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## **A study of quality of life in elderly**

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**Abstract**--Background: A very few studies have been conducted to assess the QOL among elderly in India. Many studies, however, were conducted on QOL among elderly in other countries. This study is an attempt to unravel the variables affecting the old age people residing in the rural areas of coastal Karnataka. This may serve as a baseline data and help in future planning of the services for this section of elderly population. Aims and Objectives: To Study the Quality of Life in Elderly. Materials and Methods: Study design: This was a community based cross sectional study. Study period: The study was conducted over a period of one year, from Jan 2021 to Dec 2021. Study area: The study was conducted in neighbouring villages utilizing the health services of Rural field practice area, Department of Community Medicine, K.S.Hegde Medical Academy. Results: Majority of the study subjects felt they enjoy a good quality of life (63.9%). Conclusion: The overall mean scores in Physical and Psychological domains of the study subjects were higher compared to Social and Environmental domain.

**Keywords**---elderly, quality, life, India, coastal population.

### **Introduction**

According to World Health Organization (WHO), “Quality of life is defined as individual’s perceptions 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.”<sup>1</sup> It is a vast concept covering the individual's physical

health, mental state, social relationships and their relationship to the environment. Health of an individual is an important factor that plays a major role in deciding the quality of life. The WHO - quality of life (QOL) assessment questionnaire was developed by the WHOQOL Group in an attempt to develop a tool for assessment of quality of life that would be applicable cross-culturally.

WHO's initiative to develop a quality of life assessment necessitated because:

1. In recent years there has been a broadening of focus in the measurement of health, beyond traditional health indicators such as mortality and morbidity, to include measures of the impact of disease and impairment on daily activities and behavior, perceived health measures and disability/functional status measures.
2. The increasingly mechanistic model of medicine, concerned only with the eradication of disease and symptoms, reinforces the need for the introduction of a humanistic element into health care.

By calling for quality of life assessments in health care, attention is focused on this aspect of health, and resulting interventions will pay increased attention to this aspect of patient's well-being.<sup>1</sup> A very few studies have been conducted to assess the QOL among elderly in India. Many studies, however, were conducted on QOL among elderly in other countries. This study is an attempt to unravel the variables affecting the old age people residing in the rural areas of Coastal Karnataka. This may serve as a baseline data and help in future planning of the services for this section of elderly population.

### **Aims and Objectives**

To Study the Quality of Life in Elderly.

### **Materials and Methods**

Study design: This was a community based cross sectional study.

Study period: The study was conducted over a period of one year, from Jan 2021 to Dec 2021.

Study area: The study was conducted in neighbouring villages utilizing the health services of Rural field practice area, Department of Community Medicine, K.S Hegde medical Academy.

Study subjects: The study subjects consist of population aged 60 years and above residing in the study area.

Inclusion criteria: Individuals who were aged 60 and above residing in the study area and willing to give consent to be a part of this study.

Exclusion criteria: The study excluded those individuals who were:

- a) Individuals who are aged around 60 but age could not be validated that the age is above 60.
- b) Individuals who didn't want to reveal their details about their health.
- c) Families who refused to let their elderly family member to be a part of the study.

## WHO QOL BREF Scoring

Subjects were evaluated for assessment of quality of Life using WHO-QOL BREF questionnaire after obtaining permission from the division of Health Statistics And Informatics, WHO. WHOQOL-BREF questionnaire has been validated in more than 19 different languages and the English version of the same was used for the direct interview. *Subjects were required to answer the questions based on their life experience for the past two weeks.* The WHOQOL-BREF collects 26 scores and the first two questions evaluate self-perceived quality of life and satisfaction with health. The remaining 24 questions represent each of the 24 facets of which the original instrument is composed WHOQOL-100.

The WHOQOL-BREF contains five Likert style response scales: “very poor to very good” (evaluation scale), “very dissatisfied to very satisfied” (evaluation scale), “none to extremely” (intensity scale), “none to complete” (capacity scale) and “never to always” (frequency scale)<sup>2</sup>. Each domain is made up of questions for which the scores vary between one and five. All these four domain scores are scaled in a positive direction with higher scores reflecting a higher quality of life. Three items, question numbers 3, 4 and 26 are scored in a negative direction. So the scores need to be reversed. Recoding of Q3, Q4 & Q26 scores is by substitution of values to (1=5) (2=4) (3=3) (4=2) (5=1).

Guidelines for calculating the processed score from the raw score - If any one item’s score from the physical health or environment domains was missing, then that domain score should be calculated by substituting that subject’s-specific average from the completed items in that scale. If two or more items score is missing in these domains, the score should not be calculated for them. If any items score is missing in the psychological and social relationships domains, a domain score for that subject should not be calculated.

After item recoding and handling of the missing data, a raw score for each domain is computed by a simple algebraic sum of each item’s score, in each of the four domains. Once completed, the new computed scores of each domain were checked for confirmation that the scores are within the expected range. The highest possible computed score ranges for each domain are as follows: physical health = 28, psychological = 24, social relationships = 12, and environment = 32. Following this, the computed score of each domain was transformed into score, ranging 0-100 scale using the formula:

$$\text{Transformed scale} = \frac{[(\text{Actual raw score} - \text{Lowest possible raw score}) \times 100]}{\text{Possible raw score range}}$$

The formula to compute transformed scores are,

$$\text{Physical (transformed)} = \frac{[(\text{domain 1} - 7) / 28] \times 100}$$

$$\text{Psychological (transformed)} = \frac{[(\text{domain 2} - 6) / 24] \times 100}$$

$$\text{Social relationship (transformed)} = \frac{[(\text{domain 3} - 3) / 12] \times 100}$$

$$\text{Environment (transformed)} = \frac{[(\text{domain 4} - 8) / 32] \times 100^{30}}$$

## Results

Figure 1: Perception about quality of life among study subjects (n = 440)

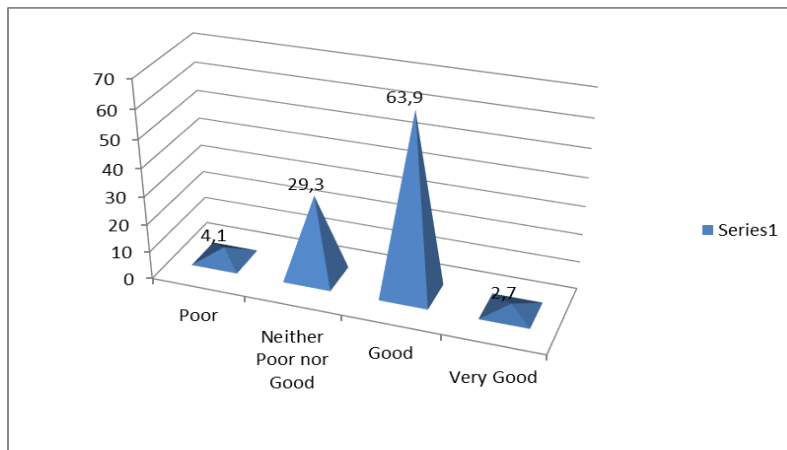


Figure 2: Perception about individual's health among the study subjects (n = 440)

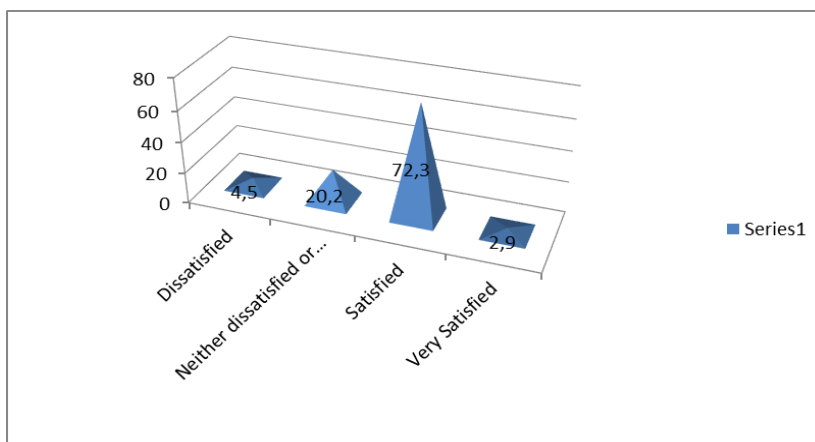


Table 1: Distribution of overall transformed scores among the subjects (Domain's maximum score = 100)

Domains	Mean	Standard deviation
Physical domain	63.18	11.38
Psychological domain	63.92	12.01
Social domain	40.85	10.24
Environmental domain	58.01	10.43

Table 2: Distribution of scores of various domains in quality of life with respect to gender

Descriptive	Domains							
	Physical		Psychological		Social		Environmental	
Sex	Median	Mean rank	Median	Mean rank	Median	Mean rank	Median	Mean rank
Male	64.23	238.2	66.67	237.1	41.67	235.5	59.37	229
Female	64.23	199.7	62.50	201	41.67	203.6	59.37	211
<i>Mann-Whitney U test</i>	U=19837 & p=0.002		U=20101 & p=0.139		U=20497 & p=0.006		U=20101 & p=0.139	

Table 3: Distribution of scores of various domains in quality of life with respect to age

Descriptive	Domains							
	Physical		Psychological		Social		Environmental	
Age	Median	Mean rank	Median	Mean rank	Median	Mean rank	Median	Mean rank
60-64	67.85	250.2	66.66	245.1	41.67	227.4	62.5	259.4
65-69	64.28	235.7	66.66	232.8	41.67	242	59.37	229.6
70-74	64.28	207.4	66.66	217	33.33	182.7	46.88	175.2
75-79	64.28	185.2	66.66	202.4	33.33	168.3	59.37	214.7
80+	60.71	164.7	58.33	156.7	41.67	237.4	56.25	162.5
<i>Kruskal Wallis Test</i>	$\chi^2 = 24.218$ df = 4 p <0.001		$\chi^2 = 20.916$ df = 4 p <0.001		$\chi^2 = 21.524$ df = 4 p <0.001		$\chi^2 = 29.927$ df = 4 p <0.001	

## Discussion

When it was about the subject's perception about overall health, none of the subjects were very dissatisfied. Around 20 (4.5%) of them were dissatisfied about their health status. 89 (20.2%) of the subjects were neither satisfied nor dissatisfied about their health. But majority of the subjects, 319 (72.3%) of the subjects were satisfied with their present health status and 13 (2.9%) subjects were very satisfied with their health status.

### Overall distribution of transformed score

The raw scores of WHO-QOL BREF was transformed into individual scores under the four domains, Physical domain, Psychological domain, Social domain and Environmental domain to the scores out of 100 and were assessed to the group, who scored better and who didn't among the group. The mean scores of the subjects under Physical domain was  $63.18 \pm 11.38$ . Under Psychological domain the mean score was  $63.92 \pm 12.01$ . Social dimension scores were  $40.85 \pm 10.24$  and the Environmental domain scores were  $58.01 \pm 10.43$ . To study the distribution of scores and differences between each domain, non-parametric tests were applied. Under Physical domain, male subjects had better scores than female subjects and this difference in scores was statistically significant with  $U = 19837$  &  $p = 0.002$ . Male subjects scored better in the rest of the three domains also. But statistically significant difference was found only in social domain with  $U=20497$ ,  $p = 0.006$  and in Psychological and Environmental domain, no significant difference was found. This might be due to the fact that in our male dominant society, generally males enjoy better privileges in comparison to females, which might be the reason for males scoring better than females. Similar results were seen in a study done by Qadri S *et al*, the quality of life scores were better among elderly males in all the domains ie; physical, psychological, social and environmental respectively as compared to elderly females<sup>3</sup> In a study, done by Hameed S *et al*, also where elderly males scored better than female counterparts in all the four domains. Statistically significant difference, however, was seen in social domain only.<sup>4</sup> In contrast to the present study, a study done by Barua A *et al*, in the year 2003 to study the quality of life of geriatric population, the mean scores in each of the 4 domains for both males and females were found to be similar. The difference between the two groups was not found to be statistically significant for any of the 4 domains.<sup>5</sup> When the study subjects were categorized into age groups with an interval of 5 years and analyzed, statistical significance was found between the groups in all four domains. The age group of 60 to 64 years scored better in Physical domain, with a statistical significant difference between the age categories of  $\chi^2 = 24.218$  and  $p < 0.001$  and scores depreciated among the categories with increasing age, with those above 80 years scoring the least in Physical domain. Similar trend was seen in Psychological domain even, where the age group of 60 to 64 years scored better than the rest of the age categories, with a statistical significant difference between the age categories of  $\chi^2 = 20.916$  and  $p < 0.001$  and the those from 80 years and above scored the least. In social domain, the age category of 65 to 69 years scored better than the rest of the categories and the category of 75 to 79 years scoring the least. There was a statistically significant difference between the categories with  $\chi^2 = 21.524$  and  $p < 0.001$ .

In Environmental domain, the age category of 60 to 64 years scored better than the rest other categories and the category of 80 years and above scoring the least. Again, there was a statistically significant difference between the categories with  $\chi^2 = 29.927$  and  $p < 0.001$ . In a study done by Mudey A *et al*, the physical domain score was  $61.95 \pm 10.72$  amongst 60-69 years as compared to  $55.18 \pm 9.71$  amongst rural geriatric above 70 years. The psychological domain score amongst rural elderly between 60-69 years was  $55.08 \pm 8.48$  as compared to  $50.78 \pm 7.26$  in those above 70 years of age. The difference in physical and psychological

domain scores, with respect to age was statistically significant.<sup>6</sup> In a study done by Chandrika S *et al*, in Vishakapatnam, as age increased the mean QOL scores of physical, psychological, and social domains were decreasing and it was found to be statistically significant and mean QOL score of environmental domain was also decreasing but it was found to be not statistically significant.<sup>7</sup> In a study done by Sowmiya KR at Mettupalyam, the age category of 60-69 years had better QOL scores in all 4 domains, when compared to 70-79 years and 80 & above.<sup>8</sup>

## Conclusion

The overall mean scores in Physical and Psychological domains of the study subjects were higher compared to Social and Environmental domain.

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