

# Quality of Life among Senior Citizens: A Comparative Study Across Age and Gender

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## Abstract

**Background:** Rapid population aging has increased the importance of assessing quality of life (QoL) among senior citizens to guide health and social policy. Gender and advancing age are known to influence multiple dimensions of well-being, yet region-specific evidence from India using validated multidimensional tools remains limited.

**Methods:** A descriptive cross-sectional study was conducted among 750 senior citizens aged 60–90 years residing in selected urban and rural areas of the Konkan Division, Maharashtra. Participants were selected using multistage sampling with probability proportionate to size. QoL was assessed using the Older People’s QoL questionnaire covering eight domains. Data were analyzed using descriptive statistics, independent t-tests, and Pearson’s correlation, with statistical significance set at  $P < 0.05$ .

**Results:** Most participants (68.27%) reported moderate QoL, while 19.6% reported good and 12.13% poor QoL. Females demonstrated significantly higher mean scores in health, home/neighborhood satisfaction, psychological wellbeing, financial circumstances, and leisure activities ( $P < 0.05$ ). No significant gender differences were observed in social relationships or perceived independence. Advancing age was significantly associated with declines in health, psychological well-being, financial satisfaction, home/neighborhood satisfaction, and leisure engagement, whereas overall life satisfaction, social relationships, and independence remained relatively stable.

**Conclusion:** Gender and age significantly influence specific QoL domains among senior citizens. Age- and gender-sensitive interventions focusing on health promotion, psychological support, and financial security are essential to enhance elderly wellbeing.

**Keywords:** Aging, elderly, gender differences, quality of life, well-being

## INTRODUCTION

The rapid growth of the global aging population has made the quality of life (QoL) of older adults an important public health priority.<sup>[1]</sup> In India, the proportion of individuals aged 60 years and above is steadily increasing and is projected to reach nearly

19% of the total population by 2050.<sup>[2]</sup> This demographic transition has significant implications for healthcare systems, social welfare planning, and economic policy. QoL in older age is influenced not only by physical health but also by psychological well-being, social participation, environmental conditions, and financial security.<sup>[3]</sup> Furthermore, these determinants often vary across age groups and between men and women due to socio-cultural roles and biological changes associated with aging.<sup>[4]</sup> QoL among senior citizens is widely recognized as a multidimensional construct encompassing physical functioning, emotional status, interpersonal relationships, independence, economic stability, and engagement in leisure activities.<sup>[5]</sup> Validated instruments, such as the older people’s QoL (OPQOL) scale enable comprehensive evaluation of these interconnected domains.<sup>[6]</sup>

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Despite initiatives aimed at improving geriatric care and social security, disparities in wellbeing persist, particularly in developing countries where structured multidimensional assessments remain limited.<sup>[7]</sup> In the Indian context, there is a scarcity of region-specific research utilizing standardized tools to examine variations in QoL among elderly populations.<sup>[8]</sup> Although policy discourse increasingly emphasizes active and healthy aging, gaps remain in understanding how QoL differs across age subgroups and between genders within the elderly population.<sup>[9]</sup> Many studies have focused predominantly on morbidity and clinical outcomes, with less attention given to psychosocial, environmental, and economic determinants of well-being. The Konkan Division of Maharashtra, characterized by its distinct socio-cultural profile and mix of urban and rural communities, offers a relevant setting for exploring these disparities. A systematic assessment using a validated multidimensional tool, such as the OPQOL scale can generate context-specific evidence to identify vulnerable subgroups and inform targeted interventions.<sup>[10]</sup> Such findings would support equitable resource allocation and the development of strategies aimed at enhancing overall well-being and promoting healthy aging among senior citizens. The objectives of the study were to assess the QoL among senior citizens, to compare QoL between male and female senior citizens, and to examine variations in QoL across different age groups of senior citizens.

## MATERIALS AND METHODS

### Study design and setting

This quantitative study employed a descriptive cross-sectional design to assess the QoL among senior citizens aged 60 years and above in the Konkan Division, Maharashtra. The study was conducted in selected urban and rural areas across the seven districts of the Konkan Division—Mumbai, Mumbai Suburban, Thane, Raigad, Ratnagiri, Sindhudurg, and Palghar.

### Study population

The study population comprised senior citizens aged 60 years and above residing in the selected communities of the Konkan Division.

### Sample size

The sample size was calculated using Cochran's formula for estimating proportions. Based on a previous study reporting a 53% prevalence of good QoL among elderly individuals ( $P = 0.53$ ), with a 95% confidence level and an allowable error of 5%, the minimum required sample size was 709. To compensate for possible non-response and improve representativeness, the final sample size was increased to 750 participants.

### Study duration

The study was conducted over 6 months, from January 2024 to June 2024.

### Sampling technique

A multistage sampling technique was adopted. In the first stage, all seven districts of the Konkan Division were included.

Talukas were selected using simple random sampling, followed by random selection of villages in rural areas and census-enumerated blocks in urban areas. Participants were stratified into urban and rural categories. The sample distribution across selected areas was determined using probability proportionate to size, ensuring proportionate representation based on the elderly population. Within each selected area, eligible participants were selected through stratified random sampling to minimize sampling bias and ensure fair representation.

### Eligibility criteria

Senior citizens aged 60 years and above who had been residing in the selected areas for at least 6 months and were willing to participate, were included in the study. Individuals who were critically ill, had severe cognitive impairment, or were unable to communicate effectively at the time of data collection were excluded.

### Data collection tool

Data were collected using the OPQOL questionnaire. The instrument assessed eight key domains of QoL:

1. Overall life satisfaction
2. Health
3. Social relationships
4. Independence
5. Home and neighborhood environment
6. Psychological and emotional well-being
7. Financial circumstances
8. Leisure activities.

### Ethical considerations

Ethical approval was obtained from the Institutional Ethics Committee (Ref. No. MGMIHS/RES.02/2022/43) before data collection. Administrative permission was secured from the concerned local authorities. Written informed consent was obtained from all participants after explaining the purpose and procedures of the study. Confidentiality and anonymity were maintained throughout the study, and participants were informed of their right to withdraw at any stage without consequences.

### Data analysis

Data were analyzed using appropriate statistical methods. Descriptive statistics, including mean and standard deviation, were calculated. Independent t-tests were used to compare gender differences in QoL domains. Pearson's correlation analysis was performed to examine associations between age and QoL domains. Statistical significance was set at  $P < 0.05$ .

## RESULTS

### Demographic characteristics of the sample

The demographic profile of the participants revealed that a majority (56.5%) were aged between 60 and 70 years, with a nearly equal gender distribution comprising 51.6% males and 48.4% females. Most of the participants were married (86.5%), and in terms of educational attainment, the largest proportion

(34.1%) had completed secondary education. Regarding religion, the majority identified as Hindu (91.9%), followed by Muslims (5.5%) and Christians (3.1%).

### QoL among senior citizens

Table 1 shows Overall OPQOL assessment among senior citizens revealed that 19.6% reported a good QoL, indicating high levels of satisfaction and well-being. A majority, 68.27%, experienced a moderate QoL, reflecting a balance of positive and negative factors influencing their daily living. In contrast, 12.13% reported a poor QoL, signifying considerable challenges adversely affecting their overall well-being.

Table 2 demonstrates that females consistently reported higher QoL scores than males across several domains. Females scored higher in overall QoL (mean = 10.83) compared to males (mean = 10.34), with a statistically significant difference. They also reported better health status (mean = 10.55 vs. 9.90;  $P < 0.001$ ), greater satisfaction with home and neighborhood (mean = 11.01 vs. 10.28;  $P < 0.001$ ), and significantly higher psychological and emotional well-being (mean = 10.03 vs. 9.66;  $P = 0.00138$ ). In addition, females reported more favorable financial circumstances (mean = 12.16 vs. 11.50;  $P < 0.001$ ) and higher participation in leisure activities (mean = 14.14 vs. 13.68;  $P < 0.001$ ). Overall, females scored significantly higher in multiple domains except

social relationships and independence, where no significant differences were observed.

Table 3 findings indicate that overall QoL, social relationships, and independence remained relatively stable across different age groups, showing no significant age-related differences. However, significant declines with advancing age were observed in health ( $P = 0.0034$ ), home and neighborhood environment ( $P = 0.0474$ ), psychological and emotional well-being ( $P < 0.0001$ ), financial circumstances ( $P < 0.0001$ ), and leisure activities ( $P = 0.0011$ ). Advancing age significantly affected health, psychological well-being, financial circumstances, home/neighborhood satisfaction, and leisure activities.

## DISCUSSION

The present study identified significant gender- and age-related variations in QoL among senior citizens. Females demonstrated higher mean scores in domains, such as health, home/neighborhood satisfaction, psychological wellbeing, financial circumstances, and leisure activities. These findings contrast with some international studies that report lower QoL among elderly women due to higher morbidity and socioeconomic disadvantages.<sup>[11]</sup> However, emerging evidence suggests that older women often develop stronger informal social networks and adaptive coping mechanisms, which may enhance perceived well-being despite physical vulnerabilities.<sup>[12]</sup> Cultural factors within Indian family systems, including sustained social engagement and caregiving roles, may also contribute to relatively better subjective QoL among elderly females.<sup>[13]</sup>

**Table 1: Overall quality of life**

QoL category	Frequency (%)
Good	19.6
Moderate	68.27
Poor	12.13

QoL: Quality of life

**Table 2: Gender differences in quality-of-life domains**

Domain	Male mean $\pm$ SD	Female mean $\pm$ SD	r-value	P-value	Significance
Life overall	10.34 $\pm$ 1.87	10.83 $\pm$ 1.94	0.115	<0.05	S
Health	9.90 $\pm$ 1.51	10.55 $\pm$ 1.62	0.186	<0.001	S
Social relationship	11.98 $\pm$ 1.10	11.82 $\pm$ 0.97	-0.055	0.102	NS
Independence	9.93 $\pm$ 1.61	10.09 $\pm$ 1.45	0.055	0.093	NS
Home/neighborhood	10.28 $\pm$ 1.30	11.01 $\pm$ 1.38	0.216	<0.001	S
Psychological wellbeing	9.66 $\pm$ 1.38	10.03 $\pm$ 1.46	0.105	0.001	S
Financial circumstances	11.50 $\pm$ 1.77	12.16 $\pm$ 1.82	0.204	<0.001	S
Leisure activities	13.68 $\pm$ 1.24	14.14 $\pm$ 1.28	0.175	<0.001	S

SD: Standard deviation

**Table 3: Comparison of quality of life across age groups**

Domain	60–70 years Mean $\pm$ SD	71–80 years Mean $\pm$ SD	81–90 years Mean $\pm$ SD	r-value	P-value	Significance
Life overall	10.50 $\pm$ 1.86	10.62 $\pm$ 1.93	10.84 $\pm$ 2.16	0.020	0.453	NS
Health	10.37 $\pm$ 1.57	10.07 $\pm$ 1.64	9.85 $\pm$ 1.53	-0.081	0.003	S
Social relationship	11.92 $\pm$ 1.04	11.82 $\pm$ 1.04	12.04 $\pm$ 1.10	-0.004	0.886	NS
Independence	9.95 $\pm$ 1.47	10.02 $\pm$ 1.60	10.27 $\pm$ 1.67	0.031	0.258	NS
Home/neighborhood	10.69 $\pm$ 1.36	10.66 $\pm$ 1.41	10.26 $\pm$ 1.44	-0.055	0.047	S
Psychological wellbeing	10.03 $\pm$ 1.35	9.76 $\pm$ 1.38	9.11 $\pm$ 1.72	-0.125	<0.001	S
Financial circumstances	12.08 $\pm$ 1.65	11.68 $\pm$ 1.84	10.93 $\pm$ 2.30	-0.118	<0.001	S
Leisure activities	14.00 $\pm$ 1.22	13.92 $\pm$ 1.28	13.32 $\pm$ 1.40	-0.092	0.001	S

SD: Standard deviation

Age-related analysis revealed a significant decline in health, psychological well-being, financial satisfaction, and leisure participation with advancing age. This pattern is consistent with longitudinal and cross-sectional gerontological research demonstrating that biological aging, multimorbidity, and functional limitations contribute substantially to diminished physical and mental well-being in later life.<sup>[14]</sup> Increased dependency, reduced income security, and shrinking social roles further compound these effects.<sup>[15]</sup> The observed reduction in leisure engagement among the oldest age group may reflect mobility limitations and reduced access to age-friendly environments.<sup>[16]</sup>

Interestingly, overall life satisfaction, social relationships, and perceived independence remained relatively stable across age groups. Similar findings have been reported in resilience-focused aging research, where subjective well-being does not necessarily decline proportionately with physical deterioration.<sup>[17]</sup> Socioemotional selectivity theory suggests that older adults prioritize emotionally meaningful relationships, which may buffer against age-related stressors.<sup>[18]</sup> In collectivist societies, such as India, strong intergenerational family bonds and community integration may serve as protective factors sustaining perceived independence and relational satisfaction.<sup>[19]</sup>

The findings underscore the importance of gender-sensitive and age-responsive interventions. Programs aimed at health promotion, chronic disease management, psychological counseling, financial planning, and age-friendly leisure infrastructure are essential, particularly for older males and individuals in the oldest age category. Community-based active aging initiatives and strengthened social protection mechanisms could mitigate declines in vulnerable domains and promote healthy longevity.<sup>[20]</sup>

This study assessed QoL among 750 senior citizens in the Konkan Division of Maharashtra using the OPQOL instrument, with emphasis on gender and age-related differences. The majority of participants reported moderate QoL. Females demonstrated significantly higher scores in health, home and neighborhood satisfaction, psychological well-being, financial circumstances, and leisure activities, while no gender differences were observed in social relationships or independence. Advancing age was significantly associated with declines in health, psychological well-being, financial satisfaction, and leisure participation. However, overall life satisfaction, social relationships, and perceived independence remained relatively stable across age groups. These findings indicate that both gender and age influence specific QoL domains, highlighting the need for targeted interventions focusing on health promotion, psychological support, financial security, and active aging initiatives, particularly for older males and individuals in the oldest age category.

## CONCLUSION

This study demonstrates that QoL among senior citizens is significantly influenced by both gender and age. While

females reported better outcomes in several psychosocial and environmental domains, advancing age was associated with declines in health, psychological well-being, financial satisfaction, and leisure engagement. However, stability in social relationships and perceived independence suggests resilience within familial and community structures. These findings underscore the importance of targeted, age- and gender-responsive strategies in geriatric health planning, with particular attention to older males and individuals in the oldest age group. Strengthening health services, psychological support systems, and financial security measures is essential to promote healthy and dignified aging.

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## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

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