International Journal of Community Medicine and Public Health
Ahlawat P et al. Int J Community Med Public Health. 2026 Apr;13(4):1947-1952
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20261037

Original Research Article

Cognitive health and quality of life among older adults: a community-based cross-sectional study

Poonam Ahlawat[1]*, Sushil Kumar Maheshwari[2], Deepak[3], Preksha Sharma[4]

[1]Department of Mental Health Nursing, Faculty of Nursing, SGT University, Gurugram, Haryana, India
[2]Department of Psychiatric Nursing, College of Nursing, IHBAS, Delhi, India
[3]Department of Obstetrical and Gynaecological Nursing, Faculty of Nursing, SGT University, Gurugram, Haryana, India
[4]Department of Medical Surgical Nursing, College of Nursing, Baba Farid University of Health Sciences, Faridkot, Punjab, India

Received: 31 January 2026
Revised: 23 March 2026
Accepted: 25 March 2026

***Correspondence:**
Poonam Ahlawat,
E-mail: Poonam_nursing@sgtuniversity.org

ABSTRACT

Background: The ageing population is rapidly increasing, especially in countries like India. Cognitive health is essential for independence, and its decline can reduce quality of life (QoL). This study assessed cognitive health, QoL, and their relationship among community-dwelling older adults.
Methods: A community-based cross-sectional study was conducted from April to August 2025 among 200 adults aged ≥60 years in selected communities of the Delhi-NCR region using convenience sampling. Cognitive health was assessed with the Mini-Cog tool, and quality of life was measured using the CASP-19 scale. Data were collected through face-to-face interviews after informed consent, and analyzed using descriptive and inferential statistics, including Chi-square tests and Pearson's correlation.
Results: The prevalence of cognitive impairment was 39%. Most participants (57%) reported a moderate level of quality of life, while 32% had a high QoL. A significant positive correlation was observed between cognitive health and quality of life ($r=0.388$, $p<0.001$). Cognitive health showed no significant association with demographic variables, whereas quality of life was significantly associated with place of residence.
Conclusions: A substantial proportion of older adults exhibited early cognitive impairment, which was significantly associated with quality of life. Routine community-based screening for cognitive health may facilitate early intervention and improve quality of life among the elderly.

Keywords: Cognitive health, Cognitive impairment, Elderly, Quality of life, Mini-Cog

INTRODUCTION

Ageing is a universal and inevitable biological process that affects every individual. It is marked by progressive physiological, psychological, and social changes that occur over time. With increasing age, the human body undergoes several physiological changes that affect nearly every organ system. One of the most concerning aspects of ageing is the alteration in cognitive abilities with affects other aspects of living including quality of life.

One of the most significant demographic trends drawing global attention is the aging population. In recent years, factors such as economic and social development, advancements in healthcare, declining fertility rates, and increased life expectancy have brought about substantial shifts in the world's population structure. As a result, the

proportion of elderly individuals has risen markedly, with the most rapid growth observed in developing countries.

India is experiencing a rapid demographic transition marked by a significant rise in the elderly population. As per the Longitudinal Ageing Study in India (LASI Wave-1), there are approximately 138 million people aged 60 years and above as of 2021, projected to reach over 194 million by 2031 and nearly 319 million by 2050 (Ministry of Health and Family Welfare.[1] With the growing elderly population in the country, it is essential to address their well-being across physical, mental, and social dimensions. This trend has important public health implications, particularly in terms of cognitive well-being and quality of life (QoL) in later years. Cognitive health, involving the ability to think, learn, and remember, is vital for independent functioning in older age. Currently, more than 55 million people worldwide are living with dementia, with over 60% residing in low- and middle-income countries. Each year, approximately 10 million new cases are reported globally. The prevalence of severe cognitive impairment is projected to rise significantly, reaching an estimated 82 million by 2030 and 152 million by 2050.[2,3] Research studies also report a rising prevalence of cognitive impairment in Indian elderly populations. Recent findings from tertiary care centre Nagpur, Madhya Pradesh, India indicate cognitive impairment was present in more than half of subject 54.55% and Significant positive correlation was noted between quality of life and level of cognition scoring (with correlation coefficient 0.234).[4]

To effectively promote their health and prevent or reduce age-related illnesses, it is crucial to first assess and understand the overall condition and needs of the elderly including cognitive health as age related cognitive impairment is common among elderly. When cognitive decline compromises an elderly individual's independence and personal and social relationships, it reduces self-care and autonomy. This, in turn, fosters feelings of insecurity, low self-esteem, and social isolation, ultimately leading to a deterioration in their quality of life.[5,6] The elderly population at risk of developing cognitive impairment is rising in the future, healthcare services in these regions often face limitations in terms of trained personnel and essential equipment. Implementing early screening for cognitive impairment can facilitate timely intervention, enabling appropriate treatment and potentially delaying disease progression. This study was undertaken to understand the status of cognitive health and quality of life among older adults living in the community, as cognitive changes often go unnoticed until they significantly affect daily functioning. Identifying early cognitive decline and its impact on quality of life is essential for promoting healthy ageing and independence.

METHODS

A community based cross sectional study was carried out between April 2025 and August 2025 from 200 elderly individuals residing in selected communities of the Delhi-NCR. The target population comprised of elderly over 60 years of age. Elderly who were above 60 years of age, willing to participate and were residing in the selected communities of the Delhi-NCR region were considered eligible. Sample size was calculated by the formula Sample size (n), $n=4pq/d^2$, assuming an expected prevalence of approximately 14%, based on prior study conducted by Jadenur et al, Karnataka.[7] A 95% confidence interval and acceptable precision level was applied with marginal error of 5% resulting in a final sample size of 200 elderly. The convenient sampling technique was used to recruit the participants.

Data collection employed a structured proforma, organised into three sections. Section one captured the Sociodemographic proforma which was used to collect the baseline information regarding the participants including age, gender, marital status, educational level, previous occupation, residence and type of family. Section two obtained information related to cognitive health by using mini cog i.e. screening test to help detect dementia in its early stages. Section three obtained information related to quality of life by using Control, Autonomy, Self-Realization and Pleasure (CASP-19). The CASP-19 is composed of 4 subscales that make up the instrument's acronym: Control, Autonomy, Self-Realization and Pleasure. Data was collected using interview technique after taking informed consent from participants.

Statistical analysis

The collected data was analysed using IBM SPSS statistics V.25 for comprehensive analysis. Descriptive statistics, like frequency distributions were used to summarize participant characteristics and determine the prevalence of cognitive impairment. Inferential analyses, primarily Chi-square tests, were performed to assess associations between cognitive health and quality of life with selected demographic characteristics. Relationship between cognitive health and quality of life was assessed by carl Pearson Corelation coefficient.

RESULTS

Among the 200 elderly assessed in the present study, most of the respondents (56%) were aged between 60 and 70 years and only 12% were above 80 years. with the overall prevalence of cognitive impairment was 39 % (Figure 1) indicating 79 elderly were having early sign of cognitive impairment. The findings also revealed that 57% of the elderly exhibited a moderate level of quality of life, whereas 32% demonstrated a high quality of life (Figure 2). The scatter plot demonstrates a positive correlation ($r=0.388$, $N=200$, $p<0.001$) between cognitive health and quality of life among elderly. Despite some variability at each cognitive score level, the plot reveals that higher cognitive functioning is often associated with improved quality of life outcomes in this population.

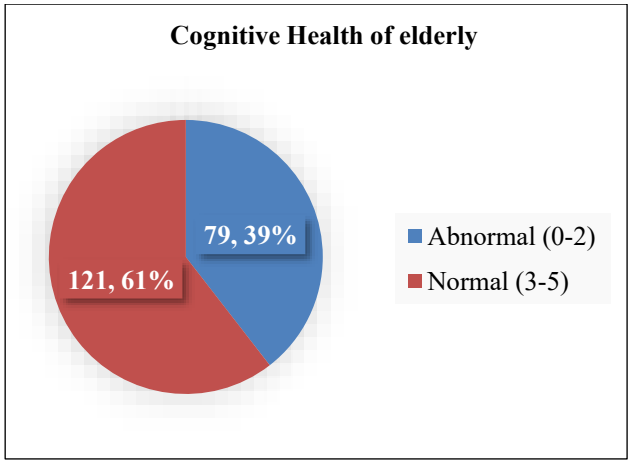

Figure 1: Cognitive health of elderly.

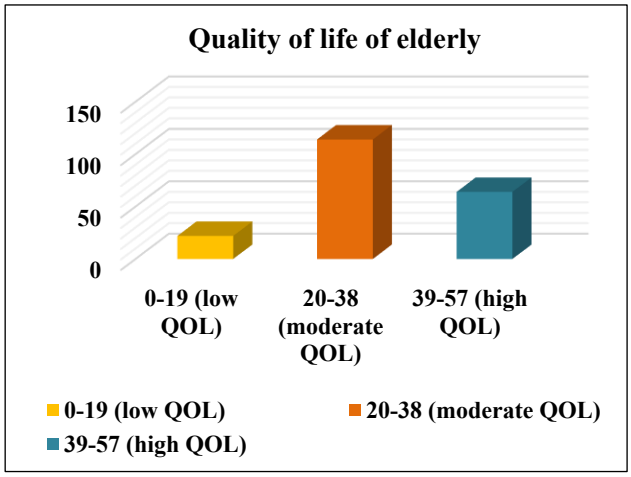

Figure 2: Graph depicting the quality of life among elderly.

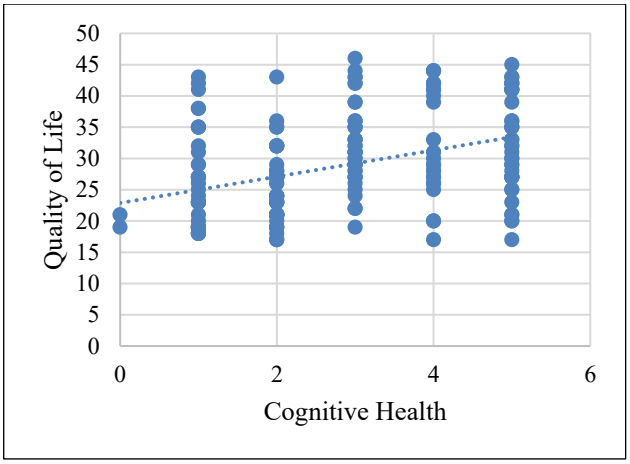

Figure 3: Correlation of cognitive health and quality of life among elderly.

No statistically significant association was observed between cognitive health and demographic variables, including age, gender, marital status, educational level, occupation, place of residence, and family type, as all p-values exceeded 0.05 (Table 1).

This finding indicates that cognitive impairment among the study population was not significantly influenced by these demographic characteristics. The results further suggest that factors other than basic demographic variables may play a more important role in determining cognitive status among older adults.

Residence was found significantly associated with quality of life among the elderly (χ^2=9.863, p=0.007), indicating a meaningful difference in quality of life between those residing in rural and urban areas (Table 2).

Table 1: Association of cognitive health with selected demographic variables among elderly (n=200).

Demographic variables	Mini cog		χ^2	P value	d.f
	Normal	Abnormal			
Age (in years)					
60-70	68	44	0.512^{Ns}	0.774	2
71-80	40	24			
Above 80	13	11			
Gender					
Male	73	40	1.829^{Ns}	0.176	1
Female	48	39			
Marital status					
Single	05	00	4.267^{Ns}	0.118	2
Married	81	50			
Widowed	35	29			
Educational status					
No formal education	25	28	5.628^{Ns}	0.131	3
Primary school	50	25			
Secondary	42	23			
Graduate	04	03			

Continued.

Demographic variables	Mini cog		χ^2	P value	d.f
	Normal	Abnormal			
Occupation					
Unemployed	59	48	3.3397^{Ns}	0.342	3
Private job	37	16			
Govt. job	16	09			
Manual labourer	09	06			
Residence					
Rural	119	79	0.1.319^{Ns}	0.251	1
Urban	02	00			
Type of family					
Nuclear	72	48	.031^{Ns}	0.859	1
Joint	36	24			

*Significant - (p≤0.05) NS - Not significant

Table 2: Association of quality of life with selected demographic variables among elderly (n=200).

Demographic variables	Mini cog			χ^2	P value	d.f
	Good	Moderate	Poor			
Age (in years)						
60-70	19	79	14	1.215^{Ns}	0.876	4
71-80	12	43	09			
Above 80	03	19	02			
Gender						
Male	16	83	14	1.557^{Ns}	0.459	2
Female	18	58	11			
Marital status						
Single	02	03	00	2.760^{Ns}	0.599	4
Married	23	92	16			
Widowed	09	46	09			
Educational status						
No formal education	08	37	08	5.412^{Ns}	0.492	6
Primary school	17	49	09			
Secondary	07	50	08			
Graduate	02	05	00			
Occupation						
unemployed	19	75	13	7.032^{Ns}	0.318	6
Private job	08	38	07			
Govt. Job	07	14	04			
Manual labourer	00	14	01			
Residence						
Rural	32	141	25	9.863^{s}	0.007	2
Urban	02	00	00			
Type of family						
Nuclear	22	83	15	0.389^{Ns}	0.823	2
Joint	12	58	10			

*Significant - (p≤0.05) NS - Not significant

This finding suggests that place of residence may play an important role in shaping the living conditions, access to resources, and overall well-being of older adults. In contrast, other demographic variables including age, gender, marital status, educational status, occupation, and type of family did not demonstrate any statistically significant association with quality of life.

DISCUSSION

This cross-sectional study assessed cognitive health and quality of life (QoL) among 200 elderly residents in a rural Delhi-NCR community, revealing moderate cognitive function 39.%. Mohammed et al also observed an almost identical prevalence of 41.6% patients

attending rural health and training centre of a tertiary care medical college and hospital in Chennai.[8]

The current study showed predominantly moderate QoL i.e. 57%. A weak positive correlation (r=0.247, p<0.001) between Mini-Cog and CASP-19 scores underscores cognitive health's role in QoL, consistent with Motlag et al, who reported a similar correlation (r=0.234) in a tertiary care setting with higher impairment prevalence (54.55%).[4] This finding was also supported by Indian cross-sectional evidence using cognitive measures (Mini-Cog, MoCA) and QoL scales (CASP-19, OPQOL-35) and Mrinalini Motlag showing similar correlation magnitudes between cognition and QoL, even in rural or institutionalized elderly populations.[10] Such concordance strengthens confidence that even mild cognitive impairment detrimentally impacts facets of QoL including autonomy, control, and pleasure.

These results extend Gopalakrishnan et al meta-analysis, confirming cognitive decline's QoL impact in mild impairment but highlighting occupation as a modifiable factor overlooked in many screenings.[12] The significant impact of occupation on QoL observed here finds support from literature illustrating that sustained occupational roles and social responsibilities promote life satisfaction and psychological well-being in older adults (Takeda et al, Williams & Roberts Study).[13,14] Regarding demographic associations, this study's lack of significant links between age, gender, education, and cognition agrees with research by Tripathi et al and Bhattacharya and Roy who emphasized that cognitive decline in elderly Indian rural populations often transcends typical sociodemographic predictors and is more tightly connected to comorbidities, lifestyle behaviors, and social engagement.[15,16]

This study has few limitations. The data for assessing Cognitive Health and Quality of Life was collected at one point of time. The study was conducted in selected communities of the Delhi-NCR region using convenience sampling, which may influence generalizability. Despite these considerations, the study offers valuable insights into cognitive health and quality of life among community-dwelling older adults.

Public health and policy implication

With an estimated 319 million people living in rural India by 2050, the country's rapidly aging rural population need for scalable, community-focused interventions that improve quality of life and cognitive health. The usefulness of quick, practical screening instruments like Mini-Cog and CASP-19 for early detection of cognitive and quality of life issues in primary care or community health worker settings is highlighted by this study. Regular screening would make it possible to provide prompt, individualized therapies, such as occupational rehabilitation, social inclusion programs, and cognitive stimulation, especially for the sizable retired population that is susceptible to social engagement and meaning loss.

CONCLUSION

The present study indicates an association between cognitive health and quality of life among community-dwelling older adults. The findings suggest the importance of routine screening and supportive community-based approaches to help maintain cognitive function and overall well-being. These results provide useful evidence from an Indian context and may inform future research and planning of interventions aimed at promoting healthy ageing.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Government of India. Ministry of Health and Family Welfare. Longitudinal Ageing Study in India (LASI) Wave 1 Report 2020-21, 2021. Available at: https://www.nihfw.org/Doc/LASI_India_Report_2020_compressed.pdf. Accessed 01 January 2026.
2. World Health Organization. Risk reduction of cognitive decline and dementia, 2019. Available at: https://www.who.int/publications/i/item/9789241550543. Accessed 01 January 2026.
3. World Health Organization. Meeting on the Implementation of the Global Action Plan on the Public Health Response to Dementia 2017-2025, 2018. Available at: https://www.who.int/publications/i/item/meeting-on-the-implementation-of-the-global-action-plan-on-the-public-health-response-to-dementia. Accessed 01 January 2026.
4. Motlag M, S. TK, Madavi SV, Bhondre AG, Pandharipande MS, Deshmukh D. A cross sectional observation study on quality of life and cognition in elderly population and their correlation at a tertiary care centre. Int J Res Med Sci. 2022;10(11):2496-500.
5. Borges EGS, Vale RGS, Pernambuco CS, Cader SA, Sá SPC, Pinto FM, et al. Effects of dance on the postural balance, cognition and functional autonomy of older adults. Rev Bras Enferm. 2018;71(Suppl 5):2302-9.
6. Bernardes FR, Machado CK, Souza MC, Machado MJ, Belaunde AMA. Subjective memory complaints and their relationship with verbal fluency in active older people. CoDAS. 2017;29(3):e20160109.
7. Jadenur SS, Saroja AO, Kari A, Angolkar M. Prevalence of cognitive impairment among people aged ≥ 50 years in rural population of Belagavi Taluka-A community based cross sectional study. Clinical Epidemiol Glob Heal. 2022;13:100940.

8. Mohammed KA, Stanly A. A study on the assessment of cognitive impairment among elderly patients visiting rural health and training centre. Nat J Comm Medi. 2024;15(05):400-4.
9. Brandão BMLDS, Silva AMBD, Souto RQ, Alves FAP, Araújo GKN, Jardim VCFDS, et al. Cognition and quality of life relationship among the elderly community: a cross-sectional study. Rev Bras Enferm. 2020;73Suppl 3(Suppl 3):e20190030
10. Gopalakrishnan P, Tiwari S, Nagaraja R, Krishnan G. Quality of life in persons with mild cognitive impairment: a systematic review and meta-analysis. Dement Neuropsychol. 2024;18:e20230093.
11. Takeda, S., et al. (2021). Occupation engagement and quality of life among older adults in Japan. BMC Geriatrics, 21(1), 40.
12. Williams, K., & Roberts, N. (2019). Occupational participation and aging: relation to mental health and well-being. Occupational Therapy International, 2019, 893715.
13. Tripathi, R., et al. (2019). Sociodemographic correlates of cognitive impairment in rural elderly: final report. Journal of Geriatric Mental Health. 2019;6(1):35-42.
14. Bhattacharya A., Roy A. (2023). Cognitive function and aging in a rural Indian community: longitudinal analysis. Aging & Mental Health, 27(2):188-95.

Cite this article as: Ahlawat P, Maheshwari SK, Deepak, Sharma P. Cognitive health and quality of life among older adults: a community-based cross-sectional study. Int J Community Med Public Health 2026;13:1947-52.