ORIGINAL RESEARCH ARTICLE

Quality of Life Among Old Age Homes Residents in Gujarat, India: Evidence from a Sequential Explanatory Mixed Method Study

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A B S T R A C T

Introduction: The concept of old age homes is developing in India. For many elderlies, moving into old age homes becomes their only viable choice. **Objectives**: To assess the quality of life of the elderly living in old age homes and to explore stakeholders' perspectives on running these facilities.

Methods: It was a sequential explanatory mixed methods study design consisting of a quantitative (Survey) followed by a qualitative phase. In the first phase, residents of old age homes were selected using a purposive sampling method. To evaluate their quality of life, an Old People Quality of Life questionnaire was used. In the second phase, six key informant interviews were conducted to explore their perspectives. Quantitative data was analyzed using bivariate and multiple regression techniques, while qualitative data was analyzed using content analysis.

Results: The standardized mean score of quality of life of 102 elderlies was 70.3(10.3), with the lowest score for the social domain 56.2(13.5). Multiple regression analysis showed that quality of life was significantly influenced by education level, duration of stay and source of income. There was lack of recreational activities.

Conclusion: Residents who were getting pension experienced a better QOL. Lowest score in social domain explained by qualitative finding.

Keywords: Elderly, Old age homes, Quality of life, Stakeholders

A R T I C L E   I N F O

INTRODUCTION

The elderly population all over the world is increasing. According to the United Nations Population Division, in 1950, there were approximately 131 million people aged 65 and older worldwide.[1] By 2019, that number had risen to 703 million, and over the next three decades, it is projected to reach over 1.5 billion older persons in 2050.[2] India ranks second globally in terms of the largest elderly population. This demographic is growing at an approximate rate of 3% annually.[3] According to the population census data, the percentage rose from 7.4% in 2001 to 8.6% in 2011.[4] It has been projected that it would rise to 12% by the year 2031.[5] In Gujarat, the elderly population (age 60 and above) constitute 8% of the total population.[6] Increased longevity of the population brings with it various challenges like dependency, lack of family support, increasing disabilities, emergence of chronic health issues and changing family structures. Ageing does not just affect the elderly, it affects everyone in society in many ways and it has many health, social, and economic implications.

With the rise of urbanization and modernization, the concept of family in India is transforming, with many young couples transitioning from a joint to a nuclear family. A gradual transition to the smaller nuclear family system has led to the emergence of old age homes for the elderly.[7] It has become a credible alternative accommodation for elders due to several factors. A sudden shift to a new unknown place can negatively affect their quality of life.

Many studies are available in Indian literature related to health conditions, mental health, reasons for residence, available facilities, and quality of life in old age home residents. A few cross-sectional studies have been conducted in the western part to assess their quality of life.[8,9,10] But, there is limited literature available on explanatory research study. So, the present study was conducted to assess their quality of life and determinants of it. Also to explore Stakeholder's perspectives in running old age homes. The study's findings can provide valuable insights on the present situation and can help policymakers and government officials in evaluating and improving existing policies for the elderly.

METHODOLOGY

Study design and Setting: The present Sequential Explanatory Mixed Method study design was carried out between January 2024 to November 2024, in which the quantitative (Survey) phase was followed by the qualitative (Interviews) phase (QUAN→qual).[11] Ethical clearance (IEC/BU/147/Faculty/28/11/2024) and written informed consent from participants were obtained before conducting the study. For Phase-1, (Quantitative phase) residents of old age homes in Anand district, Gujarat were selected to assess their quality of life.

Sample Size calculation and Sampling: Sample size was calculated using the prevalence from the previous study[8] which found that 59.4% of the elderly living in OAHs have a good quality of life. With sample size calculation formula ($n = Z^2_{1-\alpha/2} PQ/d^2$), considering 10% absolute error and 5% level of significance, calculated minimum sample size was 93. In the absence of a complete list of all registered private old age homes with the government, six private OAHs were selected using the purposive sampling method and all elderly residents living there were approached.

Inclusion and Exclusion Criteria: Elderly (above age 60) who had been staying in old age homes for at least six months were included and those suffering from any mental illnesses like depression, dementia or hearing impairment were excluded. Out of the total 128 OAHs residents, 26 were excluded as per the exclusion criteria. Thus, data were collected from 102 elderly residents.

Study Tool: A semi-structured questionnaire was developed to gather information on sociodemographic characteristics and chronic morbidity conditions such as hypertension, diabetes, or heart disease, for which individuals were on medication. To measure quality of life Old People's Quality of Life-BRIEF (OPQOL Brief) questionnaire was used, which was developed by Bowling A. et al.[12] It is a multidimensional measure of QOL and comprises seven domains (13 items) with a preliminary single item on global Quality of Life. For the administration of this questionnaire in the Gujarati population, a Gujarati translation of OPQOL was carried out by the experts using the translation-back translation method and was conceptually validated by two other experts from the psychiatric department. The investigator carried out a pilot test. The reliability of this questionnaire, using Cronbach's alpha, was found 0.69.

Statistical Analysis: Descriptive statistics [mean (SD), frequency (%)] were used to depict the baseline profile of the study participants. The findings of the QOL Score were described using standardized scores, calculated as (mean score/the highest total possible score x 100). The determinants of QOL were identified by using Bivariate and Multiple linear regression analysis. A P value <0.05 was considered statistically significant. Statistical software STATA 14.2 was used for data analysis.

Phase-2, (Qualitative phase): After survey data analysis, key informant interviews (Managers of old age homes) were conducted. A convenient type of purposive sampling of six Key Informant Interviews using the free listing method was done, as we achieved saturation of information and no new information was added by the sixth interview. An interview guide was prepared with a broad open-ended question utilizing the quantitative findings. Three "primary stimulus questions" in the Gujarati language were asked: (1) In your opinion, what do you think about the roles and responsibilities of

stakeholders in the old age home? (2) What activities are conducted to promote the physical health, emotional health, and social life of the residents? (3) What do you see as the emerging trends and challenges that old-age homes will face in the coming years? After obtaining informed consent, an interview was conducted at a time convenient to the Key Informants. Each interview lasted for about 20-30 minutes. Field notes were taken during the interview. The data entry and content analysis of lists were done by using the ANTHROPAC (4.98.1/X) software package. Smith's S value was obtained for each item. The Good Reporting of a Mixed Methods Study (GRAMMS) guidelines were used for reporting the mixed methods study findings.[13]

RESULTS

In the present study, the mean age of 102 elderlies was 74.5 ±7.6, years, and 56 (54.9%) were female. The majority, 80 (78.4%) of the participants were widowed, 43(42.2%) had received a secondary level education, and 64 (62.7%) were economically dependent. A large proportion, 56 (54.9%) of the elderly had predominant complaints related to diabetes, hypertension, joint pains, and/or dyspnea. **[Table 1].**

In response to a preliminary single item on global quality of life, 71(69.6%) participants rated their quality of life as very good or good, while 31(30.4%) participants reported it as 'Alright.' Nobody rated it as very bad or bad. The mean OPQOL score was 45.6 (7) out of a possible score of 65, ranging in total score from 32 to 60. The standardized mean score of the OPQOL was 70.3(10.3). In the 'Home and Neighborhood' domain, the highest score reported 91.1(9.0), whereas the lowest score 56.2 (13.5) was for 'Social Relationship and Social activities domain. **[Table 2].**

Bivariate analysis showed that QOL significantly differed with the duration of stay, education level and source of income. Multiple linear regression analysis indicated that elderly who were staying for more than four years (B = -4.25, *P 0.019*), who were getting pension (B = 6.98, *P 0.002*) and who completed higher education (B = 6.17, *P 0.025*) were significant predictors of quality of life. Receiving pension was the strongest factor that influenced the QOL. All predictors explained 24.6% of the variance in overall quality of life. [**Table 3**].

Table 1: Socio demographic profile of study participants (n=102)

Variables	Participants (%)
Age (in years)	
60-70	33(32.4)
71-80	50(49.0)
>80	19(18.6)
Gender	
Male	46(45.1)
Female	56(54.9)
Marital status	
Married	8 (8.8)
Unmarried	11 (9.8)
Widowed	80(78.4)
Divorced	3(3.0)
Education	
Illiterate	13(12.7)
Primary	24(23.5)
Senior Secondary	43(42.2)
Graduate	14(13.7)
Postgraduate	8(7.8)
Duration of stay in old age home	
<2 years	45(44.1)
2- 4 years	32(31.4)
>4 years	25(24.5)
Living status	
With Spouse	8(8.8)
Alone	94(91.2)
Source of income	
Dependent on family member	64(62.7)
Saving	25(24.5)
Pension	13(12.7)
Any Chronic Morbidity (Hypertension/Diabetic/ Heart disease)	
Yes	56 (54.9)
No	46 (45.1)

The perspective of stakeholders in old age homes is given in **Table 4**. The most prominent responsibility was providing food, with the highest salience value of 0.958, followed by keeping financial records. The most reported activity was providing TV, newspapers, and religious books, with a salience value of 0.604, followed by celebrating various festivals. For future challenges in running old age homes, the most important factor was providing good infrastructure, with the highest salience value of 0.667, followed by having dedicated trained staff members and financial support.

Table 2: Domain wise Mean and Standardized OPQOL Scores (n=102)

Domain	Original Score Mean ± SD	Standardized Score Mean ± SD
Life overall	3.2±0.8	65.2±16.8
Health	3.7±1.2	75.1±23.4
Social relationship and social activities	2.8±0.6	56.2±13.5
Independence, control over life, freedom	3.9 ±0.9	78.2±16.9
Home and neighborhood	4.5±0.5	91.1±9.0
Psychological well-being	3.4±0.6	68.7±12.7
Financial circumstances	3.2 ±1.6	63.7±31.7

Table 3: Determinants of QOL among Old age homes Residents (n=102)

Independent Variables	Overall quality of life score		Overall quality of life score	
	Mean ± SD	Bivariate P* value	Unstandardized Regression Co-efficient (95%CI)	p† value
Age Categories				
60-70 Years (Ref.)	45.2±7.3	**0.053**		
71-80 Years	43.2±7.9		-0.56 [-3.6, 2.5]	0.716
>80 Years	48.2±6.5		3.3 [-0.5,7.2]	0.087
Gender				
Female (Ref.)	45.1±8.1	0.669		
Male	44.5±7.3		0.14 [-2.9, 3.2]	0.925
Education				
Illiterate (Ref.)	39.2±4.5	**0.001**		
Primary	42.2±7.1		2.37 [-2.3, 7.0]	0.319
Senior secondary	46.6±7.1		4.96 [0.35, 9.56]	**0.035**
Graduate /Post graduate	47.4±9.0		6.17 [0.81, 11.5]	**0.025**
Duration of stay				
<2 years (Ref.)	47.1±5.7	**0.010**		
2-4 Years	44.2±8.4		-2.36 [-5.5, 0.81]	0.143
>4 Years	41.4±8.3		-4.25 [-7.7, -0.72]	**0.019**
Source of income				
Dependent on others (Ref)	42.7±7.1	**0.001**		
Pension	47.1±7.3		6.98 [2.5, 11.3]	**0.002**
Saving	50.5 ±6.5		1.90 [-1.5, 5.3]	0.272

(SD: Standard deviation; CI: Confidence Interval, p* value based on ANOVA, p† value based on t statistic)

Table 4: Perspective of Stakeholders (Managers) about old age homes

Roles & Responsibilities	Salience Value	Conducted Activities	Salience Value	Future challenges	Salience Value
Provide Food	0.958	Provides T.V, Newspaper & Religious Books & Magazines	0.604	Good Infrastructure	0.667
Staff Management	0.822			Dedicated trained staff	0.25
Finance record	0.786	Celebrate festivals	0.583	Financial support	0.25
Maintenance	0.463	Allow College students to do activities	0.479	Misuse of Technology	0.167
Arrange transportation	0.208	Allows free medical camps	0.431	Psychological support	0.083
Arrange a meeting for outsider	0.201	Arrange a fortnightly free Doctor Visit	0.208	Full-day care nurse	0.083
Solve disputes	0.188	Provide Exercise equipment	0.083		
Update waiting list	0.174	Arrange free religious tour	0.063		
Cleanliness	0.167	Allow Yoga/Meditation camp	0.042		
Call Doctor	0.083	Provide wheel chair service to visit within campus	0.021		
Arrange funeral	0.033				

DISCUSSION

A Sequential Explanatory Mixed Method study was conducted to evaluate the quality of life of the elderly residing in old age homes in Anand, Gujarat, and to explore stakeholders' perspectives regarding the management and operation of these facilities. Unlike many studies in India that have primarily focused on assessing QOL in similar settings, this study aimed to find out the potential reasons behind the reported QOL by interviewing the managers of selected old age homes.

Our finding is similar to other few Indian studies which found overall QOL was good among residents of old age homes.[14,15] The reason for good QOL in our study could be attributed to the fact that the majority of residents have been living in the old age homes for less than two years, and maybe they feel comfortable living with the same age group as compared to residing in their own homes. However social domain score was lowest as also reported by some other studies.[16,17] The low score could be attributed to factors such as the loss of loved ones, diminished mobility, and restricted opportunities for social engagement within the old age home environment. Additionally, being separated from family and friends further impacts the social relationships of these elderly individuals.

In this study, we found that higher education was one of the significant factors for the QOL among old age homes residents. This indicates that the literate may have a better understanding of changing values and customs than the illiterate. This finding is aligned to another study conducted by Meena Rajput et al. in Haryana.[18]

Another significant factor was receiving the pension. The pension provides financial security in old age. This stable income can improve their mental well-being. So, it might be attributed to improving QOL. However, our study revealed that only a small number of residents received a pension, aligning with findings from a similar study conducted in Tamil Nadu.[19]

In our study, the duration of stay in old age homes was one more significant predictor associated with quality of life. Over time, the residents may experience disconnecting from society with limited social connections, which can contribute to a decline in their QOL. This finding is consistent to other study conducted in Maharashtra by Priyanka A et al.[9]

The study findings also predominantly highlighted the managers' perspective about old age homes. Our finding suggests that more important responsibility for them is to provide food and basic amenities. Despite many of the elderly suffering from chronic comorbidities but no regular medical care is provided in all old age homes. We found there is a lack of experience among managers of old age homes in providing geriatric care as they do not provide other facilities like recreational, social and spiritual activities. This gap significantly impacts on the quality of life of the elderly. This fact is also revealed from the lowest social domain score. It underlines the need for structured and regular programs for having better quality of life. A Mixed method study conducted by Dahlan A et al. also reported that physical and social environment factors play a significant role in enhancing QOL amongst elderly living in the old age homes.[20]

Building a better infrastructure with more space was the most future challenge reported by managers. This issue is likely to come due to the changes in social structure, which can lead to an increased demand for such facilities. Also, it is reported that India is experiencing demographic transition with significant implications for its social, economic, and environmental landscape.[21] Another reported problems by managers were lack of trained staff and financial support. According to a study conducted in Karnataka by Shivarudraiah M et al. It reported that many staff members had limited knowledge of aging-related issues and lacked the skills needed to effectively engage with residents in old-age homes.[22] It can affect their overall well-being. Other studies also highlighted similar challenges faced by administrators; difficulties in recruiting trained staff and securing financial support.[22,23] Since old age homes are often dependent upon public donations for funding.

STRENGTH

This study is one of the few studies in the Indian literature that assesses QOL of old age home residents, while incorporating stakeholders' perspectives through a mixed-method study. By employing this approach, qualitative analysis provides valuable support and alignment with the QOL results, which enhances the depth of the overall assessment.

LIMITATIONS

In our study, the first phase was a cross-sectional study, which prevents the inference of causal relationships. Additionally, other influential factors for Quality of Life such as family support and reasons for residency, were not assessed.

CONCLUSION

The present study aimed to provide evidence concerning the factors that influence Quality of life among elderly living in old age homes and exploring manager's perspective about providing such facilities. Those residents who were getting pension experienced better QOL. Lowest score in social relationship domain explained by qualitative finding as no recreational activities are placed in old age homes. Stakeholders believe their primary responsibility is to provide only basic amenities. All old age homes do not provide medical care to residents. Good infrastructure, getting financial support and trained staff are the main future challenges for stakeholders.

RECOMMENDATIONS

Private organizations and NGOs should take an active role in strengthening social connections with old age home residents. Additionally, the community should offer voluntary services to enrich their social lives and foster a sense of belonging. The Government should focus on revising existing pension schemes for the elderly and should concern for financial support to stakeholders.

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