ORIGINAL ARTICLE

Social Exclusion & Mental Health Status Among the Elderly in Banda District, Uttar Pradesh: A Cross-Sectional Study

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ABSTRACT

Background: Aging is accompanied by a decline in physical and mental functions, increasing vulnerability to illness and social isolation. In India, mental health issues among the elderly, including depression and anxiety, remain under-recognized, compounded by weakening family systems and social exclusion. This study addresses the dual burden of mental health problems and diminished social participation among older adults in Banda district, Uttar Pradesh. **Aim & Objective:** To assess the mental health status and social exclusion among the elderly, specifically evaluating the prevalence of depression, anxiety, and social exclusion. **Methodology**: A community-based, cross-sectional study was conducted over 18 months (Feb 2023–July 2024) among 400 elderly individuals (200 urban, 200 rural) aged 60 years and above, selected via simple random sampling. Data were collected using a semi-structured proforma, Geriatric Depression Scale-30 (GDS-30), Hamilton Anxiety Rating Scale (HAM-A), and a social exclusion questionnaire. Descriptive and inferential statistics were applied using SPSS version 26.0, with significance at $p<0.05$. **Results**: Among the study participants, majority (54.50%) were aged between 60 and 69 years, The prevalence of depression was 66.50%, with 77.82% of those affected experiencing mild depression. Anxiety was prevalent among 89.25% of participants, of whom 58.26% exhibited moderate anxiety levels. Both depressive and anxiety disorders were observed to be more common among male participants. In social participation, 87.25% reported having voted in the recent election, while only 43% had attended community meetings. Social exclusion and perceived discrimination in service provision were notably higher in rural areas. **Conclusion**: This study highlights a high burden of depression, anxiety, and social exclusion among the elderly in Banda district, underscoring the urgent need for community-based mental health programs and social support interventions tailored for older adults.

KEYWORDS

Elderly Health; Geriatric Depression Scale (GDS-30); Hamilton Anxiety Rating Scale (HAM-A); Social exclusion

INTRODUCTION

Aging is a continual process that causes molecular and cellular damage, as well as a loss in Physical and Mental function, which increases the chance of disease and, eventually, death.(1)Mental health concerns among India's elderly are significant and often overlooked. National-level studies show approximately 34–47% of older adults experience depression, while 18.7% report anxiety disorders.(2-4) In Uttar Pradesh, undiagnosed depression affects around 13.1% of older individuals.(5) Factors such as weakening family support, urbanization, and poverty exacerbate this burden.(6) Concurrently, social exclusion—manifested through reduced civic participation, diminished social ties, and inadequate access to services—has a documented negative impact on mental health. Data from the Longitudinal Ageing Study in India (LASI) indicate that higher social exclusion scores are strongly correlated with

depressive symptoms among older adults.(7) Addressing this dual challenge of mental health and social isolation is critical for creating effective, age-sensitive interventions in India, particularly in high-burden states like Uttar Pradesh.

Aim: To assess the Mental health and social exclusion among elderly.

Objective: To evaluate the prevalence of depression, anxiety, and the extent of social exclusion among elderly individuals using standardized assessment tools.

MATERIAL & METHODS

Study design: community-based, cross-sectional study

Study setting: Urban and rural area of Banda district, Uttar Pradesh.

Study population: individuals aged 60 years and above.

Study duration: period of 18 months from February 2023 to July 2024.

Sample Size: A pilot study (n=40, 20 for each rural and urban area) was conducted to assess the prevalence of morbidity among the elderly population. The prevalence for different health conditions were involved, Since musculoskeletal disorders had the lowest prevalence (13.96%), it was used for sample size calculation.

Sample Size Calculation:

p = 13.96%

q = (100 - p) = 86.04%

d = 5% (Absolute precision)

Z = 1.96

For confidence interval = 95%, Sample size (N) = $Z^2 \times p \times (1-p)/d^2$

Substituting the value: = {(1.96 x1.96 x 13.96 x 86.04)/25} = 184.57 After substitution, the calculated minimum sample size was 185. However, to improve the study, a total of 400 subjects (200 from rural and 200 from urban areas) were included. **Sampling technique & Data Collection:** Azad Nagar ward from urban area & Tindwara from rural area was selected using simple random sampling technique (Lottery Method). Participants for the study were recruited based on specific criteria: inclusion included individuals aged 60 and above who provided written consent, while exclusion applied to those who did not consent, were severely ill or in a medical emergency, unable to communicate, or not present at the time of the visit. House to house survey was done till the required sample had achieved. After obtaining informed consent, eligible elderly was interviewed using a semi-structured and questionnaire using scheduled method. Data collection was performed by the first author.

Study tool: A p**roforma** to gather socio-demographic details such as age, gender, education, occupation, marital and financial status, family type, living arrangements, diet, addictions, and religious activities. The **Geriatric Depression Scale (Long Form)**,(8) with 30 items scored 0 or 1 (total score 0–30), classified depression as none (0–9), mild (10–19), or severe (20–30). Anxiety was assessed using the **Hamilton Anxiety Rating Scale (HAM-A)**,(9) containing 14 items rated 0–4, with scores indicating mild (6–14), mild to moderate (15–28), or moderate to severe (29–52) anxiety. **Social exclusion(10)** was measured with 7 items across three domains: exclusion from civic activities, social relationships, and services.

Ethical issues & informed consent, data analysis: Ethical clearance was obtained from Ethical Committee from RDMC, Banda. Data analysis involved assigning unique codes to participants, checking paperwork for accuracy using Microsoft Excel for initial data handling, data was analyzed using SPSS Version 26.0. For descriptive statistics chi-square tests were employed, with significance set at a p-value of <0.05. (CI 95%).

Ethical approval: The study was approved by the Institutional Ethics Committee, RDMC, Banda. (IEC/RDMC/Cert/03; Date:19/01/2023)

RESULTS

Sociodemographic Profile:

Majority of the elderly participants were within the **60–69 year age group (54.50%)**, with a higher proportion being **male (64.25%)**. The **average age** was **69.82 years**, with a **standard deviation of 7.02 years**. It was noted that **69.50%** of the elderly were currently married, while **13%** lived alone — a situation more commonly seen in rural areas. A significant portion, **41.75%**, resided in joint family setups, where family decisions were largely made by their children (**41.50%**). Financial dependence was reported by over **60%** of the elderly. Additionally, the majority belonged to the **middle socioeconomic class (33.75%)**, and a large percentage were **illiterate (46%)**.

Mental Health:

In the present study, out of 400 elderly participants, **66.50% (n=266)** were found to have depression according to the **Geriatric Depression Scale**, while **33.50% (n=134)** showed no signs of depression. Regarding **Hamilton Anxiety Rating Scale (HAM-A)** anxiety, a substantial **89.25% (n=357)** of the elderly reported experiencing anxiety symptoms, while only **10.75% (n=43)** were free from anxiety. These findings highlight a notably high prevalence of both depression and anxiety among the elderly population assessed in this study.

Table 1: Study population according Severity of Depression (N=266)

Depression	Rural (N=146)		Urban (N=120)		Total (N=266)
	Female	Male	Female	Male	
	N (%)	N (%)	N (%)	N (%)	N (%)
Mild Depression	50 (18.80)	56 (21.05)	30 (11.28)	71 (26.69)	207 (77.82)
Severe depression	16 (6.02)	24 (9.02)	9 (3.38)	10 (3.76)	59 (22.18)
Total	66 (24.81)	80 (30.08)	39 (14.66)	81 (30.45)	266 (100)

Table 1 : Among 266 elderly participants with depression, 77.82% had mild depression and 22.18% had severe depression. Mild depression was more prevalent among urban males (26.69%) and rural males (21.05%). Severe depression affected 22.18%, notably higher in rural males (9.02%). Overall, depression was slightly more common in males than females.

Table 2: Distribution of study population according severity of Anxiety: (N=357)

Anxiety	Rural (N=180)		Urban (N=177)		Total (N=357)
	Female	**Male**	**Female**	**Male**	
	N (%)	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Mild Anxiety	18 (5.04)	31 (8.68)	16 (4.48)	32 (8.96)	97 (27.17)
Moderate Anxiety	50 (14.01)	59 (16.53)	28 (7.84)	71 (19.89)	208 (58.26)
Severe Anxiety	8 (2.24)	14 (3.92)	11 (3.08)	19 (5.32)	52 (14.57)
Total	**76 (21.29)**	**104 (29.13)**	**55 (15.41)**	**122 (34.17)**	**357 (100)**

Table 2: Among 357 elderly participants with anxiety, 58.26% had moderate anxiety, 27.17% mild, and 14.57% severe. Moderate anxiety was more common in urban males (19.89%) and rural males (16.53%). Severe anxiety affected 14.57%, notably higher in urban areas. Overall, anxiety levels were slightly higher in males than females.

Although no significant associations were identified between depression and anxiety and variables such as age, gender, marital status, educational status, financial situation, socioeconomic status, or type of family, but the high prevalence of these mental health conditions suggest that depression and anxiety are pervasive among older adults, irrespective of their sociodemographic characteristics.

Table 3 : Distribution of study population according Social Exclusion (N=400)

Exclusion from Civic activity & social relation	Rural (N=200)		Urban (N=200)		Total
	Female	**Male**	**Female**	**Male**	
	N (%)	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Voted in last election:					
Yes	65 (79.27)	105 (88.98)	55 (90.16)	124 (89.21)	349 (87.25)
No	17 (20.73)	13 (11.02)	6 (9.84)	15 (10.79)	51 (12.75)
Attended political community organization/group meetings:					
Yes	29 (35.37)	47 (39.83)	28 (45.90)	68 (48.92)	172 (43.00)
No	53 (64.63)	71 (60.17)	33 (54.10)	71 (51.08)	228 (57.00)
Attended cultural performances shows/cinema:					
Yes	38 (46.34)	52 (44.07)	30 (49.18)	63 (45.32)	183 (45.75)
No	44 (53.66)	66 (55.93)	31 (50.82)	76 (54.68)	217 (54.25)
Attended religious functions events such as bhajan/satsang/prayer:					
Yes	52 (63.41)	72 (61.02)	32 (52.46)	73 (52.52)	229 (57.25)
No	30 (36.59)	46 (38.98)	29 (47.54)	66 (47.48)	171 (42.75)
Living alone:					
Yes	14 (17.07)	22 (18.64)	6 (9.84)	10 (7.19)	52 (13.00)
No	68 (82.93)	96 (81.36)	55 (90.16)	129 (92.81)	348 (87.00)
Received poorer services than other people at store restaurants:					
Yes	34 (41.46)	43 (36.44)	37 (60.66)	74 (53.24)	188 (47.00)
No	48 (58.54)	75 (63.56)	24 (39.34)	65 (46.76)	212 (53.00)
Received poorer services than other people from doctor:					
Yes	44 (53.66)	60 (50.85)	28 (45.90)	76 (54.68)	208 (52.00)
No	38 (46.34)	58 (49.15)	33 (54.10)	63 (45.32)	192 (48.00)

Total	82 (100)	118 (100)	61 (100)	139 (100)	400 (100)

Social Exclusion:

Table 3: 87.25% of elderly participants reported voting in the last election, while 43% attended political or community meetings. Participation in cultural events was reported by 45.75%, and 57.25% attended religious functions. Notably, 13% of the elderly lived alone, more commonly in rural areas. Regarding service experiences, 47% felt they received poorer services in public places like stores or restaurants, and 52% reported similar experiences with healthcare providers. Social and civic engagement was generally higher among males and urban residents, while social exclusion indicators such as living alone and perceived service discrimination remained significant concerns.

DISCUSSION

The present study revealed a high prevalence of depression (66.50%) and anxiety (89.25%) among the elderly, indicating significant mental health concerns in this group. Similar findings were reported by Konda et al. (2018),(11) who observed depression in 62.16% of elderly participants in rural Telangana. Likewise, Bharathi et al. (2020)(12) documented a depression prevalence of 64% and anxiety in 85% of older adults in Tamil Nadu. These comparable results suggest that mental health disorders among India's elderly are consistently high across various regions. The findings underscore the urgent need for focused mental health screening, awareness programs, and accessible geriatric services to address this growing issue.

In this study, among 266 elderly participants with depression, 77.82% had mild and 22.18% had severe depression. Depression was slightly more common in males, with severe depression notably higher among rural males (9.02%). Similar patterns were reported by Sebastian et al. (2019)(13), who found mild depression in 75.4% and severe depression in 20.6% of elderly in Kerala, with higher rates among males (1). Likewise, Sharma et al. (2020)(14) observed depression prevalence of 72.5% in elderly from Rajasthan, with male participants experiencing higher depressive symptoms than females. These findings suggest a consistent gender disparity and highlight rural elderly males as a particularly vulnerable group, emphasizing the importance of targeted mental health interventions in these settings.

In the present study, among 357 elderly participants with anxiety, 58.26% had moderate anxiety, 27.17% mild, and 14.57% severe. Anxiety levels were marginally higher in males, with moderate anxiety more common in urban males (19.89%) and rural males (16.53%). These findings are consistent with Ramesh et al. (2019)(15), who reported moderate anxiety in 60.2% and severe anxiety in 13.4% of elderly in Karnataka, with higher prevalence among males. Similarly, Nair et al. (2021)(16) found anxiety symptoms in 61% of elderly participants in Kerala, with men showing greater severity. These parallels indicate a recurring pattern of anxiety predominance among elderly males, particularly in urban areas, emphasizing the need for gender- and location-sensitive mental health interventions.

In this study, 87.25% of elderly participants voted in the last election, while participation in political meetings (43%), cultural events (45.75%), and religious functions (57.25%) was moderate. Social exclusion markers such as 13% living alone and perceived service discrimination in stores (47%) and healthcare (52%) were notable, particularly in rural areas. Kalusivalingam et al. (2020)(17) similarly observed limited civic engagement and high social exclusion among elderly in Tamil Nadu, with social participation significantly lower in rural settings (1). Hossain et al. (2022)(18) reported comparable patterns in Uttar Pradesh, where over 50% of elderly experienced social exclusion, particularly in access to services and community activities (2). These findings highlight persistent challenges in promoting inclusive social and civic participation for India's ageing population.

CONCLUSION

The study highlights a substantial mental health burden among the elderly in Banda district, with 66.50% experiencing depression and 89.25% reporting anxiety. Depression and anxiety were more common among males, particularly in urban areas. Social exclusion indicators like living alone (13%) and perceived discrimination in public services and healthcare remain significant challenges, especially in rural communities. Although civic engagement activities like voting were high (87.25%), participation in social, cultural, and political activities was limited. These findings underline the pressing need to address the mental, social, and economic vulnerabilities of India's ageing population through targeted, community-based interventions.

RECOMMENDATION

Regular mental health screening for depression and anxiety should be integrated into primary healthcare for the elderly. Community-based support programs promoting social participation

and inclusion, especially in rural areas, are essential. Awareness initiatives targeting families about the importance of elderly involvement in decision-making and social activities can improve well-being. Strengthening healthcare provider sensitivity towards elderly care and addressing service-related discrimination is crucial. Financial support schemes and adult education programs should also be expanded to reduce economic dependency and improve quality of life for the elderly in India.

LIMITATION OF THE STUDY

This study has certain limitations. Its cross-sectional design restricts causal interpretations between mental health and social exclusion. The reliance on self-reported tools like GDS-30, HAM-A, and social exclusion criteria may introduce reporting and recall bias. Additionally, while standardized, these tools were developed in different cultural contexts and may not fully capture the socio-cultural nuances of elderly mental health in India. The social exclusion scale's limited scope overlooks factors like digital or financial exclusion.

RELEVANCE OF THE STUDY

This unique study in Banda district provides vital local evidence on mental health, social exclusion, and civic engagement among the elderly. It highlights the need for routine mental health screening in primary care, community-based programs to promote social inclusion, and improved sensitivity in healthcare services. The findings also support expanding financial and educational support to reduce dependency. Overall, the study informs targeted public health strategies and reinforces ageing as a key health priority in India for benefiting both the elderly and society.

AUTHORS CONTRIBUTION

All authors have contributed equally.

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Nil

CONFLICT OF INTEREST

There are no conflicts of interest.

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DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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