Full Length Research Article

ASSESSMENT OF DOMAIN WISE QUALITY OF LIFE AMONG ELDERLY POPULATION AND ITS DETERMINANTS IN A RURAL SETTING OF BIHAR, INDIA

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ABSTRACT

Introduction: Although population ageing is recognised international reality, quality of life (QOL) among elderly is still a neglected issue especially in developing countries like India.
Objectives: The present cross-sectional study was undertaken to assess the QOL and its associated factors among elderly population.
Methods: A community based cross-sectional study was conducted among 450 elderly subjects in rural population of Katihar, Bihar. Data on QOL was assessed by World Health Organization Quality of Life BREF (WHOQOL-BREF).A pre-designed, pre-tested semi structured questionnaire was used to collect socio-demographic information and complete clinical examinations were performed among the study subjects to assess chronic morbid conditions.
Results: The mean scores of QOL domains was maximum in physical health (40.60±8.33), followed by psychological domain (33.77±8.40).The lowest mean score was seen in social relationship domain (25.35±12.12). Financial independency and higher socioeconomic status were found to be the determinants of better QOL score for physical domain while scores for environmental domain were significantly higher among those who were engaged in any type of occupation.(p<0.05)
Conclusion: QOL score among elderly were below average, while QOL scores for social relationship domain was lowest. Empowering the elderly financially might help in improving the QOL among the elderly population. Also health education with comprehensive approach might have additive impact in increasing QOL among elderly.

INTRODUCTION

Ageing is anatural and universal phenomenon affecting each and every individual in society.In developing countries, demographic transition has resulted in increasing life expectancy and increase in proportion of elderly population. (Rovan*et al.,* 2004)Worldwide, about 11% of population is above 60 years of age and 8% of this population age resides in South East Asian countries including India. (World Health Statistics 2014) The percentage of elderly population in India has increased over 6.0 to 8.3 per cent since 1991 to 2013 with proportion offemales to be higher than males. (SRS Statistical Report, 2013).

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It is expected that over the next four decades, India's demographic structure will transform dramatically from a young to an ageing population resulting in 316 million elderly persons by 2050.(James ., 2011) With epidemiological transition of diseases there has been increase in burden of chronic morbid conditions during past few years which had especially affected the QOL of elderly population.World Health Organization defined quality of life as "an individual's perception of life in the contextof culture and value system in which he or shelives and in relation to his or her goals,expectations, standards and concerns."(WHOQOL-BREF., 1996)Globally, QOL among elderly is quite a significant matter of concern as it reflects both the health status as well as well-being of this vulnerable population. There are indications that concerns related to QOL in elderly people are different from that of the general population.

(Myanmar Country Report, 2007) In view of the above, the present study was conducted to analyse the QOL and its associated factors among this vulnerable population so that develop effective interventions accordingly.

MATERIAL AND METHODS

A community based cross-sectional study was conducted from Jan 2013 to Dec 2013, in field practice area of Rural Health and Training Centre, Katihar Medical College, Bihar. A total 450 elderly persons were enrolled in the study using multistage sampling. The subjects were enrolled randomly from each of the selected village in proportion to the size of eligible population. The information about the eligible subjects was collected with the help of ASHAs (Accredited Social Health Activist) and Anganwadi workers.

Method of Data Collection

The study subjects were approached at their homes and the data was collected on socio-demographic factors and morbidity status of the subjects using structured questionnaire after obtaining informed consent. Data on socio demographic characteristics that include age, sex, education, family type, marital status etc., were collected using a structured questionnaire. Morbid conditions were assessed based on history given by subjects and complete clinical examinations.

Statistical Analysis

Data was entered in Microsoft excel and the major findings were reported in terms of mean and SD.

Table 1. Mean domain scores of Quality of life

(N=450)

Domain	Score (Mean ± SD)
Physical health domain	40.60 ± 8.33
Psychological domain	33.76 ± 8.40
Social relationship domain	25.35 ± 12.12
Environmental domain	29.54 ± 6.99

Table 2. Bio-social factors associated with various domains of Quality of Life

(N=450)

Bio – Social Characteristic		No.	Physical Domain		Psychological Domain		Social relationships domain		Environment domain	
Variables			*Mean ± SD*	*p*	*Mean ± SD*	*p*	*Mean ± SD*	*p*	*Mean ± SD*	*p*
Age group (Years)	60-74	246	40.69 ± 8.14	0.336	34.06 ± 8.31	0.474	25.27 ± 12.23	0.286	28.84 ± 6.78	0.068
	75-84	164	40.91 ± 8.51		33.14 ± 8.67		24.78 ± 11.67		30.34 ± 7.11	
	Above 85	40	38.77 ± 8.66		34.47 ± 7.85		28.15 ± 12.48		30.52 ± 7.44	
Gender	Male	233	41.15 ± 8.24	0.12	33.68 ± 8.60	0.81	25.59 ± 12.44	0.65	29.52 ± 7.20	0.95
	Female	217	39.98 ± 8.39		33.86 ± 8.20		25.09 ± 11.66		29.56 ± 6.77	
Religion	Hindu	88	41.48 ±7.61	0.26	33.94 ± 8.57	0.83	26.68 ± 12.77	0.24	29.03 ± 7.24	0.45
	Non Hindu	362	40.38 ± 8.49		33.72 ± 8.37		25.02 ± 11.87		29.66 ± 6.93	
Type of Family	Nuclear	23	39.39 ± 6.68	0.47	33.21 ± 7.54	0.74	24.47 ± 10.59	0.72	28.04 ± 7.97	0.29
	Joint	427	40.66 ± 8.41		33.79 ± 8.45		25.39 ± 12.1		29.62 ± 6.93	
Socio economic status#	Lower middle and above	218	41.55 ± 7.51	0.01*	33.23 ± 8.69	0.19	35.12 ± 12.42	0.70	29.15 ± 7.16	0.24
	Upper lower and below	232	39.71 ± 8.95		34.27 ± 8.90		25.56 ± 11.74		29.91 ± 6.81	
Employment status	Employed	197	40.93 ± 7.98	0.45	34.28 ± 8.36	0.25	25.66 ± 11.9	0.62	28.85 ± 6.87	0.49*
	Unemployed	253	40.33 ± 8.59		33.36 ± 8.43		25.10 ± 12.16		30.08 ± 7.05	
Educational Status	Illiterate	306	40.28 ± 8.33	0.23	34.03 ± 8.18	0.32	25.88 ± 11.81	0.17	29.09 ± 6.87	0.27
	Literate	144	41.27 ± 8.30		33.19 ± 8.83		24.22 ± 12.53		29.02 ± 7.22	
Marital Status	Married	252	40.18 ± 8.33	0.22	33.67 ± 8.42	0.78	25.40 ± 11.69	0.90	29.60 ± 7.01	0.83
	Others##	118	41.13 ± 8.32		33.89 ± 8.40		25.27 ± 12.54		29.46 ± 6.96	
Financial Dependency	Independent	148	40.77 ± 7.81	0.03*	32.92 ± 8.56	0.13	25.45 ± 12.41	0.89	28.87 ± 7.26	0.15
	Dependent	302	40.03 ± 8.52		34.17 ± 8.31		25.30 ± 11.90		29.86±6.84	

Modified B G Prasad socioeconomic scale 2013
Includes divorced, separated, unmarried, widow/widower
*p value significant

Study Tool

QOL was assessed by using a well-tested and validated WHOQOL-BREF scale. (WHOQOLBREF, 1998) The instrument consists of four domains namely physical health, psychological, social relationships and environment having total of 26 questions. Each of these domains was rated on a 5-point Likert scale. Raw scores calculated for each domainby adding values of single items, was then transformed to a score ranging from 0 to 100, where 0 is the lowest and 100 is the highest value.

Difference between mean scores was tested by using independent sample t-test and ANOVA (Analysis of variance). P-value less than 0.05 were considered as significant.

RESULTS

The study was conducted among 450 elderly (≥ 60 years) in a rural population of Katihar district of Bihar. Among the study subjects, about 8.9 percent were aged more than 85 years and the mean age of the population was 68.75 ± 84 years.

Table 3. Association of QOL domain score with morbidity status

(N=450)

Morbidity Status		No.	Physical Domain		Psychological Domain		Social relationships domain		Environment domain	
			Mean ± SD	*p*	*Mean ± SD*	*p*	*Mean ± SD*	*p*	*Mean ± SD*	*p*
Cardiovascular morbidities	Present	223	40.42 ± 8.48	0.64	38.78 ± 7.97	0.95	24.48 ± 11.69	0.13	29.82 ± 6.99	0.39
	Absent	227	40.77 ± 8.18		33.74 ± 8.82		26.19 ± 12.37		29.26 ± 7.06	
Diabetes mellitus	Present	63	40.39 ± 8.03	0.81	35.30 ± 8.20	0.12	26.04 ± 13.75	0.62	28.53 ± 6.98	0.22
	Absent	387	40.63 ± 8.38		33.52 ± 8.42		25.23 ± 11.78		29.70 ± 6.98	
Employment status	Employed	197	40.93 ± 7.98	0.45	34.28 ± 8.36	0.25	25.66 ± 11.9	0.62	28.85 ± 6.87	0.05
	Unemployed	253	40.33 ± 8.59		33.36 ± 8.43		25.10 ± 12.16		30.08 ± 7.05	
Visual morbidities	Present	363	40.27 ± 8.38	0.08	33.48 ± 8.52	0.14	25.47 ± 12.18	0.66	29.81 ± 7.02	0.09
	Absent	87	40.98 ± 8.00		34.95 ± 7.82		24.85 ± 11.55		28.40 ± 6.78	
Marital Status	Married	252	40.18 ± 8.33	0.22	33.67 ± 8.42	0.78	25.40 ± 11.69	0.90	29.60 ± 7.01	0.83
	Others[##]	118	41.13 ± 8.32		33.89 ± 8.40		25.27 ± 12.54		29.46 ± 6.96	
Body mass index	Normal	209	40.77 ± 8.53	0.64	33.18 ± 8.66	0.17	25.80 ± 11.75	0.45	29.59 ± 6.82	0.88
	Abnormal	241	40.44 ± 8.26		34.27 ± 8.16		24.95 ± 12.32		29.49 ± 7.14	
Respiratory problems	Present	69	40.11 ± 8.31	0.59	32.69 ± 8.69	0.25	25.44 ± 11.24	0.92	29.75 ± 6.79	0.78
	Absent	381	40.69 ± 8.34		33.96 ± 8.34		25.33 ± 12.21		29.50 ± 7.03	
Musculoskeletal disorders	Present	170	40.31 ± 8.08	0.58	34.08 ± 7.96	0.54	24.78 ± 12.36	0.42	29.58 ± 6.37	0.79
	Absent	275	40.76 ± 8.55		33.55 ± 8.67		25.72 ± 11.97		29.56 ± 7.33	

*p value significant

Among the biosocial characteristics of the study population, nearly half of them were females (48.2%), majority of them were illiterate (68.0%) and 32.8 percent were financially not dependent on others. Majority of the population belonged to Muslim religion (80.4%); and joint family. The overall mean score was 32.31±4.03. All the scores of the respective domains were found to be below average. Mean QOL scores were maximum for physical health domain (40.60 ± 8.33) followed by psychological domain (33.76 ± 8.40). The lowest mean score reported for social relationship domain (25.35 ± 12.12). (Table No. 1)On analysing, financial independency and higher socio-economic status (lower middle and above) were having better score in domain of physical health and association was statistically significant (p<0.05). Also, significant difference was seen between mean score for environmental domain with respect to employment status (Table No. 2) On comparing the mean scores for respective domains with morbidity status for different conditions, comparatively better quality scores were reported in normal subjects in majority of the cases; however difference observed was statistically non-significant (Table No. 3).

DISCUSSION

Our study highlighted the fact that overall QOL were quite suboptimal with lowest mean score for social relationship domain. This was much lower as compared to that reported by Gupta *et al.*(2014), Thadathil *et al.*(2015)and Ganesh *et al.*(2013) in Lucknow, Kerala and Puducherry; however the results for physical domain (40.60 ± 8.33) are quite comparable. In contrast to that the scores were much higher as reported by Deshmukh *et al.* (2015). Social relationship and environmental domains were most badly affected in our study. Similarly Ganesh *et al.* (2013) also reported mean score of social relationship to be lowest among the four domains. As reported by Mathew *et al.* (2010), the QOL score for the different domains was less for females however the differences were statistically insignificant. Statistically significant differences were observed between mean scores for the domain of physical health between financially dependent and

independent subjects as well as between lower and upper socio-economic groups. Contradictory to the findings, as reported by Barua *et al.* (2007) and Ganesh *et al.* (2013); no significant difference in domain scoresin different age groups. These differences observed in QOL scores might be due to variation in pattern of associated factors which influence QOL in different study settings. Similar to the finding reported by Gureje *et al.*(2013) and Thadathil *et al.*(2015), economic factors like financial independency and higher socio economic status were found to have better QOL score for physical domain (p<0.05); however the difference was insignificant for other domains. Chronic morbid conditions have been found to have a well-known impact over the quality of life (Thadathil *et al.*, Gureje *et al.,*Ganesh *et al.* and Gupta *et al.*). However, no such difference was observed in present study. This might be due to small sample size or due to field limitation of the present study.

Conclusion

QOL score among elderly were sub optimal, with scores of social relationship domain to be lowest. Financial empowerment by creating suitable jobs opportunitiesfor elderly could help to increase QOL scores. Apart from that it will also help to improve QOL for environmental domain. Health education along with recreational activities and environmental modification may have catalytic role help in improving the QOL among the elderly population.

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