

Quality of Life Among Elderly Residing in Selected Old Age Homes in Palakkad District, Kerala: A Cross-Sectional Study

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ABSTRACT

Background: Kerala has one of the highest proportions of elderly in India, with many residing in old age homes. Understanding their quality of life (QOL) is vital for designing nursing interventions.

Objective: To assess the QOL of elderly residing in selected old age homes in Palakkad District Kerala and identify associated sociodemographic and health-related factors.

Methods: A descriptive cross-sectional study was conducted among 200 elderly (≥ 60 years) residing in registered old age homes in Palakkad district, Kerala. Participants were selected using stratified random sampling. Data were collected through structured interviews using a sociodemographic proforma and the WHOQOL-BREF (Malayalam version). Descriptive statistics, chi-square tests, and multiple linear regression were applied.

Results: The mean age of participants was 71.2 ± 7 years; 55% were female and 50% widowed. Most had primary education (35%) and occasional family contact (45%). Mean WHOQOL-BREF scores were: Physical 55.2, Psychological 47.0, Social 42.1, and Environmental 60.7. Social domain was the lowest-rated, while environmental was the highest. Regression analysis showed no significant predictors,

though male gender was associated with slightly lower QOL

Conclusion: Elderly in old age homes experience compromised QOL, particularly in psychological and social domains. Nursing interventions focusing on emotional support, social engagement, and family involvement are recommended.

Keywords: Elderly, Quality of life, old age homes, Kerala, WHOQOL-BREF

INTRODUCTION

Population ageing is a global phenomenon and one of the most significant demographic trends of the twenty-first century. In 2019, there were 703 million persons aged 65 years or over in the global population. This number is projected to double to 1.5 billion in 2050. Globally, the share of the population aged 65 years or over increased from 6 per cent in 1990 to 9 per cent in 2019. That proportion is projected to rise further to 16 per cent in 2050, when it is expected that one in six people worldwide will be aged 65 years or more¹. The rapid increase in life expectancy and declining fertility rates have contributed to this demographic transition, leading to an unprecedented rise in the number of elderly individuals requiring long-term care and social support². The World Health Organization (WHO) emphasizes that

successful ageing encompasses not only longevity but also maintenance of physical, psychological, and social well-being³. In India, the elderly population (≥ 60 years) has increased from 8.6% in 2011 to a projected 19% by 2050⁴. India's senior citizen population is projected to surge to around 230 million by 2036, making up about 15% of the total population⁵. This demographic shift has major implications for health and social welfare systems. Kerala, often referred to as the "aging state" of India, has the highest proportion of elderly at approximately 16.5%⁶. Declining fertility, reduction in mortality, and increase in life expectancy have contributed to a higher proportion of the aging population. Increased displacement of the youth population from the state for education and employment purposes during recent years has magnified the demographic transition process. These family structural changes add to the vulnerability of senior citizens who are undergoing a lot of biopsychosocial changes as part of their developmental crisis⁷. Factors such as urban migration of younger generations, breakdown of joint families, and chronic health conditions have contributed to the growing institutionalization of the elderly in old age homes. While institutional care provides safety, food security, and medical supervision, it may also lead to feelings of loneliness, loss of autonomy, and diminished sense of purpose.

Quality of Life (QOL) is a multidimensional construct encompassing physical health, psychological state, level of independence, social relationships, and environment⁸. The WHOQOL-BREF is a widely validated instrument to assess these domains across cultural contexts⁹. Studies indicate that QOL among elderly residents of old age homes tends to be lower than that of community-dwelling elderly, particularly in social and psychological dimensions¹⁰. Institutional settings may inadvertently restrict personal freedom and social engagement, further influencing emotional well-being¹¹.

A cross-sectional study by Sanya and Kumaran (2020) in North Kerala found moderately poor QOL among institutionalized elderly, with social relationships being the lowest-scoring domain¹². Similarly, Kengnal et al. (2019) in Karnataka observed that elderly living in old age homes had significantly lower QOL scores compared to urban counterparts¹³. Research from other regions of India supports this finding, demonstrating that education level, family contact, and absence of morbidity are positively associated with better QOL¹⁴. Globally, similar trends have been reported; for instance, studies in China, Japan, and Europe reveal that institutionalized elderly often experience reduced psychological well-being and life satisfaction compared to those living with family^{16,17}.

From a health perspective, elderly residents frequently face chronic illnesses, sleep disturbances, and mobility limitations that compound QOL impairment¹⁸. Psychosocially, the lack of family involvement, limited peer bonding, and perceived neglect can intensify feelings of isolation and depression¹⁹. However, supportive interventions—such as recreational activities, counseling, and structured family interactions—have shown promise in improving the psychological and social well-being of institutionalized elderly²⁰.

Despite Kerala's advanced health indicators and well-developed elderly care infrastructure, empirical data on the QOL of elderly residing in old age homes remain limited. Given the socio-cultural uniqueness of Kerala, assessing both health-related and psychosocial determinants of QOL is crucial to designing targeted nursing and policy interventions.

Despite Kerala's advanced demographic transition and widespread elderly care infrastructure, there is limited empirical data on QOL among elderly residing in Old Age Homes within the state, especially using the WHOQOL-BREF framework. This study aims to bridge that gap by measuring

WHOQOL-BREF domain scores among elderly residents of selected old age homes in Palakkad District, Kerala and identifying socioeconomic and health-related predictors influencing their QOL.

Previous studies have demonstrated mixed QOL outcomes among institutionalized elderly in India, with poorer psychological and social health compared to community dwellers. However, limited evidence exists from Kerala, where cultural and social contexts are unique. This study was undertaken to assess the QOL and its determinants among elderly residents of old age homes in Palakkad District Kerala.

Objectives:

To assess the QOL of elderly residing in selected old age homes in Palakkad District Kerala

To identify associated sociodemographic and health-related factors.

MATERIALS & METHODS

Design & Setting: Descriptive cross-sectional study in registered private, and charitable old age homes in Palakkad District Kerala. Data on sociodemographic characteristics, health profile, and quality of life were collected at a single point in time from elderly residents of selected old age homes in Palakkad District Kerala.

Study population

Target Population: All residents aged 60 years or more living in registered old age homes in Palakkad District

Inclusion criteria: Age 60 years or more, resident for 3 months or more, able to consent

Exclusion criteria: Terminally ill with distress, acute psychiatric crisis, unavailable at the time of visit

Sample: 200 elderly (≥ 60 years) residing ≥ 6 months in old age homes, able to communicate in Malayalam or English

Sampling: stratified Random sampling

A stratified two stage random sampling was conducted among elderly residents in registered old age homes in Palakkad District. The sampling frame, obtained and verified with the District Social Welfare office, listed facilities with ownership and urban and rural location. Within each stratum, facilities were selected probability proportional to size, followed by simple random sampling of eligible residents.

Tools:

1. Sociodemographic and health profile.
2. WHOQOL-BREF (Malayalam version).

Ethics: Approval obtained from Institutional Ethics Committee from Amala Institute of Medical Sciences. Written informed consent was taken from participants

STATISTICAL ANALYSIS

Data were analyzed using SPSS. Descriptive statistics summarized demographics and WHOQOL scores. ANOVA/chi-square tested associations, and multiple linear regression identified predictors of QOL.

RESULT

Table 1. Sociodemographic and Health Profile of Participants. n = 200

Variable	Categories	Frequency (n)	Percentage (%)
Age (years)	Mean $\pm$ SD = 71.2 $\pm$ 7	-	-
Gender	Male	90	45.0
	Female	110	55.0
Marital status	Married	60	30.0
	Widowed	100	50.0
	Single/Divorced/Separated	40	20.0
Education	Illiterate	40	20.0
	Primary schooling	70	35.0
	Secondary	55	27.5
	Higher secondary & above	35	17.5

Family contact	Regular	50	25.0
	Occasional	90	45.0
	None	60	30.0
Comorbidities	Mean = 1.6 per person	-	-

Sociodemographic and Health Profile

- Mean age: 71.2 ± 7 years. Gender: 55% female, 45% male. Education: Primary schooling most common (35%). Marital status: Half widowed (50%). Mean comorbidities: 1.6 per person. Family contact: Mostly occasional (45%).

WHOQOL-BREF Scores

- Physical: 55.2 ± 12
- Psychological: 47.0 ± 14

- Social: 42.1 ± 15

- Environmental: 60.7 ± 10

The social domain scored the lowest, while environmental domain was the highest.

Table 2. WHOQOL-BREF Domain Scores of Elderly (n = 200)

Domain	Mean $\pm$ SD
Physical Health	55.2 ± 12
Psychological	47.0 ± 14
Social Relations	42.1 ± 15
Environmental	60.7 ± 10

Figure 1. Mean WHOQOL-BREF Domain Scores of Elderly (n=200)

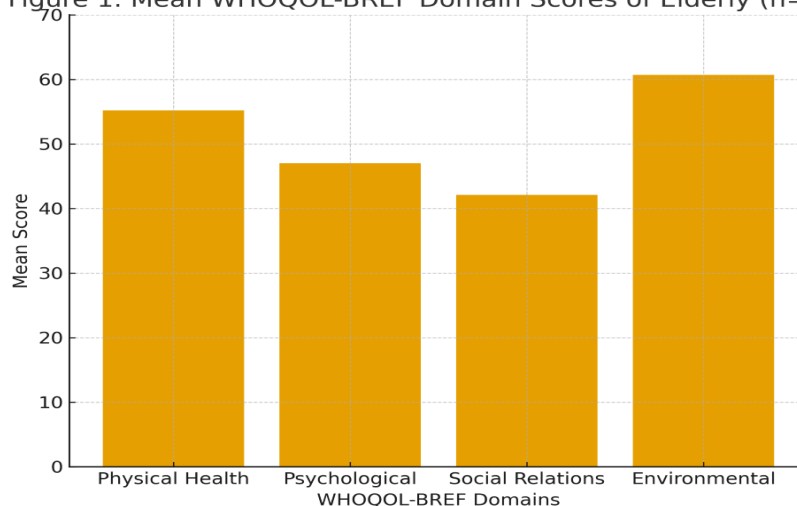


Table 3. Association of Sociodemographic and Health Variables with WHOQOL-BREF Domains. (n = 200)

Variable	Categories	Physical Health (Mean $\pm$ SD)	Psychological (Mean $\pm$ SD)	Social Relations (Mean $\pm$ SD)	Environmental (Mean $\pm$ SD)	Test / p-value
Age	<70 yrs (n=95)	56.1 ± 11.8	48.0 ± 13.7	43.0 ± 14.9	61.2 ± 10.1	$r = -0.12, p = 0.12$
	≥ 70 yrs (n=105)	54.4 ± 12.2	46.1 ± 14.2	41.3 ± 15.2	60.2 ± 9.9	
Gender	Male (n=90)	54.6 ± 12.2	46.2 ± 14.1	41.9 ± 14.9	60.2 ± 10.3	$t = -1.79, p = 0.07$
	Female (n=110)	55.7 ± 11.8	47.7 ± 13.9	42.3 ± 15.1	61.0 ± 9.7	
Marital status	Married (n=60)	56.3 ± 12.1	48.2 ± 14.0	43.2 ± 14.6	61.5 ± 9.8	$F = 1.12, p = 0.26$
	Widowed (n=100)	54.9 ± 12.0	46.8 ± 13.8	41.7 ± 15.3	60.3 ± 10.2	
	Single/Divorced (n=40)	55.0 ± 11.7	46.5 ± 14.1	42.0 ± 15.0	60.6 ± 9.9	
Education	Illiterate	52.0 ± 13.0	44.1 ± 14.5	39.5 ± 15.0	58.2 ± 10.5	$F = 3.27, p =$

	(n=40)			15.4		0.04*
	Primary (n=70)	54.8 ± 12.1	46.8 ± 14.0	41.9 ± 14.7	60.1 ± 10.0	
	Secondary+ (n=90)	56.7 ± 11.3	49.2 ± 13.6	44.0 ± 14.5	62.1 ± 9.8	
Comorbidities	≤1 (n=120)	56.4 ± 11.8	47.8 ± 13.7	43.0 ± 14.6	61.5 ± 9.9	t = 2.05, p = 0.04*
	≥2 (n=80)	53.7 ± 12.4	45.9 ± 14.3	40.9 ± 15.2	59.4 ± 10.3	
Family contact	Regular (n=50)	55.6 ± 11.9	47.8 ± 13.8	42.7 ± 14.8	61.6 ± 10.0	F = 0.95, p = 0.39
	Occasional (n=90)	54.9 ± 12.2	46.5 ± 14.1	41.8 ± 15.0	60.0 ± 9.9	
	None (n=60)	55.0 ± 11.8	46.7 ± 13.9	41.5 ± 15.2	61.3 ± 10.1	

*Significant at p < 0.05

- Elderly below 70 years had slightly higher mean scores in all domains compared to those aged 70 years and above; however, the differences were not statistically significant (p > 0.05).
- Females reported marginally higher scores across psychological, social, and environmental domains, whereas males had lower overall QOL. The difference in gender was close to significance for total QOL (p = 0.07).
- Married participants had higher mean scores in all domains compared to widowed or single/divorced participants, though these differences were not statistically significant (p > 0.05).
- A clear positive association was observed between education level and QOL. Elderly with secondary education or above reported significantly higher psychological and environmental

domain scores compared to those with lower education levels (F = 3.27, p = 0.04).

Comorbidities: Participants with two or more comorbid conditions scored lower across all domains, particularly physical health (t = 2.05, p = 0.04), indicating that increased morbidity negatively affected QOL.

Family contact: Regular family contact was associated with slightly better scores across all domains, particularly environmental well-being, though the differences were not statistically significant (p > 0.05).

Overall, the findings suggest that educational status and comorbidities were significantly associated with quality of life, while age, gender, marital status, and family contact showed non-significant trends.

Table 4. Predictors of Quality of Life (Multiple Linear Regression n = 200)

Predictor Variable	B Coefficient	Std. Error	t	p-value
Age	-0.05	0.08	-0.63	0.53
Gender (Male)	-1.6	0.9	-1.79	0.07
Education level	0.4	0.3	1.33	0.19
Marital status	-0.7	0.6	-1.12	0.26
Family contact	0.5	0.4	1.25	0.21
Number of comorbidities	-0.3	0.2	-1.47	0.14

Multiple linear regression was performed to identify predictors of overall quality of life among elderly residing in old age homes. As shown in Table 4, none of the sociodemographic or health-related

variables emerged as statistically significant predictors of quality of life (p > 0.05).

- Age:** The regression coefficient for age was negative (B = -0.05), suggesting that increasing age was associated with a

slight decline in quality-of-life scores, though this relationship was not significant ($p = 0.53$).

- **Gender:** Male gender was associated with a lower quality of life compared to females ($B = -1.6$), and this effect approached statistical significance ($p = 0.07$).
- **Education level:** Higher educational attainment had a positive influence on QOL scores ($B = 0.4$), but the effect was not significant ($p = 0.19$).
- **Marital status:** Being widowed, single, or divorced was associated with slightly lower QOL compared to married participants ($B = -0.7$, $p = 0.26$).
- **Family contact:** More frequent family contact was positively associated with QOL ($B = 0.5$), though not statistically significant ($p = 0.21$).
- **Number of comorbidities:** A higher number of comorbid conditions was associated with lower QOL ($B = -0.3$), but this relationship did not reach significance ($p = 0.14$).

The overall model explained 6% of the variance in quality of life ($R^2 = 0.06$, Adjusted $R^2 = 0.02$), and the regression equation was not statistically significant ($F(6,193) = 1.9$, $p = 0.08$).

These results indicate that although factors such as gender, education, and co morbidities showed trends toward influencing QOL, none were significant predictors in this sample

DISCUSSION

This study found that elderly residing in Kerala's old age homes experience moderate QOL, with lowest scores in social and psychological domains. Similar findings were reported by Rao and Nair (2019) in South India, and Kumar et al. (2021) across Indian old age homes. The compromised social domain highlights reduced family interaction and limited peer engagement in institutions.

Environmental domain scores were relatively higher, likely reflecting structured living conditions, safety, and access to

medical care within Kerala's old age homes. The near-significant gender effect aligns with prior studies, where elderly women often maintain stronger social networks, while men experience greater isolation.

The absence of strong predictors may be due to institutional homogeneity, where residents share similar routines and constraints. Nonetheless, family contact and psychosocial support remain important considerations.

Implications for Nursing Practice

- Nursing care in old age homes should go beyond medical and physical support to address psychological and social well-being.
- Group activities, recreational therapy, relaxation techniques, and counseling sessions can be incorporated to promote mental health.
- Nurses can facilitate peer support systems within institutions to reduce loneliness and foster a sense of belonging.

Policy Implications

- Policymakers should integrate structured psychosocial programs into old age homes, including the appointment of trained counselors, social workers, and activity coordinator
- Initiatives to strengthen family involvement, such as encouraging regular visits, video calls, and family participation in institutional events, are essential.
- Public-private partnerships may be encouraged to fund and implement holistic elderly care models that prioritize dignity and well-being.

Recommendations for Future Research

- Further studies may explore the effectiveness of multicomponent psychosocial and nursing interventions on improving QOL in institutionalized elderly.
- Qualitative research is needed to capture the lived experiences of elderly residents

and understand subjective meanings of well-being.

- Comparative studies between community-dwelling elderly and those in institutions could provide deeper insights into contextual determinants of quality of life

CONCLUSION

Elderly in Kerala's old age homes experience compromised QOL, particularly in social and psychological aspects. Nursing interventions should focus on group activities, counseling, and strengthening family engagement. Policymakers must integrate psychosocial programs into institutional care for holistic well-being. The present study highlights that elderly residing in old age homes in Kerala experience a moderate level of quality of life, with the social and psychological domains being most compromised. While the environmental and physical health domains were relatively better, the lack of social connectedness, limited family interaction, and reduced autonomy were evident concerns.

These findings suggest that although institutional care provides safety, structured living, and access to medical facilities, it does not fully meet the emotional, psychological, and social needs of elderly residents. The absence of strong predictors in regression analysis also points toward a certain level of institutional homogeneity, where the shared routines and restricted social opportunities limit variations in quality of life.

Declaration by Authors

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