

Prevalence of Geriatric depression and its associated factors in Warangal district, Telangana

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ABSTRACT:

Background: The world's population is ageing fast. Physical and mental health deteriorates as a result of the normal aging process. The most common mental health conditions for older adults are depression and anxiety. Mental health concerns are least prioritized in most of the developing countries with depression being easy to screen. **Materials and Method:** A cross-sectional study was conducted in Warangal district from October to December 2024, involving 370 participants aged over 60 years, both males and females. Data was collected through a semi-structured questionnaire and the Geriatric Depression Scale Short Form (GDS-15) for depression. The study used SPSS (version 26) for statistical analysis and Pearson Chi-square test. **Results:** The prevalence of geriatric depression was found to be 64.1%. Out of which 35.4% had mild depression; 16.8% had moderate depression and 11.9% had severe depression. Factors like education, marital status, occupation, pension, socio-economic status, co-morbidities, sleep problems, hearing, major life event and feeling lonely or isolated from others were found to be significantly associated with depression. **Conclusion:** The mental health of older adults should be addressed from the primary healthcare setting onward, through screening, diagnosis, and management. Strengthening the National Program for Health Care of the Elderly (NPHCE) through community-based programs. It also points towards the need for multicentric, longitudinal studies evaluating various aspects of geriatric depression.

Keywords: Ageing, depression, geriatric, mental health, rural

INTRODUCTION:

The world's population is ageing fast. In 2020, 1 billion people in the world were aged 60 years or over. That figure will rise to 1.4 billion by 2030, representing one in six people globally. By 2050, the number of people aged 60 years and over will have doubled to reach 2.1 billion. According to Census 2011, India has 104 million older people (60+years), constituting 8.6% of total population.¹ Aging is a natural phenomenon leading to deterioration of both physical and mental health. The most common mental health conditions for older adults are depression and anxiety.²

Depression is a common mental disorder. It involves a depressed mood or loss of pleasure or interest in activities for long periods of time. Depression is different from regular mood changes and feelings about everyday life. It can affect all aspects of life, including relationships with family, friends and community.

People who have lived through abuse, severe losses or other stressful events are more likely to develop depression. Women are more likely to have depression

than men. An estimated 3.8% of the population experience depression, including 5% of adults (4% among men and 6% among women), and 5.7% of adults older than 60 years.³

In India, gerontology is still in its infancy. There is not sufficient literature in the study area, so this study was done to estimate the prevalence of depression among the elderly and its association in a rural setting, highlighting the need for better preparedness for older populations in India.

Objectives:

1. To estimate the prevalence of depression among elderly in Warangal district.
2. To determine the factors associated with depression among the study population.

MATERIALS AND METHOD:

Study Design and Duration: A community based cross sectional study was conducted in Warangal district with

duration of 3 months from October 2024 to December 2024.

Study Population: Individuals aged more than 60 years, both males and females.

Inclusion Criteria: individuals aged >60 years, both males and females who have given consent.

Exclusion Criteria: Elderly people who had major psychiatric illness, were bedridden, and were unable to communicate.

Sample Size and Sampling Technique: The required sample size was determined using the formula Z^2PQ/d^2 , assuming a prevalence rate of 40.4%⁴. The sample size was obtained as 370 with Confidence level of 95% and margin of error of 5%. The sampling method is multistage sampling

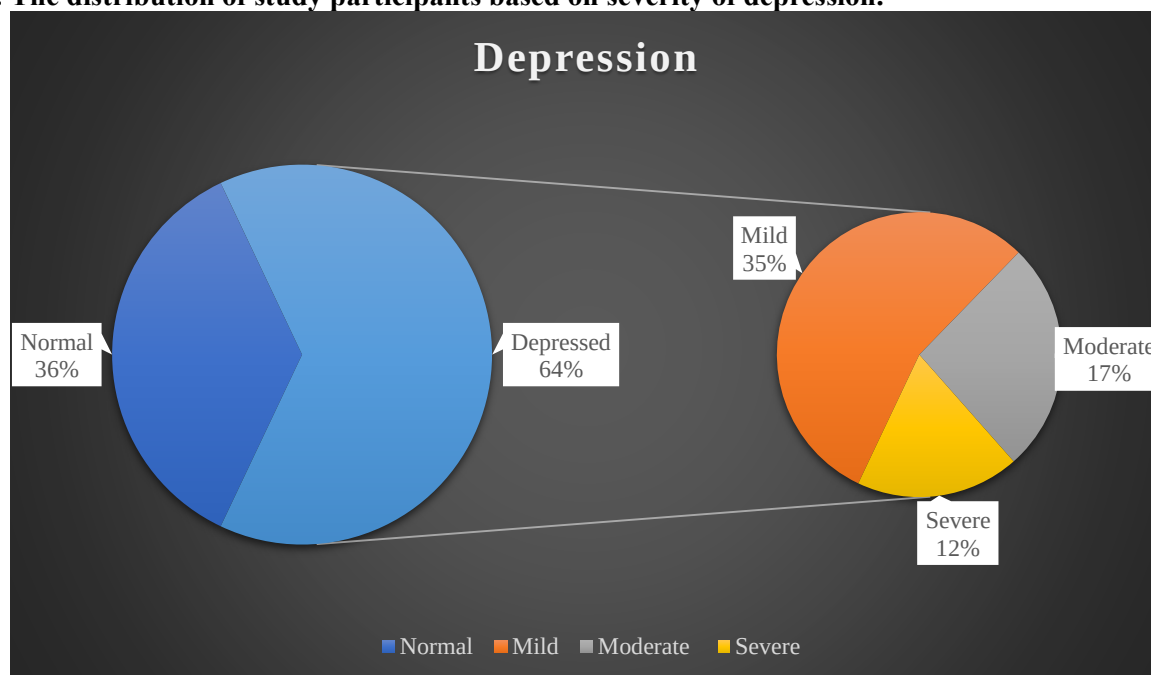
Data Collection and Analysis: First, the list of all villages in Warangal District is prepared, and then using simple random sampling, 10 villages were selected. In each village, 37 houses were selected using systematic random sampling. If there is no elderly in the house or the house is locked for 3 visits then the next house is taken. One elderly person from each house is selected; if there is more than one elderly person in the house, then one elderly person is selected using lottery method and is interviewed after taking informed consent, using

a semi-structured questionnaire for demographic data, and the Geriatric Depression Scale Short Form (GDS-15) is used for depression.^{5,6} The GDS-15 contains 15 yes or no questions; out of the 15 questions, 10 indicated the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively. Scores of 0–4 were considered normal, 5–8 indicated mild depression; 9–11 implied moderate depression, and 12–15 pointed towards severe depression. The GDS-15 has sensitivity and specificity that ranges from 79%–100% and 67%–80%, respectively.⁷ The data is entered into excel and imported to SPSS and Statistical analysis is done in SPSS (version 26). Chi-square test has been done to see association between depression and other variables.

RESULTS:

The prevalence of geriatric depression was obtained to be 64.1% i.e., 237 out of 370 participants. Out of which 131(35.4%) had mild depression; 62(16.8%) had moderate depression and 44(11.9%) had severe depression.

Figure 1: The distribution of study participants based on severity of depression.



The Median depression score was 6 and (Interquartile Range 3-9). The Median number of family members were 4(IQR 2-5). Sociodemographic data is shown in table 1. Association between depression and sociodemographic characteristics has been shown in table 2. Association with other variables is show in table 3.

Table 1: Sociodemographic characteristics of study subjects (N = 370)

Variable	Frequency (n)	Percentage (%)
Age (Median(IQR))	66(63-70)	
Gender		
Female	176	47.6
Male	194	52.4
Education		

Illiterate	325	87.8
Primary (upto Class V)	29	7.8
Upper primary (Class VI to VIII)	8	2.2
Secondary (Class IX to X)	5	1.4
Upper secondary (Class XI to XII)	3	0.8
Religion		
Hindu	325	87.8
Christian	33	8.8
Muslim	12	3.2
Marital status		
Married	270	73.0
Unmarried	3	0.8
Widow/Widower	92	24.8
Divorced/Seperated	5	1.4
Occupation		
Homemaker	78	21.1
Farmer	65	17.6
Not doing anything at present	197	53.2
Labourer	13	3.5
Other	17	4.6
Type of family		
Nuclear	303	81.9
Extended	49	13.2
Joint	18	4.9
Socio-economic status (Modified BG prasad)		
Class I	15	4.0
Class II	35	9.5
Class III	73	19.7
Class IV	162	43.8
Class V	85	23.0

Table 2. Association between Depression and Socio-demographic characteristics

Variable	Category	Depression (n, %)	Not Depressed (n, %)	Total (n)	P-value
Gender	Females	114 (64.8%)	62 (35.2%)	176	0.784
	Males	123 (63.4%)	71 (36.6%)	194	
Education	Illiterate	223 (68.4%)	102 (31.4%)	325	0.001*
	Literate	14 (31.1%)	31 (68.9%)	45	
Marital status	Married	164 (60.7%)	106 (39.3%)	270	0.029*
	Unmarried/Widow /Divorced	73 (73.0%)	27 (27.0%)	100	
Occupation	Not doing anything at present	137 (69.5%)	60 (30.5%)	197	0.003*
	Working or Homemaker	100 (54.2%)	83 (45.8%)	183	
Socioeconomic status	Class I & II	19 (37.9%)	31 (62.1%)	50	0.001*
	Class III, IV & V	218 (68.0%)	102 (32.0%)	320	

* P-value ≤ 0.05 is considered statistically significant

Table 3. Association between Depression and other variables

Variable	Category	Depression (n, %)	Not Depressed (n, %)	Total (n)	P-value
Major life events in past 1 year	No	155 (58.3%)	111 (41.7%)	266	0.001*
	Yes	82 (78.8%)	22 (21.2%)	104	
Substance Abuse	No	130 (63.1%)	76 (36.9%)	206	0.639
	Yes	107 (65.7%)	57 (34.3%)	164	
Pension	No	54 (52.9%)	48 (47.1%)	102	0.006*
	Yes	183 (68.3%)	85 (31.7%)	268	
Co-morbidities	0	26 (48.1%)	28 (51.9%)	54	0.008*
	1 or more	211 (66.8%)	105 (33.2%)	316	
Sleep problems in past 1 year	Absent	144(57.4)	107(42.6)	251	0.001*
	Present	93(98.2)	26(21.8)	119	
Hearing	Impaired	71(81.6)	16(18.4)	87	0.001*
	Normal	166(58.7)	117(41.3)	283	
Vision	Blind	34(62.4)	19(35.8)	53	0.987
	Sighted	203(64)	114(36)	317	
Feeling lonely or isolated from others	Often	26(78.8)	7(21.2)	33	0.001*
	Sometimes	168(78.5)	46(21.5)	214	
	Rarely	36(39.6)	55(60.4)	91	
	Never	7(21.9)	25(78.1)	32	
Interaction with family or friends	Daily	117(60.3)	77(39.7)	194	0.353
	Weekly	77(67.5)	37(32.5)	114	
	Monthly	30(73.2)	11(26.8)	41	
	Rarely	13(61.9)	8(38.1)	21	
Engage in religious or spiritual practices	Daily	55(61.1)	35(38.9)	90	0.601
	Weekly	97(62.2)	59(37.8)	156	
	Monthly	48(72.7)	18(27.3)	66	
	Rarely	35(63.6)	20(36.4)	55	
	Never	2(66.7)	1(33.3)	3	

* P-value ≤ 0.05 is considered statistically significant

Factors like education, marital status, occupation, pension, socio-economic status, co-morbidities, sleep problems, hearing, major life event and feeling lonely or isolated from others were found to be significantly associated with depression.

DISCUSSION:

The prevalence found in this study (64.1%) is higher than most previously reported rates from India and globally. A comprehensive meta-analysis by Pilia et al. reported a pooled prevalence of 34.4% (95% CI: 29.3–39.7%).⁸ A study from rural Tamil Nadu by Sinha et al. reported 42.7%.⁹ It may be due to regional variations, methodological differences

Our finding that illiteracy is significantly associated with higher depression rates (68.4%) is similar to the study by Behera et al. where the educational levels inversely correlated with depression risk.¹⁰ May be due to reduced access to healthcare information and limited coping strategies.

There strong association of socioeconomic status with depression. This aligns with findings from Antony et al. who identified financial dependency as a significant risk factor.¹¹

Strengths and Limitations:

Strengths: Use of a probable sampling technique that ensured adequate representation of the study population. Data collection using a structured questionnaire ensured consistency and comprehensiveness.

Limitations: Limitations include the use of a screening rather than diagnostic tool and the cross-sectional design restricting causality assessment. Nonetheless, this indicates a critical need for enhanced mental health screening and interventions in elderly population integrated into primary care for early detection and management.

CONCLUSION:

The mental health of older adults should be addressed from the primary healthcare setting onward, through screening, diagnosis, and management. Strengthening the National Program for Health Care of the Elderly (NPHCE) through community-based programs. It also points towards the need for multicentric, longitudinal studies evaluating various aspects of geriatric depression.

Recommendations:

Integrate routine GDS-15 screening for elderly into primary health centers (PHCs) and Anganwadi programs for early detection. Launch community education campaigns targeting illiterate and low-SES groups to enhance mental health awareness and coping skills. Conduct longitudinal studies using diagnostic tools like DSM-5 criteria to establish causality and evaluate intervention efficacy in similar rural settings.

Source(s) of support: Nil

Conflicting Interest: Nil

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