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Original Research Article

Take a stand against ageism: quality of life among elderly in a rural area of Himachal Pradesh

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ABSTRACT

Background: Quality of life (QOL) among elderly is an important area of concern which reflects the health status and well-being of this vulnerable population. The WHOQOL-BREF contains a total of 26 questions which measures QOL is being used in this study.
Methods: It is a community based observational study with cross-sectional design carried out on 100 elderly (60+year age) in a rural area of Solan district using pre-designed, pretested and semi-structured interview schedule, which is based on WHOQOL-BREF standard quality of life questionnaire. Appropriate statistical tests were used for analysis using SPSS software.
Results: Majority 60% of the subjects were in the age group of 60-70 years, 62% of them were males and 38% of them were females. The mean score value of physical domain, psychological growth, social relations and environment domain among the subjects was found to be 52.50±10.56, 52.86±13.25, 61.15±16.06 and 63.92±11.10 respectively. The mean score of all four domains was found higher among age group 60-70 than age group >70 and It was statistically significant in social domain with p value of 0.017. By gender, mean score of all four individual domains was found higher among males as compared to females but this difference was not statistically significant.
Conclusions: The overall quality of life was poor among the study subjects. The subjects who were illiterate, unmarried/widow/widower/divorced/separated, belonged to nuclear family had poor quality of life compared to those who were literate married and belonged to joint family. Males had comparatively better quality of life compared to females in the study area.

Keywords: Elderly, Quality of life, Domains

INTRODUCTION

"The ageing process is of course a biological reality which has its own dynamic, largely beyond human control. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60+ years to refer to the older population.[1] WHO defines Quality of Life as individuals‟ 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, level of

independence, social relationships, personal beliefs and their relationship to salient features of their environment.[2]

The WHOQOL-BREF (tool for measuring the quality of life) is being developed as a short version of the WHOQOL-100 for use in situations where time is restricted, where respondent burden must be minimized and where facet-level detail is unnecessary e.g. with large epidemiological surveys and some clinical trials. The WHOQOL-BREF contains a total of 26 questions.[3,4]

At global level, Quality of Life (QOL) among elderly is an important area of concern which reflects the health status and well-being of this vulnerable population. Also, presently the epidemiological transition of diseases with increase in burden of chronic morbidity conditions, which is driven by population ageing, will affect the QOL of elderly population. In view of the above, it is imperative to analyze the QOL and its associated factors among this vulnerable population so that effective measures to improve the QOL can be implemented at community level.

Considering the vulnerability of elderly people and importance of healthy status in this population and due to the lack of studies regarding quality of life and associated factors in elderly people living in community and in the region, this study was aimed to assess the quality of life in elderly population in Solan district, Himachal Pardesh, India.

METHODS

Study design

A community based observational study with cross-sectional design.

Study area and study period

The study was carried out in a Primary Health Centre, Sultanpur, district, Solan, Himachal Pradesh during July-October 2016.

Sample Size

Assumed 50% of the elderly enjoyed a good QoL and allowable error of 20%, at level of significance of 95%, and using the standard formula for calculating the sample size:

$N= 3.86\ PQ/L^2$, where N is the sample size taken, P is the 50%, Q= 1-prevalence, L= Relative allowable error.

Putting all these values in the above formula gave a desirable sample size of 100.

Study subjects

Persons aged 60 years and above in the study area.

Exclusion criteria

Exclusion criteria were those who were not willing to participate in the study; those subjects whose general health condition did not allow them to communicate; subjects who could not be contacted on three consecutive visits.

Study tool

A pre-designed, pretested and semi-structured interview schedule, which has WHOQOL-BREF standard quality of life questionnaire.

Data collection and analysis

After listing the population of elderly in the given PHC area 100 subjects were selected by simple random sampling technique. A house-to-house visit was done and written informed consent was obtained from all the participants by explaining the purpose of the study. Ethical approval was taken from Institutional Ethics Committee.

Analysis was carried out using SPSS (Statistical Package for Social Studies) for Windows version 21.0 and online GraphPad software (Prism 5 for Windows) version 5.01. Pearson's chi square test was used to evaluate differences between groups for categorized variables. Unpaired "t" was used to calculate difference of means for quantitative variables. Normally distributed data was presented as means and standard deviation, or 95% confidence intervals (CI). All tests were performed at a 5% level of significance.

World Health Organization's Quality of Life BREF questionnaire (WHO QOL-BREF)

A self-report questionnaire that contains four domains of quality of life (QOL): physical health (7 items i.e. Q3,Q4,Q10,Q15,Q16,Q17,Q18), psychological health (6 items i.e. Q5,Q6,Q7,Q11,Q19,Q26), social relationships (3 items i.e. Q20,Q21,Q22) and environment (8 items i.e. Q8,Q9,Q12,Q13,Q14,Q23,Q24,Q25). Two other items measure overall QOL and general health.

Items are rated on a 5-point Likert scale and the domain scores are calculated by multiplying the mean score of items included within each domain by a factor of 4, with a possible range of each raw domain score of 4 to 20. Each raw domain score is then transformed to a scale ranging from 0 to 100 (in order to make domain scores comparable with the scores used in the WHOQOL- 100), with a higher score indicating a higher quality of life.

Domains are not scored where 20% of items or more are missing, and are unacceptable where two or more items are missed (or 1-item in the 3-item social domain). The scores are transformed on a scale from 0 to 100 to enable comparisons to be made between domains composed of unequal numbers of items.

The four domain scores denote an individual's perception of quality of life in each particular domain. Domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life).

RESULTS

The present study was undertaken in a rural field practice area under primary health centre in district, Solan in the state of Himachal Pradesh. A total of 100 persons aged ≥60 years were contacted and interviewed to find the information on quality of life.

Table 1: Distribution of study subjects by socio-demographic variables (N=100).

Socio-demographic variables	Frequency (%)
Age group (in years)	
60-70	60 (60)
>70	40 (40)
Gender	
Male	62 (62)
Female	38 (38)
Marital status	
Married	81 (81)
Others	19 (19)
Education	
Illiterate	57 (57)
Primary school	18 (18)
Middle school	7 (7)
Higher and above	18 (18)
Occupation	
None	29 (29)
Govt Job	52 (52)
Pvt Job	12 (12)
Farmer	7 (7)
Income	
<10000	54 (54)
≥10000	46 (46)
Family type	
Joint	93 (93)
Nuclear	7 (7)

The Table 1 depicts the distribution of the study subjects according to their age groups, gender, marital status, education, occupation, income and family type. Majority 60% of the subjects were in the age group of 60-70 years, 62% of them were males and 38% of them were females. The study subjects in the age group above 70 years (40%) constituted the second group. Majority (81%) of them were married and others (unmarried/ widow/ widower/ separate/ divorced) constitutes (19%). Out of the total, 57% elderly were illiterate. Of the remaining, 18% of them had primary education, 7% of them were educated till middle school, 18% of them went till high school. 29% study subjects were not involved in any occupation and 7% of them were involved in cultivation. Rest (52%) were in government job, (12%) were in private job. Out of the total (54%) elderly were having monthly income <10000 and rest (46%) were having monthly income >10000. (93%) subjects belonged to joint family. Study subjects who belonged to nuclear family constituted only (7%).

Table 2: Mean of individual domain scores (N=100).

Domains	Mean score	Standard deviation
Physical	52.50	10.56
Psychological	52.86	13.25
Social	61.15	16.06
Environmental	63.92	11.10

Table 2 shows the mean of individual domain scores among the study participants. The mean score value of physical domain, psychological growth, social relations and environment domain among the subjects was found to be 52.50±10.56, 52.86±13.25, 61.15±16.06, and 63.92±11.10 respectively.

Table 3 depicts the comparison of mean and standard deviation of all the four domains according to various socio-demographic characteristics. The mean score of all four domains was found higher among age group 60-70 than age group >70 and It was statistically significant in social domain with p value of 0.017. By gender, mean score of all four individual domains was found higher among males as compared to females but this difference was not statistically significant.

The mean score of social domain were more in married subjects (65.75±12.61) compared to others (unmarried/ widow/ widower/ separate/ divorced) (51.53±14.52) and was found statistically significant (p=0.000). Mean score of other three domains was also found higher among married as compared to other category but it was not statistically significant. Regarding education the mean domain scores were better among literates as compared to the illiterates and was found to be statistically significant only for social domain (p=0.024).

The mean domain scores were better among those whose income is more than 10000 as compared to those whose income is less than 10000 and was found to be statistically significant for all domains except psychological domain. The mean domain scores were better among those who belonged to joint family as compared to those who belonged to nuclear family and was found to be statistically significant for physical (p=0.026) and environmental domains (p=0.035).

Table 3: Comparison of individual domain scores by various socio-demographic characteristics (n=100).

Domains	Physical	Psychological	Social	Environmental
Age group				
60-70 years	52.42±11.06	53.05±12.37	64.27±14.45	63.18±12.11
> 70 years	52.33±9.89	52.58±14.63	56.48±17.37	65.03±9.43
P value	0.924	0.862	0.017*	0.41
Gender				
Male	53.63±9.89	54.27±13.60	63.19±15.63	64.92±10.94
Female	50.66±11.47	50.55±12.48	57.82±16.40	62.29±11.31
p value	0.173	0.174	0.104	0.252
Marital status				
Married	52.69±10.35	52.99±3.38	65.75±12.61	63.84±11.28
Others	51.68±11.67	52.32±13.05	51.53±14.52	63.26±10.58
p value	0.710	0.843	0.000*	0.839
Education				
Illiterate	51.14±11.22	51.33±12.77	58.07±16.70	62.23±10.54
Literate	54.30±9.44	54.88±13.76	65.23±14.36	66.16±11.54
p value	0.139	0.186	0.024*	0.079
Family income				
<10000	50.39±11.69	50.65±12.77	56.11±18.66	61.48±11.61
>10000	54.98±8.54	55.46±13.47	67.07±9.54	66.78±9.84
p value	0.029*	0.070	0.000*	0.017*
Family type				
Nuclear	44.00±10.31	51.71±16.28	53.57±21.02	55.43±12.65
Joint	53.14±10.35	52.95±13.10	61.72±15.62	64.56±10.78
p value	0.026*	0.814	0.197	0.035*

* Statistically significant

DISCUSSION

Our study assessed the subjective feeling of quality of life among elderly aged 60 years and above in terms of Physical, Psychological, Social and environmental domains of the World Health Organization's Quality of Life BREF questionnaire. The mean score value of physical domain, psychological growth, social relations and environment domain among the subjects was found to be 52.50±10.56, 52.86±13.25, 61.15±16.06, and 63.92±11.10 respectively (Table 2).

In a study by Rashid et al, the mean score for the physical, psychological growth, social relations and environment domain was higher in comparison to our study and were found to be 74.6±14.3, 71.9±12.7, 59.9±16.5 and 71.6±14.5 respectively.[5] The mean quality of life (QOL) score in their study was highly suggestive of a positive trend towards better quality of life, this might be possible because the study subjects were living in old age homes and also the institution where this study was conducted is one of the best in north Malaysia with well-maintained facilities as reported in their study.

A study by Asadullah et al, done among inmates of old age homes in Udupi district, showed that the mean score of physical, psychological, social and environmental domains were 53.71±15.64, 58.16±13.57, 34.66±14.87 and 60.46±10.14 respectively.[6] This study also indicated an average quality of life among elderly but high compared to findings for physical and psychological domains from our study. The poor social domain scores in their study reflect the miserable social relationship of inmates of old age homes with family, friends and community.

Our study also compared the individual domain score according to various socio-demographic characteristics like age, gender, marital status, education, family income and family type. By age group the mean score of all four domains was found higher among age group 60-70 than age group >70 and it was statistically significant in social domain (p=0.017). By gender, the mean score of all four individual domains was found higher among males as compared to females but this difference statistically not significant in any of domain. The mean score of social domain were more in married subjects (65.75±12.61) compared to others (unmarried/ widow/ widower/ separate/ divorced) (51.53±14.52) and was found statistically significant (p=0.000). Mean score of other three domains was also found higher among married as compared to other category but it was not statistically significant. Regarding education the mean domain scores were better among literates as compared to the illiterates and was found to be statistically significant only for social domain (p=0.024). The mean domain scores were

better among those whose income is more than 10000 as compared to those whose income is less than 10000 and was found to be statistically significant for all domains except psychological domain. The mean domain scores were better among those who belonged to joint family as compared to those who belonged to nuclear family and was found to be statistically significant for physical (p=0.026) and environmental domains (p=0.035) (Table 3).

A cross sectional hospital based study conducted by Barua et al, among geriatric age group of 60 years and above, found the mean scores of the two age groups of 60–69 years and ≥70 years were found to differ significantly in the domains of physical, psychological and social relations.[7] The total mean score as well as the mean scores in each of the four domains for both men and women were found to be similar. The difference between the two groups was not found to be statistically significant for any of the four domains. These findings were similar to our study.

In a community based cross sectional study by Mudey et al, in Wardha district of Maharashtra, the mean score of environmental domain was more among males compared to females and was found to be statistically significant.[8] The mean score of physical, psychological domains and environmental domains among elders aged 60-69 years was higher than those aged 70 years and above but was found statistically significant only in physical and psychological domain. The mean score of physical and psychological domains among elders who were literate were higher than that were illiterate and was found significant

In a community based cross sectional study by Lokare et al, the mean scores of males and females using WHOQOL-BREF scale differed significantly in the physical domain and rest of the domains were not significant.[9] Mean scores of age groups <70 yrs and >70 yrs differed significantly in the physical domain. These findings can be due to the reason that those elderly subjects above the age of 70 years find it difficult to adjust with the lifestyle changes compared to those in the age group of 60-69 years. As age advances people found difficult to cope up with problems due to chronic illnesses, vision and hearing problem, sleep problems, and need of assistance while doing day-to-day activities and going to toilets apart from problems in relationships, nutrition, shelter, and financial security.

Dongre et al, conducted a study in a rural area of Maharashtra to assess the quality of life among elderly.[10] They found the mean value of all the four domains of quality of life were higher among males compared to females and were found to be statistically significant. The mean values of domain scores were also significantly high among literate. The mean values of domain scores were more among the elderly in the age group of 60-69 years compared to those in the age group of 70 years and above but statistically significant difference were not found. These findings were coherent with the findings from our study.

In a study by Qadri et al, among rural elderly aged 60 years and above, the quality of life was better in males in all the domains i.e. physical, psychological, social and environmental (79.33, 83.33, 85.33 and 72.1) as compared to females (65.67, 75.67, 73.67 and 65.67).[11] Regarding educational status, the quality of life mean score was 52.99±10.08 in illiterate subjects, which is lower compared to literates. The mean score was better in currently married compared to those living away from spouse or widow or widower. This difference was also found to be statistically significant. These findings are similar to our study.

The reason for better Quality of life in their rural elderly population in our study could be attributed to the fact that QOL would be affected by a number of significant positive and negative life events and differences in literacy rates, sociocultural factors, availability, acessability and affordability of health services across the nation. These life events may be related either to his family or society or community where he lives. Quality of Life need not be poor in poor man's home or in a handicapped person's home but depends on plethora of factors.

CONCLUSION

The overall quality of life was poor among the study subjects. The subjects who were illiterate, unmarried/ widow/ widower/ divorced/ separated, belonged to nuclear family had poor quality of life compared to those who were literate married and belonged to joint family. Males had comparatively better quality of life compared to females in the study area. These findings do indicate the influence of various factors on the subjective feeling of quality of life as good or bad.

Depending on the support the elderly with disability get from family and friends will lead to either lower or higher quality of life. Another important influence on the quality of life is the effect of the deficit in functional autonomy on social functioning, which is important for healthy ageing.

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