Research Article

A community based epidemiological study on quality of life among rural elderly population of Punjab

Deepshikha Kamra

Assistant Professor, Dept. of Community Medicine, Christian Medical College, Ludhiana, Punjab, INDIA.
Email: deepshikhakamra@gmail.com

Abstract

Background: Ageing is a recognized international reality all over the world. The number of elderly is increasing day by day due to demographic transition. This will result in emergence of new problems related to medical, social and economic rehabilitation of elderly population if a timely initiative in this direction is not taken. **Aims & Objective:** To determine the quality of life and its relation with various socio-demographic characteristics among elderly population of rural area. **Material and Methods:** A community based cross-sectional design was adopted for studying quality of life, using Post Graduate Institute Quality of life scale questionnaire. A two stage sampling technique was used for sample collection. A total of 220 individual ≥ 60 years of age were taken up for the study purpose. **Results:** Out of total 220 subjects, maximum were in the age group of 60-69 years (Males=53.6% & Females = 46.4%). Majority of the subjects were currently married (60%) and nearly 64% were illiterates. 71.3% of the subjects were engaged in household activities. An overwhelming majority (68.2%) of elderly enjoyed a good quality of life, while those having a fair/poor quality of life were ≤ 15%. The association of quality of life is statistically significant in subjects who had graduated and currently married, belonged to non-scheduled cast and living in extended families ($p<0.001$). **Conclusion:** There is a need to highlight the medical and psychosocial problems that are being faced by the elderly people in India and strategies for bringing about an improvement in their quality of life.

Key Word: quality of life, Punjab State.

Address for Correspondence
Dr. Deepshikha Kamra, Assistant Professor, Dept. of Community Medicine, Christian Medical College, Ludhiana, Punjab, INDIA.
Email: deepshikhakamra@gmail.com
Received Date: 19/05/2014 Accepted Date: 05/06/2014

Access this article online

Quick Response Code:

Website: www.statperson.com

DOI: 05 June 2014

INTRODUCTION

The world is in the midst of a unique and irreversible process of demographic transition which will result in increase in older populations everywhere. The percentage of persons aged 60 and over is expected to double between 2007 and 2050, and their actual number will triple by 2050 reaching to 2 billion.[1] Ageing is a universal process and it affects every individual, family, community and society. Sir James Sterling Ross commented "You do not heal old age, you protect it, you promote it and you extend it". The world health day theme in 2012 was "Good health adds life to years". The major attention of WHO was mainly on the productive lives among the elderly people and not a dependency for their families and communities.[2] World Health Organization defined quality of life as "an individual's perception of life in the context of culture and value system in which he or she lives and in relation to his or her goals, expectations, standards and concerns".[3] The rapidly growing numbers of elderly people in the entire world challenging the 21st century to delay the onset of disability and ensure optimal quality of life for older people.[4] This can be prevented or delayed, not only by medical but also by social, economic and environmental interventions. There is a need to highlight the problems that are being faced by the elderly people in India and strategies for bringing about an improvement in their quality of life. This study is an attempt to study the

How to site this article: Deepashikha Kamra. A community based epidemiological study on quality of life among rural elderly population of Punjab. *International Journal of Recent Trends in Science and Technology* June 2014; 11(2): 192-197 http://www.statperson.com (accessed 05 June 2014).

quality of life and their relation with socio-demographic characteristics among the old age persons residing in the rural areas of Punjab.

AIMS AND OBJECTIVE

To determine the quality of life and its relation with various socio-demographic characteristics among elderly population of rural area.

MATERIALS AND METHODS

The study was conducted in field practice area of Rural Health and Training Center (RHTC) located at village Pohir, block Dehlon, district Ludhiana, Punjab, India. This Center is an integral part of Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana. A community based cross-sectional design was adopted for studying the quality of life and its relation with various socio-demographic characteristics in elderly population. The period of study was one year from 1stMarch, 2007 to 29th February, 2008.The field practice area is composed of ten villages .It covers a total population of 20861, comprising of 2117 elderly. A convenience sample of 10% was taken for the present study. Hence 220 subjects out of total 2117 individuals, 60 years and above were included in the study. The individuals refuse to participate; non-cooperative and inability to participate due to gross physical and mental disability were excluded. A two stage sampling was used for the study. In first stage, equal no of individuals were taken from each village according to quota sampling technique and in the second stage, subjects were stratified on basis of gender and individuals from each gender were decided on the basis of simple random sampling technique. The information was collected on a predesigned and pretested proforma through personal interviews by house to house visits. Each individual was told about the purpose of the study, and confidentiality of the information was assured. If the house was locked or/and subject was not available two attempts were made to contact the subject. The proforma includes socio-demographic variables viz. age, gender, marital status, education, occupation, family type, past and present illness. Quality of life was assessed using Post Graduate Institute Quality of life scale[5] which was developed by AC Moudgil, SK Verma and Kuldip Kaur. This scale has been reported to be independent of personality variables like neuroticism, lie, socioeconomic status, locus of control and age. The scale originally had 26 questions. However out of these 4 questions were not applicable to elderly population and were deleted. Thus a questionnaire containing 22 questions was administered. Each question had 5 levels of responses and subjects were asked to indicate their response to each question on the 5 point scale. Thus maximum scoring possible was 110 and minimum score of 22. As per, the Likert's scale, the standardized Quality of life score had been divided into four categories Excellent (110-89), Good (88-67), Fair (66-45) and Poor(22-44).

Ethical Consideration

The present study did not impose any financial burden to the patients and informed and written consent was taken from the participants before conducting the study.

Statistical Analysis

The data collected in respect of various variables was statistically analyzed. Mean, range and standard deviation were computed for the variables. The comparison between two groups was done by one way classification of analysis of variance (ANOVA).The data was analyzed by using statistical package SPSS 16.0.

RESULTS

This community based cross-sectional study was conducted with an objective to determine the quality of life among rural elderly population of field practice areas of department of Community Medicine A total of220 subjects including 112 (50.9%) male and 108(49.1%) females were taken.

Table 1: Distribution according to Socio-Demographic Profile of Participants

Characteristics		Male (%)	Female (%)	Total (%)
Age	60-64	30 (13.63)	32	62
	65-69	30	32	62
	70-74	26	23	49
	≥75	26	21	47
Marital Status	Currently Married	80	52	132
	Unmarried	08	01	09
	Widower/ Widow	23	54	77
	Divorced	0	01	01
	Living away from spouse	01	00	01
Education	Illiterate	55	86	141
	Primary	20	14	34

	Middle	18	07	25
	High school	15	01	16
	Graduate	04	0	04
	Household work	43	77	120
	Agriculture	28	0	28
	Business	11	01	12
Occupation	**Service**	02	0	02
	Unskilled labour	04	06	10
	Skilled labour	07	01	08
	Professional	0	0	0
	Not working	17	23	40
	Own Income	63	08	71
	Government	05	07	12
Source of Livelihood	**Supported by Family**	43	93	136
	Destitute	01	0	01

The table above describe, out of the total 220 subjects, maximum were in the age group of 60-69 years (Males=53.6% &Females = 46.4%) respectively. Regarding marital status, majority of the subjects were currently married (60%). In regards to educational status 64% were illiterates (Females=61% & Males=39%) and only 4 (1.8%) of subjects were graduate or had high school education. As far as occupation was concerned, majority (71.3%) of the subjects were engaged in household activities whereas 18.2%were sitting idle. Table further illustrates that61.8% were supported by family and 32.3% subjects had their own income as far as source of livelihood was concerned.

Table 2: Distribution according to Socio-economic status, type of family and religion of Participants

Characteristics		**No. of Participants**	**Percentage**
	Low (<16)	11	5.0
Socio-economic	**Low Middle (17-25)**	103	46.8
status*	**High Middle (26-34)**	89	40.5
	High(>34)	17	7.7
	Joint	160	72.7
Type of family	**Nuclear**	36	16.4
	Extended	13	5.9
	Living Alone	11	5.0
	Sikh	209	95
Religion	**Hindu**	06	2.7
	Muslim	05	2.3

(**Modified Udai Pareekh* scale was used for socio-economic status)

A total of 87.3% belonged to middle socio-economic status, while 5% and 7.7% subjects were in low and high socioeconomic status, respectively. Majority of the respondents were Sikhs (95%) and living in joint families (72.7%) whereas only 5% were living alone.

Table 3: Distribution of Subjects according to Quality of Life

Quality of life	**Male n=112**	**Female n=108**	**Total n=220**
Excellent(110-89)	28	09	37
Good (88-67)	73	77	150
Fair (66-45)	10	21	31
Poor(44-22)	01	01	02

A perusal of above table shows that an overwhelming majority (85%) of elderly enjoyed an excellent/good quality of life, while those having a poor quality of life were <1%.

Table 4: Distribution of Subjects according to Quality of Life score and various socio-demographic characteristics

Characteristics		**N**	**Quality of life score (Mean+ SD)**	**Source of variation**	**df**	**Mean square**	**F-value**	**p-value**
Sex	**Male**	112	80.5 $\pm$ 11.3	**Between**	1	1183.170	10.705	0.001

	Female	108	75.8 ± 9.6	**Within**	218	110.527		
Education	**Illiterate**	141	75.99 ± 10.08	**Between**	4	713.855	6.845	0.00
	Primary	34	78.41 ± 11.59	**Within**	215	104.291		
	Middle	25	85.68 ± 9.33					
	High school	16	83.75 ± 9.82					
	Graduate	04	86.50 ± 8.96					
Occupation	**Agriculture**	28	84.14 ± 11.93	**Between**	6	422.828	3.960	0.001
	Business	12	79.75 ± 9.71	**Within**	213	106.766		
	Service	2	74.00 ± 1.41					
	Unskilled labour	10	67.70 ± 12.74					
	Skilled labour	8	77.37 ± 8.63					
	Household work	120	78.68 ± 10.17					
	Not working	40	75.25 ± 9.56					
Caste	**Schedule caste**	110	75.6 ± 10.4	**Between**	2	1502.841	13.78	0.00
	Non schedule caste	110	80.8 ± 10.4	**Within**	217	109.061		
Marital Status	**Currently Married**	132	80.46 ± 10.687	**Between**	4	550.027	5.124	0.001
	Unmarried	9	74.67 ± 8.139	**Within**	215	107.339		
	Widow/Widower	77	74.67 ± 8.139					
	Divorced	1	58 ± 0.00					
	Living away from spouse	1	91 ± 0.00					
Type of family	**Nuclear**	36	77.44 ± 10.61	**Between**	3	1048.263	10.230	0.000
	Extended	13	82.31 ± 9.29	**Within**	216	102.469		
	Joint	160	79.16 ± 9.99					
	Living alone	11	62.36 ± 11.38					
Social Support	**Adequate**	206	79.24± 9.87	**Between**	1	3335.885	33.143	0.00
	Inadequate	14	63.29±12.32	**Within**	219	100.652		

The table no.4 describes the distribution of subjects according to Quality of Life Score. Gender wise the mean score of quality of life was 80.5 ±11.3 in male subjects as compared to 75.8 ± 9.6 in female subjects. The difference was found to be statistically significant (f = 10.705, p=0.001). Subjects belonging to schedule caste category had mean quality of life score 75.6 ± 10.4 as compared to mean score of 80.8 ± 10.4 in non-schedule caste(f = 13.78, p = 0.00). Regarding educational status, the quality of life means score was 75.99 ± 10.08 in illiterate subjects. The difference between educational groups was found to be statistically significant (f=6.84,p=0.00).In respect to occupation of subjects, it was found that the quality of life score was 84.14 ±11.93 in agriculturists and 75.25 ± 9.56 in those not working. The difference between various occupations was found to be statistically significant (f=3.96, p=0.001).The mean score of quality of life was more in currently married (80.46 ±10.69) and living in extended families(70.31±9.29) and the difference was found to be significant (f=5.124, p=0.001).The mean score of quality of life was77.44 ± 10.61 in those staying in nuclear families, 82.31 ± 9.29 in those staying in extended families, 79.16 ± 9.99 in those living in joint families and 62.36 ± 11.38 in those living alone. The difference in between the groups was found to be statistically significant (F=10.23, p=0.00). The mean quality of life score was 79.24± 9.87 in those having adequate social support and 63.29±12.32 in those who were not adequately supported. The difference between the groups was found to be statistically significant (F=33.143, p=0.00).

DISCUSSION

The present study was a community based cross sectional study carried out over a period of one year i.e. from 1st March, 2007 to 29th February, 2008.conducted in rural field practice areas of the Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana. The total sample consisted of 220 subjects, 50.9% being male and 41.9% being female. The age wise distribution is in consonance with findings of Goel PK *et al* who reported a similar age distribution in their study

on the elderly in rural population of Merrut[6] reveals that 60% of the subjects were currently married and 35% of subjects were widow/widowers. The marital status seen in present study is similar to the figures reported in the 2001 Census.[4] In the present study nearly two third of the subjects were illiterate with women (61.0%) far out numbering men (39.0%). This significant difference (p=0.0013) is expected because of very low school enrolment rates that must have existed in rural areas in the pre independence era. The present study shows that more than half of subjects were involved in household work with females (64.2%) outnumbering men (35.8%).72.7% of subjects were living in joint families. This is expected in a rural setting, where the traditional system is still continuing and may be an important buffer to combat loneliness and promote social support. The present study shows that majority (61.8%) of the subjects were supported by family as far as their source of livelihood was concerned. This is in tune with the findings that 72.7% of the subjects (vide supra) were living in the joint family

Quality of Life

Quality of life (QOL) would be affected by a number of significant positive and negative life events and these life events may be related either to his family or society or community where he lives. The majority (68.2%) of elderly had good quality of life where as only 0.9% had poor quality of life. The male subjects in present study enjoyed a significantly (F=10.705, p=0.001) better quality of life as compared to the female subjects. Similar was the case between caste the non schedule caste (F=13.78, p=0.00) having a better quality of life. The present study also emphasizes the role of literacy in quality of life .Those subjects who were literate had a significantly better quality of life (F=6.84, p=0.00).The subjects who were in some kind of occupation scored better on quality of life scale when compared to the non working (F=3.96, p=0.001). This may be a measure of self worth of the subjects. Similarly currently married, those living in joint/extended families and having adequate social support, had a better quality of life. This all may be due to more social interaction and less loneliness. Joshi K also found a positive association between quality of life and occupation.[8] Barua A *et al*observed in their study on geriatric population that currently married had better quality of life than those divorced, widowed or separated **[26].**According to WHOQOL-OLD project males, married people and those with higher level of education have better quality of life.[10]

LIMITATIONS OF THE STUDY

Due to lack of time and resources we could not follow up the study. Misreporting and underreporting might increase with age and varies greatly with the disease considered. There are increased chances of recall bias in the study as it deals with elderly population. One possible source of biased reporting of medical conditions may arise from differential access and utilization of health care services by different segments of the population.

CONCLUSION

The study among the elderly in the rural area of Punjab, India has highlighted a rapid expansion in the elderly population. There is an urgent need to develop various schemes for better quality of life among elderly population all over the country.

RECOMMENDATIONS

The government agencies should carry out special surveys to identify the vulnerable aged and the deprivations suffered by them. Maintenance and Welfare of Parents and senior Citizens Act, 2007 should be implemented in letter and spirit. There is need to sensitize the community at large and the opinion group leaders, particularly about the special health needs of geriatric age group, particularly the females/widows. Panchayati Raj institutions should develop system for social protection in form of assuring old age pension from relevant sourceand supply of drugs from proper source. Itwas felt by researcher during the study thatthere was no involvement of panchayat or anyother opinion leader in taking care of the agedand the infirm. Appropriate and relevant indicators of health of the aged be developed, taking in to account the way in which the elderly perceive their quality of life and value their health. Evaluate reasons for failure of government tinstitutions to attract large number of elderly population. It is strongly recommended that qualitative studies should be carried for a focused and an in depth analysis of special health needs

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