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Original Research Paper

Prevalence of Depression and associated risk factors among elderly in rural field practice areas of a tertiary care institution in Guntur, Andhra Pradesh

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ABSTRACT:

Background: Old age is considered as curse being associated with deterioration of all physical, psychological factors, isolation from social, economic and other activities. Rapid urbanization and societal modernization has brought its wake breakdown in family values and frame work of family support, social isolation and elderly abuse leading to a host of psychological problems. The present study was undertaken to estimate the prevalence of depression and associated risk factors among the elderly **Methodology**: A cross sectional study was conducted in the rural field practice area of a tertiary care teaching institute in Guntur district, Andhra Pradesh state during July – August 2021. A predesigned, pretested questionnaire and GDS-15 scale were used for data collection from 220 participants. Data was entered into MS Excel sheet and analyzed using Statistical Package for the Social Sciences statistical software version -16. **Results**: The prevalence of depression in study population was 38.63%.Mild depression was observed in (15.45%) of study population followed by moderate depression (14.09%) which was followed by severe depression in the elderly (9.09%).It was significantly higher in those who were divorced ,separated , Unmarried and widow or widower as compared to married elderly (p=0.00) and those who belonged to "Not working" class (47.37%) as compared to "Working " class (19.6%) ,(p=0.01),those who were financially dependent on others (58.62%)as compared to those who were financially independent (31.48%) (p=0.00), those belonging to lower socioeconomic status (45.61%) as per modified BG Prasad classification, and those who are living alone (56.25%) as compared to living with family(32.55%) (p=0.00). **Conclusion:** The study revealed the need for the provision of care, concern, support (financially as well as psychologically) towards the elderly to promote mental health positively.

Keywords: Depression, Elderly, Rural area

INTRODUCTION:

The elderly age is an integral part of human life. it is the evening of life. it is Unavoidable, Undesirable, Unwelcomed and problem ridden phase of life [1]. Over the past few decades life expectancy has increased drastically in India from 36.7 years in 1951 to 70.03 years in 2021[2]. it is projected that by 2050 ,elderly will constitute 20% to 30% of India's population [3]depression is the most common psychiatric disorder and commonest cause of disability in the elderly[4,5]. In India various community based studies for mental health surveys on depressive disorders in those aged 60 years and above were conducted with prevalence of depression ranging from 8.9% to 62.61%[6]. Depression results in reduced quality of life leading to cognitive decline and impairs activity of daily living[7]. Studies to assess, the depression among elderly population are scanty in the rural community of Andhra Pradesh, so the present study was undertaken to estimate the prevalence of depression associated risk factors among the rural elderly population in rural field practice area of tertiary care teaching institute in Guntur district, Andhra Pradesh.

METHODS:

The community based cross sectional study was conducted in the rural field practice area of tertiary care

teaching institute in Guntur district, Andhra Pradesh state during July – August 2021 . Sample size was calculated as 200 using the previous study (taking 47% as prevalence of depression among rural elderly(p), the sample size was calculated using the formula $Z=4pq/d^2$(where p=47% , q=100-p and d=allowable error of 15% of p)) and considering 10% Non-response rate , the total sample size obtained was 220

Study population:
The rural field practice area of institute includes 8 villages under Tadikonda Mandal, Guntur district, Andhra Pradesh, for good representation of study, it was decided to consider all 8 villages for data collection. A detailed list of geriatric population in these villages was obtained from the Mandal office Tadikonda Mandal, which includes a comprehensive list of voter id card details and the same was used in present studies as reference for the study population.
The total geriatric population of the villages was 7069 based on census 2011. The total sample (220) was divided by probability proportion to size (PPS) in which the village with more population required more sample and the village with less population required fewer sample.

In the village required sample was collected by using simple random sample with random number. The selected houses are visited, any person aged equal to 60 year or above, giving consent, was interviewed, if the individuals are not available at the time of study or the house is locked, then second visit was made to house after 1 week. if the person is still unavailable,then he was excluded and the next person assigned by the random number list was included in the study. People who didn't give consent or those who met the exclusion criteria were excluded and the next numbers in the random list were included

Inclusion criteria:
1.Elderly people aged 60 years and above (both males and females)
2.Elderly people residing in these villages for more than 6 months

Exclusion criteria:
1.Elderly people who are not willing to participate in study
2.Those who are not able to communicate in Telugu, English, and Hindi.
3.Those who are unable to communicate because of terminal illness and complete deafness

Assessment of depression:
Data collection was carried out by interview method by house to house survey, by using a predesigned and pretested questionnaire to extract sociodemographic variables. Assessment of depression was done using the 15 –item geriatric depression scale(GDS) consists of 15 self-report items. The data was entered in MS excel sheet and analyzed using statistical package software for the social sciences statistical software version 16. results were interrupted as frequencies and percentages. chi square tests were used wherever applicable and a p value <0.05 was taken as significant

RESULTS:
Of the 220 study population ,124 (56.3%)were male and 96 (46.63%)were female. Male is to female ratio was 1.9:1. Most of them were married and belonging to nuclear family (80.4%). Most of the participants interviewed belonged to an age group of 60-65 years (38. 63%).most of the respondents belong to Hindu religion (83.6%) and were illiterate (60.00%).
Table 1 denotes the distribution of elderly population on the basis of GDS-15 scores. nearly two-third of study population were found to be normal (61.36%) without depression as per GDS-15 score ,9.09% of the elderly were severely depressed.
Table 2 depicts, Of the 220 study population ,56.3% were male and 46.63% were female most of them were married and belonging to nuclear family (80.4%). Most of the participants interviewed belonged to an age group of 60-65 years (38. 63%).most of the respondents belong to Hindu religion (83.6%) and were illiterate (60. 00%).But it was found that the association between age, gender, religion, type of family and education status were found to be statistically non-significant.

Table 1: Distribution of elderly population on the basis of GDS-15 scores(N=220)

Depression per GDS score	**Number**	Percentage
Absent(0-4)	135	61.36%
Mild(5-8)	34	15.45%
Moderate(9-11)	31	14.09%
Severe(12-15)	20	9.09%

Table 2:Association between sociodemographic variable and depression(N=220)

Living status	Living alone Living with family	48(21.81%) 172(78.18%)	27(56.25%) 56(32.55%)	21(43.75%) 116(67.44%)	0.00

Bio social characteristic		Depression			
Variables		NO.(%)	Present No.(%)	Absent No.(%)	P
Age groups (years)	60-65 66-70 71-75 76-80 >80	85(38.63 %) 59(26.81 %) 41(18.63 %) 23(10.45 %) 12(5.45%)	32(37.64%) 25(42.37%) 10(24.39%) 12(52.17%) 7(58.33%)	53(62.35%) 34(57.62%) 31(75.60%) 11(47.82%) 5(41.66%)	0.10
Gender	Male Female	124(56.3 %) 96(43.63 %)	50(40.32%) 35(36.45%)	74(59.67%) 61(63.54%)	0.55
Religion	Hindu Non Hindu	184(83.6 %) 36(16.36 %)	73(39.67%) 12(33.33%)	111(60.32%) 24(66.66%)	0.47
Type of family	Nuclear Joint Extended	177(80.4 %) 9(4.09%) 34(15.45 %)	70(39.54%) 4(44.44%) 11(32.35%)	107(60.45%) 5(55.55%) 23(67.64%)	0.75
Socio economic status	Lower middle Upper lower Lower	13(5.90%) 150(68.1 %) 57(25.90 %)	1(7.69%) 61(40.66%) 26(45.61%)	12(92.30%) 89(59.33%) 31(54.38%)	0.04
Occupation	Working Not working	51(23.18 %) 169(76.8 %)	10(19.60%) 75(44.37%)	41(80.39%) 94(55.62%)	0.01
Educational status	Illiterate Literate	132(60.0 %) 88(40.0%)	54(40.90%) 31(35.22%)	78(59.09%) 57(64.77%)	0.39
Marital status	Married	171(77.7	56(32.74%)	115(67.25%)	0.00

	Others[##]	%) 49(22.27 %)	30(61.22%)	19(38.77%)	
Financial dependency	Independent Dependent	162(73.6 %) 58(26.36 %)	51(31.48%) 34(58.62%)	111(68.51%) 24(41.37%)	0.00

Modified BG Prasad socioeconomic scale 2021.[##]includes divorced, separated, widow\widower value significant

DISCUSSION:

The overall prevalence of depression was found to be 38.63% which was similar (39.6%)to a study conducted in Katihar, Bihar by Sneha Soni et al[8] and another study conducted in Surat city by Vishal J et al[9] (39.04%). However, the prevalence of present study was higher as compared to other studies done in Ludhiana, Vellore, and Dharwad with prevalence rates of 8.9%,12.7%and 29.36% respectively[10-12] and was much lower as compared to other Indian studies[13-16].This wide difference may be due to the differences in the sociodemographic characteristics of the study population and different sample size. The present study showed that depression was more in males(40.32%) as compared to females (36.45%). This effect is statistically not significant. A study by Singh et al on geriatric population showed similar findings where 89.6% were having depression and in that males outnumbered females[17]. Prevalence of depression was found to be highest in the age group of more than 80 (58.33%) however,this effect was not found to be significant. In this present study, it was observed that the depression was most prevalent among divorced, separated, widow or widower (61.22%) as compared to married (32.74%) similar to the study done by (sati P et al in sembakkam, Kanchipuram, Tamilnadu[13]). Sinha et al [13] and Taqui et al[16] which was statistically significant. Depression was also found higher among those who belonged to " Lower socioeconomic status (45.6%) and those who were financially dependent on others (58.62%)".Contradictory findings were observed by Sneha soni et al. No significant association was observed between education and depression. on contrary to the findings as reported by Jain RK et al[19] . Significant association between economic status and depression was observed in this study similar to the study done by Jain RK et al[18]. Prevalence of Depression was also found to be higher among the participants who are living alone (56.25%) as compared to the participants who are living with their families (32.55%) similar to the study done by the Barua et al[19], senugupta et al[10], Thilak S et al[20],MaulikS et al[21] which was statistically significant. Significant variables associated with depression in present study were lower socioeconomic status, unemployment condition, marital status, financial dependency and living status ($p<0.05$).

CONCLUSION:

The higher prevalence of depression among oldest adults, reiterates the need for better community support and importance of awareness about depression among family members and community. It is also very essential to design mental health awareness activities to prevent geriatric depression.To address the sample size limitation of the study large scale studies are needed for better understanding of psychological and psychiatric illnesses among rural geriatric population in India.

Finding: No funding sources

Conflict of Interest: None declared

Ethical Approval: The study was approved by Institutional Ethics committee

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