

Original Research Article

A community based cross-sectional study on psychosocial status among elderly population of rural field practice area of a tertiary health care centre of Maharashtra

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Received: 15 July 2026

Revised: 04 September 2026

Accepted: 09 September 2026

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ABSTRACT

Background: Psychological and social factors form an integral part in the health and wellbeing of elderly. The elderly who will constitute 10% of the Indian population by 2025 face problems such as deteriorating healthcare status, loneliness, and economic constraints among others. All these factors together may affect the psychosocial status of the elderly and their health-seeking behaviour. With this background, the current study tried to evaluate the psychosocial status among elderly patients.

Methods: The present community based cross-sectional study was carried out among 200 men and women of aged above 60 in rural healthcare centre of a tertiary health centre of Maharashtra. A semi-structured interview schedule was administered by a trained medical professional after taking informed consent over a period 6 months from January to June 2023.

Results: Depression was found significantly higher in age group above 75 years (66.7%), Of which majority are female (57.9%). The proportion of Hindu suffering from depression was 55.5% as compared to other religions. The depression was found significantly higher among elderly population those who are illiterate and having education below secondary level and of lower socioeconomic status.

Conclusions: In present study, elderly above 75 years, female gender, illiteracy and low SES were found significant factor for poor psychological status. Depression was higher among those elderly population whose advise was not honored and whose living arrangement was alone.

Keywords: Psychosocial status, Elderly, Geriatrics, Community

INTRODUCTION

Ageing is a period of transition affecting not only the physical well-being but also the social and mental well-being of an individual.¹ Psychological and social factors form an integral part in the health and wellbeing of an elderly.² The elderly who will constitute 10% of the

Indian population by 2025 face problems such as deteriorating healthcare status, loneliness, and economic constraints among others.^{2,3} Though physical health of the elderly is taken care of to some extent, mental health and the social factors influencing it are largely ignored.² The burden of mental disorders' morbidities is increasing in the Indian elderly due to ageing of the brain, problems

associated with physical health, cerebral pathology and socio-economic factors such as breakdown of the family support systems, social isolation and decrease in economic independence.⁴

In the older population, one of the serious health concerns that are associated with comorbidity, impaired functioning, excessive use of health care resources, and increased mortality (including suicide) is a depressive disorder.⁵ Depression that occurs among individuals 65 years and above with no previous history of depression is known as late-life depression.⁶ Depression in late life is underdiagnosed and inadequately treated.⁶ The diagnostic and Statistical Manual of Mental Disorders (DSM-5), defines major depressive disorder by the presence of depressed mood or marked loss of interest or pleasure in activities along with five of the following symptoms—changes in appetite or weight (5% total body weight), lack of sleep, energy, concentration, and psychomotor activity, feelings of inappropriate guilt or worthlessness and recurrent thoughts of death or suicide.⁷

Literature shows that depressive symptoms associated with older adults mainly due to living alone due to widowhood, having never married, being childless, or lacking communication with relatives and friends.^{8–11} Depressed elderly are also more likely to get affected by negative life events as compared to their healthy counterparts due to cognitive distortions. Inactivity in old age also contributes to depression. People in old age are bound to stay home after retirement. They are less involved in outdoor activities, which eventually leads to the narrowing of their social network, resulting in depression.¹² Everyone needs social connections to survive and thrive. But as people age, they often find themselves spending more time alone. Studies show that loneliness and social isolation are associated with higher rates of depression.¹⁰ There is a gap in understanding the unique living arrangements characterised by small living spaces and relatively isolated community settings among older adults.¹³

All these factors together may affect the psychosocial status of the elderly. With this background, the current study was carried out with the objective to find out the prevalence of depression among elderly population and to evaluate the factors associated with psychosocial status among elderly population.

METHODS

The present community based cross-sectional study was carried out among elderly 200 male and female of aged above 60 in Barshitakali block of Akola district, which is the rural field practice area of Government Medical College, Akola, Maharashtra. Sample size was calculated to evaluate psychosocial status (with anticipated average of 16%) with 95% confidence level and allowable error of 5%.¹⁴ Calculated sample size was 200 by using Open epi software.

A two-stage cluster random sampling technique was employed to select participants from the Barshitakali block, which has a total population of approximately 150,000 across 126 inhabited villages. In the first stage, the first cluster was chosen using a random number table. Subsequent clusters were then selected using a calculated sampling interval based on the cumulative population of the villages. This process continued until a total of 30 clusters were selected. Within each cluster, participants were chosen proportionately to the village population. In the second stage, the first household in each cluster was selected randomly, and subsequent households were selected in a single direction from the initial household. The desired household is selected based on the availability of elderly individual in the household.

A predesigned, validated, semi-structured questionnaire was used for data collection. The questionnaire contains information about socio-demographic details like age, sex, religion, literacy and economic status etc. The questionnaire also contains information about social status of the participants like Company at home, interaction outside home, advice honored or not and living arrangement etc. For assessment of psychological status all the participants were first undergone mini mental status examination (MMSE).¹⁵ Participants who were found to have no cognitive impairment were included in the study and subsequently assessed using the Geriatric Depression Scale (GDS). The elderly individual who found as cognitively impaired and with chronic debilitating conditions were excluded from the study. In our study short form of GDS was used. The scores of 0–4 were considered normal; 5–8 indicated mild depression; 9–11 indicated moderate depression; and 12–15 indicated severe depression.¹⁶ The participants were also asked about chronic health conditions. A semi-structured interview schedule was administered by a trained medical professional after taking informed consent over a period 6 months from January to June 2023. Ethical approval was obtained from institutional ethics committee before initiation of study.

Statistical analysis

The data was entered into Microsoft excel. For qualitative data, proportions were calculated and for quantitative data mean and standard deviation was calculated. Chi-square test of significance was applied for qualitative data at 5% level of significance by epi info software developed by CDC version 7.2.5.0. Odd's ratio and confidence interval were calculated to find the association between variables.

RESULTS

The study sample exhibited a male predominance, with 62% of respondents being male. A significant majority, 67%, belonged to the Below Poverty Line (BPL) category. Age distribution revealed that 68% of participants were between 60–69 years, 27% were 70–79 years, and only 5% were over 80 years old. Religious demographics showed majority i.e. 64.5% were Hindu

followed by 29.5% Muslim, and 6% belonged to other religions. Educational attainment was low, with 55.5% of respondents being illiterate and 40% having education below the secondary level; merely 4.5% had education above the secondary level. The majority were married i.e.

85% and the primary occupations were farming and labor, engaging 55% of the population. The socio-economic status distribution indicated that 70% were in the higher socio-economic classes (I, II, III), while 30% were in the low socio-economic classes (IV, V) (Table 1).

Table 1: Sociodemographic characteristics of respondents (n=200).

Variables		Number	Percentage (%)
Age group (in years)	60-69	136	68
	70-79	54	27
	≥80	10	5
Sex	Female	76	38
	Male	124	62
Religion	Hindu	129	64.5
	Muslim	59	29.5
	Others	12	6
Education	Illiterate	111	55.5
	Below secondary	80	40
	Above secondary	9	4.5
Marital status	Married	170	85
	Unmarried/ widowed	30	15
Occupation	Unemployed	90	45
	Employed	110	55
Socio-economic status	I, II, III	140	70
	IV, V	60	30
Type of ration card	BPL	134	67
	APL	66	33

The depression was identified in 97(48.5%) individuals within the study sample. Among these, the proportion of depression was higher (60%) among age group of more than 80 years than other groups. However, age was not found to be statistically significant with depression ($\chi^2 = 0.559$, $P = 0.76$, OR = 0.98 [0.52-1.85]). The gender analysis revealed a significantly higher prevalence of depression among females (57.9%) compared to males (42.7%) ($\chi^2 = 4.332$, $P = 0.03$, OR = 1.84 [1.03-3.28]). The depression rates were also significantly higher among individuals of the Hindu religion compared to other religions ($\chi^2 = 7.001$, $P = 0.03$, OR = 3.67 [0.95-14.1]), with 55% of Hindu participants experiencing depression whereas 39% of Muslim participants had depression. The educational level appeared to play a critical role in

magnitude of depression. About 54.9% of illiterate individuals were depressed, compared to 45% of those with below-secondary education and 11.1% of those with education above the secondary level. This indicated that literacy significantly impacts depression prevalence ($\chi^2 = 6.800$, $P = 0.03$, OR = 9.41 [1.13-77.8]). The socio-economic status was also a significant factor. The depression was more prevalent among individuals from lower socio-economic classes (54.3%) compared to higher socio-economic classes (35%) ($\chi^2 = 6.254$, $P = 0.01$, OR = 2.20 [1.17-4.12]). Additionally, 51.5% of individuals below the poverty line (BPL) whereas 42.4% above the poverty line (APL) were found to be depressed, though this was not statistically significant ($\chi^2 = 1.456$, $P = 0.22$, OR = 1.44 [0.79-2.60]) (Table 2).

Table 2: Association of sociodemographic characteristics with depression (n=200).

Sociodemographic characteristics		Depression		Odd's ratio (CI)	Chi-square value	P value
Age group (years)	Total	Yes, N (%)	No, N (%)			
60-69	136	65 (47.8%)	71 (52.2%)	1	0.559	0.76
70-79	54	26 (48.1%)	28 (51.9%)	0.98 (0.52-1.85)		
≥80	10	6 (60%)	4 (40%)	0.61 (0.16-2.26)		
Sex						
Female	76	44 (57.9%)	32 (42.1%)	1.84 (1.03-3.28)	4.332	0.03
Male	124	53 (42.7%)	71 (57.3%)			

Continued.

Sociodemographic characteristics		Depression		Odd's ratio (CI)	Chi-square value	P value
Religion						
Hindu	129	71 (55.0%)	58 (45.0%)	1	7.001	0.03
Muslim	59	23 (39.0%)	36 (61.0%)	1.91 (1.02-3.58)		
Others	12	3 (25.0%)	9 (75.0%)	3.67 (0.95-14.1)		
Education						
Illiterate	111	60 (54.9%)	51 (45.9%)	1	6.800	0.03
Below Secondary	80	36 (45.0%)	44 (55.0%)	1.43 (0.80-2.56)		
Upto and above Secondary	9	1 (11.1%)	8 (88.9%)	9.41 (1.13-77.8)		
Marital status						
Married	170	83 (48.8%)	87 (51.2%)	1.09 (0.50-2.37)	0.047	0.82
Unmarried/ widowed	30	14 (46.7%)	16 (53.3%)			
Occupation						
Unemployed	90	46 (51.1%)	44 (48.9%)	1.20 (0.69-2.11)	0.447	0.50
Employed	110	51 (53.6%)	59 (46.4%)			
Socio-economic status*						
I, II, III	140	76 (54.3%)	64 (45.7%)	2.20 (1.17-4.12)	6.254	0.01
IV, V	60	21 (35.0%)	39 (65.0%)			
Type of ration card						
BPL	134	69 (51.5%)	65 (48.5%)	1.44 (0.79-2.60)	1.456	0.22
APL	66	28 (42.4%)	38 (57.6%)			

*Note: Assessed using Modified B.G. Prasad Scale.

The depression was found very highly significantly associated with those individuals who found lonely at home [$\chi^2 = 40.307$, $P < 0.000$, $OR = 21.46(6.3-72.6)$], when there is no interaction outside home [$\chi^2 = 10.719$, $P = 0.001$, $OR = 6.58(1.85-23.3)$], whose advise was not honored [$\chi^2 = 15.252$, $P = 0.000$, $OR = 3.65(1.87-7.14)$] and who do not participate much in leisure activities [$\chi^2 = 25.841$, $P < 0.001$, $OR = 5.02(2.63-9.58)$] as well as whose attitude towards life was sad [$\chi^2 = 6.682$, $P = 0.03$,

$OR = 3.24(1.09-9.61)$]. The social status components not only limited to this, but also other components like living arrangement [$\chi^2 = 16.853$, $P < 0.000$, $OR = 5.56(2.29-13.4)$], participation in ceremonies [$\chi^2 = 19.927$, $P < 0.001$, $OR = 5.25(2.42-11.3)$], accompanying person for health care seeking [$\chi^2 = 12.336$, $P < 0.001$, $OR = 2.78(1.56-4.96)$] was also found significant. About 66% said that they had indulged in some sort of leisure activity with watching television being the most popular leisure activity (Table 3).

Table 3: Association of social status with depression (n=200).

Social Status		Depression		Odd's ratio (CI)	Chi-square value	P value
Company at home	Total	Yes, N (%)	No, N (%)	21.46(6.3-72.6)	40.307	<0.000
Available	159	59 (37.1%)	100(62.9%)			
Lonely	41	38 (92.7%)	3(7.3%)			
Interaction outside home						
Yes	181	81 (44.8%)	100(55.2%)	6.58(1.85-23.3)	10.719	0.001
No	19	16 (84.2%)	3(15.8%)			
Advice						
Honored	145	58 (40.0%)	87(60.0%)	3.65(1.87-7.14)	15.252	<0.001
Not honored	55	39 (70.9%)	16(29.1%)			
Participation in leisure activities						
Yes	132	47 (35.6%)	85(64.4%)	5.02(2.63-9.58)	25.841	0.000
No	68	50 (73.5%)	18(26.5%)			
Attitude toward life						
Happy	55	19 (34.5%)	36(65.5%)	3.24(1.09-9.61)	6.682	0.03
Satisfied	126	66 (52.4%)	60(47.6%)	1.55(0.57-4.21)		
Sad	19	12 (63.2%)	7 (36.8%)	1		

Continued.

Social Status		Depression		Odd's ratio (CI)	Chi-square value	P value
Living arrangement						
Alone	35	28 (80.0%)	7 (20.0%)	5.56 (2.29-13.4)	16.853	<0.001
Family Member	165	69 (41.8%)	96 (58.2%)			
Participation in ceremonies in last 1 year						
Yes	155	62 (40.0%)	93 (60.0%)	5.25 (2.42-11.3)	19.927	<0.001
No	45	35 (77.8%)	10 (22.2%)			
Accompanying person for Health care seeking						
Alone	114	43 (37.7%)	71 (62.3%)	2.78 (1.56-4.96)	12.336	0.001
Family Member	86	54 (62.8%)	32 (37.2%)			

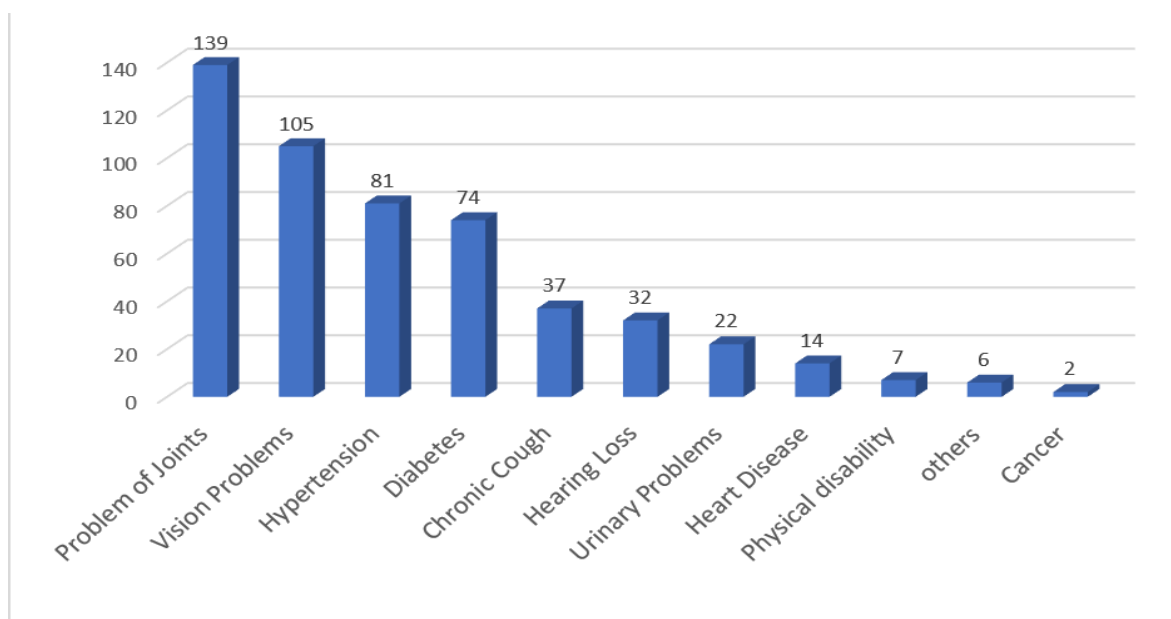


Figure 1: The presence of comorbidities in elderly population. Arthritis (69.5%) found as the most common disorder among the geriatric individuals followed by cataract (52.5%), hypertension (40.5%) and diabetes (37%). Other disease conditions like need for surgeries and cancer was found the least.

DISCUSSION

The sociodemographic profile of our elderly population aligns with patterns observed in previous research by Banker K et al, Lena et al and Debnath S et al.¹⁷⁻¹⁹ In our study, 68% of participants were aged 60-69 years, closely mirroring the proportions reported by Banker et al (75%), Lena et al (72%), and Debnath et al (65%). A significant 67% of respondents belonged to the Below Poverty Line (BPL) category, consistent with Rent et al findings (63%), underscoring the widespread economic disparities impacting older adults.³ Notably, our sample had a higher male predominance (62%) compared to Tundia M et al (52%), Banker et al (51%), and Kohli et al (33%), reflecting broader gender dynamics in access to healthcare and social support systems.^{16,17,20}

The marital status of our respondents showed that a higher proportion were married (85%) compared to Rent et al study, where 61% were currently married and 35% were widows.³ Marital status is known to be linked to better health, companionship, and a higher standing in the

home, contributing to the lower rates of illness observed among married individuals. Consistent with the study by Abdul M et al, we found that elderly females exhibited higher rates of geriatric depression (58%) compared to their male counterparts.²¹

Our study also highlighted the low literacy levels among the elderly, with women being more disadvantaged than men. These findings are consistent with various studies that reported low literacy levels among the elderly, likely due to historical gender biases in education.^{18,22}

Social support indicators were also positive, with 73% of respondents feeling their advice was honored, 80% reporting company at home, and 91.5% engaging in interactions outside the home. These figures are comparable to those found by Rent et al where 84.3% felt their advice was honored, 81.6% had company, and 78.5% had social contacts outside the home.³ Lena et al and Goel et al also reported similar findings.¹⁸ Depression was significantly higher among elderly living alone (80%) compared to those living with family (42%),

echoing the findings of Abdul M et al.²¹ This highlights the protective effect of spousal companionship against geriatric depression. Furthermore, living with family can enhance an elderly person's sense of purpose and belonging, and provide assistance with daily activities, which collectively contribute to better mental health outcomes. In contrast, elderly individuals living alone may face a lack of immediate emotional support, leading to increased feelings of isolation and a higher risk of developing depressive disorders. This finding suggests that interventions aimed at reducing geriatric depression should prioritize strategies that enhance social support networks, particularly for those elderly individuals who live alone.

Chronic conditions were prevalent among our respondents, with arthritis (69.5%), cataract (52.5%), hypertension (41.5%), and diabetes (37.5%) being the most common. This contrasts with Rent et al 2017 study, which found chronic hypertension (36.48%), diabetes (18.57%), and arthritis (14.42%) as the most common morbidities.³

Overall, our findings highlight significant sociodemographic and health challenges faced by the elderly population, underscoring the need for targeted interventions to improve their quality of life and healthcare access.

Limitations

The present study is a community based study having several strengths, including its focus on a rural community, making the results more relevant to similar areas. The use of reliable tools like the Geriatric Depression Scale (GDS) ensured accurate assessment, and the large number of 200 participants added to the study's reliability. However, there are some limitations. The study's design only provides a snapshot in time, so we can't determine cause and effect. The results might not apply to urban areas or other regions. Additionally, relying on self-reported information could affect accuracy.

CONCLUSION

Our study identified significant factors contributing to poor psychological status among the elderly, including being above 70 years, female gender, illiteracy, and low socioeconomic status. Depression was notably higher among those whose advice was not honored and those living alone. To address these issues, it is crucial to encourage regular social interactions with family, friends, and community members, and to implement routine mental health screenings for older adults to identify depression, anxiety, and cognitive decline.

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Cite this article as: Rao KMP, Lokare P, Sukhsohale ND. A community based cross-sectional study on psychosocial status among elderly population of rural field practice area of a tertiary health care centre of Maharashtra. *Int J Community Med Public Health* 2026;13:5906-12.