

Quality of Life of Women with Breast Cancer at the Time of Diagnosis in New Delhi

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Abstract

Background: Breast cancer survivors increasingly experience long-term side effects that influence their quality of life. The current study was carried out to assess the Quality of life of women with breast cancer at the time of diagnosis.

Methods: This is a descriptive study; a case series of patients studied. The study was conducted at Lok Nayak Hospital, New Delhi, India; from January 2006 to May 2007. 172 women with new primary breast cancer were included in the study. Quality of Life - Cancer Survivor's (QOL-CS) instrument was used.

Results: The mean score of overall QOL was 6.04. The mean score of the social well-being was 4.61 and was the lowest among all the domains. The mean score of spiritual well-being was 7.34, and physical well-being 7.24 and psychological well-being 4.98.

Conclusion: Among all the domains the mean score was the lowest in the social well-being. The mean score of spiritual well-being was highest.

Keywords: Quality of life; Women; Breast cancer

Abbreviations: QOL: Quality of life; LNH: Lok Nayak Hospital; OPD: Out Patient Department; FNAC: Fine Needle Aspiration Cytology; QOL-CS: Quality of Life-Cancer Survivors; US: United States; UK: United Kingdom; SD: Standard Deviation

Introduction

The burden of breast cancer is increasing in both developed and developing countries. [1-3]. Despite the rising incidence of breast cancer, mortality from the disease has declined recently in some countries, including the US and UK [4].

Breast cancer is a serious, stressful and life-threatening disease. It is assumed that the diagnosis of cancer evokes far greater distress than many other diseases, regardless of prognosis. Breast cancer survivors increasingly experience long-term side effects that influence their quality of life [5,6]. Quality of life typically involves the assessment of several dimensions: physical well being, psychological well-being, social well-being, and spiritual well-being [7,8]. Although quality of life ultimately depends on the outcome of treatment; there is always something medical team can do to improve it even at the end of life [9,10].

Recent advances in diagnosis and treatment of cancer have led to an increase in cancer survival and hence, there is a greater emphasis on quality beside quantity of survival [11]. However little is known about the QOL of survivors. The current study was carried out to assess the Quality of life of women with breast cancer at the time of diagnosis. This study discusses the physical, psychological, social and spiritual well-being domains of QOL in breast cancer patients at the time of diagnosis.

Methods

Study Design: Descriptive Study; A case series of patients studied at the time of diagnosis.

Study Setting: The present study was conducted at Lok Nayak Hospital, New Delhi, India. LNH is a 1600 bedded teaching hospital

attached to Maulana Azad Medical College, located in the central part of Delhi. The hospital provides services to more than one million patients per year from Delhi and neighboring states.

Study period: The study was conducted from January 2006 to May 2007; Period of data collection was 17 months.

Study subjects: All the women with primary breast cancer, detected in surgery Out Patient Department (OPD), were included in the study.

Inclusion criteria: All the newly detected primary breast cancer female cases.

Exclusion criteria: Patients with past history or recurrence of breast cancer, patients having metastasis at the time of diagnosis, patients with reconstructive surgery, patients with severe psychiatric illness, patients with any other cancer.

Methodology: The diagnosis of breast cancer was made by the surgeon on the basis of physical examination and FNAC (Fine Needle Aspiration Cytology)/Core Biopsy report. After the diagnosis, the informed consent was taken from each of the patient and was interviewed using pre-tested, pre-structured and semi-coded proforma. The investigator has taken the help of a trained person who could communicate in local language with the subjects. Interview of each patient took approximately 45 to 60 minutes to complete the questionnaire.

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Received November 19, 2010; Accepted January 25, 2011; Published February 04, 2011

Citation: Pakseresht S, Ingle GK, Garg S (2011) Quality of Life of Women with Breast Cancer at the Time of Diagnosis in New Delhi. J Cancer Sci Ther 3: 066-069. doi:10.4172/1948-5956.1000060

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The interview was carried out for 172 subjects and data was collected.

Study instruments: In this study, for the data collections following instruments were used: (a) Self structured questionnaire, (b) Quality of Life - Cancer Survivor's (QOL-CS) instrument

Quality of life data (QOL-CS):

- (i) The Quality of Life data was collected by using the Quality of Life-Cancer Survivors (QOL-CS) instrument [12], which contains 46 items representing the four domains of quality of life viz. physical well being (8 items),
- (ii) Psychological well being (22 items), including three parts: general (10 items), cancer –related fears (5 items) and distress (7 items),
- (iii) Social well being (9 items),
- (iv) And spiritual well being (7 items).

Statistical analysis: Statistical Analysis was carried out by using the Microsoft SPSS-pc version 14.0 statistical program. All statistical tests were performed at a significance level of 5% ($P < 0.05$). This study was approved by the Research Ethics Committee of Maulana Azad Medical College, New Delhi, India.

Results

In current study, the mean age of subjects was 46.99 years (SD, 12.64, Median 45, range 25 to 80 years), 38.4% of the subjects were \leq 40 years, 70.3% subjects were living with their spouse, 95.3 % subjects were housewives and 62.2% subjects were illiterate. Majority (68%)

Variables	Numbers	Percentage
Age(years)		
\leq 40	66	38.4
40-49	36	20.9
50-59	29	16.9
$>$ 60	41	23.8
Mean (SD) : 46.99 (12.64)		
Marriage		
Living with Spouse	121	70.3
Not living with Spouse	51	29.7
Occupation		
Employed	8	4.7
Housewife	164	95.3
Educational status		
Illiterate	107	62.2
\leq 10 Years schooling	47	27.3
$>$ 10 Years schooling	18	10.5
Religion		
Hindu	117	68
Muslim	53	30.8
Other religion	2	1.2
Place of residence		
Urban	91	52.9
Rural	81	47.1

Table 1: Socio-demographic profile of the subjects (n=172).

QOL Domains	Mean	SD
Physical well-being	7.24	1.64
Psychological well-being	4.98	2.02
Social well-being	4.61	2.19
Spiritual well-being	7.34	1.81
Overall QOL	6.04	1.21

Table 2: The mean scores of QOL domains (n=172).

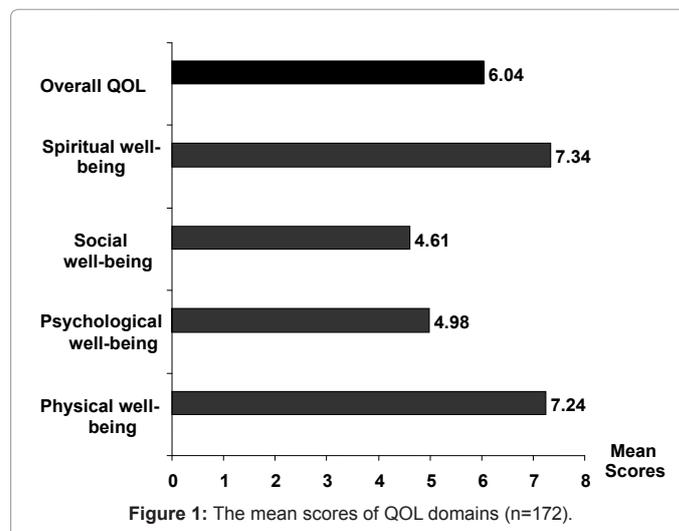


Figure 1: The mean scores of QOL domains (n=172).

PHYSICAL WELL BEING ITEMS	Mean	SD
Fatigue	5.60	3.83
Appetite changes	7.84	3.22
Aches or pain	5.73	3.60
Sleep changes	5.73	3.60
Weight gain	8.39	2.03
Menopausal symptoms	9.51	1.83
Menstrual changes or fertility	9.45	1.96
Overall physical health	5.70	3.56
TOTAL SCORE	7.24	1.64

Table 3: Scores in physical well being subscale (n=172).

subjects were Hindus while Muslims constituted the second largest group. Majority of the subjects (52.9%) originally belonged to urban areas (Table1).

The mean score of overall QOL was 6.04 (SD 1.21). The mean score of the social well-being was 4.61 and was the lowest among all the domains. The mean score of spiritual well-being was 7.34, and physical well-being 7.24 and psychological well-being 4.98 (Table 2).

The Physical Well-Being subscale contains eight items. The items with the lower scores were fatigue (mean score 5.60), aches / pain (5.73), sleep (5.73) and self perception of overall physical health (5.70). The items with higher scores were menopausal symptoms (9.51), menstrual changes or fertility (9.45) (Table 3).

The mean score for general psychological items was 5.25. Among the psychological general items, the lower scores were observed for items like 'concentration / memory' (3.26) and 'coping today with the disease' (4.09) and 'treatment' (3.93). The higher scores were observed for 'appearance' (6.27) and 'happiness' (6.09) (Table 4.1).

The mean score for psychological distress items was 5.09. The poorer outcome were observed for items like 'anxiety' (4.12) and 'distress at diagnosis' (4.43), 'chemotherapy distress' (4.78) and 'depression' (4.85). The highest score was observed for 'radiation distress' (6.39) (Table 4.2).

The mean score for psychological fear items was 4.28. The worse outcomes were observed in spread (metastasis) of cancer (2.93), and recurrence of cancer (3.17), where as the scores were higher in inability to have normal life back (6.31) and future test (5.55) (Table 4.3).

The mean social well being score at the time of diagnosis was 4.61. The worse outcomes were observed in employment (2.43), sexuality

(2.64), financial burden (2.84) and family distress (2.86), where as the highest score was observed for support/others (6.82) (Table 5).

The mean Spiritual well being score at the time of diagnosis was 7.34. The score were lower in the items, viz. positive change (5.19), uncertainty (5.52), and spiritual change (5.70), where as the scores were higher in religious activities (9.58), other spiritual activities (8.73), and hopefulness (8.18) (Table 6).

PSYCHOLOGICAL WELL BEING General Items	Mean	SD
Coping with the disease	4.09	4.01
Coping with the treatment	3.93	4.07
Quality of life	5.61	3.63
Happiness	6.09	3.95
Control	6.05	3.44
Satisfaction	5.30	4.08
Concentration/Memory	3.26	3.75
Usefulness	5.90	3.53
Appearance	6.27	3.68
Change in self concept	5.98	3.79
TOTAL SCORE	5.25	1.86

Table 4.1: Scores in general items of psychological well being subscale (n=172).

PSYCHOLOGICAL WELL BEING Distress Items	Mean	SD
<i>How distressing were the following aspects of your illness and treatment?</i>		
Distress at diagnosis	4.43	4.40
Chemotherapy distress	4.78	4.21
Radiation distress	6.39	4.22
Surgery distress	5.24	4.58
Distress for completion of treatment	5.82	4.37
Anxiety	4.12	4.14
Depression	4.85	4.27
TOTAL SCORE	5.09	3.21

Table 4.2: Scores in distress items of psychological well being subscale (n=172).

PSYCHOLOGICAL WELL BEING Fear Items	Mean	SD
<i>To what extent are you fearful of:</i>		
Future tests	5.55	4.40
Second (other) cancer	3.46	4.35
Recurrence of cancer	3.17	4.23
Spread(metastasis) of cancer	2.93	4.06
Inability to have normal life back	6.31	3.60
TOTAL SCORE	4.28	2.88

Table 4.3: Scores in fear items of psychological well being (n=172).

SOCIAL WELL BEING ITEMS	Mean	SD
Family distress	2.86	4.19
Support/others	6.82	4.04
Personal relationships	5.32	4.23
Sexuality	2.64	2.69
Employment	2.43	2.37
Home activities	3.63	4.18
Feeling of isolation	5.52	4.13
Concern for daughter(s)/others	5.25	4.60
Financial burden	2.84	3.53
TOTAL SCORE	4.61	2.19

Table 5: Scores in social well-being subscale (n=172).

SPIRITUAL WELL BEING ITEMS	Mean	SD
Religious activities	9.58	1.59
Other spiritual activities	8.73	2.84
Spiritual change	5.70	3.79
Uncertainty	5.52	3.72
Positive change	5.19	4.23
Life purpose	6.75	3.91
Hopefulness	8.16	3.21
TOTAL SCORE	7.34	1.82

Table 6: Scores in spiritual well being subscale (n=172).

Discussion

The current study based on scoring of 0 (worst outcome) to 10 (best outcome), cancer survivors' mean QOL-CS revealed that at the time of diagnosis, the mean score of overall QOL was 6.04 (range 2.88-9.53). The mean score of the social well-being (4.61) and psychological well-being (4.98) subscale ranked the lower in QOL. The mean scores for spiritual well-being, and physical well-being were 7.34 and 7.24 respectively.

In a similar study, [12], based on scoring of 0 (worst outcome) to 10 (best outcome), cancer survivors' mean QOL-CS sub scores were 5.88 for psychological well-being, 6.59 for spiritual well-being, 6.62 for social well-being, and 7.78 for physical well-being [9]. Pandey [14] reported that the FACT-B mean score was 90.6 (Standard Deviation (SD)= 18.4). The mean scores of the subscales were – Physical well-being 19.6 (SD 4.7), Social well-being 19.9 (SD = 5.3), Emotional well-being 14 (SD = 4.9), Functional well-being 13.0 (SD = 5.7), and the Breast-specific subscale 23.8 (SD = 4.4) [14]. [5,10] showed that the breast cancer subjects had significantly worse overall QOL and perceived health status than healthy women, reflected mainly by lower QOL scores in physical and psychological well-being domains [5,10]. [13] showed the lowest QOL were in the physical (p=0.002) and psychological (p=0.02) domains.

In contrast, [15] reported that in most domains and for women without further disease events after diagnosis, quality of life does not seem to be permanently and globally impaired by breast cancer.

Most of the studies reported lower overall Quality of Life as well as lower QOL in almost all the domains viz. physical, psychological, social, spiritual and functional. In most of the studies psychological and social well-being domain have the lowest scores; this may be due to the perception about breast cancer that it is a serious, stressful and life-threatening disease.

Present study revealed among the physical well-being domain, lower outcomes were observed in items fatigue, aches / pain, sleep, and self-perception of overall physical health. The higher scores were observed for menopausal symptoms and menstrual changes.

Among the psychological well-being items, worse outcomes were observed in concentration / memory, coping today with the disease and treatment, anxiety, depression, distress at diagnosis, chemotherapy distress, fear of spread (metastasis) of cancer, recurrence of cancer and second (other) cancer. The higher scores were observed for appearance and happiness, change in self-concept, radiation distress.

In the social well being domain, the worse outcomes were observed in the items employment, sexuality, financial burden and family distress, home activities and the highest score was observed for support/others.

In the spiritual well being domain the scores were higher in religious activities, other spiritual activities, life purpose, and hopefulness.

After the treatment, the scores declined in most of the items though statistically not significant.

The results of a study, [6] indicated that: a) fatigue, aches and pains, and sleep problems were persistent after treatment ended; b) psychological distress from cancer diagnosis and treatment, and fear of recurrence and metastasis were problematic over time; c) family distress, sexuality, and family burden issues were of greatest social concern; and d) uncertainty over the future plagued breast cancer survivors long-term. Breast cancer survivors also reported good outcomes in hopefulness, having a life purpose, and having a positive change after the treatment.

In another study, [16] showed unique issues of survivorship including those related to physical, psychological, social, and spiritual well-being. In the domain of physical well-being, the areas of worst outcome were in menstrual changes and fertility, fatigue, and pain. In the domain of psychological well-being, predominant needs were in the areas of fear of the spread of cancer, distress from surgery, recurrence, fear of a second cancer, impact on self-concept, and fear of future tests. The social well-being subscale identified the greatest disruption in the area of family distress. The spiritual well-being subscale showed greatest disruption in the area of uncertainty, although other aspects of this domain were usually rated in a positive direction e.g., importance of religious activities.

In a study, [17] reported that a significant deterioration was seen in health-related parameters in terms of recreation ($P=0.01$), social life ($P=0.002$), mobility ($P=0.03$), physical activity ($P=0.4$) and sleep and appetite ($P=0.05$). Treatment related parameters deteriorated in both early and advanced carcinoma.

In another study, [15] reported that the post-operative subjects have been found to become more fearful and anxious, develop sleep difficulties, and experience a reduction in interest and pleasure. Their concerns involve feelings of threat to life, fear of pain, fear of recurrence, cosmetic concerns, sexual attitudes, feelings of devaluation, and loss of femininity.

In a study [18] reported that almost 90% of all women with breast cancer reported that they felt depressed, irritable tense or worried. [19] reported that the subjects before mastectomy had the greater disturbance in general mental health functioning, more severe impairment in emotional well being and higher levels of anxiety, greater disturbance in work and daily activities, more frequent interference in social activities and less vitality, greater impairment in physical and functional well being, higher levels of affective distress, depressive symptoms, and obsessive-compulsive traits.

The scoring in various items in physical, psychological, social and spiritual well being domains in the present study is similar with the most of the other studies. There were some variations for the items like sleep, menarche, uncertainly etc. which may be due to different geographic, demographic, socio-cultural, and economic factors and different lifestyles and religious beliefs and perceptions.

Conclusion

Based on scoring of 0 (worst outcome) to 10 (best outcome), cancer survivors' mean QOL-CS revealed the mean score of overall QOL was

6.04 The QOL was lowest among the social well-being domain followed by psychological well-being, physical well-being, and spiritual well-being.

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