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Original Research Article

QUALITY OF LIFE AMONG THE GERIATRIC POPULATION IN A BLOCK OF DIBRUGARH DISTRICT, ASSAM

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ABSTRACT

Background: The health and well-being of the elderly population is anticipated to deteriorate due to the combined effects of ageing, social changes, and numerous morbidity conditions. We need to reevaluate this vulnerable group's quality of life (QOL), particularly in the Indian setting. The aim is to assess the QOL among the geriatric population in a block of Dibrugarh district, Assam.

Materials and Methods: A community-based cross-sectional study was conducted among the geriatric population aged 60 years and above of both genders in Panitola block, with a sample size of 360. 10 sub-centres were selected randomly, and from each sub-centre, 2 villages were randomly selected. From each selected village, 18 participants were enrolled in the study. Data were collected and analysed using SPSS version 25.

Results: The study included 360 elderly participants, of whom the majority (57.50%) were in the 60–70 age range, while just 7.23% were in the 80 years and above age group. The majority (54.16%) were female. The social relationships health domain had the highest QOL mean scores [71.18 (21.88)], followed by the environmental health domain [71.12 (28.97)]. The domain with the lowest mean score was physical health [62.65 (17.12)].

Conclusion: By focusing on quality of care during the planning and implementation phase, the existing gaps in QOL among the geriatric population may be addressed.

Keywords: quality of life, geriatric population, Dibrugarh, Assam.

INTRODUCTION

Aging is a biological process that occurs at the cellular level. Ageing at the multicellular level may also be considered as a result of the ageing processes taking place in all the cells, with environmental influences including the effects of the ageing cells on each other and the changes with time of the connective tissues.[1]

According to the World Health Organization (WHO), elderly people are individuals above the age of 65 years.[2] However, in India, the elderly population is defined as those who are over 60 years.[3]

The average lifespan of an elderly person has increased dramatically worldwide, from 66.8 years in 2000 to 73.4 years in 2019. The healthy life expectancy of elderly people has increased by 8% between 2000 and 2019, from 58.3 years to 63.7 years. This gain has been ascribed to lower mortality rather than fewer years spent disabled.[4]

The proportion of the old in India has been rising steadily recently, and this trend is probably going to continue in the ensuing decades. The percentage of senior citizens in India's overall population has been rising since 1961. The percentage of people aged 60 and older increased from 5.60% in 1961 to 10.10% in 2021 and is projected to reach 13.10% in 2031. Both rural and urban areas have shown a similar trend. Between 1961 and 2011, the percentage of older adults in rural areas rose from 5.80% to 8.80%, whereas in urban areas, it rose from 4.70% to 8.10%.[5]

Despite the importance of QOL in health and medicine, there is a continuing methodological and conceptual debate about the meaning of QOL and about what should be measured. There is no uniform definition of the concept; however, QOL is defined by the World Health Organization (WHO) as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns".[6,7]

In addition to the epidemiological results and the goal of managing patients' health care through symptom reduction and morbidity and mortality prevention, quality of life evaluation can investigate the disease's effects on the body, mind, and society. Elderly health-related quality of life measurements are crucial, especially when it comes to chronic illnesses.[8]

Advances in health care and improvements in socio-economic status have resulted in increased longevity, leading to changes in age structure and a higher dependency ratio.[9] Rapid modernization has led to an increase in the concept of the nuclear family. Due to this reason, the elderly face psychological distress, and sometimes they are forced to move to a nursing home.[10]

At the global level, many studies conducted in other countries found that QOL among the elderly is an important area of concern as it reflects their health status and well-being.[11] Quality of life among the elderly age groups remains a neglected issue, especially in developing countries, including India.[12]

However, even after an extensive literature search, there was a paucity in studies looking at the quality of life among the elderly and factors associated with it. Only a few data were available on problems of the elderly in India, particularly in Assam. Hence, information on the QOL of this population is essential to understand the problems associated with it from a modern perspective for planning and implementation of health services addressing their needs. Therefore, considering the importance of the subject, the present study is being undertaken to assess the quality of life among the geriatric population in a block of Dibrugarh district, Assam.

MATERIALS AND METHODS

A community-based cross-sectional study was conducted from July 2022 to June 2023 among the elderly population aged 60 years and above of both genders in Panitola block of Dibrugarh district, Upper Assam. According to the 2011 census, Panitola Block has 1,24,723 residents. With an estimated geriatric population of 8.60% of the total, there would be 10,726 elderly individuals living in Panitola Block.[13]

Ethics consideration: Before the study commenced, Institutional Ethics Committee (Human) approval was obtained from Assam Medical College, Dibrugarh. All information gathered during the study period was treated with the utmost confidentiality and utilised exclusively for research. During this study period, any abnormal findings were disclosed to the relevant study participant. They received the necessary counselling, advice, and guidance for a health examination, appropriate investigation, and subsequent management at the appropriate health facility.

Sample size: Using the formula, $n = Z2pq/d2$, where 'n' is the sample size to be estimated, 'Z' is 1.96 for a 95% confidence interval, 'p' is the estimated proportion of the problem, q is (1–p), and 'd' is the allowable error. Taking p = 0.541 (prevalence of poor QOL taken to be 54.10%) and 10% relative error (d = 0.0541), the sample size was calculated to be 325.[14] Considering a 10% non-response, the sample size was rounded off to 360.

Sampling procedure: A multistage random sampling technique was used to select the study participants. There is a total of 6 block primary health centres (PHC) in Dibrugarh district, namely Barbaruah, Khowang, Lahoal, Naharani, Panitola, and Tengakhat. Out of the 6 block PHCs, the study was conducted in villages under the Panitola block PHC for operational feasibility. Out of the total 20 sub-centres in Panitola block PHC, 10 sub-centres were selected randomly for the study, and from each sub-centre, 2 villages were selected randomly. Thus, 20 villages were selected from 10 sub-centres. An equal number of study participants was planned to be selected from each village. Therefore, (360÷20) = 18 study participants were selected from each village. To construct sampling frames for each village, family registers maintained by local Accredited Social Health Activist (ASHA) workers were used. Using these sample frames with the household list, simple random sampling (SRS) was used to select 18 households from each village. A single geriatric person was included in the study from each of these houses. If the house had two or more geriatric individuals, the younger geriatric participant was chosen. In order to recruit study participants, households without geriatric individuals were dropped, and the next consecutive household was visited until the target number of 18 study participants was chosen from each village. Informed consent was obtained before any data was gathered from them.

Selection criteria of the study participants: The study included all elderly individuals, both male and female, who were 60 years of age or older, had resided in the study area for a minimum of one year, and gave their informed consent to participate. Participants in the study were excluded if they were unable to respond to the interview schedule due to extreme morbidness, psychiatric disorder diagnosis, or cognitive impairment.

Data collection technique: After the selection of the participants, the details of the study were explained to them, and all their questions in relation to the study were answered. Those participants who agreed to participate were asked to sign the informed consent

form. If the participants were found to be illiterate, then the informed consent form was read out to them in the presence of an impartial witness. Then, they were asked to give a thumb impression in the informed consent form along with the signature of the impartial witness. Finally, data were collected using a predesigned and pretested proforma and WHOQOL-BREF questionnaires.

Data analysis: Data entry and analysis were done using Statistical Package for the Social Sciences (IBM SPSS) statistics version 25. Data were presented as tables. Qualitative data were expressed in terms of frequencies, percentages, and continuous data were expressed in terms of mean with standard deviation. An independent t-test was used to test the significance of the difference between two means and to compare the means of three or more groups, an Analysis of variance (ANOVA) test was done, and a p-value < 0.05 was considered statistically significant.

Study variables: Demographic variables used were age, gender, educational status, marital status, religion, type of family, domicile, and occupation.[15–17]

Study tool: The study tools used were an informed consent form, a pre-designed, pre-tested proforma, modified B.G. Prasad's socio-economic status scale, May 2021, and the WHOQOL-BREF questionnaires for QOL.[18,19] The QOL of the geriatric population was assessed using the WHOQOL-BREF scale, which has been tested and validated. Each of the four health domains—physical health, psychological, social relationships, and environment—was rated on a 5-point Likert scale, totaling 26 questions. According to WHO guidelines, 25 raw scores for each domain were calculated by adding the values of single items. It was then transformed to a score ranging from 0 to 100, where 0 is the lowest value and 100 is the highest. The total score, average score, and mean score of each domain were calculated.[19]

RESULTS

A total of 360 geriatric population was taken up for the study, among whom the majority (57.50%) belonged to the 60-70 years age group, only 7.23% constituted the 80 years and above age group, and the majority (54.16%) were female. Most (74.40%) of them were Hindu by religion. The majority were illiterate (52.50%) and unemployed (86.95%), followed by unskilled workers (9.73%) and clerical workers, shop owners, and farmers (2.22%). As per Modified B G Prasad's socio-economic status scale, May 2021, the majority (59.20%) of the participants belonged to Class V socio-economic status [Table 1].

The mean QOL scores were maximum in the social relationships health domain [71.18 (21.88)], followed by the environmental health domain [71.12 (28.97)]. The lowest mean score was seen in the physical health domain [62.65 (17.12)] [Table 2].

The results in each of the four QOL dimensions are compared with sociodemographic factors in Table 3. When comparing the physical health domain scores with sociodemographic variables, it was found that elderly male participants aged 60-69 who follow Christianity, are unskilled workers, belong to a nuclear family, and are of OBC/MOBC caste had significantly higher QOL mean scores ($P < 0.05$). The elderly of the 60-69 age group, who follow Christianity in religion, and the OBC/MOBC caste were the factors found to have significantly better scores in the psychological health domain ($P < 0.05$). When comparing the scores in the sociodemographic characteristics and social relationship health domains, male participants who were graduates, unmarried, and urban inhabitants had a higher QOL mean score ($P < 0.05$). The elements that were shown to have significantly higher QOL mean scores in the environmental health domain were male participants, Class I socioeconomic class, and OBC/MOBC caste ($P < 0.05$).

Table 1: Distribution of the study participants according to sociodemographic characteristics (n=360)

Sociodemographic characteristics		Frequency(n)	Percentage (%)
Age group (years)	60-69	207	57.50
	70-79	127	35.27
	80 and above	26	7.23
Gender	Male	165	45.84
	Female	195	54.16
Religion	Hindu	268	74.40
	Muslim	65	18.10
	Christian	27	7.50
Education	Illiterate	189	52.50
	Primary school	88	24.45
	High school	57	15.83
	Matriculate	23	6.39
	Higher secondary	1	0.28
	Graduate	2	0.55
Occupation	Clerical, shop-owner, farmer	8	2.22
	Skilled worker	2	0.55
	Semi-skilled worker	2	0.55
	Unskilled worker	35	9.73
	Unemployed	313	86.95
Marital status	Unmarried	5	1.40
	Married	196	54.40

	Divorced/Separated	1	0.30
	Widow	113	31.40
	Widower	45	12.50
Type of family	Nuclear	79	21.95
	Joint	281	78.05
Socioeconomic class	Class I	7	1.90
	Class II	14	3.90
	Class III	40	11.10
	Class IV	86	23.90
	Class V	213	59.20
Domicile	Rural	288	80.00
	Urban	72	20.00
Caste	General	12	3.34
	OBC/MOBC	341	94.72
	Scheduled Caste/Scheduled Tribes	7	1.94

Table 2: Domain-wise quality of life scores (Mean and SD) of the study participants:

Domain	Mean score (Std. Deviation)
Physical	62.65 (17.12)
Psychological	64.66 (15.34)
Social	71.18 (21.88)
Environmental	71.12 (28.97)

Table 3: Comparison of WHO QOL BREF domain score with sociodemographic factors (n=360)

Sociodemographic characteristics		Mean (SD)			
		Physical health domain	Psychological health domain	Social relationships domain	Environmental health domain
Age group (years)	60-69	66.42 (15.46)	67.29 (14.53)	72.36(22.65)	69.90 (13.67)
	70-79	58.97 (18.08)	62.07 (15.89)	70.59(20.41)	70.54 (12.62)
	80 and above	50.57 (15.91)	56.30 (14.19)	64.73(22.13)	83.69 (97.63)
	p- value	0.000	0.000	0.229	0.070
Gender	Male	65.91 (16.63)	66.17 (15.47)	76.70(21.43)	71.67 (13.39)
	Female	59.89 (17.08)	63.37 (15.15)	66.51(21.20)	68.08 (12.71)
	p- value	0.001	0.085	0.000	0.010
Religion	Hindu	62.14 (16.80)	64.36 (15.29)	69.97(21.87)	69.45 (12.30)
	Muslim	60.83 (18.160	63.09 (16.38)	73.00(22.97)	70.44 (15.33)
	Christian	72.03 (15.24)	71.37 (11.56)	78.92(17.65)	70.70 (15.63)
	p- value	0.010	0.051	0.097	0.796
Education	Illiterate	62.31 (16.14)	64.92 (14.86)	65.54 (21.58)	70.94 (37.98)
	Primary school	63.62 (18.05)	64.50 (15.89)	75.94 (21.23)	70.71 (12.69)
	High school	63.36 (17.25)	65.14 (15.28)	80.40 (17.85)	71.14 (15.16)
	Matriculate	60.39 (20.58)	61.47 (16.36)	73.69 (23.43)	72.60 (13.01)
	Higher secondary	69.00 (35.35)	78.50 (13.43)	75.00 (35.35)	78.50 (21.92)
	Graduate	50.50 (17.67)	56.00 (35.35)	97.00 (4.24)	81.50 (9.19)
	p- value	0.832	0.645	0.000	0.993
Occupation	Clerical, shop-owner, farmer	68.12 (20.40)	69.62 (26.43)	17.50 (3.25)	77.50 (18.19)
	Skilled worker	66.00 (4.24)	62.50 (9.19)	20.00 (0.00)	72.00 (4.24)
	Semi-skilled worker	50.00 (43.84)	59.50 (40.30)	17.50 (2.12)	88.00 (0.00)
	Unskilled worker	75.25 (17.22)	69.88 (11.96)	15.37 (3.73)	72.08 (13.44)
	Unemployed	61.16 (16.35)	63.99 (15.16)	15.29 (3.46)	70.74 (30.58)
	p- value	0.000	0.219	0.118	0.886
Marital Status	Unmarried	63.61 (17.81)	64.58 (16.00)	84.02 (16.87)	70.04 (14.13)
	Married	65.00 (10.46)	69.00 (6.00)	58.80 (14.99)	73.80 (16.75)
	Divorced/Separated	60.53 (16.24)	64.26 (14.84)	55.57 (17.32)	69.33 (11.75)
	Widow	64.35 (15.93)	66.37 (13.41)	56.91 (15.04)	69.46 (11.24)
	Widower	25.00	25.00	25.00	44.00
	p- value	0.101	0.101	0.000	0.338
Type of Family	Nuclear	66.91 (17.90)	66.16 (16.22)	73.74 (21.82)	67.31 (14.27)
	Joint	61.45 (16.73)	64.23 (15.08)	70.46 (21.88)	70.40 (12.73)
	p- value	0.012	0.325	0.240	0.065
Socio-economic class	Class I	54.57 (13.81)	63.28 (20.66)	84.85 (18.04)	75.14 (15.76)
	Class II	57.64 (15.68)	66.57 (9.33)	76.50 (17.84)	74.28 (9.04)
	Class III	61.40 (19.66)	65.02 (15.22)	76.75 (21.05)	75.00 (12.77)
	Class IV	62.66 (18.14)	64.45 (15.79)	67.95 (21.60)	69.61 (12.60)
	Class V	63.47 (16.38)	64.59 (15.43)	70.65 (22.24)	68.30 (13.29)
	p- value	0.485	0.989	0.085	0.018
Domicile	Rural	62.05 (16.75)	64.47 (14.73)	71.58 (21.19)	70.70 (31.75)
	Urban	62.65 (17.12)	64.72 (17.48)	78.83 (21.51)	70.41 (15.03)
	p- value	0.137	0.834	0.001	0.671
Caste	General	51.66 (19.78)	48.33 (18.41)	71.33 (25.70)	63.16 (14.71)
	OBC/MOBC	63.57 (16.63)	65.64 (14.75)	71.32 (21.72)	70.28 (12.92)

	Scheduled Caste/Scheduled Tribes	36.71 (7.78)	44.71 (8.34)	64.14 (25.30)	53.71 (7.22)
	p- value	0.000	0.000	0.692	0.001

DISCUSSION

The sociodemographic characteristics of the present study conducted among 360 participants of ≥60 years in Panitola Block of Dibrugarh District, Assam were similar to the study findings done by Karmakar N et al. (2018) in Tripura, Dasgupta A et al. (2018) in West Bengal, Risal A et al. (2020) in Nepal and Debnath A et al. (2021) in the rural areas of West Tripura district.[14,20–22]

Elderly people in urban areas had a higher quality of life (QOL) than those in rural areas, according to studies by Risal A et al. (2020) in Nepal and Usha and Lalitha (2016) in Kerala.[21,23] Elderly people in rural areas had lower physical health domain scores but higher environmental health domain scores.[23]

The present study revealed that male study participants who lived in an urban area had a significantly higher QOL mean score in the social relationship health domain. Srivastava S et al. (2021) showed that the satisfaction level of study participants with their lives was 43.70% high, 21.50% medium, and 34.90% low.[24] Risal A et al. (2020) in Nepal and Van Nguyen T et al. (2017) in Vietnam, in their study, reported that the overall QOL score in elderly males was better than that of females, and the same pattern was observed in all four domains of QOL.[21,25] In the present study, it was found that QOL was better in males in all domains except the psychological health domain ($P < 0.05$), which is similar to the study conducted by Qadri S et al. (2013).[26] The gender discrimination and male-dominated character that are common in a society where women's rights are undermined may be indicated by these observable discrepancies. The study by Shah VR et al. (2017) found that none of the study participants had low QOL, with an overall QOL of 50.80% being excellent, 56% being good, and 3.20% being fair.[27] In contrast, only the social relationship domain was better in the present study.

In a study by Risal A et al. (2020), Debnath A et al. (2021), and Ghosh S et al. (2017) reported that QOL mean scores were lower among participants who were illiterate, which is similar to the present study.[21,22,28] In the current study, the QOL mean score in the social relationship health domain was considerably higher among the urban elderly individuals who are literate and unmarried. In their study, Ghosh S et al. (2017) revealed that among married study participants, the mean QOL score was significantly high in every health domain except social health.[28] Marital status was thus found to be one of the crucial factors influencing their QOL.

Similar to a study conducted in Nepal's Morang District by Shrestha M et al. (2018), the current study found that individuals aged 60–69 years had a considerably greater quality of life than the others in terms of physical health.[29] The study witnessed a negative relationship between age and QOL, as an increase in age showed a decrease in QOL mean scores in the physical health domain, as seen in the studies conducted by Karmakar N et al. (2018), Debnath A et al. (2021), and Soren SK et al. (2022).[20,22,30]

The present study revealed that the elderly had the highest QOL mean score in the social relationship health domain [71.18 (21.88)] and the lowest QOL mean score in the physical health domain [mean score 62.65 (17.12)]. Parsuraman G et al. (2021), in their study, found that the study participants had a QOL mean score for the physical health domain, which was the lowest, and for the environmental health domain, which was the highest score.[31] The social relationships health domain had the lowest [mean score (51.98±18.61)] in another study by Rajput M et al. (2019), which is completely in conflict with the current study because the social relationship domain score was the highest in the present analysis.[32] This discrepancy may have been caused by the way older people interacted with one another, the care they received from their personal relationships, and variations in the pattern of related elements that affected how well they lived in various contexts.

Elderly Hindus in the current study showed significantly poorer QOL mean scores in the area of physical health. In a related study, Karmakar N et al. (2018) and Shrestha M et al. (2018) found that study participants who identified as Hindu had a higher overall QOL across all four health areas.[20,29]

While the present study found that the elderly living in nuclear families had significantly better QOL scores than the others in the physical health domain and marginally higher QOL scores in the psychological and social health domains, Ghosh S et al. (2017) found that the QOL mean score was significantly high in all four domains among study participants belonging to a joint family.[28] Qadri S et al. (2013) reported that the unemployed study participants had significantly lower overall QOL mean scores, which is similar to the present study.[26]

The present study found that the physical health domain ($P < 0.05$), the environmental health domain ($P < 0.05$), and the social relationship health domains had significantly higher QOL mean scores for elderly individuals <70 years of age, unskilled workers, nuclear family members, and members of the MOBC/OBC caste. Variations in socio-cultural practices, family structures, level of education, and socio-economic status that are common in different study contexts may be the cause of the observed disparities between studies.

Limitations of the present study: The study involved the geriatric population; therefore, there was an increased risk of recall bias. Misreporting and underreporting may increase with age and vary

greatly depending on the presence of any current illness or chronic disease condition. For those study participants who were currently ill or had chronic health conditions, further observations were required to find out the factors associated with their quality of life.

CONCLUSION

The present study found that the physical health domain of the elderly, regardless of gender, was most negatively impacted, while the social relationship domain had a higher mean QOL score than other health domains. Additionally, qualitative research has the potential to improve our understanding of the factors that contribute to poor physical health.

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