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Original Research Article

Socio-demographic factors and their impact on quality of life among cancer patients- a study in a tertiary health institute in Jharkhand

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ABSTRACT

Background: Quality of life (QOL) is a crucial outcome measure in cancer care, reflecting the physical, psychological, and social well-being of patients. Socio-demographic factors such as age, gender, marital status, education, and socio-economic status can significantly influence QOL in cancer patients. Identifying these determinants is essential for developing targeted interventions to improve patient care.
Methods: A cross-sectional study was conducted in the oncology department of Rajendra Institute of Medical Sciences (RIMS), including 264 cancer patients aged 18 years and above. Data were collected through structured interviews using a validated QOL questionnaire based on EORTC guidelines, adapted for the Indian population. Socio-demographic data and QOL scores were analyzed using the chi-square test, with statistical significance set at p<0.05.
Results: Among the socio-demographic factors assessed, marital status was significantly associated with QOL (p=0.04), with widowed patients reporting the lowest QOL scores. Gender differences, though not statistically significant, indicated that female patients experienced greater psychological distress. Socio-economic status, education level, age, ethnicity, and religion did not show significant associations with QOL.
Conclusions: The findings emphasize the importance of marital status as a key determinant of QOL among cancer patients, underscoring the need for psychological and social support interventions. While other socio-demographic factors did not show statistical significance, trends indicate the necessity for patient education and financial support mechanisms to mitigate barriers to effective cancer care.

Keywords: Cancer, Marital status, Quality of life, Socio-demographic factors

INTRODUCTION

Quality of Life (QOL) is a crucial outcome measure in cancer care, reflecting the physical, psychological, and social well-being of patients undergoing treatment or living with the disease.[1] Cancer patients experience significant disruptions in their daily lives due to the disease itself and the side effects of treatment, including fatigue, pain, emotional distress, and financial burdens.[2] Understanding the socio-demographic determinants of QOL in cancer patients is essential to developing targeted interventions for improving patient support and care.

Several socio-demographic factors influence QOL among cancer patients. Age plays a role as younger individuals may struggle with career disruptions and emotional distress, while older patients may experience physical deterioration and co-morbidities.[3] Gender differences are also notable, as female cancer patients often report higher levels of psychological distress and lower QOL compared to males, likely due to differences in coping mechanisms and social support.[4] Socio-economic status significantly affects treatment access, affordability, and emotional well-being, with lower-income groups facing more financial strain and reduced treatment adherence.[5]

Ethnicity and religion may also shape perceptions of illness, coping strategies, and access to healthcare services.[6] Identifying these socio-demographic determinants can help healthcare providers implement more personalized and effective interventions to enhance the well-being of cancer patients.

This study aimed to assess the impact of socio-demographic factors on QOL among a sample of cancer patients in a tertiary health institute. By analyzing these factors statistically, the study seeks to identify significant predictors of poor QOL and provide insights into potential areas of intervention for healthcare providers and policymakers.

METHODS

This was a cross-sectional study conducted in the oncology department of Rajendra Institute of Medical Sciences (RIMS). The study aimed to assess the quality of life (QOL) among cancer patients and identify socio-demographic factors that may influence their QOL outcomes. The study was conducted from July 2015 to August 2016.

Study population and inclusion criteria

The study included 264 cancer patients, aged 18 years and above, who were attending the oncology department at RIMS. Participants were selected based on the following inclusion criteria: adults (≥18 years) diagnosed with cancer. Patients who were able to comprehend the questions posed in the QOL questionnaire. Patients who provided informed consent to participate in the study.

Exclusion criteria

Patients who were critically ill and could not comprehend the questions, as well as those who did not provide consent, were excluded from the study.

Ethical considerations

Ethical clearance for the study was obtained from the institutional ethical committee of RIMS. Informed consent was sought from all participants before conducting interviews.

Data collection

Data were collected through personal interviews conducted by the researchers. Each participant was provided with a detailed explanation of the study and its aims, and informed consent was obtained before proceeding with the interviews. The interviews were structured using a pre-designed quality of life (QOL) questionnaire, which was administered to each participant in a one-on-one setting to ensure accurate responses.

QOL assessment

The quality of life of the cancer patients was assessed using a QOL questionnaire designed under the EORTC (European Organization for Research and Treatment of Cancer) guidelines. This questionnaire was specifically validated for the Indian population by Vidhubala et al.[7] It has a high reliability with a Cronbach's alpha of 0.90 and a split-half reliability coefficient of 0.74, ensuring consistency and validity in measuring the quality of life of participants.

The total score for the QOL questionnaire ranged from 38 to 152 points, with the following categories based on score ranges: 88 and below = significantly poor QOL, 89-108 = below average QOL, 109-132 = average QOL, 133-144 = above average QOL, above 144 = significantly high QOL.

Data analysis

The collected data were entered into MS Excel for initial data management, and statistical analysis was performed using SPSS statistical software (version 24.0). The association between socio-demographic characteristics (such as age, gender, marital status, education, and socio-economic status) and QOL outcomes was assessed using the chi-square test. A p value of less than 0.05 was considered statistically significant.

RESULTS

Patients belonged to different religious groups: Hindu (145), Muslim (38), Christian (21), and Sarna (58). The highest proportion of significantly poor QOL was found among Sarna (58%), followed by Muslims (12%), Christians (21%), and Hindus (36%). The P-value of 0.888 suggests no significant impact of religion on QOL (Tables 1 and 2).

Education and QOL

Patients were divided into four educational levels: illiterate (48), below 10th (112), 10th/12th (71), and graduate/PGs (31). The percentage of individuals with significantly poor QOL was highest among those with education below 10th grade (29%) and lowest among graduates (9%). Despite these trends, education was not significantly associated with QOL (p=0.786) (Tables 1 and 2).

Marital status and QOL

Marital status was categorized into married (192), unmarried (38), widow/widower (24), and divorced/separated (8). The proportion of significantly poor QOL was highest among widowed individuals (21%) and lowest among divorced/separated individuals (2%). The p value (0.04) indicates a significant association between marital status and QOL (Tables 1 and 2).

Table 1: Sociodemographic profile of participants.

Variables	Category	Frequency	Percentage
Age (years)	<40	66	25.2
	40-60	158	60.3
	>60	38	14.5
Gende	Male	96	36.7
	Female	166	63.4
Ethnicity	Tribal	111	42.4
	Non tribal	151	57.6
Religion	Hindu	145	55.3
	Muslim	38	14.5
	Christian	21	8
	Sarna	58	22.1
Education	Illiterate	48	18.3
	Below 10	112	42.8
	Upto10/12	71	27.1
	Graduate/PGs	31	11.8
Marital status	Married	192	73.3
	Unmarried	38	14.5
	Widow/widower	24	9.2
	Divorced/separated	8	3.1
Socio-economic status (modified BG Prasad)	Class 1	13	5
	Class 2	20	7.6
	Class 3	72	27.5
	Class 4	121	46.2
	Class 5	36	13.7

Table 2: Association between socio-demographic factors and QOL.

Socio demographic factors		N Total-262	QOL (n=262)			P value
			Average	Below average	Significantly poor	
Age (years)	<40	66	14	31	21	0.483
	40-60	158	33	89	36	
	>60	38	7	18	13	
Gender	Male	96	14	54	28	0.185
	Female	166	40	84	42	
Ethnicity	Tribal	111	20	62	29	0.599
	Non tribal	151	34	76	41	
Religion	Hindu	145	33	76	36	0.888
	Muslim	38	6	20	12	
	Christian	21	3	5	21	
	Sarna	58	12	17	58	
Education	Illiterate	48	11	27	10	0.786
	Below 10	112	20	63	29	
	Upto10/12	71	15	34	22	
	Graduate/PGs	31	8	14	9	
Marital status	Married	192	38	100	54	0.04
	Unmarried	38	11	18	9	
	Widow/widower	24	4	15	5	
	Divorced/separated	8	1	5	2	
Socio-economic status (modified BG Prasad)	Class 1	13	2	6	5	0.230
	Class 2	20	3	16	1	
	Class 3	72	12	41	19	
	Class 4	121	27	59	35	
	Class 5	36	10	16	10	

Socio-economic status and QOL

The modified BG Prasad classification was used to categorize participants into five socio-economic classes. The proportion of significantly poor QOL was highest in class 4 (35%) and class 5 (10%), while it was lowest in class 1 (5%). However, the p value (0.230) suggest that socio-economic status was not significantly associated with QOL.

DISCUSSION

The results showed how socio-demographic factors affect cancer patients' quality of life. Factors including age, gender, ethnicity, religion, education, and socioeconomic level did not exhibit significant relationships with QOL, however married status was. The importance of married status implies that social and emotional support networks are essential for the welfare of cancer patients.[8]

The pattern implies that female patients may be more susceptible to psychological discomfort, maybe as a result of body image issues, care giving responsibilities, and societal expectations, even if gender differences were not statistically significant. This is consistent with earlier studies showing that women with cancer typically have increased anxiety and despair levels.[9]

Health literacy is vital for managing cancer, as evidenced by the lower quality of life among patients with lower educational attainment.[10] Patients with low levels of education may find it difficult to comprehend their diagnosis, available treatments, and how to manage their symptoms. In order to enhance outcomes for less educated groups, this emphasizes the necessity of patient education programs and streamlined medical communication.

Government-funded healthcare initiatives or support programs that lessen financial burden for cancer patients may be the reason why socioeconomic status and QOL do not significantly correlate.[11] However, patients from lower-income groups may still face indirect costs including transportation, feeding, and caring support, making financial strain a major worry.[12] These hidden economic costs should be investigated in future studies to more accurately evaluate their effects on quality of life.

Given that marital status has a substantial impact on QOL, having a spouse or family member provide both practical and emotional support is essential. The lowest QOL was observed by widowed patients, who may also face additional financial pressures, loneliness, and a lack of emotional support.[13] Peer support groups, community-based care, and psychological counselling are examples of support interventions that could aid in addressing these issues.

Overall, this study underscores the complexity of QOL determinants among cancer patients. Future research should focus on longitudinal studies to better understand the dynamic interplay between these factors and QOL outcomes over time.

Since this study was cross sectional study involving single tertiary centre with a limited sample size it may not be fully generalizable to cancer patients in other regions or healthcare settings.

CONCLUSION

The study's findings underscore the crucial influence that socio-demographic variables specifically, marital status has on cancer patients' quality of life (QOL). While socioeconomic level, age, gender, and ethnicity did not significantly correlate with QOL, marital status did, and this highlighted the significance of social and emotional support networks in improving patient well-being.

The findings imply that cancer patients may face increased psychological distress and obstacles to efficient health care, particularly women and those with less education. This emphasizes how important it is to address these vulnerabilities with focused interventions, such as patient education and psychiatric counselling. Additionally, even though socioeconomic status had no direct impact on QOL, indirect financial pressures like caring and transportation expenses can still have an impact on patients' overall experience. The dynamic and long-term effects of these socio-demographic characteristics on quality of life should be investigated in future studies in order to improve care plans and guarantee that all cancer patients, irrespective of their socio-demographic profile, receive thorough support during their journey.

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