"QUALITY OF LIFE OF ELDERLY IN RURAL AREAS OF EAST SIKKIM, INDIA: A CROSS SECTIONAL STUDY"

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Abstract : Ageing being the most emerging demographic phenomenon in the world today, there is an increase in demand for preventive, curative care and rehabilitation services. With the population rising in India, the elderly population is likely to accelerate further in the coming years and therefore there is a need to know the quality of life of elderly and develop mixed strategies to meet their health care needs. Of the total population in Sikkim, around 75.03 % live in the rural areas. With 6.7% of the elderly population in the state,the objective of this study was to find out the quality of life of geriatric population in rural areas of East Sikkim.A cross-sectional study was carried out by visiting the Gram Panchayat Units(GPU's), where elderly people were randomly selected from 18 GPUs out of 53 GPU's in rural areas of east Sikkim. Study included 324 elderly people with age more than or equal to 60 years.World Health Organisation Quality of Life BREF (WHOQOL-BREF) questionnaire was used for assessing the quality of life. Physical health, psychological, social relationships and environmental quality of life in both genders were found to be poor (Mean 39.5 ± 11.26 SD). There was no significant difference between gender and age variables in quality of life. Quality of life is found to be poor in the geriatric population of Sikkim due to the environmental barrier, reduced psychological, social relationships and physical health. Further studies are required to study the overall quality of life of elderly to promote graceful ageing through comprehensive geriatric care.

Introduction

Ageing is a universal process and is the most emerging demographic phenomenon in the world today. [1] India's elderly population has already crossed 100 million during 2011 and is projected to cross 177 million by the year 2025.[2] With the demographic transition in India, the elderly population is likely to accelerate further in the coming years and therefore there is a need to know the quality of life of elderly and develop mixed strategies to meet their health care needs.[3]The World Health Organization defines quality of life 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. It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of the environment.[4]Quality of life (QOL) among elderly is a major area of concern to determine the health status and well-being of the elderly. In India, with the increase in burden of chronic morbidity conditions and ageing population, the quality of life of the elderly population will be affected. A study done by R.S.Rajasi et alto assess the quality of life (QOL) using the World Health Organization QOL (WHOQOL‑BREF) scale and sociodemographic factors affecting QOL of 160 elderly women residing in a community setting in South Kerala. The results found out that QOL was least in the

psychological domain followed by physical and health‑related, social, and environmental domains. They concluded that it is possible to improve the QOL of elderly women by providing financial security, ensuring care, and by enhancing social relationships of elderly women.[5]A community based cross-sectional study was conducted among 300 elderly subjects in urban Puducherry, India by Ganesh Kumar S et al. Quality of Life was assessed by World Health Organization Quality of Life BREF (WHOQOL-BREF) and Activities of Daily Living (ADLs) by Katz ADL scale. The study concluded that QOL score among elderly is average, while social relationship domain of QOL score was found to be low. Health education with regard to activity and environmental changes and increase in social relationship may help in improving the QOL among the elderly population.[6]Sikkim being the smallest state in Northeast India with around 75.03 % of the total population in Sikkim live in the rural areas and with 6.7% of the elderly population in the state, the hilly terrain and steep roads and unfavourable weather conditions contribute to a lot of problems in the elderly.[7]

Many of the studies done on geriatric quality of life in India are either hospital based or primary health care based which has high chance of selection bias as only those elderly who are physically independent could walk up to either of the two for assessment. Therefore, there is a need of community based study in India and Northeast India especially among the elderly population so that the burden of disease conditions is reduced and the accompanying functional disabilities caused by the primary diseases are reduced and the overall quality of life is improved.

Method

After the approval of study from the Institutional Ethics Committee the study was carried within the period of October 2016 to April 2017.This cross-sectional study was done on elderly of 60 years and above who were willing to participate in the study under rural areas of East Sikkim. Rural areas of Sikkim are divided under the gram panchayat units(GPU's) in Sikkim. The study sample was obtained using multistage simple random sampling. In rural areas of east Sikkim, there are 52 GPU's out of which 18 GPU's (1/3rd) were randomly selected through random generation and then the list of all the geriatrics were obtained under each GPU. From this list, 18 elderlies in each GPU was selected randomly for the study thus the total sample size was 324. For each part, one house was selected randomly. Starting from this house, every nearest next house was surveyed until 18 subjects were enrolled for the study. After screening the subjects, through house to house visit informed consents were given to the selected elderly who were ready to participate in the study with the explanation that they could withdraw from the study anytime they want to and then a detailed pre-tested socio-demographic assessment was done Data on socio demographic factors included age, gender, income, occupation, marital status, living status, level of education, and type of family. World Health Organisation Quality of Life-BREF (WHOQOL-BREF) questionnaire was used to assess the quality of life in the elderly. This instrument contains four domains namely physical health, psychological, social relationships and environment with a total of 26 questions. Each of these domains were rated on a 5-point Likert scale. As per the WHO guidelines, 25 raw scores for each domain was calculated by adding values of single items and it was then transformed to a score ranging from 0 to 100, where 100 is the highest and 0 is the lowest value. The mean score of each domain, total score and average score were calculated.[8]Statistical Package for the Social Sciences (SPSS) version 20 was used for statistical analysis.

Result

Table 1: Socio-demographic variables

Age group (years)	*n= 324 (%)*
60-69	160 (49.4)
70-79	107 (33)
80 and above	57(17.6)
Gender	
Male	149 (46)
Female	175 (54)
Caste/Ethnicity	
Schedule Caste	33 (8.2)
Schedule Tribes	88 27.2)
Other Backward Classes	92 (28.3)
General	111 (34.3)
Marital Status	
Married	219 (67.6)
Widow	72 (22.2)
Widower	27 (8.3)
Unmarried	6 (1.9)
Religion	
Hindu	171 (52.8)
Buddhist	72 (21.6)
Christian	83 (25.6)
Muslim	0 (0)
Education	
Professional/honor	0 (0)
Graduate/post graduate	1 (0.3)
Intermediate/post high school Dip.	0 (0)
High school certificate	8 (2.5)
Middle school certificate	9 (2.8)
Primary school certificate	54 (16.7)
Illiterate	252(77.8)

A total of 324 subjects ranging from 60 years and above participated in the study with mean age 70.84. Females represented 54% of the study. 22.2% of the participants were widow and 8.3% were widower. 77.8% of the total elderlies were illiterate and 288 (88.9%) study subjects were living in joint families. Majority of the elderly (49.4%) were in the 60-69 years age-group(Table 1). Around 85% of the elderly were farmers.The overall mean (SD) score of QOL was found to be poor, 39.35 ± 11.26. Mean score for environmental domains was the lowest followed by social relationship domain as compared to psychological and physical domains (Table 2). Analysis of variance (ANOVA) was done for socio demographic variables and QOL scores. Among the age groups, 80 years and above had poor QOL as compared to the other two age groups. Females had lower QOL as compared to male and among the marital status group there was no significant difference between the groups as shown in table 3 and table 4.

Discussion

Our study highlighted that overall QOL is poor while environmental domain of QOL showed the lowest score followed by social relationship. This may be due to the roads and transportation problem in hilly rural area. Majority of the elderly were suffering from non-communicable diseases and had a lot of difficulty to perform their daily activities or fetch health support. This study has also revealed a low social relationships domain score which may be due to reduced interactions with their children and grandchildren as majority of the children do not want to adopt farming as their primary profession and so they go to town for jobs which leads to communication gap between them as they do not have time. Whereas in the study done by Syed Q et al they revealed that that majority (68.2%)of elderly had good quality of life whereas only 0.9% had poor and further it was better in males in physical, psychological, social and environmental domains.[9]

Compared to previous studies done in rural area, the current study showed low overall quality of life of elderly people which may be because of chances of selection bias in previous studies which were conducted in Primary health centres (PHC) and therefore only those elderly who are physically independent could walk up to the PHC. A previous study on quality of life in the geriatric population at Wardha, Maharashtra had reported that elders living in rural community had a significantly lower level of QOL in social relationship domain (55.9 ± 2.7) and environmental domain (57.1 ± 3.2) than urban population[10].

Our study found that age influence the QOL score as older age-group had lesser QOL score.[6]Similarly, we found that education status, type of family and marital status had an influence on the QOL score. Older adults who are with higher levels of schooling had better perceptions of their QOL.There was no significant difference in the QOL scores of caste and religion variables. As per the present study male subjects had a higher mean score in all four domains of QOL compared to female subjects. However, statistically significant difference was observed only for the psychological domain. Barua A et al in their study on Quality of Life (QOL) among geriatric subjects in Karnataka using WHOQOL- BREF had also reported almost similar mean scores for male and female in all four domains without any statistical difference.[11]
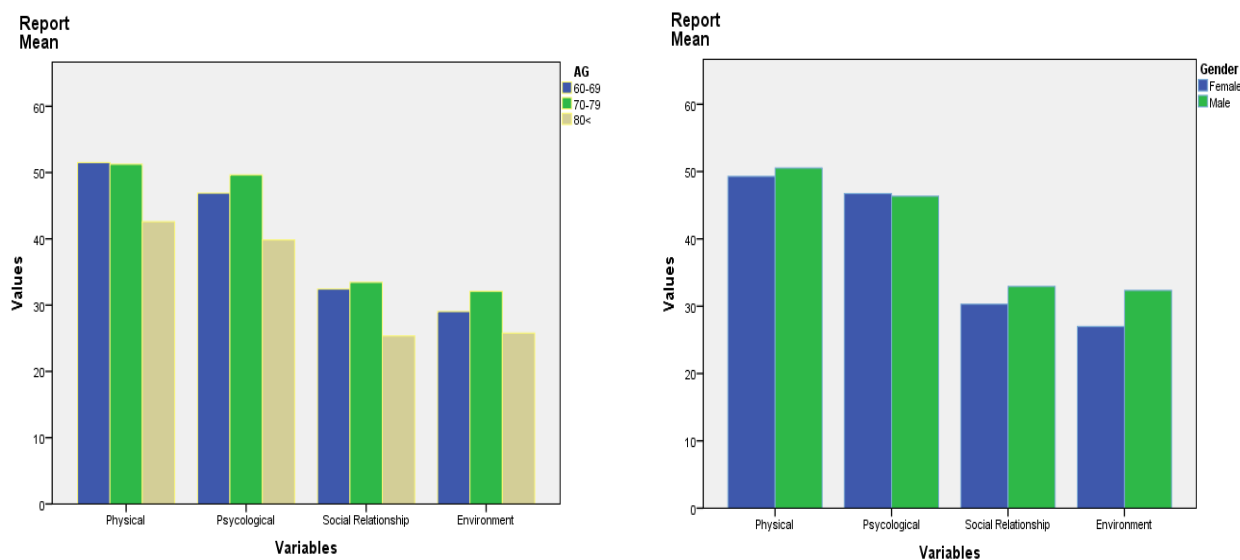
Table 2: WHOQOL-BREF scores

Domains	Mean	Std. Deviation
Physical	49.85	11.862
Psychological	46.55	12.525
Social Relationship	31.52	14.747
Environment	29.46	16.026
Total Score	39.35	11.264

Table 3: Sociodemographic variables and QOL scores

		Mean	Std. Deviation	Source of Variation	df	Mean Square	F	Sig.
Age Group	60-69	39.99	11.75	Between	2	1286.15	10.748	0.000
	70-79	41.54	11.26	Within	321	119.662		
	80<	33.44	7.37					
Gender	Male	40.5	11.24	Between	1	361.532	2.866	0.091
	Female	38.38	11.23	Within	322	126.156		
Religion	Hindu	40.04	11.44	Between	2	136.27	1.068	0.345
	Buddhist	37.7	11.18	Within	319	127.605		
	Christian	39.28	11.08					
Caste	Schedule Caste	39.88	8.13	Between	3	188.355	1.488	0.218
	Schedule Tribe	38.09	11.85	Within	319	126.615		
	Other Backward Class	38.35	10.79					
	General	41.06	11.9					
Marital Status	Married	39.1	11.09	Between	3	17.239	0.135	0.939
	Widow	39.72	11.44	Within	320	127.913		
	Widower	40.15	10.75					
	Unmarried	40.67	19.13					

Table 4: Bar graph of QOL domain score with age group and gender

Conclusion

The overall Quality of Life (QOL) of the elderly was poor in rural areas of East Sikkim, environmental domains with least QOL score followed by social relationships, psychological and physical domains. Environmental barriers can be minimized by improving the transportation accessibility, mobile health care units and elderly friendly public areas which will help in improvement of environmental domain. Peer group recreational activities and social interactions with the elderly are to be implied so that it builds their self-confidence and thereby improve their QOL. Health education and awareness to support elderly in all four domains for a superior quality of life is important. Empowerment of the elderly with respect to improve the degree of independence which will help in increase of psychological domain of QOL as their dependency minimizes. Further, proper trainings and awareness should be given to the government, policy makers and other stakeholders to implement adequate geriatric medical services, improve quality of life and provide psycho-social support to every old age people. Thus, helping every old age people to maintain or improve a functional independent quality of life. Further analytical studies can be done which will help in understanding the association of factors influencing QOL score.

Acknowledgement

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