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Evaluation of association between the quality of life of urban senior citizens living in the slum area and their socio-demographic factors: A community-oriented approach

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ABSTRACT

Introduction: Factors influencing the quality of life (QoL) of senior citizens are many. We evaluated the factors affecting various domains of quality of life in this vulnerable population.
Materials and Methods: A community-based survey was conducted in the Thane District of Maharashtra state, India amongst 427 individuals above 60 years of age. A pre-validated World Health Organization quality of life questionnaire (WHOQOL-BREF) followed by personal interviews was used.
Results: Overall a lower QoL was observed amongst the study participants. Advanced age, female gender, informal education, economically dependence on the family members, low socio -economic status and those with multiple health problems were observed to be associated with poor QoL.
Conclusion: We have identified factors significantly associated with poor QoL amongst the senior citizens living in a slum area. Interventions targeting this vulnerable population (particularly with risk factors) should be explored for their utility in improving the QoL.

1. Introduction

Population structure is changing rapidly with an increase in the elderly subgroup with the model prediction of nearly doubling of this subpopulation by 2050. Individuals above 60 years of age constitute around 8.6% in India according to 2011 census.

Ageing is an inevitable natural phenomenon associated with many physical, psychological, social, spiritual, and environmental changes with a potential to affect the quality of life (QoL).[1] One of the most important sustainable development goals enlisted in many of the government policies is to provide healthcare to ensure optimal QoL. Healthy older adults form an important resource for their family, society, and the national economy according to the WHO Brasillia Declaration on Ageing 1996. [1]On the other hand, elderly population has also been considered as a significant burden to the family and the society posing challenges to all the nations.[2] Studies have identified risk factors such as gender significantly influencing the QoL in this subpopulation.[1]

It is important to identify risk factors affecting QoL in the elderly population so that health policies can be devised targeting education, housing, women empowerment, employment, and improving social support.[3] It is imperative that differences in the populations, and healthcare delivery and societal support systems influence QoL. Hence, we carried out the present study to identify

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the overall QoL amongst this population residing in an urban slum area in one of the metropolitan cities in India. As a secondary objective, we have also evaluated the association between demographic characteristics and QoL in this vulnerable population.

2. Materials Methods

2.1. Study design and ethics

The present study was a community-based survey carried out in the area of Thane district of Maharashtra after obtaining approval from the Institutional Ethics Committee and consent from the study participants.

2.2. Study procedure

We included individuals of 60 years and above that were selected using simple random sampling technique. A structured, validated questionnaire was used in English and was also translated in local language (Marathi). Demographic characteristics including age, gender, education, family income, marital status, and whether economically dependent or not were obtained. A validated structured World Health Organization Quality of Life questionnaire (WHOQOL-BREF) was used to evaluate the quality of life after validation and assessment of the test-retest reliability in each of the field centre. The scale is a Likert scale with 26 structured questions covering four domains: physical condition, psychological condition, social relationships, and environmental domain. Each domain was assessed using a raw score that was transformed using the formula to 0 to 100 scale using the following formula:

Transformed score = {[(Actual raw score – lowest possible raw score)/possible raw score range] x 100}.

3. Statistical Analysis

Descriptive statistics were used for representing the demographic characteristics. Numerical variables were evaluated using analysis of variance (ANOVA) and Mann Whitney U test depending on the number of groups. With a significant mean difference of 10, type 1 error of 5% and power of 80%, sample size has been estimated to be 425. A p-value of < 0.05 was considered significant. SPSS version 22 was used for statistical analysis.

4. Results

4.1. Demographic characteristics

Four-hundred and twenty-seven participants were included and Table 1 summarizes the demographic characteristics of the study participants. Majority (72.52%) of the study participants were in the age group of 60-69 years. Kappa score of 0.9 was observed confirming the reliability of the

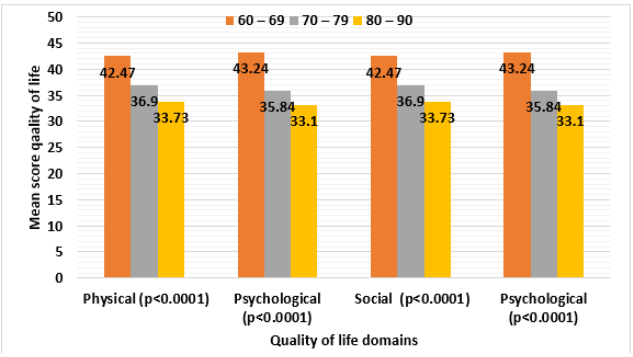

Fig. 1: Association between age with quality-of-life score of the study population.

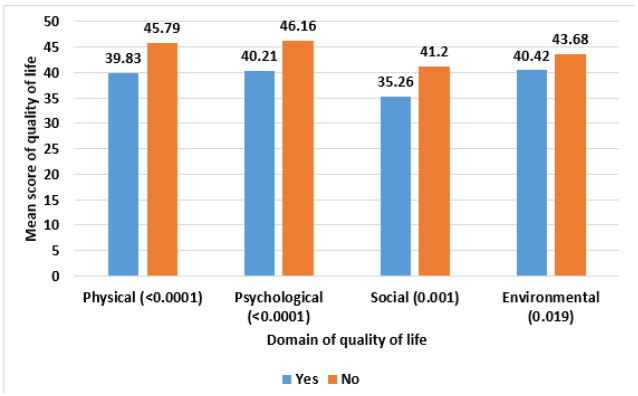

Fig. 2: Association between economic dependence with the quality of life amongst the study population.

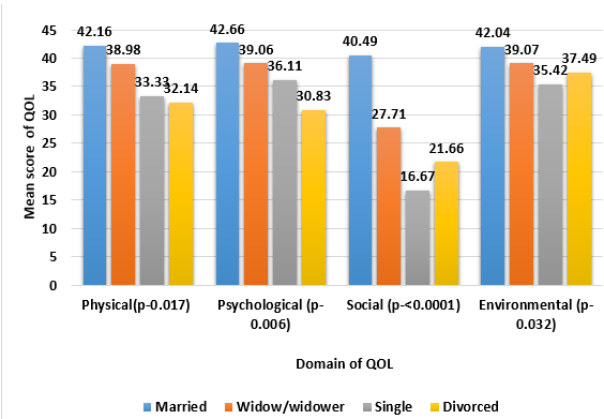

Fig. 3: Association between the marital status andquality of life score amongst the study population.

Table 1: Demographic characteristics of study participants.

Parameters	N (%)
Age (Years)	
60 – 69	331 (77.52)
70 – 79	78 (18.26)
80 & above	18 (4.22)
Mean age (Years)	64.87
Gender	
Male	154 (37.07)
Female	273 (63.94)
Education	
Non formal	168 (39.34)
Primary	75 (17.56)
Secondary	160 (37.47)
Higher secondary	17 (3.99)
Marital status	
Married	299 (70.02)
Widow/widower	120 (28.10)
Single	3 (0.70)
Divorced	5 (1.18)
Monthly family income (Rs)	
<5000	48 (11.25)
5001-10000	225 (52.69)
10001-15000	95 (22.25)
>15000	59 (13.81)

Table 2: Co-relation between WHOQoL domains score with age in the study population:

Variables		Physical score		Psychological score		Social score		Environmental score	
Age (Yrs.)	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
60 – 69	331	42.47	12.32	43.24	11.58	38.49	14.62	42.72	10.03
70 – 79	78	36.9	9.36	35.84	11.85	30.77	14.91	36.22	9.72
80 – 90	18	33.73	9.66	33.1	7.35	24.99	9.9	32.69	5.52
F Value		10.78		18.05		14.85		20.7	
P Value		<0.0001		<0.0001		<0.0001		<0.0001	

Table 3: Co-relation between WHO Quality of life domains score with genderin the study population

Variables		Physical score		Psychological score		Social score		Environmental score	
Gender	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Male	154	42.79	12.15	43.86	11.46	39.56	14.02	42.15	9.39
Female	273	40.12	11.84	40.11	12.02	34.79	15.26	40.52	10.71
MW test Z Value		1.88		2.65		3.4		1.56	
P Value		0.06		0.008		0.001		0.12	

QoL scale following test-retest validity.

4.2. Evaluation of the association of demographic characteristics with QoL

Age is found to be negatively correlated with QoL in all domains and was statistically significant ($p < 0.0001$; Figure 1). Similarly, better QoL scores were observed in males, particularly in psychological and social domains ($p < 0.001$; Table 2). Those who were educated were observed with statistically better QoL particularly in the social and psychological domains (Table 3). Similarly, those belonging to a better economic status had an enhanced quality of life in physical, psychological and social domains ($p < 0.05$). Also, those who were economically independent had a better QoL (Figure 2). Those married had a better QoL compared to those who were divorced and single (Figure 3). Those with multiple comorbid illnesses were observed with poor QoL ($p < 0.05$).

5. Discussion

We carried out the present study to evaluate the QoL and the associated factors determining the QoL in individuals aged 60 and above residing in a slum locality of the urban area in a metropolitan city in India. Age was observed to be significantly associated with QoL with a decline in the QoL with increasing age. This finding corroborates with a recent study by Datta et al.[4] Another study by Chandrika et al revealed a significant decline in all but environmental domain with advancement in the age.[5] Increasing health problems, loosing closely-related long term relatives and an increased risk of becoming economically dependent could possibly explain the poor QoL. Also, men were observed with better QoL compared to women. This is similar to the studies by Qadry et al and Joshi et al.[6,7] Lee et al evaluated the gender differences in quality of life among older adults from low- and middle-income countries in five countries namely, China, India, Ghana, Russia, and South Africa where men had a better QoL.[8] Variations in the cultural norms, social factors, and responsibilities may possibly explain this difference. The present study highlighted a statistically significant association with an enhanced QoL with an increase in the income similar to the study by Farzianpour et al in Iran.[9] Higher income is associated with a better access to healthcare facilities, social support and reduced time spent in social networking, all of which are associated with an enhanced quality of life.[10] Additionally, higher incidences of mental health disorders such as anxiety, depression and psychosis were observed in patients with lower income.[11] Also, those who were married were observed with a better QoL compared to single and widowed population in the present study which is in corroboration with a study by Mudey et al.[12] Those who were single or divorced were observed with a higher mortality and co-morbid disorders compared to married.[13] The present study has also observed that those with multiple concomitant disorders had a poor QoL.

5.1. Strengths and limitations

The present study is the first to be carried out in one of the largest states in India, particularly in a slum area present in an urban setting. However, the study is limited by cross-sectional design.

6. Conclusion

We observed that advancement in the age, male gender, married status, higher education, better economic situation, and absence of any co-morbid disorder were the crucial factors associated with a better QoL.

7. Source of Funding

None.

8. Conflict of Interest

None.

9. Acknowledgment

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