57±15.91	19.56±22.01
Pain	16.38±11.68	21.11±12.22	23.05±13.05	10.55±16.22
Nausea and vomiting	1.38±4.64	5.27±7.81	9.44±9.39	22.50±8.58
Dyspnea	4.44±11.42	11.66±16.03	16.10±16.79	6.11±13.00
Insomnia	15.55±16.76	24.10±20.61	29.99±20.99	16.66±21.69
Appetite loss	4.99±12.00	19.44±18.70	28.33±18.23	16.66±24.93
Constipation	3.33±10.08	8.33±14.55	12.77±16.54	6.66±14.77
Diarrhea	0	0	0	0
Financial impact	46.66±23.12	56.66±24.0	62.22±50.03	39.44±28.45

QOL: Quality of life; RT: Radiotherapy; SD: Standard deviation

The EORTC QLQ-C30 scores were high for physical function (90.11), role performance (81.91), cognitive function (91.38), and social function (79.99), indicating a level between satisfactory and regular; for these functions, they were worse at the end of treatment: physical function (79.88), role function (74.30), cognitive function (85.27), and social function (63.75). The results may provide support for planning the nursing care for women undergoing RT.^[9-13]

The score of the emotional function (mean 63.75) was considered the lowest among the functions of the first scale. It was observed that psychological distress in patients with breast cancer is related to depression, anxiety and low emotional function, and also to decreased QOL, especially in the emotional function and mental health.^[11-14]

It was identified that the magnitude of change in psychological anguish has a significant impact on the

physical and functional state as well as on the social condition of QOL. The anguish is more closely related to symptoms, treatment factors, or loss of skills during treatment than to family or social relationships as most of the parameters came back to normal on the first follow-up after 3 months [Table 3].^[15-18]

The most affected symptoms on the scale of symptoms were insomnia (15.55), fatigue (15.32), and pain (16.38). It is common to have increased fatigue and pain in women with breast cancer at this stage. With respect to items of the QLQ-BR23 instrument, the result showed a worst score for sexual functioning on functioning scale and arm symptoms on symptom scale; in other words, many women had side effects of RT.

Among the physical effects of RT, fatigue was the most prevalent symptom reported and source of high

Table 4: Statistical analysis (*P*) of quality of life scores comparison of quality of life scores at different assessment times (Organization for Research and Treatment of Cancer 30-item Quality of Life Questionnaire)

EORTC QLQ-C30 Variables	<i>P</i>					
	Assessment time first versus second	Assessment time first versus third	Assessment time first versus fourth	Assessment time second versus third	Assessment time second versus fourth	Assessment time third versus fourth
Functioning scales						
Physical functioning	0.000	0.244	0.205	0.000	0.375	0.817
Cognitive functioning	0.000	0.000	0.000	0.000	0.000	0.000
Emotional functioning	0.000	0.000	0.002	0.000	0.002	0.000
Social functioning	0.000	0.111	0.000	0.013	0.000	0.090
Role functioning	0.000	0.002	0.528	0.000	0.637	0.590
Global functioning	0.028	0.378	0.000	0.000	0.145	0.426
Symptoms scales						
Fatigue	0.000	0.000	0.000	0.000	0.000	0.000
Pain	0.000	0.000	0.000	0.000	0.029	0.020
Nausea and vomiting	0.015	0.072	0.113	0.000	0.472	0.166
Appetite	0.002	0.121	0.473	0.000	0.165	0.269
Constipation	0.000	0.001	0.000	0.000	0.000	0.000
Dyspnea	0.001	0.017	0.012	0.000	0.003	0.013
Financial impact	0.000	0.001	0.316	0.000	0.184	0.883
Insomnia	0.000	0.000	0.000	0.000	0.000	0.000

Table 5: Radiation therapy for carcinoma breast (Quality of Life Questionnaire-breast cancer 23) scores (*n*=60)

QLQ BR-23 Variables	Mean ± SD			
	First fraction (start of RT)	Thirteen fraction (midway of RT)	Twenty-fifth fraction (at completion of RT)	At 3 months on follow-up
Functioning scales				
Body image	49.58 ± 13.67	40.69 ± 14.25	40.69 ± 14.65	45.97 ± 18.12
Sexual functioning	8.88 ± 12.45	1.11 ± 5.19	0.55 ± 3.02	11.66 ± 17.70
Sexual enjoyment	33.33 ± 0.00	0	NA	33.33 ± 0.00
Future perspective	57.22 ± 27.51	51.11 ± 18.91	50.55 ± 18.88	52.77 ± 24.00
Symptom scales				
Systemic therapy side effects	9.38 ± 15.95	0	0	0
Breast symptoms	NA	NA	NA	NA
Arm symptoms	15.36 ± 6.16	20.55 ± 8.39	22.31 ± 9.17	13.70 ± 5.92
Upset by hair loss	43.33 ± 20.63	0	0	43.33 ± 20.63

NA: Not available; RT: Radiotherapy; SD: Standard deviation

Table 6: Statistical analysis (P) of quality of life scores comparison of quality of life scores at different assessment times (Organization for Research and Treatment of Cancer Quality of Life Questionnaire-breast cancer 23)

QLQ BR-23 Variables	P					
	Assessment time first versus second	Assessment time first versus third	Assessment time first versus fourth	Assessment time second versus third	Assessment time second versus fourth	Assessment time third versus fourth
Functioning scales						
Body image	0.000	0.000	0.001	0.000	0.001	0.006
Sexual functioning	0.006	0.004	0.000	0.000	0.099	0.078
Sexual enjoyment	0.000	0.000	0.000	0.000	0.000	0.000
Future perspective	0.000	0.000	0.008	0.000	0.000	0.000
Symptom scales						
Breast symptoms	NA	NA	NA	NA	NA	NA
Arm symptoms	0.000	0.000	0.000	0.000	0.002	0.000

NA: Not available

stress for patients. This symptom was accompanied by complaints of lack of energy, exhaustion, loss of interest in previously pleasurable activities, weakness, dyspnea, pain, changes in taste, rash, sluggishness, irritability, and loss of concentration.^[19,20] Bower *et al.*^[21] studied 1957 patients of breast cancer and they also found that the breast cancer survivors were somewhat more fatigued than a more demographically similar reference group. Approximately one-third of the breast cancer survivors assessed reported more severe fatigue, which was associated with significantly higher levels of depression, pain, and sleep disturbance similar to the observations in our study.

The physical condition and the treatment caused a lot of financial difficulty (mean 62.22) as most of our patients are from a rural background belonging to low socioeconomic strata. During treatment, the patient experienced physical and financial losses since RT is a long-drawn treatment mostly done on outpatient basis, leading to daily commuting or staying out of home for the patients severely disturbing their family life also. The skin reactions which a patient develops during RT also affect her psychologically and socially. The skin reactions are another additional factor, which affects the psyche of a woman. When she sees reactions associated with pain after undergoing RT, this compounds her sorrow of losing her complete breast, the hallmark of her outer beauty, and self-esteem requiring constant adjustments to the sociological, social, family, physical, and emotional changes. In addition, limitations may occur in activities of daily life and biopsychosocial changes that may also interfere with QOL, such as job losses.^[22,23]

The score of sexual satisfaction has a score of 0.55, showing that there was extreme dissatisfaction in the quality of the relationship. In young patients, the dissatisfaction with sex life was related to frequent interruptions, performance, and psychological difficulties with their partners with respect to sexual relations. Various researches

suggest that problems with sexual functioning are common in women with breast cancer undergoing RT.^[24] In a study by Ganz *et al.*^[25] in 864 patients who had undergone breast conservation surgery (BCS) completed, the survey scores were as good or maybe better than those of healthy, age-matched women, and the frequency of depression was similar to general population samples. Marital/partner adjustment was similar to normal healthy samples, and sexual functioning mirrored that of healthy, age-matched postmenopausal women. However, these BCSs reported higher rates of physical symptoms (joint pains, headaches, and hot flashes) than healthy women. Sexual dysfunction occurred more frequently in women who had received chemotherapy (all ages) and in younger women who were no longer menstruating.

In a study on 837 patients by Whelan *et al.*,^[26] 416 patients were randomly allocated to radiation therapy and 421 to no further treatment. The mean change in QOL from baseline to 2 months was -0.05 for the radiation group and +0.30 for the control group. The difference was statistically significant ($P = 0.0001$). Long-term radiation therapy increased proportion of patients who were troubled by irritation of the skin of the breast and breast pain. Radiation therapy did not increase the proportion of patients at 2 years who were troubled by the appearance of treated breast, 4.8% in irradiated and nonirradiated patients ($P = 0.62$). Hughson *et al.*^[27] described psychological morbidity in 47 patients who received postoperative RT and in 38 patients who received no further treatment after mastectomy. They found that at 3 months, patient who had completed RT had more somatic symptoms and social dysfunction than those not so treated. At 6 months, the RT group continued to show more somatic symptoms, but after a year of operation, there were no significant differences between the groups.

Studies on the QOL related to health encompass both clinical morbidity caused directly by the disease state, the influences of disease, treatments on daily activities, and

satisfaction with life. Low socioeconomic status, young age, advanced stage, and poor performance status correlated with poor QOL. QOL was poorest at the third assessment, i.e., the day of completion of RT when acute side effects of radiation were on a larger scale. Best QOL was seen at the fourth assessment, i.e., after completion of RT when the patient was on follow-up when symptomatic relief because of settling down of acute radiation reactions. Intervention strategies can be formulated by evaluating aspects of QOL related to health, to minimize the effects of the disease of progressive character, and improve aspects of QOL.

The most invigorating question which these women suffering from psychosexual dysfunctions after curative treatment ask us is the management aspects of the aftermath. Various studies suggest that health professionals should increase their awareness of existential aspects connected with the will to live and should assist women and their families in developing coping strategies such as lifestyle modification including more physical activity in the form of aerobic exercises and meditation. Wenzel *et al.*^[28] report that a brisk 30-min walks 5 days a week can help reduce the fatigue and emotional distress that may accompany treatments such as chemotherapy and radiation in patients from age 20 to 80 years. Johansson *et al.*^[29] found that participation in a structured program to improve coping skills results in greater physical and psychological health a full year after treatment ended. Another study found that adding religious coping as a strategy was of particular benefit to African-American breast cancer patients undergoing treatment.

As a physician or as an oncologist, our responsibility toward patients does not end with just the curative therapy. Management of the physical and psychological side effects with a humane touch is what makes the treatment complete. Based on our observations in this study, we have formed a support group called “Perna” or “motivation” in our institute. This group comprises cancer patients undergoing RT, survivors, as well as volunteers who provide emotional support and counseling to the patients during active treatment as well as during follow-up. A multispecialty team of radiation, surgical, medical oncologists, and a psychologist forms the core group. We have found a marked change in the coping abilities of our patients and this has really helped them, as well as their families to withstand the disease as well as treatment challenges.

The major challenge posttreatment is to reinstall the self-esteem of the patients, for which they are inspired by the previous cancer survivors. Families are counseled jointly so that the family bonding becomes strong again, especially between husband and wife. Patients are motivated to join back their jobs and start participating in the social activities

the way they used to do before being diagnosed. Issues pertaining to QOL are an integral part of surveillance at our institute apart from clinical examination and investigations.

Conclusion

Women with breast cancer in this study showed significant changes in the following domains: Financial, emotional, sexual satisfaction, and future prospects. The most frequently mentioned symptoms were fatigue, insomnia, pain and skin reactions. The treatment of carcinoma breast has significant psychosexual consequences affecting the QOL of these women. These consequences can be far greater than expected when considering the type and extent of the therapy given with surgery, chemotherapy, or RT. The psychosexual and financial impact of treatment has been described by a few authors, but it has not received the attention that it merits possibly because of the difficulty in its nature and overall impact. RT to chest wall post-MRM has a deep impact on psychology, sexual functioning, and body image even when intercourse remains possible. The concern for the impact of postoperative RT on women has been the principle reason for the development of multimodality supportive and curative strategies to establish self-esteem, improved body image with reasonable control of the disease. The impact of these factors can be minimized by effective psychological and emotional counseling along with appropriate pharmaceuticals. This research recommends further studies with a large sample about the relationships between the sociodemographic variables and QOL.

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Conflicts of interest

There are no conflicts of interest.

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