


Original Research Article

Effect of impairment and disability on health related quality of life of elderly

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Abstract

Background: The old people are prone to chronic diseases such as cardiovascular illness, cardiovascular attacks, cancers, diabetes, diseases related to musculoskeletal and mental illness. These disorders affect the health related quality of life of elderly and do affect the burden on systems dealing with health in India.

Aim and objectives: To study the effect of impairment and disability on health related quality of life of elderly in urban areas.

Materials and methods: It was a cross-sectional study was conducted which was community based. For this study, delineated area which has around 200 households with approximately a population of 60,000 with mix of different religions, regional, social and economic statuses was taken. The study subjects selected were having age of above 60 years and both sexes were selected. 300 subjects were studied. **Results:** Out of a total 300 elderly, 110 males and 190 females were selected. The mean age of the subjects was 68 ± 7.9 years. With increase in age, the number of subjects decreased consistently. In all age groups, females were higher. For both sexes, the age distribution was uniform ($p > 0.05$). 85 % were Hindus, 5% were Muslims, 5% were Christians and 2.5% were Sikhs and rest were others. The largest group of study population were with impairment i.e. 48.5%. Of which females were having more impairment i.e. 55.8%. Females had the most self appraisal of their health i.e. 115 out of 190. The worsening of health seen in people who complained since last was higher as age increased ($P < 0.05$). HOQRL got worse as age increased. The difference in HOQRL scores in young-old and old-old were highly significant ($p < 0.001$). Males showed decrease in HOQRL scores as age increased and it was statistically significant across the age groups ($p < 0.05$).

Conclusion: It is concluded that there is an immediate need for specific preventive measures to be taken for protecting HOQRL among elderly people in India. Various health schemes and policies must be designed by the Government on seeing the findings.

Key words

Impairment, Disability, Urban areas.

Introduction

In the 20th century, across the world, the transition of demography had a leading role in the continuous increase in the elderly population. India is classified a country with aging population as it has 7.8% of its population aged more than 60 years [1, 2]. The old people are prone to chronic diseases such as cardiovascular illness, cardiovascular attacks, cancers, diabetes, diseases related to musculoskeletal and mental illness [3-5]. These disorders affect the health related quality of life of elderly and do affect the burden on systems dealing with health in India. So, HRQOL of the elderly was studied to know the most common morbidities and what effects it has on elderly.

Materials and methods

Cross-sectional study was conducted which was community based. For this study, delineated area which has around 200 households with approximately a population of 60,000 was taken. This area has a mix of different religions, regional, social and economic statuses. This study was conducted from January 2010 to March 2011. The study subjects selected were having age of above 60 years and both sexes were selected. 300 subjects were studied.

Results

Out of a total 300 elderly, 110 males and 190 females were selected. Out of 110 males, 70 were aged 60-68, 30 were aged 69-79, 10 were 80 and above. Out of 190 females, 120 were aged 60-68, 50 were aged 69-79, 20 were aged 80 and above. Out of total of 300, 190 were aged 60-68, 80 were aged 69-79, 30 were aged 80 & above. The mean age of the subjects was 68 ± 7.9 years. With increase in age, the number of subjects decreased consistently. In all age groups, females were higher. For both sexes, the age distribution was uniform ($p > 0.05$). 85 % were Hindus, 5% were Muslims, 5% were Christians and 2.5%

were Sikhs and rest were others. The largest group of study population were with impairment i.e. 48.5%. Of which females were having more impairment i.e. 55.8%. Females had the most self appraisal of their health i.e. 115 out of 190 (**Table – 1**).

The worsening of health seen in people who complained since last was higher as age increased ($P < 0.05$). HOQRL got worse as age increased. The difference in HOQRL scores in young-old and old-old were highly significant ($p < 0.001$). Males showed decrease in HOQRL scores as age increased and it was statistically significant across the age groups ($p < 0.05$). The elderly who had no disability or impairment had high HOQRL scores when compared to those who had impairment or disability (**Table – 2, Graph – 1**).

Discussion

In our study, the proportion of elderly had decreased as age increased. Chandrakant Lahariya, et al. [6], have done a study which was a community-based cross-sectional study on elderly, selected by cluster sampling from central Delhi, India, was conducted from April 2005 to February 2006. A pre-tested, semi-structured questionnaire, along with Short Form -36 (SF-36) survey was used for data collection. The data was analyzed using Chi square and student's *t* test on SPSS v12 statistical software. *P* value of less than 0.05 was considered statistically significant. The results were a total of 200 elderly were included in the study. 71.5% subjects had at least one disability/impairment. Around 40% subjects reported their health being poor and another 50% of worsening of their health in the last 1 year. HRQOL score for people with and without chronic morbidity/disability was 51.8 and 73.5, respectively ($P < 0.05$), with overall mean score $56.7 (\pm 17.2)$. The most commonly affected HRQOL domains were Role Physical, Physical

Functioning, and General Health. The HRQOL and domain scores decreased with increasing age, and females had lower mean scores than males ($P < 0.05$). This study concluded that the HRQOL of elderly in urban India is severely affected by impairments and disabilities. There is an immediate need for specific preventive and rehabilitative measures targeted on elderly to maintain their health related quality of life. This information may be utilized for designing any policy and/or program targeted for elderly in India and in other similar settings. In Goel, et al. [7] study, the similar trend was seen however the results are 47.2% of their subjects were between 60 and 69 years, 37.8% in 70–79 years, and 15.0% 80 years and above of age. In Chadha, et al. [8] study, on urban elderly where 60.4% were young old, and 31.6% and 8% were old-old and oldest-old respectively. In both of these studies, the gender distribution was also similar to our study. Both the studies were conducted in urban areas. Ajediran I Bello, et al. [9], have conducted a study in which Seventy elderly people who have been cured of leprosy but were undergoing socio-economic rehabilitation at three selected Leprosaria in the southern part of Ghana, were involved in this study. They comprised 31 female and 39 male adults with leprosy-related residual impairment and disability. The main outcome measure was a standardised HRQOL questionnaire which comprised physical functioning, role functioning, social functioning, cognitive functioning, health perception and pain. Descriptive statistics of mean and standard deviation were used to summarize the data whilst relationships and comparisons among and between the variables were evaluated using linear regression analysis and independent t-test respectively. Alpha level was set at $P = 0.05$. The results were The mean age of the participants was 59.7-13.5 years. The overall mean score of the subjects (40.9-7.6) on the six domains of the questionnaire was below average. The highest and lowest mean scores were obtained in social functioning (56.9-20.1) and physical functioning (15.0-25.1) domains respectively. All the domains were significantly and

positively correlated ($P = 0.05$) with the overall HRQOL scores. Age had no significant relationship ($P = 0.05$) on any of the domains and the overall HRQOL scores. Male participants scored significantly higher ($P, 0.05$) than their female peer on cognitive functioning and HRQOL. This study demonstrated low QOL among the sampled elderly people affected by leprosy at the selected leprosoxia, thus stressing the need for measures that could improve their health and socio-economic status within the settlements. Vani Madhavi Kommula, et al. [10], have conducted to study the health status of the elderly people in the rural area. The study design was a cross sectional study. The setting was a rural field practice area of Konaseema Institute of Medical Sciences (KIMS), Andhra Pradesh, India. The selected subjects were 100 subjects out of which 50 were males and 50 were females of age ≥ 60 years. The study variables were Age, educational status, marital status, economic dependence, self-rating of health status, common disabilities. The statistical analysis was it was done using Epi-info version 7.0. The results were majority (68%) were in the age group of 60 – 69 years, 58% were illiterate, 27% were widowed, 62% were economically fully dependent on their children, majority (42%) of the participants self rated their health status as poor. This study concluded that educating people regarding time management and safety precautions is necessary for reducing domestic accidents.

Conclusion

The higher number of impairments and disabilities are among elderly population in India and its increasing drastically. The decrease in HOQRL is due to limited availability of health facilities which worsen the conditions of elderly. It is concluded that there is an immediate need for specific preventive measures to be taken for protecting HOQRL among elderly people in India. Various health schemes and policies must be designed by the Government on seeing the findings of the

present study.

Table – 1: Age and sex distribution, physical disabilities, self-appraisal of health.

Age (in years)	Sex		Total (%)
	Males (%)	Females (%)	
60-68	70 (63.63)	120 (63.15)	190 (63.33)
69-79	30 (27.27)	50 (26.32)	80 (26.66)
80 & above	10 (9.09)	20 (10.53)	30 (10)
Total	110 (100)	190 (100)	300 (100)
Magnitude of physical disability in study population			
No disability/ impairment	35 (31.81)	45 (23.68)	80 (26.66)
Impairment	60 (54.55)	115 (60.53)	175 (58.33)
Disabled	15 (13.64)	30 (15.79)	45 (15)
Total	110 (100)	190 (100)	300 (100)
Self-appraisal of health			
Excellent	10 (9.09)	2 (1.05)	12 (4)
Very Good	45 (40.91)	24 (12.63)	69 (23)
Good	30 (27.27)	115 (60.53)	145 (48.33)
Fair	20 (18.18)	45 (23.68)	65 (21.66)
Poor	5 (4.55)	4 (2.11)	9 (3)
Total	110 (100)	190 (100)	300 (100)

Table – 2: HRQL scores and disability.

	Physical functioning	General Health	Vitality	Social functioning	Physical	Emotional	Bodily Pain	Mental Health
No Disability/ impairment	89.75 ± 13.9	70± 17.3	82± 18.6	50 ± 15.2	65± 14.8	79± 13.7	74± 12.8	80± 11.8
Any impairment	57.75 ± 12.8	66± 11.7	52± 12.7	45 ± 17.4	53± 12.8	67± 19.1	74± 10.2	48± 12.7
Any Disability	48.52 ± 14.5	37± 15.8	35± 14.1	36 ± 13.7	25± 16.8	59± 10.7	62±16.7	20± 12.9
Domain Scores	63.75 ± 11.0	53± 10.7	57± 14.9	52 ± 12.3	62± 11.4	66± 12.8	63± 17.8	62± 12.9

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Graph – 1: Quality of life scores according to age and sex.

