Quality of Life among Women with Breast Cancer: A Cross-Sectional Study in Idukki District Kerala

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ABSTRACT

Background: Breast cancer, one of the most common type of cancers affecting women in worldwide, and it is continuously increasing in India. Mastectomy and Chemotherapy are the essential treatment for recovery.it affect women's physical as well as, emotional, and social well-being and overall, their quality of life, The rural regions like Idukki district where access to specialized Health care facilities and support system may be limited. **Objective:** To study the socio-demographic profile of women with breast cancer in Idukki district and to identify the relationship between selected socio-demographic variables with their quality of life. **Methodology:** This study followed a quantitative descriptive Cross-sectional design to examine 50 women with breast cancer (N=50) selected through purposive sampling in Idukki district, Kerala. Data were collected by using a structured questionnaire and the EORTC QLQ-BR23 scale and analysed using a t-test and one-way ANOVA. **Results:** The mean quality-of-life scores ranged from 40.33 to 68.67, indicating moderate levels of quality of life. No meaningful difference was found between married and unmarried women ($p > .05$). Monthly income showed a significant association with body image ($F = 3.077$, $p = .037$), while other domains were not significant ($p > .05$). **Conclusion:** This study found a moderate level of quality of life among participants. Economic factors such as income may influence body image, highlighting the need for social work interventions such as counselling, financial assistance, and support groups to improve their well-being.

Materials and methods

The study adopted a descriptive research design to gain a clearer understanding of the socio demographic characteristics and the Quality of life among women who have undergone treatment for breast cancer after in Idukki district, Kerala. Relevant literature was reviewed and systematically arranged. The hypotheses were formulated on the basis of the objectives and tested. Data has been collected from 50 women living with breast cancer in Idukki district Kerala by using the scale EORTC QLQ-BR23.

Data were collected using the EORTC QLQ-BR23 questionnaire SPSS Software was used to analyse the data. Statistical results obtained for interpretation. The p-value was set to 0.05 with a 95%. confidence interval.

Results

The findings show that the mean scores across domains ranged from 40.33 to 68.67, indicating different levels to evaluate impact on quality-of-life among 50 women with breast cancer.

The independent sample t-test showed no statistically significant difference in quality-of-life scores between married and unmarried participants ($p > .05$). This indicates that marital status did not significantly affect any of the measured domains in this study.

A one-way ANOVA was used to compare the differences in quality-of-life domains across monthly income groups. The results indicated a significant difference in Body Image ($F = 3.077$, $p = .037$). However, no significant differences were found for Sexual Functioning ($F = 0.364$, $p = .779$), Future Perspective ($F = 0.471$, $p = .704$), Systemic Therapy ($F = 0.503$, $p = .682$), Breast Symptoms ($F = 1.999$, $p = .127$), Arm Symptoms (F

= 0.479, p = .699), or Global Quality of Life (F = 0.616, p = .608), as all p-values were greater than .05 (p > .05).\

Conclusion

This study carried out to examine the socio-demographic characteristics and quality of life among women diagnosed with breast cancer in Idukki district, Kerala. A total of 50 respondents participated in the study, and quality of life was measured using the EORTC QLQ-BR23 scale. The findings revealed moderate levels of quality of life across domains such as body image, sexual functioning, perspective on the future and treatment-related symptoms.

The analysis of the relationship between selected socio-demographic factors and quality of life indicated that marital status did not have a significant relationship with any of the quality-of-life domains. However, monthly income showed a clear connection with body image, while no association was found with other domains.

Based on these findings, it can be concluded that economic factors, particularly income, may influence certain aspects of quality of life, especially body image, among women with breast cancer. Therefore, suitable social work interventions such as psychosocial counselling, financial guidance, support groups, and community-based rehabilitation programs are recommended to enhance the overall quality of life of women diagnosed with breast cancer.

Categories: social work, Breast cancer, quality of life

Keywords: Breast cancer, Quality 0f life, Cancer Treatment, Psychosocial Support.

INTRODUCTION

Breast cancer is a disease, which occurs abnormal cells in the breast grow uncontrollably and form a tumour, it can spread to other parts of the body if not detected and treated early. While it mainly affects the women, it can also occur in men, although less commonly.

Several factors have been associated with an increased risk of getting the disease, including increasing age, family history, genetic mutations (such as BRCA1 and BRCA2), hormone, obesity, and lifestyle factors. Early symptoms may include a breast lump, changes in the size or shape, discharge from the nipple, and skin changes, or persistent pain. However, breast cancer may not present noticeable symptoms in its early stages. Therefore, regular screening through mammogram, clinical breast examinations, and self-breast examinations play an important role in early detection and timely treatment.

The breast cancer treatment is determined by the stage and type of cancer and may include surgery such as mastectomy or lumpectomy, chemotherapy, radiation therapy, hormone therapy, or targeted therapy. While these treatments are vital to manage the disease, they may also affect a women's physical and emotional well-being. Many women experience fatigue, hair loss, changes in their body image, which can lead to emotional distress and affect their overall quality of life.

Breast cancer doesn't affect a women's physical health it often brings psychological challenges, social life and financial stability as well as affecting the entire family. The diagnosis and treatment process may experience emotional distress, changes in family relationships, and financial difficulties. In such situation Support from family, healthcare professionals, and community resources play an important role in helping women to manage these challenges. More over early detection, timely treatment, awareness programs, and psychosocial support services play an essential role in improving the quality of life of women affected by breast cancer.

Globally, breast cancer (BC) is the most commonly diagnosed cancer among women worldwide and the second most common type of all cancers (Bray et al., 2020). Recent estimates indicate the approximately 2.3 million new cases and about 627,000 deaths occurred globally in 2022, highlighting its significant impact on public health.

Women with BC experience a wide range of physical, psychological, and social consequences (Boquiren et al., 2013; Iddrisu et al., 2020). Common physical symptoms includes Fatigue, pain, lymphedema, sexual dysfunctions, and sleep impairments are frequently reported as physical consequences of BC (Taghian et al., 2014; Schmidt et al., 2018). Recent studies continue to confirm that fatigue and sleep disturbances remain among the most prevalent and distressing symptoms, significantly impairing daily functioning and over all wellbeing (Hendy et al., 2025; Tao et al., 2024). Contemporary evidence further highlights that anxiety, depression, and emotional distress are strongly connected with poorer quality of (QoL) breast cancer patients (Al-Sharman et al., 2024; Annamalai et al., 2024; Nahle et al., 2024).

Collectively, all those multidimensional consequences substantially reduce overall health status and quality of life in women diagnosed with breast cancer (Campbell-Enns & Woodgate, 2015; Belhaj Haddou et al., 2024).

Quality of life is multidimensional in nature. The physical dimension includes general health, energy levels, pain, and the ability to carry out daily activities. The psychological dimension involves emotional well-being, self-esteem, body image, and freedom from anxiety or depression. The social dimension of quality of life highlights the role of relationship, and active participation in community activities. At the same time, economic stability and access to health care and other necessary resources are important factors that influence a person's over all well-being and quality of life.

When dealing with chronic illness like cancer, quality of life plays an important measure of treatment success. The aim of medical care not only focused on the survival but also to enhance the patient's comfort, functional ability, and emotional well-being. How ever issues such as treatment side effects, financial difficulties, and social stigma can greatly affect the patient's overall quality of life.

Therefore, improving the quality of life focuses on a holistic perspective that includes physical health, psychological support, social relationships, and economic stability. By focusing on these areas, individuals can achieve better overall well-being and life satisfaction.

Quality of life has become a prominent concern in current healthcare system to assess the subjective perception of individuals' life (Megari, 2013).assessing QOL among patients with chronic conditions such as breast Cancer may help to improve patient health policies, interventions, and support services (Bamm et al., 2013). Furthermore, the evaluation of QoL plays an important role in both clinical research and clinical practice by enabling a more patient cantered approach to care.

The World Health Organization (WHO) defines quality of life (QoL) as a person's perspective on their life within the context of their culture, values, beliefs expectation and concerns. It is a subjective evaluation of overall life satisfaction shaped by personal priorities and experiences (Schlock, 2004). several factors may influence QoL, with emotional distress being a significant component.at the time of diagnosis, patients have the concerns with the treatment and the chance of survival. However, as treatment progress their concerns may shift towards the side effects of physical and psychological burden associated with treatment procedures. Therefore, it is important to bridge the gap between patients' expectations, hopes, and lived experiences in order to improve their overall quality of life.

For women in rural districts like Idukki district, socio-demographic factors such as age, education, marital status, occupation, income, and family support may further influence treatment adaptation and quality of life.

Therefore, the main objective of the study is that the examined factors connected with QoL among women diagnosed with Breast Cancer in Idukki Kerala. This approach improves patients' overall quality of life through early and appropriate treatment.

European Organisation for Research and Treatment of Cancer – Quality of Life Questionnaire – Breast Cancer Module (EORTC QLQ-BR23)

The EORTC QLQ-BR23 is a breast cancer–specific quality of life questionnaire developed by the European Organisation for Research and Treatment of Cancer (EORTC).

It is designed to be applied together with the EORTC QLQ-C30, which measures general cancer-related quality of life. The BR23 module is designed to address the concerns and experiences that are commonly faced by individuals with breast cancer. focuses specifically on issues relevant to breast cancer patients.

The questionnaire includes 23 items that focuses on issues commonly experienced by patients with breast cancer. It covers functional areas such as body image, sexual functioning, sexual enjoyment and future perspective. In addition, it evaluates physical symptoms like treatment related side effects, breast and arm discomfort and emotional distress related to hair loss, where each item is measured on a four-point Likert -scale ranging from 'not at all' to 'very much'.

After data collection, the responses are transferred in to standardised scores ranging from 0 to100. The higher score indicates better well-being and functioning, whereas higher scores on the symptom scales represents a greater presence of difficulty or burden. This method helps in understanding both the positive and challenging aspects of the patient's experience.

MATERIALS AND METHODS

A cross-sectional descriptive study design was adopted to evaluate the socio-demographic characteristics and the wellbeing and quality of life of women with breast cancer receiving treatment or follow-up care in Idukki District. This design was appropriate as it facilitated data collection at one specific point in time to describe the current status of participants and examine associations between variables without any intervention. A convenience sampling technique was employed to recruit participants who were readily available and met the inclusion criteria during the study period. A total of 50 women were admitted in to the study, which was considered feasible and adequate for achieving the study objectives within the available time and resources.

Objectives

1. To study the socio-demographic characteristics of women with breast cancer in Idukki district Kerala.

2. To measure the quality of life of women with Breast cancer

3. To find out the association of selected socio-demographic variables in relation to the quality of life of women with breast cancer.

4. To suggest suitable recommendation and social work intervention to improve the quality of life among women diagnosed with Breast cancer.

Hypothesis

- Married women with breast cancer have a better quality of life than unmarried or widowed women.
- Women with higher income levels will report a better quality of life than women with lower income levels.

Inclusion exclusion criteria

Inclusion Criteria

- ❖ Women who were diagnosed with breast cancer treatment and had completed at least six months since diagnosis.
- ❖ Women aged 18 years and above
- ❖ Able to read and understand the study language.
- ❖ Willing to give informed consent and participate in surveys or interviews.

Exclusion Criteria

- Women currently undergoing active cancer treatment (such as chemotherapy radiotherapy) during the study period, as treatment side effects may affect mental health and quality of life independently of surgery.
- Inability to read, understand, or communicate in the study language(s).
- Women who do not provide informed consent**.**

Participants and procedure

The sample consisted of 50 participants diagnosed with breast cancer in Idukki district Kerala. We requested permission from district medical officer for the data collection. The socio-demographic profile of the 50 breast cancer patients shows an equal distribution in terms of civil status, with 25 married and 25 unmarried participants.

The study utilized a two-part questionnaire comprising a Socio-Demographic Schedule and the EORTC QLQ - BR23 (European Organisation for Research and Treatment of Cancer- Quality of Life Questionnaire – Breast Cancer (23 Items).

All respondents signed an informed consent form before completing the EORTC QLQ - BR23 and whose data were entered in the database.

Measures

To assess the subject, the EORTC QLQ - BR23 was used (European Organisation for Research and Treatment of Cancer- Quality of Life Questionnaire – These scales were utilized to assess the quality of life of the women with breast cancer.

The domains of the EORTC QLQ-BR23 are divided into functional domains and symptom domains, focusing specifically on challenges faced by women with breast cancer. Developed by the European Organisation for Research and Treatment of Cancer, this breast cancer–specific module assesses the following domains.

 Functional Domains (Well-being Areas) includes Body Image, Sexual Functioning, Sexual Enjoyment and Future Perspective. (Higher scores indicate better functioning and well-being.)

 Symptom Domains includes Systemic Therapy Side Effects, Breast Symptoms, Arm Symptoms, Upset by Hair Loss (single-item domain) (Higher scores indicate more severe symptoms or greater distress.)

A four -point rating scale is used (1 = Not at all, 2 = A little, 3 = Quite a bit, 4 = Very much) Scores are linearly transformed to a 0–100 scale.

Statistical analysis

Statistical analysis was performed using the licenced IBM SPSS statistics software version 26 (IBM Corp., Armonk, NY), while the data management and manipulation were performed using Microsoft Excel 365 (Microsoft Corp., Redmond, Washington U.S.A). The p-value was set to 0.05 with a confidence interval (CI) of 95%.

The statistical analysis consisted descriptive statistics mean, median, standard deviation, minimum, and maximum, along with inferential statistics. An independent samples t-test was used to determine whether there were significant differences in quality-of-life domains between married and unmarried participants. A one-way analysis of variance (ANOVA) was conducted to determine if the quality-of-life domains differed significantly across categories of monthly income.

Result

The present study was conducted among 50 women participants with breast cancer in Idukki District, Kerala, using the EORTC QLQ-BR23 scale to evaluate the quality of life.The data were processed and analysed using SPSS software, and statistical results were generated for interpretation. Descriptive findings indicated moderate mean scores across domains, including Body Image (M = 48.67, SD = 18.08), Sexual Functioning (M = 40.33, SD = 19.07), Future Perspective (M = 48.67, SD = 34.48), Systemic Therapy Side Effects (M = 45.82, SD = 11.43), Breast Symptoms (M = 53.39, SD = 15.24), and Arm Symptoms (M = 56.22, SD = 15.94).

Inferential analysis showed that marital status did not significantly influence any quality-of-life domains, including Body Image ($t = 0.129$, $p = .898$), Sexual Functioning ($t = 0.614$, $p = .542$), Future Perspective ($t = -0.407$, $p = .686$), Systemic Therapy ($t = 0.990$, $p = .327$), Breast Symptoms ($t = -0.383$, $p = .703$), Arm Symptoms ($t = 0.885$, $p = .380$), and Global Quality of Life ($t = -0.596$, $p = .554$). However, monthly income demonstrated a statistically significant difference in Body Image ($F = 3.077$, $p = .037$), while no significant differences were found in Sexual Functioning ($F = 0.364$, $p = .779$), Future Perspective ($F = 0.471$, $p = .704$), Systemic Therapy ($F = 0.503$, $p = .682$), Breast Symptoms ($F = 1.999$, $p = .127$), Arm Symptoms ($F = 0.479$, $p = .699$), or Global Quality of Life ($F = 0.616$, $p = .608$).

In conclusion, while marital status did not significantly affect quality of life among women diagnosed women with breast cancer in this study, monthly income was significantly associated with body image. The results obtained the importance of addressing economic factors when addressing psychosocial aspects that influence the overall quality of life among women with breast cancer.

Table 1: Descriptive Statistics for Quality-of-Life Domains of Breast Cancer Patients (N = 50)

Domain	Mean	Std. Deviation
Body Image	48.67	18.08
Sexual Functioning	40.33	19.07
Sexual Enjoyment	45.33	29.17
Future Perspective	48.67	34.48
Systemic Therapy Side Effects	45.82	11.43
Breast Symptoms	53.39	15.24
Arm Symptoms	56.22	15.94
Upset by Hair Loss	68.67	24.67

(Mean, Std. Deviation)

This table shows the descriptive statistics related to the Quality of Life (QoL) domains among the study participants. The mean scores ranged between from 40.33 to 68.67, suggesting that different areas of participant's quality of life were affected to varying degrees.

Among the different domains evaluated, *Upset by Hair Loss* showed the highest mean score (M = 68.67, SD = 24.67), suggesting that hair loss was significant concern for the participants with breast cancer. The relatively large standard deviation shows the variability in response, suggesting that although some participants were highly affected, others experienced comparatively less emotional distress.

In contrast, the of *Sexual Functioning* scale exhibited the lowest mean score (M = 40.33, SD = 19.07), suggesting that this aspect of quality of life was particularly affected by women with breast cancer. *Sexual Enjoyment* (M = 45.33, SD = 29.17) also showed considerable impact, accompanied by a relatively high standard

deviation. This finding suggests that participants' experiences of intimacy and sexual well-being varied widely, shaped by personal relational, and treatment- related factors.

The results revealed a moderate level of body image (M = 48.67, SD = 18.08), suggesting that some participants seemed to adopt to the physical changes they experienced, while others still found them too difficult.

The findings for future perspective (M = 48.67, SD = 34.48), showered considerable variation across participants, while some participants showed optimism, while others appeared uncertain or emotionally troubled when thinking about what lies ahead.

The moderate domains in the Physical symptom reported Breast *Symptoms* (M = 53.39, SD = 15.24) and *Arm Symptoms* (M = 56.22, SD = 15.94). suggests that the most participants experienced similar levels of physical discomfort. Compared to psychosocial domains these areas showed less variation across individuals.

Systemic Therapy Side Effects (M = 45.82, SD) reflected a moderate level of impact on participants. The small standard deviation further indicates that these experiences were relatively similar across the sample.

The over all results indicates that quality of life among participants shaped by a combination of physical, emotional, and psycho social factors including symptoms such as body image, sexual health and views about the future. although hair loss and arm symptoms stand out as notable concerns, the variability in sexual enjoyment and future perspective points to the unique and personal nature of these experiences.

Grouping Variable: P3 (1=Married, 2=Unmarried)

Table 2: Comparison of Quality-of-life domains by marital status Among Breast Cancer Patients. An Independent Samples t-Test (N = 50)

Domain	t-value	Sig. (2-tailed)
Body Image	0.129	0.898
Sexual Functioning	0.614	0.542
Future Perspective	-0.407	0.686
Systemic Therapy	0.990	0.327
Breast Symptoms	-0.383	0.703
Arm Symptoms	0.885	0.380
Global QoL Score	-0.596	0.554

*. Correlation is significant at the 0.05 level (2-tailed).

(t-value, Sig. (2-tailed)

To explore possible difference in quality of life according to marital status, an independent samples t-test was used. The analysis indicated that married and unmarried participants did not significantly differ in any of the quality-of-life domains ($p > .05$).

The results indicated that no significant difference in body image between married and unmarried participants ($t = 0.129$, $p = .898$).suggesting that marital status had little influence on participants body image perceptions in similar way, sexual functioning scores didn't significantly differ between the two group ($t = 0.614$, $p = .542$).

Future Perspective, representing participant's psychological outlook, showed no statistically significant difference between married and unmarried individual (t = –0.407, p = .686). this result implies that marital status was not associated with variations in participants views about their future.

The analysis indicated no significant differences between married and unmarried participants, t = 0.990, p =. 327.a similar pattern was seen for breast Symptoms, t = –0.383, p = .703, or Arm Symptoms, t = 0.885, p =. 380.also revealed no statistically relevent variation between the groups.

Finally, the globally of Quality of Life (QoL) Score did not show a significant difference between married and unmarried participant (t = –0.596, p = .554). This suggests that overall quality of life were observed between married or unmarried participants.

The overall pattern of findings suggests that marital status was not a significant determinant of quality of life among the participant. Both married and unmarried participants appeared to similar experience across physical, emotional, and functional dimensions.

Factor: P2 (Income Categories)

Table 3: One-Way Anova (Monthly Income)

Domain	F	Sig.
Body Image	3.077	0.037
Sexual Functioning	0.364	0.779
Future Perspective	0.471	0.704
Systemic Therapy	0.503	0.682
Breast Symptoms	1.999	0.127
Arm Symptoms	0.479	0.699
Global QoL Score	0.616	0.608

*. The mean difference is significant at the 0.05 level.

(financial status, significance)

To investigate whether quality of life varied according to monthly income levels, a one-way ANOVA were conducted across the income group.

The ANOVA results indicated a statistically significant variation in body image scores among the income groups F = 3.077, p = .037. This finding suggests that's income level may be associated with how individuals perceive and adjust to changes in their physical, appearance, difference in cosmetic options, or physical logical support, which could affect body image perceptions.

In contrast, the remaing domains did not show statistically significant difference across monthly income categories. Sexual functional was similar across participants regardless of income level F = 0.364, p = .779 and a comparable pattern was observed for future perceptions F = 0.471, p = .704.

The result showed a significant difference in Body Image scores across monthly income groups, As the p-value is below the 0.05 level of significance, this finding indicates that participants' perceptions of their body image varied according to their monthly income. This suggests that a person's financial status can influence how

individuals cope with and perceive changes in their physical appearance, possibly because of varying access to supportive care resources, cosmetic solutions and , or psychosocial support system.

However, no statistically significant differences were found across monthly income categories for the remaining domains. Sexual Functioning did not differ significantly between income groups, $F = 0.364$, $p = .779$. Similarly, Future Perspective showed no significant variation.

The analysis indicated that, systematic therapy side effects were not found to be significantly related to participants monthly income, $F = 0.503$, $p = .682$, similarly the breast symptoms ($F = 1.999$, $p = .127$) and Arm Symptoms ($F = 0.479$, $p = .699$) also did not demonstrate significant differences among various income levels.

With respect to treatment-related effects, Systemic Therapy Side Effects were not significantly associated with monthly income, Additionally, physical symptom domains such as Breast Symptoms did not demonstrate statistically significant differences across income levels.

Finally, the global Quality of Life (QoL) Score did not show a significant difference across monthly income ($F = 0.616$, $p = .608$). indicating that the overall quality of life was similar regardless of participants income level.

The results indicate, that monthly income was significantly associated with body image perceptions. All other areas, such as sexual functioning, psychological outlook, physical symptoms, and overall Quality of Life (QoL), remained statistically comparable across the income groups.

DISCUSSION

This study focused on understanding the quality of life (QoL) of women diagnosed with breast cancer in Idukki District, Kerala, it used the EORTC QLQ-BR23, questionnaire, developed by European Organisation for Research and Treatment of Cancer which is designed specially for breast cancer patients. The findings revealed that breast cancer affects women in multiple ways, touching not just their physical, emotional and social wellbeing.The findings also found that factors like marital status and monthly income can affect how women experience their total well-being.

Quality of Life Across Domains

The result showed that participants generally experienced moderate disruption in their quality of life. Among the areas assessed “Upset by Hair Loss “recorded the highest mean scores, indicating that alopecia was one of the most emotionally challenging treatment related effects. Because hair is strongly connected with feminity, identity and outward appearance, so losing it can be it lose can be affect emotional well-being, the range of responses reflects how people, adapts to their changes, shaped by personal attitudes, coping styles and the support available to them.

The findings showed that the sexual functioning had the lowest mean score, indicating notable challenges in sexual and intimate well-being. Sexual enjoyment also varied widely among participants, shaped treatment effect. These differences may be influenced by physical side effects, hormonal changes, social attitudes towards sexuality, and the nature of communication between partners. The high variability indicates that while some women adjust with supportive partners, others experience persistent struggles.

Participants expressed moderates’ concerns related to body image, reflecting the visible effect of treatments such as mastectomy, lumpectomy, chemotherapy, and radiation therapy. These treatments can lead to change in breast appearance, surgical scares, and hair loss, all of these may influence self-image and personal confidence. moderate mean score combined with the varied responses, suggests that participants expense varying degrees of psychological adjustment.

Body Image scores show the moderate concern, consistent with the visible effects of breast cancer treatments, changes in breast appearance, including the scars and hair loss can negatively affect self-perception and confidence. The moderate mean score combined with notable variability suggests differing levels of psychological adjustment among participants.

Future Perspective emerged one of the highest levels of variability, indicating the notable differences in responds levels of optimism and expectation about the future. While others faced ongoing fears, uncertainty about their health, and emotional challenges. These findings highlight the importance of providing personalised psychological support to meet diverse emotional needs.

The domains assessing physical symptoms-Breast Symptoms, Arm Symptoms, and Systemic therapy Side Effects-showed moderate average scores with comparatively less variation. This suggests that participants experienced these physical side effects in fairly consistent way. However, the emotional and psychological response impact of these symptoms varied from person to person.

Overall, these descriptive findings shows that breast cancer affects multiple areas of persons life simultaneously—physical comfort, body image, sexual health, and psychological outlook—highlighting the importance of holistic and multidisciplinary care.

Influence of Marital Status on Quality of Life

The results, indicated that there was no significant variation in quality of life based on marital status. This indicates that marital status did not play a major role in shaping body image, sexual health, mental well-being, or treatment-related experience.

While marriage is commonly connected with emotional and practical support, these findings suggest that it doesn't automatically lead to a better quality of life. The strength and quality of life support from a partner may be more influential than simply being married. Unmarried participants, may still benefits from strong networks of family and friends, especially in Kerala's culturally connected communities.

The lack of notable differences may partially item from the comparatively small sample, which may could have restricted the strength of the analysis. However, the results are consistent with standards struggling that psycho social adjustment to cancer depends on a range of factors not just marital status.

Influence of Monthly Income on Quality of Life

Monthly income was significantly associated with body image, while other areas of quality of life did not vary much. This suggests that financial stability may play a role in how women respond and to cope with physical changes following breast cancer.

Women with greater financial resource may benefit from access to service like reconstructive surgery, cosmetic support, counselling, and better health care, all of which can support their adjustment to physical changes.in contrast, women with limited income may deal with additional financial challenges, such as treatment and travel costs, which heighten worries about body image.

The findings show that income did not have a noticeable, impact on sexual function, future outlook, physical symptoms, or overall, quality of life. Which points to the idea that these aspects are driven more by health, emotional resilience and social relationships than by economic status.

Major Findings of the Study

1. This study indicated that the mean scores of quality-of-life domains varied from 40.33 to 68.67, indicating a moderate level of quality of life among women diagnosed with breast cancer.

2. The highest mean score was observed in the Among the domains, Upset by Hair Loss recorded the highest mean score (M = 68.67), indicating distressed hair loss was major source of distress for many of the women in the study.

3. The lowest mean score was seen in sexual function (M = 40.33), pointing to it as a key area where quality of life was significantly affected.

4. Many women reported moderate levels of concern about their Body Image (M = 48.67), it appears that many women some worries about physical appearance and uncertainty about their future (M = 48.67).

5. Moderate scores in Breast Symptoms (M = 53.39) and Arm Symptoms (M = 56.22) suggest that many women experienced a noticeable level of physical discomfort related treatment.

6. The independent samples t-test indicated no notable difference in quality-of-life domains between married and unmarried women ($p > .05$), suggesting that marital status was not a key factor influencing their well-being.

7. The one-way ANOVA revealed a significant difference on Body Image different across income levels, suggesting that financial status can influence how women feel about their physical appearance. ($F = 3.077$, $p = .037$).

8. However, no significant differences were found between income groups in other domains such as sexual functioning, future perspective, systemic therapy side effects, breast symptoms, arm symptoms, and global quality of life ($p > .05$).

   sexual functioning, future outlook, systemic therapy side effects, breast symptoms, and arm symptoms.

9. Overall, the findings indicate that economic factors, particularly income, may influence certain aspects of quality of life, while marital status did not show a significant effect in this study.

Findings related to the Hypothesis Testing Results

Hypothesis	**Test Applied**	**Result**	**Conclusion**
Married women with breast cancer have a better quality of life than unmarried or widowed women.(Null Hypothesis (H_0)	Independent Samples t-test	No significant difference was found between married and unmarried women in quality-of-life domains ($p > .05$).	A significant difference was found only in the Body Image domain across income groups ($F = 3.077$, $p = .037$), while other domains were not significant ($p > .05$).
Women with higher income levels will report a better quality of life than women with lower income levels. (Null Hypothesis (H_0)	One-way ANOVA	A significant difference was found only in the Body Image domain across income groups ($F = 3.077$, $p = .037$), while other domains were not significant ($p > .05$).	Partially Accepted

Implications for Practice

The findings underscore the importance of addressing psychosocial concerns. Interventions may include:

- Provide emotional support to cope effectively with the life change.
- Support to rebuild confidence and self-esteem.
- Provide Sexual health counselling and couple-based interventions to improve relationship quality.
- Ensure Financial assistance to reduce economic stress.

Suggestions

- Appointment of social workers

Appoint trained social workers to understand the needs of patients and families, connect them with services, and make sure they regularly checking and provide continues support.

- Provide psycho social support.

Provide emotional, social, and psychological counselling support to patients and families to manage daily struggles.

- Conduct group support activities

To conduct group work sessions to encourage sharing, mutual support, peer learning, where individuals can support one another.

- Conduct community awareness programmes

Conduct community based awareness programmes by professional social workers and healthcare practitioners to educate about health, hygiene, and psycho social wellbeing.

- Financial assistance programs

Enhance policymakers and healthcare providers should consider financial assistance programs and affordable supportive care services to reduce disparities in psychosocial outcomes.

Limitations and Recommendations for Future Research

This study conducted in small group of 50 participants from Idukki district, which may limit the generalizability of the findings. Hence the study also conducted at a single point in time, it is difficult to understand cause-and-effect relationships. Future studies should involve larger and more diverse samples and longitudinal designs to assess changes in quality of life over time. Additionally, In depth qualitative studies may provide deeper understanding of personal experiences related to body image, sexuality, and coping.

CONCLUSION

The study shows that women with breast cancer experience some level of difficulty across different aspects of daily life. Many experience emotional distress, especially related to hair loss and changes in body image. Being married or unmarried did not seem to affect their overall quality of life. Income level had a clear impact on body image perceptions. These findings highlights that the need to look at patients as whole individuals, not just their illness. Healthcare should include both medical care and support for emotional and social well-being.

Disclosures

Human subjects: Consent was obtained or waived by all participants in this study. Animal subjects: Authors have confirmed that this study did not involve animal subjects or tissue. Conflicts of interest: In compliance with the ICMJE uniform disclosure form, authors declare the following: Payment/services info: Authors have declared that no financial supportwas received from any organization for the submitted work. Financial relationships: Authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. Other relationships: Authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

Declaration of Conflicting Interests

The author(s) declare that there is no conflict of interest regarding the research, authorship, and/or publication of this article. This study was conducted independently, and no financial support or personal relationships influenced the design, data collection, analysis, or interpretation of the results.

Consent

I have been duly informed and explained about the nature and process of the study. I have read and understood the instructions for the respondents. By signing this informed consent statement, I am indicating that I understand the purpose of this research study and my role in it, and that I agree to participate in this research voluntarily.

I understand that my identity will not be connected to the information I provide. All the information I share will be kept private. I am aware that taking part in this study is my choice. I can withdraw my consent at any time during the study. My decision will not affect my treatment or access to healthcare in any way.

I know that participation in this study, may need to spend some additional time with the researcher, and this will not interfere with my medical care or hospital procedures.

Signature of the respondent

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