Original Research Article

Assessment of quality of life and co-morbidities among elderly population living in Rewa City

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Abstract:

Background & Method: The aim of present study is to assessment of quality of life and co-morbidities among elderly population living in rewa city. Multistage sampling was done for taking the samples, among 45 wards in the city, randomly 30 wards were selected. With the help of voter list, 10 males and 10 females were selected from each ward randomly, so that the sample size of 600 can be met.

Result: The mean scores were high in Environmental and Social relationship i.e., 51.54 and 52.34 respectively, but no statistically significant association WHO-QOL BREF with cardiovascular system was found. Majority of females 158 (62.45 %) were accompanied by someone to the health facility for their treatment and only 113 (41.24%) males were accompanied by someone. It was found to be statistically significant. A little higher preference of government hospital among both males 176 (58.66%) and females 168(56%).

Conclusion: Considering the lack of studies regarding quality of life and its associated factors of elderly in our community and in this region, this study was conducted in Rewa city and was aimed at measuring the Quality of life using WHO QOL BREF tool with permission by the WHO and assessment of various health related problems among the elderly population who were 60 and above. While old age is in itself one of the associated factor for various morbidities, other factors such as socio-demographic profile, BMI, working status, educational status, behaviour towards seeking care towards the chronic diseases etc were assessed in view of knowing the potential associations.

Keywords: quality, co-morbidities, population & living.

Study Design: Cross-Sectional study.

1. INTRODUCTION

Ageing is a continuous, irreversible, universal process, which starts from conception till death of an individual. However, the age at which one's productive contribution declines and becomes economically dependent can probably be treated as onset of the aged stage of life.[1]

Today, for the first time in history most people can expect to live into their 60s and beyond.[2] In low- and middle-income countries, this is largely the result of large reductions in mortality at younger ages, particularly during childhood and childbirth, and from infectious diseases.[3] In high-income countries, continuing increases in life expectancy are now mainly due to declining mortality among those who are older.[4]

National Elderly Policy defines person of 60 and above as elderly. India, the world's second most populous country, has experienced a dramatic demographic transition in the past 50 years, entailing almost a tripling of the population over the age of 60 years. Age division of Indian population is (0-14) 30.8%, (15-59) is 60.3% and (60+) is 8.6%.

According to Population Census 2011, there are nearly 104 million elderly in India. It has increased from 5.5% in 1951 to 8.6% in 2011 and projected a rise of approximately 19% by 2050. As regards rural and urban areas, more than 73 million persons i.e., 71% of elderly population resides in rural areas while 31 million or 29% of elderly population are in urban area.[5] Out of the total Rewa population of 23.65 Lakhs, 16.73 percent lives in urban regions of district. In total 395,785 people lives in urban areas of which males are 207,261 and females are 188, 524, approx. 7.5 % is of elderly.[6] WHO defines Quality of Life as an individual's 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.[6]

The factors such as age of the individual, gender, marital status, living status, education, occupation, socioeconomic status, interaction with people etc determines the Quality of life of elderly.[7] Common conditions in older age include hearing loss, cataracts and refractive errors, back and neck pain, osteoarthritis, chronic obstructive pulmonary disease, diabetes, depression and dementia. As people age, they are more likely to experience several conditions at the same time. Older age is also characterized by the emergence of several complex health states commonly called geriatric syndromes. They are often the consequence of multiple underlying factors and include frailty, urinary incontinence, falls, delirium and pressure ulcers. Older people also contribute in many ways to their families and communities. Yet the extent of these opportunities and contributions depends heavily on one factor: health.

2. MATERIAL & METHOD

This study was conducted to assess the quality of life and co-morbidities among the elderly population of Rewa city on 60 years and above elderly residing in Rewa city from January 2021 to September 2022.

Multistage sampling was done for taking the samples, among 45 wards in the city, randomly 30 wards were selected. With the help of voter list, 10 males and 10 females were selected from each ward randomly, so that the sample size of 600 can be met.

After clearance from institutional ethical committee, wards were visited and elderly aged 60 years and above were approached. House-to-house visit was done and interviewed until the desired number of samples was achieved. The participants were briefed about the study and its purpose of conduction. After informed consent and assuring full confidentiality of the study participants, interviews were carried out using pre-structured and pre-tested questionnaire. WHO questionnaire containing 26 items was used to evaluate the quality of life in elderly population with permission from WHO. House to house various domain and their associated factors were evaluated. Health seeking behaviour was evaluated using a questionnaire and was evaluated using statistical analysis.

Inclusion Criteria:
- Elderly population of age 60 years and above
- Residents of Rewa
- Participants willing to be part of study

Exclusion criteria:
- Those who refused to participate in the study or those who were unable to answer the assessment questionnaire due to serious hearing problems or severe communication disorder.
- Guests visiting the household.

3. RESULTS

Table 1: Age-Wise Distribution of Study Participants

Age (years)	Male (%)	Female (%)	Total
60-74	249 (83)	262 (87.33)	511 (85.16)
75-84	49 (16.33)	34 (11.33)	83 (13.83)
85 and above	2 (0.66)	4 (1.33)	6 (1)
Total	300 (100)	300 (100)	600 (100)

Table 1 shows that majority of study participants 511 (85.16%) were in the age group of 60-74 years and only 6 (1%) in the age group of ≥85 years.

Table 2: Religion-Wise distribution of study participants:

Religion	N= 600	Percentage
Hindu	542	90.3
Muslim	52	8.6
Christian	2	0.3
Sikh	4	0.7

Table 2 and figure 2 shows that the majority 542 (90.3%) of study participants were Hindu, 52 (8.6%) were Muslims, 2 (0.3%) were Christians and 4 (0.7%) were Sikh.

Table 3: Domain wise QOL Score of study participants (N=600):

WHOQOL-BREF Items/Domains	Mean (Raw)Score	Standard Deviation
Q1 Overall QOL	3.40	0.877
Q2 General health	3.28	1.29
DOMAIN 1: PHYSICAL HEALTH	**20.05**	**7.026**
Q3 Physical pain	2.47	0.753
Q4 Medical treatment	2.75	0.963
Q10 Energy	2.77	1.02
Q15 Mobility	3.21	1.09
Q16 Sleep	2.92	1.09
Q17 Daily living activities	2.99	1.07
Q18 Working capacity	2.94	1.04
DOMAIN 2: PSYCHOLOGICAL HEALTH	**16.83**	**5.85**

Q5 Life enjoyment	2.73	0.94
Q6 Meaningfulness of life	3.06	1.03
Q7 Concentration	2.81	1.00
Q11 Bodily appearance	3.02	**0.98**
Q19 Self-satisfaction	3.06	1.16
Q26 Negative feelings	2.15	0.72
DOMAIN 3: SOCIAL RELATIONSHIPS	**9.32**	**2.24**
Q20 Personal relationship	3.19	1.17
Q21 Sex life	3.05	1.07
Q22 Social support	3.08	1,16
DOMAIN 4: ENVIRONMENT	**24.01**	**8.58**
Q8 Day-to-day safety	2.98	0.99
Q9 Physical environment	2.93	1.01
Q12 Financial resources for needs	2.96	1.04
Q13 Daily information	3.00	1.01
Q14 Leisure activities	2.85	1.14
Q23 Home environment	3.11	1.12
Q24 Access to health	3.16	1.10
Q25 Transport facility	3.02	1.17

Table 3 shows the raw mean score for WHOQOL-BREF items/domains and it was observed that mean score for environmental domain was maximum (24.01 + 8.58) and was minimum for the social relationship domain (9.34 + 2.24)
Study Participants Overall Perception and Satisfaction about their Quality of Life and Health (Question No.1 and 2 of WHOQOL-BREF SCALE)

Table 4: Association of QOL with various age groups:

QOL Domains	Age groups	Mean	Standard Deviation	p-Value
DOM1 (Physical)	60 to 74 years	54.3	18.16	**.055**
	75 to 84 years	43.7	16.99	
	85 and above	47.2	8.59	
DOM2 (Psychological)	60 to 74 years	45.6	15.97	**.484**
	75 to 84 years	43.4	14.39	
	85 and above	45.8	11.53	
DOM3 (Social Relationship)	60 to 74 years	52.9	25.90	**.441**

	75 to 84 years	48.9	24.94	
	85 and above	51.0	30.84	
DOM4(Environmental)	60 to 74 years	52.0	21.94	**.310**
	75 to 84 years	48.1	20.96	
	85 and above	50.3	26.53	

Table 4 shows that participants of age group 60 to 74 years had better mean scores in all four domains as compared to other age group among. QOL was found to be statistically significant with physical domain, (P value on Annova test .055).

Table 5: Association of QOL with Socio-Economic Status:

QOL Domains	Socio-Economic Status	Mean	SD	P-Value
DOM 1 **(Physical)**	Upper	39.6	18.9	**.209**
	Upper Middle	45.4	17.5	
	Middle	48.0	18.1	
	Lower Middle	47.2	17.7	
	Lower	43.4	18.9	
DOM 2 **(Psychological)**	Upper	39.0	16.2	**.209**
	Upper Middle	44.7	16.2	
	Middle	45.9	15.8	
	Lower Middle	46.1	15.4	
	Lower	42.6	13.0	
DOM 3 **(Social Relationship)**	Upper	44.0	25.1	**.326**
	Upper Middle	51.8	26.1	
	Middle	53.8	25.8	
	Lower Middle	52.6	25.5	
	Lower	46.0	26.6	
DOM 4 **(Environmental)**	Upper	40.9	15.1	**.019**
	Upper Middle	51.6	21.1	
	Middle	52.8	22.5	
	Lower Middle	51.6	21.1	
	Lower	47.7	20.6	

Table 5 shows that the participants of middle socio-economic status have good mean score among all the four domains. Out of all four domain, environmental domain had highest score.

Table 6: Association of QOL with Cardiovascular System:

Cardiovascular		Mean	Std. Deviation	F	P value
DOM 1 (Physical)	Yes	46.41	16.579	0.063	0.803
	No	46.86	18.332		
	Total	46.77	17.974		
DOM 2 (Psychological)	Yes	44.77	14.633	0.186	0.666
	No	45.46	15.997		
	Total	45.32	15.718		
DOM3 (Social relationship)	Yes	51.13	22.496	0.341	0.559
	No	52.66	26.615		
	Total	52.34	25.814		
DOM4 (Environmental)	Yes	49.54	20.472	1.287	0.257
	No	52.05	22.196		
	Total	51.54	21.861		

Table 6 shows that the mean scores were high in Environmental and Social relationship i.e., 51.54 and 52.34 respectively, but no statistically significant association WHO-QOL BREF with cardiovascular system was found.

Table 7: Distribution of Study Participants according to their financial dependency:

Financial dependency	Male (N=300)		Female(N=300)		Total(N=600)	
	No.	%	No.	%	No.	%
Pension	89	29.66	4	1.33	93	15.5
Family member	217	72.33	244	81.33	461	76.83
Savings	37	13.33	23	7.66	60	10
Other sources	95	31.66	34	11.33	129	21.5

Table 7 shows that family members (76.83%) were most common source of social security. (15.5%) of study participants received some kind of pension, most commonly seen in males (29.66%) and only (1.33%) females.

Table 8: Distribution of Study Participants for treatment profile with Chronic Disease:

Gender	Treatment of Chronic Disease	
	Regular	Irregular
Male (N=274)	163 (59.48%)	111 (40.51%)
Female(N=253)	107 (42.29%)	146 (57.70%)
Total(N=527)	270 (51.23%)	257 (48.76%)

Table 8 shows that among male's 163 (59.48%) participants were taking treatment for chronic disease, while among females' majority 146 (57.70%) were not taking treatment regularly.

Table 9: Distribution of Study Participants on the basis of treatment Seeking for Chronic Illness in Regards of Accompanying Person:

Gender	Accompanying Persons			
	Yes, always	Yes, occasional	No	
Male (N=274)	113 (41.24%)	142 (51.82%)	19 (6.93%)	
Female(N=253)	158 (62.45%)	91 (35.96%)	4 (1.58%)	
Total(N=527)	271 (51.42%)	233 (44.21%)	23 (4.36%)	
Chi Sqaure= 27.62, p= <.05				

Table 9 shows that majority of females 158 (62.45 %) were accompanied by someone to the health facility for their treatment and only 113 (41.24%) males were accompanied by someone. It was found to be statistically significant.

Table 10: Health facility preferred by the elderly:

Gender	Government Hospital	Private Hospital
Male (N=300)	176 (58.66 %)	124 (41.33%)
Female (N=300)	168 (56%)	132 (44%)
Total (N=600)	344 (57.33%)	256 (42.66%)

Table 10 shows that there is a little higher preference of government hospital among both males 176 (58.66%) and females 168(56%).

4. DISCUSSION

In the present study 242 (40.3%) participants were found to have good perception about overall health and 171(28.5%) were neither satisfied nor dissatisfied about their overall health. There was no statistically significant difference in the quality of life among males and females in our study. In psychological domain females had better quality of life as compared to males.

In age group of 60 to 74 years the mean score was highest in physical domain, this indicates that medication on time for various illness, better mobility, good sleep, and working capacity have great influence on their quality of life and among all four domains their quality of life was better as compared to other age groups in our study, this shows that the quality of life reduces with increasing age. Similarly, a study by Debnath A et al.[8] observed that more than 70 years. had 43.5% lesser chance of having good QOL than those aged 70years or less [P=0.027]. Similar results were seen in a study done by Sanya R et al 2020.[9] it was seen that 100(54.5%) participants were having perception about their quality of life as neither good nor poor and regarding their overall health 74(36.6%) participants were 'neither satisfied nor unsatisfied. In the study done by Rajasi R et al.[10] mean score for QOL was 177.42 (standard deviation 69.7). Highest mean score was seen in physical domain (mean was 49.5 and standard deviation 22) followed by environmental domain (mean was 47.38 and standard deviation 17) and then social domain (mean was 43.7 and standard deviation 18) where the proportion of elderly women falling under "very poor" QOL were 16.2%, and 14.4%, respectively.

In the present study it was seen that the participants belonging to middle socio-economic status had better quality of life and other socio-economic class had average quality of life according to the mean score. In the study of Kumar D et al.[11] it was reported that the QOL of upper socio-economic status was better than middle and lower socioeconomic status

Present study observed that higher the educational status better is the quality of life, similar results were seen in study, it was observed larger the number of years of education, the higher quality of life assessed by the participants in all 4 domains, though statistically not significant

Visual impairment had more impact on the quality of life among the participants with lowest mean score in physical and psychological domains 46.77 and 45.32 respectively. This indicates that there is a need to take care of visual impairment of elderly in order to improve their quality of life as it impacts their self-esteem and daily activities. The effect of various chronic disease was quite significant in all the four domains of QoL i.e., physical, psychological, social and environmental, this means that there is a need for more attention on the treatment of various morbidities with or without age related and increase in daily living activities.

In the present study it was found that 59.48% males and only 42.29% females were taking regular treatment for their chronic disease. This result may be because females are more engaged in household activity and neglect their ailments. Majority of females out of 527 participants seeking treatment for chronic illness 158(62.45%) were always accompanied by either their son, daughter, husband or any other family members in comparison to 113(41.24%) males. Government health facility was preferred by almost 344 participants. Such results were observed due to their thinking of availability of more qualified doctors as well as more preference for free of cost medication provided by government supply. It was also observed that 56.1% of participants preferred allopathic medication as compared to only 9.33% who were taking homeopathic treatment and 34.5% preferred other basis of treatments like traditional healers etc. Such results may be seen due to better relief and good results seen by taking allopathic medication. Similar results were observed in the study done by Agboola BD et al 2022.[12] who observed that 73.7% participants had nearby health facility and 57.7% did not visit traditional healers for treatment when sick. In the study of Banerjee S et al.[13] Urban elderly people mostly avail the services of the private doctors/ clinics (43.5%).In a study conducted by Gupta E et al 2019.[14] it was found that 77.7% of the participants preferred allopathic treatment, two fifth preferred private health facility and one third preferred government health facility. In study of Dharmaraj R et al 2018.[15] it was seen that majority of participants took treatment when they fell ill whereas 40.4% were taking treatment once in a month. Study done revealed that 51.8% preferred allopathic medicine for their illness, 37.8% used both allopathic and AYUSH medication for their problems, 48.7% went to government health facility which include medical college and urban health centre. Similar results were seen in a study of where majority of participants preferred allopathic medication and in case of chronic disease, majority of them (53.18%) also preferred government hospital.

5. CONCLUSION

Considering the lack of studies regarding quality of life and its associated factors of elderly in our community and in this region, this study was conducted in Rewa city and was aimed at measuring the Quality of life using WHO QOL BREF tool with permission by the WHO and assessment of various health related problems among the elderly population who were 60 and above. While old age is in itself one of the associated factor for various morbidities, other factors such as socio-demographic profile, BMI, working status, educational status, behaviour towards seeking care towards the chronic diseases etc were assessed in view of knowing the potential associations.

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