

A Cross-Sectional Study to Assess the Effect of Social Support, Hope and Resilience on Quality of Life of Breast Cancer Patients Attending Oncology Units of Selected Hospitals of Bagalkot

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Abstract

Original Research Article

Background: Breast cancer is a disease in which abnormal breast cells grow unmanageable and form tumors. If left unchecked, the tumors can spread throughout the body and become lethal. Breast cancer cells begin inside the milk ducts and/or the milk-producing lobules of the breast. The earliest form (in situ) is not life-threatening and can be detected in early stages. Cancer cells can spread into nearby breast tissue (invasion). This creates tumors that cause lumps or thickening. Invasive cancers can spread to nearby lymph nodes or other organs (metastasize). Metastasis can be life-threatening and fatal. Treatment is based on the person, the type of cancer and its spread. Treatment combines surgery, radiation therapy and medications. **Methods:** Data were collected using self-report method and Hospital's records. Tool used for data collection were; socio-demographic and clinical questionnaire, Social Provision Scale to assess Social Support, Herth Hope Index to assess Hope, Brief Resilience Scale to assess resilience and WHO Quality of Life Bref Scale to assess Quality of life. Multiple linear regression analysis was performed to find the social support, hope and resilience affecting quality of life of breast cancer patients. Chi-square test was performed to find the Association of Quality-of-Life patients with Breast Cancer with their selected socio-demographic and clinical variables. **Results:** A significant regression equation was found ($F_{3,99}=9.53$, $R^2=0.23$, $P=0.000$) when all the variables are considered together for finding the social support, hope and resilience affecting the quality of life. Social support, hope and resilience are positively predicted the quality-of-life breast cancer patients. There was no any strongest negative predictor of quality-of-life breast cancer patients. **Conclusion:** The overall findings reveals that a significant positive correlation between social support, hope and resilience with quality of life. Interventions are aimed to strengthen the social support, hope and resilience among breast cancer patients would result in enhancement of their quality of life.

Keywords: Socio-demographic, social support, Hope, Resilience, Quality of life, Breast cancer patients.

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INTRODUCTION

Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer-related death among women worldwide. Although it is frequently detected in more developed countries, over half of all breast cancer diagnoses and nearly two-thirds of related deaths occur in less developed regions of the world [1].

Carcinogenesis, driven by genetic and environmental factors, involves key mechanisms like evasion of apoptosis, sustained proliferation, and metastasis. Breast cancer, a major outcome of this process, is among the most commonly diagnosed cancers globally, with 2.3 million new cases and ranking as the fifth leading cause of cancer-related deaths [2]. Breast

cancer significantly impacts patients' physical and mental health, with effects lasting decades after diagnosis and treatment. Long-term consequences include chronic diseases and persistent treatment-related issues like fatigue, depression, and cognitive dysfunction [3].

Quality of life (QOL) refers to an individual's subjective evaluation of well-being across physical, emotional, functional, and social domains. It reflects personal perceptions of life, values, and satisfaction within a cultural context [4]. A cancer diagnosis threatens one's sense of security, bringing psychological suffering and disrupting daily life. Patients face not only physical symptoms and treatment side effects but also

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long-term health issues, disability, fatigue, and pain. Emotional stress may lead to work limitations, financial strain, and reduced social support [5].

Breast cancer affects physical, emotional, social, and financial aspects of life, with diagnosis and treatment causing distress, body image issues, and financial strain. Holistic care and strong social support are vital for improving quality of life and recovery outcomes [6].

Breast cancer treatments often lead to physical symptoms like pain, fatigue, nausea, and lymphedema, affecting both patients and their families. These treatments can also cause psychological, sexual, and physical dysfunction, significantly reducing women's quality of life [7]. Social support from family, friends, and the community provides vital psychological, physical, and financial help to breast cancer patients. Strong social networks improve emotional well-being, health outcomes, and survival, while lack of support is linked to poorer prognosis and higher mortality [8]. Older adults often face reduced social support due to life changes like retirement or widowhood. For breast cancer patients, instrumental and emotional support enhances treatment adherence, mobility, stress relief, potentially improving survival and independence [9].

Hope, through agency and pathways, motivates breast cancer patients toward recovery, with positive hope aiding healing. Resilience, strengthened by traits like self-efficacy, optimism, and courage, helps patients cope with treatment challenges. [10]. Breast cancer is the leading cause of death and the most prevalent cancer among women worldwide, with ~2.26 million new cases diagnosed annually. Its global burden is rising, especially in developing countries, due to westernized lifestyles like poor diet and inactivity [11].

Cancer and its treatments impact body image differently based on cancer visibility, with “visible cancers” like breast cancer causing more noticeable changes. Therapies such as surgery, chemotherapy, and radiotherapy can lead to physical changes (e.g., amputations, hair loss) and symptoms like pain, nausea, and fatigue. [12].

MATERIALS AND METHODS

A cross-sectional study design was used to assess effect of social support, hope and resilience on quality-of-life breast cancer patients attending oncology units of selected hospitals of Bagalkot. Data were collected using self-report method and Hospital's records. Tool used for data collection were; socio-demographic and clinical questionnaire, Social Provision Scale to assess Social Support, Herth Hope Index to assess Hope, Brief Resilience Scale to assess resilience and WHO Quality of Life Bref Scale to assess Quality of life. Multiple linear regression analysis was performed to find the social support, hope and resilience affecting

quality of life of breast cancer patients. Chi-square test was performed to find the Association of Quality-of-Life patients with Breast Cancer with their selected socio-demographic and clinical variables.

Study design:

A Descriptive cross-sectional research design was used to assess effect of social support, hope and resilience on quality-of-life breast cancer patients.

Setting of the study:

The present study was conducted at Oncology units of selected cancer hospitals of Bagalkot; Hallamma kerudi cancer hospital of Bagalkot, H.S.K Hospital & Research Centre of Bagalkot Karnataka.

Sample:

Sample for the present study consists of women aged 18 years with histopathologically confirmed diagnosis of early breast cancer and completed the initial surgical and oncological treatment at least one month prior to the inclusion and presently coming for follow up at the oncology units of selected hospitals of Bagalkot.

Data collection tool:

The data was collected using a standardised tools used for data collection were; socio-demographic and clinical questionnaire, Social Provision Scale to assess Social Support, Herth Hope Index to assess Hope, Brief Resilience Scale to assess resilience and WHO Quality of Life Bref Scale to assess Quality of life.

Statistical analysis:

The obtained data were statistically examined in terms of the objectives of the study using inductive statistics. Frequencies and Percentage was used for the analysis of demographic data. The mean and standard deviation was used as inferential statistics. Linear multiple regression analysis used to determine significant psychosocial factors influencing the quality of life and Chi-square test used to assess the association between quality of life with selected socio-demographic variables and clinical characteristics of breast cancer patients.

Ethical Approval:

A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

RESULTS

Part-I: Description of sample in terms of their socio-demographic and clinical characteristics.

Majority of breast cancer patients (40%) were belongs to 31-40 years and 41-50 years of each age group. Majority of breast cancer patients (81%) were belongs to Hindu religion. Majority of breast cancer patients (50%) were Illiterate. Majority of breast cancer patients (80%) were Married. Majority of breast cancer patients (80%) were from Urban area. Majority of breast

cancer patients (50%) were belongs to Coolie work. Majority of breast cancer patients (70%) were belonging to Family monthly income Rs.10,001-20,000/-. Majority of breast cancer patients (90%) were belongs to Nuclear family. Majority of breast cancer patients (70%) were belongs to no family history of cancer. Majority of breast cancer patients (30%) were belongs to 2nd stage, 3rd stage and 4th stage of each stage. Majority of breast cancer patients (70%) were belongs to 3-4 times cycles of chemotherapy. Majority of breast cancer patients (50%) were belongs to average self- care ability. Majority of breast cancer patients (70%) were belongs to no history of radiation therapy. Majority of breast cancer patients

(50%) were belongs to 3-4 years duration of disease condition. Majority of breast cancer patients (80%) were belongs to no any others disease like DM, HTN or others.

Part II: Description of quality of life of breast cancer patients.

Section A: Distribution of samples in terms of their quality of life of breast cancer patients.

Categorization of breast cancer patients on the basis of their level of quality of life was done as follows: score ≥ 60 high quality of life and score < 60 poor quality of life.

Table-1: Distribution of samples in terms of their quality of life of breast cancer patients
N=100

| Level of quality of life | Range of score | Frequency | Percentage |
|--------------------------|----------------|-----------|------------|
| Poor | < 60 | 19 | 19% |
| Good | ≥ 60 | 81 | 81% |

As per findings presented in Table 1, quality of life of breast cancer patients reveals that, majority of breast cancer patients (81%) had good quality of life and 19 percent of them had poor quality of life.

Section B: Mean and SD of Quality-of-life scores of breast cancer patients.

Table 2: Mean and SD of Quality-of-life scores of breast cancer patients
N=100

| Variable | Mean | SD |
|-----------------|-------|------|
| Quality of life | 69.72 | 8.83 |

Table 2 shows, Mean and SD of Quality-of-life score is 69.72 ± 8.83 .

PART III: Description of social support, hope, resilience among breast cancer patients.

Section A: Description of subjects in terms of their social support of breast cancer patients.

Categorization of breast cancer patients on the basis of their social support was done as follows: > 64 high social support, score 30-64 moderate social support and score < 32 low social support.

Table 3: Distribution of sample in terms of their social support among breast cancer patients.
N=100

| Level of social support | Range of score | Frequency | Percentage |
|-------------------------|----------------|-----------|------------|
| Low | < 32 | 4 | 4% |
| Moderate | 32-64 | 59 | 59% |
| High | > 64 | 37 | 37% |

As per the findings presented in Table 3, majority of breast cancer patients (59%) had Moderate social support, 37 percent of them had High social support and 4 percent of them had low social support.

Section B: Mean and SD of Social support score of breast cancer patients.

Table 4: Mean and SD of Social support score of breast cancer patients.
N=100

| Variable | Mean | SD |
|----------------|-------|------|
| Social support | 62.85 | 7.84 |

Table 4 shows, Mean and SD of Social support score is 62.85 ± 7.84 .

Section C: Description of subjects in terms of their hope among breast cancer patients.

Categorization of breast cancer patients on the basis of their hope was done as follows: score 61-90 high hope, score 31-60 moderate hope and score 0-30 low hope.

Table 5: Distribution of sample in terms of their hope among breast cancer patients.

N=100

| Level of hope | Range of score | Frequency | Percentage |
|---------------|----------------|-----------|------------|
| Low | 0-30 | 7 | 7% |
| Moderate | 31-60 | 82 | 82% |
| High | 61-90 | 11 | 11% |

As per findings presented in Table 5, hope among breast cancer patients reveals that, majority of breast cancer patients (82%) had Moderate hope, 11 percent of them had High hope and 7 percent of them had low hope.

Section D: Mean and SD hope score of breast cancer patients.

Table 6: Mean and SD of hope score of breast cancer patients

N=100

| Variable | Mean | SD |
|----------|-------|------|
| Hope | 43.35 | 8.83 |

Table 6 shows, Mean and SD of hope score is 43.35±8.83.

Section E: Distribution of sample in terms of their resilience of breast cancer patients.

Categorization of breast cancer patients on the basis of their resilience was done as follows: score 23-30 high resilience, score 15-22 moderate resilience and score 6-14 low resilience.

Table 7: Distribution of samples in terms of their resilience among breast cancer patients.

N=100

| level of resilience | Range of score | Frequency | Percentage |
|---------------------|----------------|-----------|------------|
| Low | 6-14 | 18 | 18% |
| Moderate | 15-22 | 72 | 72% |
| High | 22-30 | 10 | 10% |

As per findings presented in Table 7, resilience among breast cancer patients reveals that, majority of breast cancer patients (72%) had moderate resilience, 18% of them had low resilience and 10% of them had high resilience.

Section F: Mean and SD of resilience score of breast cancer patients.

Table 8: Mean and SD of resilience score of breast cancer patients

N=100

| Variable | Mean | SD |
|------------|-------|------|
| Resilience | 17.96 | 3.07 |

Table 8 shows, Mean and SD of resilience score is 17.96±3.07.

Part IV: Multiple Linear Regression analysis to find the determinants.

Table 9: Multiple regression model to associate social support, hope and resilience with Quality of life of breast cancer patients

N=100

| Sl. No | Independent Variables | Quality of Life | | |
|--|-----------------------|-------------------------------|-------|-----------------|
| | | Standardized Coefficients (β) | T | P value |
| 01. | Social support | 0.206 | 1.984 | 0.040* |
| 02. | Hope | 0.340 | 3.272 | 0.001*** |
| 03. | Resilience | 0.422 | 3.731 | 0.027* |
| Regression equation ($F_{3,99}=9.53$, $R^2=0.23$, $P=0.000$) | | | | |

* $P<0.05$ (Significant),

*** $P<0.001$ (Significant)

Assessment of psychosocial factors social support, hope and resilience with quality of life was done with the help of multiple regression analysis and there was a significant regression equation ($F_{3,99}=9.53$, $R^2=0.23$, $P=0.000$).

Table 9 shows that social support ($t=1.984$, p value 0.040), hope ($t=3.272$, p value 0.001) and resilience ($t= 3.731$, p value 0.027) are significant factors

of quality of life of breast cancer patients. Social support, hope and resilience are positively predicted the quality of life of breast cancer patients. There were no any negative predictors of quality of life of breast cancer patients.

PART V: Association between Quality of Life of patients with Breast Cancer and their selected socio-demographic and clinical variables.

Table 10: Association between Quality of Life of patients with Breast Cancer and their selected socio-demographic and clinical variables

N=100

| Sl. No. | Variables | Df | Chi- Square Value | P Value |
|---------|--|----|-------------------|------------------|
| 1 | Age | 1 | 12.89 | 0.0003*** |
| 2 | Religion | 1 | 2.96 | 0.0853 |
| 3 | Educational status | 1 | 0 | 0.8065 |
| 4 | Marital status | 1 | 4.42 | 0.0355*** |
| 5 | Area of residence | 1 | 2.96 | 0.0853 |
| 6 | Occupation | 1 | 6.5 | 0.0108*** |
| 7 | Family Monthly income | 1 | 5.56 | 0.0184*** |
| 8 | Type of family | 1 | 1.42 | 0.2334 |
| 9 | Family history of cancer | 1 | 1 | 0.3173 |
| 10 | Stages of cancer | 1 | 6.5 | 0.0108*** |
| 11 | Cycles of chemotherapy | 1 | 0.2 | 0.6547 |
| 12 | Self-care ability | 1 | 5.56 | 0.0184*** |
| 13 | Have you undergone radiation therapy | 1 | 14.31 | 0.0002*** |
| 14 | Duration of the disease condition | 1 | 0.01 | 0.9203 |
| 15 | Any other diseases like DM, HTN or others. | 1 | 0.69 | 0.4062 |

***P<0.05 (Significant)**

Df- Degree of freedom

Table 10 Displays that findings related to the association between Quality of life scores of breast cancer patients with their socio-demographic and clinical characteristics reveals that that there was significant association was found between Quality of life of breast cancer patients with their Age ($\chi^2=12.89$, $P<0.05$), Marital status ($\chi^2=4.42$, $P<0.05$), Occupation ($\chi^2=6.5$, $P<0.05$), Family monthly income ($\chi^2=5.56$, $P<0.05$), Stages of cancer ($\chi^2=6.5$, $P<0.05$), Self-care ability ($\chi^2=5.56$, $P<0.05$) and have you undergone radiation therapy ($\chi^2=14.31$, $P<0.05$). Whereas, there was no significant association was found between Quality of life and other socio-demographic and clinical characteristics of breast cancer patients. Hence 'H₂' stated is accepted for the socio-demographic and clinical characteristics that is age, marital status, occupation, family monthly income, stages of cancer, self-care ability and have you undergone radiation therapy of breast cancer patients and rejected for other variables.

DISCUSSION

SECTION A: Description of sample in terms of their socio-demographic and clinical characteristics.

The percentage wise distribution of sample according to their age describes that Majority of breast

cancer patients (40%) were belongs to 31-40 years and 41-50 years of each age group. Majority of breast cancer patients (81%) were belongs to Hindu religion. Majority of breast cancer patients (50%) were Illiterate. Majority of breast cancer patients (80%) were Married.

The finding of the present study is supported or consistent with the study conducted by Moey SF, Mutalib AMA, Mohamed NC, Saidin N. The majority of the women with breast cancer 46.5% of them were in the age group of 35-40 years.[13]

Section B: Mean and SD of Social support score of breast cancer patients.

The Mean and SD of social support score of breast cancer patients is 62.85 ± 7.84 .

The finding of the present study is not supported or inconsistent with the study conducted by Jadidi A, Ameri F. The Mean and SD of social support score of breast cancer patients is 39.34 ± 9.51 .

Section C: Assessment of hope among breast cancer patients.

The percentage wise distribution of breast cancer patients according to hope describes that the most of the breast cancer patients (82%) had moderate hope.

The finding of the present study is consistent and supported with the study conducted by Denewer A, Farouk O, Mostafa W, Elshamy K. The majority of the women with breast cancer 36.2% of them were had moderate hope.[14]

Section D: Mean and SD hope score of breast cancer patients.

The Mean and SD of hope score of breast cancer patients is 43.35 ± 8.83 .

The finding of the present study is not supported or inconsistent with the study conducted by Gavrilovic J, Kovacevic M, Ristic DI, Peulic M, Gavrilovic A. The Mean and SD of social support score of breast cancer patients is 40.00 ± 5.92 . [15]

Section E: Assessment of resilience of breast cancer patients.

The percentage wise distribution of breast cancer patients according to resilience describes that the most of the breast cancer patients (72%) had moderate resilience.

The finding of the present study is not supported and inconsistent with the study conducted by Cerezo MV, Álvarez-Olmo A, Rueda P. The majority of the women with breast cancer 65.6% of them were had high resilience.[16]

Section F: Mean and SD of resilience score of breast cancer patients.

The Mean and SD of hope score of breast cancer patients is 17.96 ± 3.07 .

The finding of the present study is not supported or inconsistent with the study conducted by Li, MY, Yang, Y., Liu, L. The Mean and SD of resilience score of breast cancer patients is 69.59 ± 18.26 . [17]

Section G: Multiple linear regression analysis to find the determinants.

Multiple linear regression analysis carried out to find the determinants (social support, hope and resilience) affecting quality of life breast cancer patients. Social support ($t=1.984$, p value 0.040), hope ($t=3.272$, p value 0.001) and resilience ($t=3.731$, p value 0.027) are significant factors of quality of life of breast cancer patients. Social support, hope and resilience are positively predicted the quality of life of breast cancer patients. There were no any negative predictors of quality of life of breast cancer patients.

The finding of the present study is supported with the study conducted by Li MY, Yang YL, Liu L,

Wang L. social support ($\beta=0.285$, p value 0.000), hope ($\beta=0.243$, p value 0.000) and resilience ($\beta=0.164$, p value 0.010) are positively predicted the quality of life of breast cancer patients.[17]

Section H: Association between Quality of Life of patients with Breast Cancer and their selected socio-demographic and clinical variables.

Findings related to the association of Quality of Life patients with Breast Cancer and their selected socio-demographic and clinical variables reveals that there was a significant association was found between Quality of life of breast cancer patients with their Age ($\chi^2=12.89$, $P<0.05$), Marital status ($\chi^2=4.42$, $P<0.05$), Occupation ($\chi^2=6.5$, $P<0.05$), Family monthly income ($\chi^2=5.56$, $P<0.05$), Stages of cancer ($\chi^2=6.5$, $P<0.05$), Self-care ability ($\chi^2=5.56$, $P<0.05$) and have you undergone radiation therapy ($\chi^2=14.31$, $P<0.05$).

The finding of the present study is supported with the study conducted by Faroughi F, Fathnezhad-Kazemi A, Sarbakhsh P. There was a significant association was found between Quality of life of breast cancer patients with their women's employment status [$\chi^2=2.119$, P value= 0.035], Income status [$\chi^2=3.097$, P value=0.047] and not supported with Time since diagnosis [$\chi^2=4.069$, P value= 0.018]. [18]

Limitation:

The study delimited to;

- Socio-demographic and clinical factors have been included to find out association between social support, hope and resilience with quality of life of breast cancer patients.
- Some of the psychosocial problems like work environment and social status could have include to find out factors affecting quality of life of breast cancer patients.
- Small number of subjects limits the generalization of the study.
- Long-term follow up could not be carried out due to time constraints.

CONCLUSION

The overall findings reveal that psychosocial determinants like social support, hope and resilience were significant and associated with quality-of-life breast cancer patients.

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