Original Article

A descriptive cross-sectional study on assess the quality of life of caregivers of individuals with chronic illness in selected health care settings in Waynad, Kerala

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Abstract

Background and Objectives: Caregivers of individuals with chronic illnesses are essential to patient care but often experience physical, psychological, and social strain. This study aimed to assess the QoL of caregivers of individuals with chronic illness and its association with selected demographic factors in healthcare settings in Wayanad, Kerala.

Materials and Methods: A descriptive cross-sectional study was conducted over six months among 89 primary caregivers selected through non-probability convenience sampling from healthcare settings in Wayanad. Caregivers aged ≥18 years were included. Data were collected using a demographic questionnaire and the WHOQOL-BREF scale assessing physical, psychological, social, and environmental QoL domains. Data were analyzed using Jamovi and Microsoft Excel. Descriptive statistics and Chi-square tests were applied.

Results: Totally 89 primary caregivers the psychological domain showed the highest mean score 33.2, followed by the physical domain 31.8. Lower scores were observed in the social and environmental domains. Significant associations were found between psychological QoL gender with p=0.014, reporting higher scores in males, and between psychological QoL and patient dependency level with p=0.018.

Conclusion: From this study, we have concluded that the caregivers of individuals with chronic illness experience compromised QoL, particularly in social and environmental domains. The findings emphasize the need for caregiver-focused interventions, including education, counselling, stress management, and improved community support to enhance caregiver well-being and patient outcomes.

Keywords: caregivers, quality of life, chronic illness, WHOQOL-BREF, caregiver Burden

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Introduction

Quality of life among caregivers is an important component of comprehensive healthcare, as the well-being of caregivers can influence their ability to provide continuous and effective care. Previous studies have reported challenges in the quality of life of caregivers of individuals with chronic illnesses and other long-term health conditions**.** The WHOQOL-BREF provides a multidimensional assessment of quality of life across physical, psychological, social, and environmental domains. [1, 2] Despite the important role of caregivers, their needs may receive less attention than those of the patients they support. Therefore, this study was conducted to assess the quality of life of caregivers of individuals with chronic illness and to determine its association with selected demographic variables in selected healthcare settings at Wayanad.

Behind every person receiving long-term care is a caregiver who manages numerous responsibilities, including emotional support, physical care, and personal sacrifices. Although caregiving is often rooted in love and duty, prolonged caregiving responsibilities can affect the caregiver's physical, psychological, social, and environmental well-being, thereby influencing their overall quality of life. [6,10,14] Caregivers of individuals with chronic illnesses may experience difficulties in maintaining their own health and social relationships while continuing to meet the needs of the person receiving care. [6, 11, 15]

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Materials and Methods

A quantitative research approach was adopted for the present study to assess the quality of life among caregivers of individuals with chronic illness and to determine its association with selected demographic variables. A descriptive cross-sectional research design was used. This design was appropriate as it enabled the researcher to assess the quality of life of caregivers at a single point in time without manipulating any variables. The study was conducted in selected healthcare settings in Wayanad district, Kerala. These settings were chosen because they provide care for a large number of patients with chronic illnesses and their caregivers. The target population consisted of primary caregivers of individuals diagnosed with chronic illness who were receiving care in the selected healthcare settings.

The study included 89 primary caregivers of individuals with chronic illness. Non-probability convenience sampling technique was used to select participants who met the inclusion criteria and were available during the data collection period. Primary caregivers aged 18 years and above, Caregivers providing care to individuals with chronic illness for at least one month, Caregivers who can communicate in English or Malayalam. Paid caregivers or professional healthcare workers, Caregivers unwilling or unable to provide consent.

Sample Size Calculation:

The sample size for the present descriptive cross-sectional study was calculated using Cochran's formula. The formula used was:

$$N = Z^2 \times p \times q / d^2$$

Where **n** represents the minimum required sample size, **Z** is the standard normal deviate corresponding to the desired confidence level, **p** is the estimated population proportion based on previous studies or a pilot study, and **d** is the absolute precision or margin of error, which indicates the allowable deviation from the true population proportion.

Data were collected using two instruments: (1) A structured demographic questionnaire assessing caregiver characteristics (age, gender, marital status, education, occupation, monthly family income, family type, relationship with the patient, place of residence, caregiving experience, professional training, level of patient dependency, and duration of illness), and (2). WHOQOL-BREF questionnaire developed by the World Health Organization, comprising 26 items across four domains: physical, psychological, social, and environmental. Higher scores indicated better quality of life.

Statistical Analysis:

The collected data were entered, coded, and analyzed using jamovi statistical software and excel spreadsheet.Frequency and percentage were used to summarize demographic characteristics, while mean and standard deviation were used to describe WHOQOL-BREF quality-of-life scores. The Chi-square (χ^2) test was used to determine the association between quality of life and selected demographic variables. p-value <0.05 was considered as statistically significant.

Ethical Clearance and Statement:

Ethical approval no: IEC/DMMC/APR/2026-16 was obtained from the Institutional Ethics Committee before conducting the study. Written informed consent was obtained from all participants. Confidentiality and anonymity of the participants were maintained throughout the study, and participation was entirely voluntary.

Results

In this present study, totally 89 primary caregivers participated in this study. Data were collected using a demographic questionnaire and the

Section-1 Description of demographic variables of caregivers

Table-1 Distribution of participants according to selected demographic variables (N = 89)

Demographic Variables	Category	n	%
Age Group (years)	18–40	17	19.1
	40–60	50	56.2
	≥60	22	24.7
Gender	Female	62	69.7
	Male	27	30.3
Marital Status	Married	77	86.5
	Unmarried	12	13.5
Education	Primary	20	22.5
	High School	28	31.5
	Higher Secondary	19	21.3
	Degree	22	24.7
Monthly Income	≤5,000	12	13.5
	5,001–10,000	18	20.2
	10,001–20,000	25	28.1
	20,001–30,000	20	22.5
	≥30,000	14	15.7
Family Type	Nuclear	73	82.0
	Joint	16	18.0
Caregiving Duration	≤6 months	30	33.7
	7–12 months	25	28.1
	1–3 years	20	22.5
	>3 years	14	15.7
Professional Training	No	88	98.9
	Yes	1	1.1
Patient Dependency	Mild	10	11.2
	Moderate	20	22.5
	Severe	50	56.2

WHOQOL-BREF scale across four domains. The results are presented in three sections: demographic characteristics, quality of life scores, and associations with demographic variables. Descriptive statistics and Chi-square tests were used for analysis.

The study included 89 primary caregivers, with the majority being middle-aged adults. More than half (56.2%) belonged to the 40-60 years age group, followed by those above 60 years (24.7%) and younger adults aged 18-40 years (19.1%). A significant gender disparity was observed, with female caregivers outnumbering males nearly 2.3 times (69.7% vs. 30.3%), indicating that caregiving remains a predominantly female responsibility. Most caregivers were married (86.5%) and belonged to nuclear family setups (82.0%), suggesting that caregiving duties are primarily managed within immediate family units rather than extended family systems.

Regarding educational background, the largest proportion had completed high school (31.5%), followed by degree holders (24.7%), primary education (22.5%), and higher secondary (21.3%). Economically, the largest segment earned between ₹10,001-20,000 monthly (28.1%), while 13.5% earned ₹5,000 or less, indicating financial strain among many caregivers. Most caregivers had been providing care for six months or less (33.7%), with only 15.7% providing care for over three years. Notably, almost all caregivers (98.9%) had received no professional training, highlighting a critical gap in caregiver preparedness. Regarding patient dependency, over half (56.2%) were caring for individuals with severe dependency, while 22.5% cared for moderately dependent and 11.2% for mildly dependent patients. **(Table -1)**

The majority of caregivers (56.2%) were aged 40–60 years, followed by those aged ≥60 years (24.7%) and 18–40 years (19.1%). Female caregivers constituted the majority (69.7%), while males accounted for 30.3%. Most caregivers were married (86.5%) and belonged to nuclear families (82.0%). Regarding education, the largest proportion had completed high school (31.5%), followed by degree-level education (24.7%), primary education (22.5%), and higher secondary education (21.3%). The highest proportion of caregivers reported a monthly family income of ₹10,001–20,000 (28.1%). Most caregivers had provided care for ≤6 months (33.7%). Nearly all caregivers (98.9%) had not received professional caregiving training. Regarding patient dependency, more than half of the caregivers (56.2%) were caring for patients with severe dependency, followed by moderate dependency (22.5%) and mild dependency (11.2%). **(Figure-1)**

Section-2 Analysis of the quality of life of caregivers based on the WHOQOL BREF scale

The descriptive statistics for the four Quality of Life domains (Physical, Psychological, Social, Environmental) are presented below. Scores are transformed to a 0–100 scale, where higher scores indicate better QoL.

The descriptive statistics for the quality of life domains reveal that the Psychological domain has the highest mean score (33.2). The Social domain recorded the lowest mean score (28.6), closely followed by the Environmental domain (28.7), suggesting these are the areas where caregivers face the most significant challenges. **(Table -2)**

Figur-1 Distribution of caregivers according to selected demographic variables (N=89)

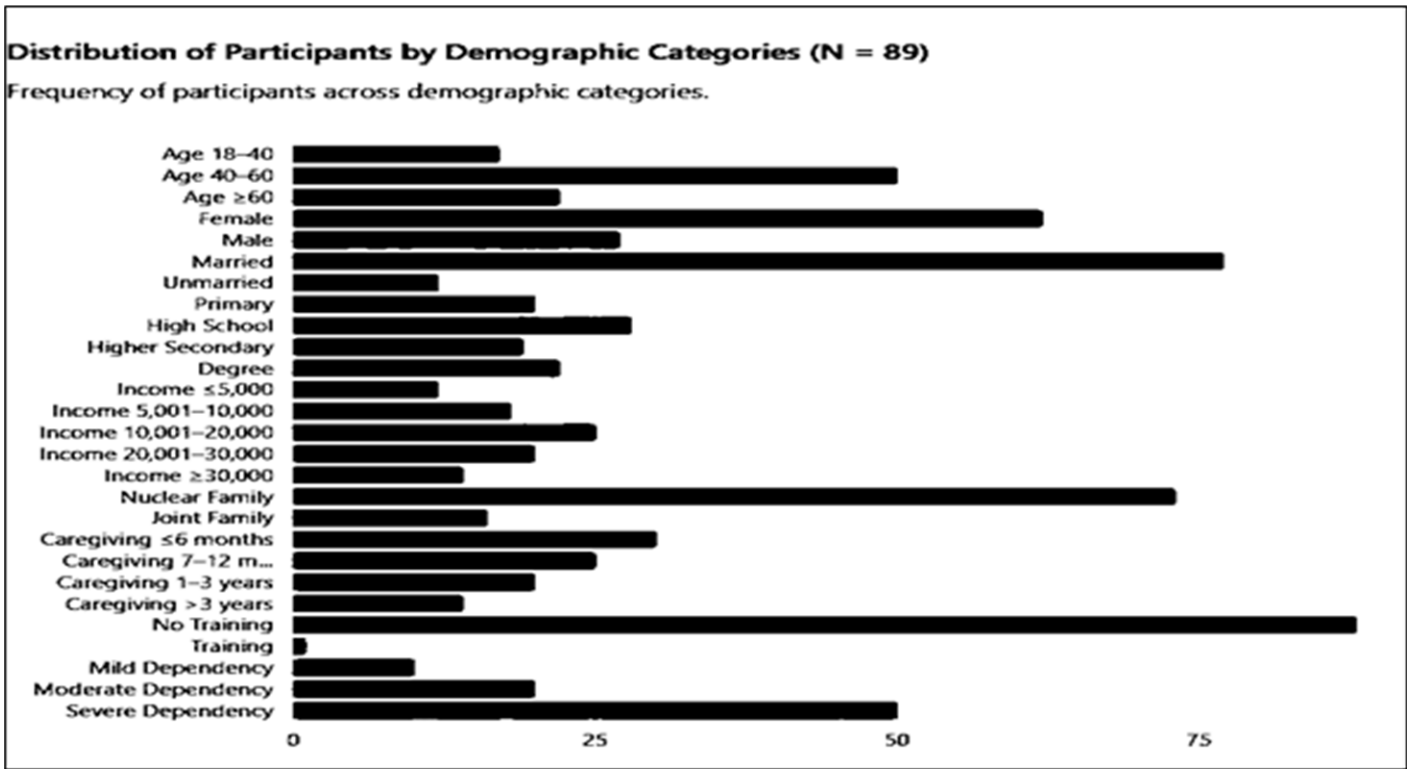

Table-2 Distribution of mean, median and standard deviation of the domains

Domains	N	Mean	Standard Deviation	Median	Above Median (%)	Below Median (%)
Physical	89	31.8	10.8	31.8	44.0 %	56.0 %
Psychological	89	33.2	36.4	31.1	50.0 %	50.0 %
Social	89	28.6	16.3	25	50.0 %	50.0 %
Environmental	89	28.7	11.5	28.1	47.0 %	53.0 %

The analysis demonstrated that gender (p=0.014) and level of patient dependency (p=0.018) were significantly associated with the psychological domain of caregivers' quality of life (p<0.05). Male caregivers had higher psychological quality of life scores than female caregivers, and psychological well-being differed according to the patient's level of dependency.

No statistically significant associations were observed between the physical, social, or environmental domains and age, marital status, education, monthly family income, type of family, duration of caregiving, or other demographic variables with p>0.05. Although the physical domain showed a borderline association with the level of dependency (p = 0.087), this did not reach statistical significance. Overall, the findings indicate that psychological quality of life is influenced by gender and patient dependency, whereas the remaining quality-of-life domains are not significantly affected by the selected demographic characteristics. **(Table-3)**

Discussion

In this present study, we found that caregiving was predominantly undertaken by middle-aged and female caregivers. Most caregivers belonged to the 40–60 years age group and were from nuclear families. A large proportion had no professional caregiving training, while more than half were caring for severely dependent patients. Similar findings have been reported in studies highlighting the considerable responsibilities and challenges experienced by family caregivers. [6, 11, 15] The psychological domain had the highest mean quality-of-life score (33.2), whereas the social domain had the lowest score (28.6), followed by the environmental domain (28.7).

This indicates that caregivers experienced greater difficulties in social relationships and environmental aspects of quality of life. Previous studies have also reported challenges in the quality of life of caregivers of individuals with chronic illnesses. [6, 10, 12, 14] Significant associations were observed between quality of life and age, monthly family income, type of family, duration of caregiving, and level of patient dependency. These findings suggest that socioeconomic and caregiving-related factors may influence caregiver quality of life. Previous research has similarly emphasized the influence of caregiving demands and socio-econo-

Section-3 Analysis of the association between the quality of life of caregivers and their selected demographic variables

Table-3 Association between quality of life domains and selected demographic variables (N= 89)

Demographic Variables	Physical Domain (p-value)	Psychological Domain (p-value)	Social Domain (p-value)	Environmental Domain (p-value)	Interpretation
Age	0.212	0.290	0.254	0.268	Not significant
Gender	0.615	**0.014***	0.619	0.428	Significant for psychological domain
Marital status	0.399	0.062	0.355	0.115	Not significant
Education	0.139	0.907	0.404	0.152	Not significant
Monthly family income	0.751	0.685	0.613	0.298	Not significant
Type of family	0.223	0.955	0.499	0.537	Not significant
Duration of caregiving	0.634	0.938	0.934	0.645	Not significant
Level of dependency	0.087	**0.018***	0.511	0.299	Significant for psychological domain

Bolded p-values were statistically significant with p-value <0.05

-mic circumstances on caregiver well-being. [7, 10, 11, 15, 17] Overall, the findings emphasize the need for caregiver-focused nursing interventions, including caregiver education, psychological support, stress-management strategies, and improved access to social and community resources. [4, 10, 14, 18]

Conclusion

The study concludes that caregivers of individuals with chronic illness in selected healthcare settings at Wayanad, have a significantly reduced quality of life, particularly in social and environmental aspects. Furthermore, gender and the patient's level of dependency are significantly associated with the psychological domain of caregiver QoL, with female caregivers and those caring for mildly dependent patients being at higher risk. The null hypothesis (H_0) is partially rejected for the psychological domain in relation to gender and dependency, but accepted for all other domains.

Limitations of the Study:

The study was limited to selected healthcare settings in Wayanad; therefore, the findings cannot be generalized to all caregivers of individuals with chronic illness. The sample size was limited to 89 caregivers, which may affect the representativeness of the findings.

Conflict of Interest:

None

Sources of Information:

This study did not receive any external funding.

Authors' Contributions:

All authors made substantial contributions to the study. The first author was involved in the conception and design of the study, data collection, data analysis, interpretation of results, and manuscript preparation. The co-authors contributed to the study design, supervision of the research process, critical review of the manuscript, and intellectual input throughout the study.

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