

A STUDY OF DEPRESSION LEVEL AMONG ELDERLY PEOPLE IN THE RURAL AREA OF BIJAPUR, INDIASantosh D. Patil¹, Sharvanan E. Udayar², Mohd. Shannawaz³**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: BACKGROUND: "Population ageing" was one of the most distinctive demographic events of the twentieth century. Growth in the elderly population has led to an increase in age related diseases and mainly depression affecting quality of life. Depression in old age is an emerging public health problem leading to morbidity and disability worldwide. In India there is acute scarcity of adequately trained mental health professionals. In this context, there is need to study the level of depression in old age and an effective screening tool which can be used to detect and treat depression. **OBJECTIVES:** 1) To assess the prevalence of depression in elderly using the Geriatric Depression Scale (GDS). 2) To examine the socio-demographic factors associated with depression among elderly people. **MATERIALS AND METHODS:** A cross-sectional, community based study was conducted in Shivanagi village of Bijapur District, Karnataka. A random sample of 388 elderly people was taken for the study. GDS was used to assess depression. Those with any psychiatric morbidity and without consent were excluded. Data was analyzed using Chi Square test of association, tests of difference between mean, and standard deviation with SPSS software. **RESULTS:** The magnitude of mild or severe depression was 34 percent on GDS scale. The prevalence of depression was found to be more among women, and it was statistically significantly positively associated with increasing age, illiteracy, a low socio-economic status, those who were living alone, those who were economically partially dependent and those who were totally dependent for the activities of daily living. **CONCLUSION:** These findings could guide community-based program managers to devise and implement effective and timely mental health interventions for older adults in order to prevent geriatric depression and develop comprehensive strategy for its early diagnosis.

KEYWORDS: Elderly people, depression, rural area.

INTRODUCTION: "Population ageing" is the process by which older individuals become a proportionally larger share of the total population was one of the most distinctive demographic events of the twentieth century. It will surely remain important throughout the twenty-first century. Initially experienced by the more developed countries, the process has recently become apparent in much of the developing world as well.¹ India, the second largest country in the world, is presently undergoing such a demographic transition² with 72 million elderly persons above 60 years of age, which is expected to increase to 179 million in 2031 and further to 301 million in 2051. This increase in the number of elderly will have a direct impact on the demand for health care services and social security.³

During the aging process, changes experienced by the elderly, such as the loss of a spouse, financial difficulties, lack of familiar and social support, and the occurrence of co morbidities may frequently contribute to psychological imbalances, especially depression.⁴ Psychiatric disorder is especially prevalent among elderly. With great percentage of people living beyond the age of 60 in

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both the developed and the developing countries, the problem of mental illness among the elderly has grown significantly. Depression is one of the most frequent and debilitating psychiatric disorder.⁵

Depression is likely to increase in number due to increase in life expectancy, rapidly changing social and physical environment that gives rise to psychological stress, breaking of traditional protective measures, increase in morbidity due to chronic non-communicable disease and increase in medicaments and alcohol. Depression is not a normal part of ageing. Depression causes needless suffering for the individual & for the family. Elderly people with untreated depression are more likely to have worse outcomes from conditions like hypertension, diabetes mellitus and heart disease. Depression may accompany a chronic illness or a condition that causes pain & suffering.⁶

Community based studies done on depression among elderly in India are very few, thus this study was an attempt to assess the prevalence of depression among elderly using the Geriatric Depression Scale (GDS) and to determine the factors influencing depression and to recommend preventive measures. With this background the above study was carried out with the objective to to assess the prevalence of depression in elderly using the Geriatric Depression Scale (GDS) and its relationship to various sociodemographic factors.

MATERIALS AND METHODS: This is a cross-sectional, community based study. The data were collected between Jan 2014 – Jun 2014 in the Shivanagi village, the rural field practice area which was attached to the Department of Community Medicine, Shri B. M. Patil Medical College, Bijapur. It was purposively selected for data collection because of high no. of elderly population.

Sample Size & Sampling: The sample size for the present study was calculated by using the following formula at a 95% confidence interval, with an allowable error of 15 %:

$$n = \frac{z^2 * p * q}{D^2} = 388$$

$z = 1.96$ at 5% level of significance.

$p = 31.4\%$, $q = 1 - p = 68.6\%$.

$D = \text{margin of error} = \pm 15\%$.

Various earlier Indian studies have revealed that the prevalence of depression among the old age people ranged from 6% to 58%. Hence, a prevalence of 31.4 % was assumed for the purpose of computing the size of the sample which was required for the present study.

Total number of houses in the village of Shivangi is 1872. A house to house survey was conducted and a systematic random sampling procedure was applied to achieve the required sample size. After obtaining oral consent, one to one interview was done to obtain information regarding socio-demographic profile and to assess the prevalence of depression in elderly using the Geriatric Depression Scale (GDS) which was modified and translated to the local language. This scale was created and validated by Yesavage JA to assess depression.⁷ Data analysis was done using mean, standard deviation, Chi Square test and presented in the form of tables.

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RESULT: A total of 388 elderly persons were interviewed. Most of the elderly i.e., 69.3% were 60-69 yrs while a small proportion i. e. 8. 2% belonged to >80 yrs. The mean age of the study population was 68. 1 yrs. The 66% of the study population were females. More than half of the respondents were Hindus 232 (59.8%) and majority of the study subjects were illiterates 201 (51.8%). Overall half of them were not working 202 (51.8%) and almost 149 (38.4%) belonged to class IV of SES (Table. 1). Ankur Barua⁸ et al and Manjubhashini S⁹ in their study depression in elderly also showed similar pattern.

Table 2 shows that of the 388, overall prevalence of depression was 132 (34.0%), of which 94 (24.2%) were mildly depressed and 38 (9.8%) were found to be suffering from severe depression. Females 89 (36.5%) were more depressed compared to that of 43 (29.9%) males. The association between depression level and sex of respondent was statistically significant ($X^2=2.047$, $df = 2$, $p=0.002$, significant).

DISCUSSION: In our study, the rate of depression was found to be higher in females when compared to males because women, throughout their lifetime face more stressful events and have a greater sensitivity towards them. Hence they tend to get depressed in response to stressful life events. Our study findings are consistent with the study by Ankur Barua⁸ et al, Ramachandran V et al¹⁰ where the depression was similar in both sexes. On the different, a study done in a rural community in South Kerala by Sandhya GI¹¹ showed that the prevalence of depression was lower in females (22.9%) when compared to males (29.1%).

The overall prevalence of depression was found to be 29.38%. Ankur Barua⁸ and Ramachandran V¹⁰ et al who had determined the prevalence of depressive disorders in the geriatric population is to be 21.7%, 24.1% respectively. However, a high prevalence of depressive disorders of 52.2% among the elderly 60 years was observed in the study conducted by Nandi et al¹² in the rural areas of West Bengal.

When the role of socio-demographic factors leading to depression was assessed (Table 3) , it was observed that depression was higher among study subjects aged 60-69 years (60.53%) the difference in the prevalence of depression between different age groups was found to be statistically significant. The prevalence of depression was found to increase with increasing age. The reason for the increase in the prevalence after the age of 70yrs may be an increased economical and physical dependency, loss of spouse, negligence by the family members and loss of self-esteem. Similar findings were found in Ankur Barua⁸ and Ramachandran V¹⁰ et al studies.

In the present study, Literate individuals 134 (48.91) were leading a normal life compared to illiterates 80 (70.18%) who were suffering from depression was found to be statistically significant. The prevalence of depression was found to be inversely proportional to the literacy status. There was a gradual decrease in the prevalence of depression as the literacy status increased. Ramachandran V¹⁰ and Rajkumar AP¹³ which were conducted in India revealed similar findings as those of the current study.

When the role of socio-economic factors leading to depression was assessed, it was observed that majority of the study population belongs to class III, IV and class V compared to class II and class I is statistically highly significant. Low socio-economic status not only increases the risk of onset but also increases the risk of persistence of depression. Similar findings were also observed in rajkumar et al¹³ and ramachandran et al¹⁰ in their study.

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CONCLUSION: The prevalence of depression among study population was 34.0%. The prevalence rates of depression among the males and females were 29.9 and 36.5, respectively. The prevalence of depression was found to be positively associated with the female sex, increasing age the educational status, a low socio-economic status, who were living alone, economic dependency and dependency of the daily living activities. These findings could guide community-based program managers to devise and implement effective and timely mental health interventions for older adults in order to prevent geriatric depression and develop comprehensive strategy for its early diagnosis.

REFERENCES:

1. Population Division, DESA, United Nations World Population Ageing 1950-2050.
2. Seby K, Chaudhury S, Chakraborty R. Prevalence of psychiatric and physical morbidity in an urban geriatric population. *Indian J Psychiatry* 2011; 53 (2): 121-7.
3. Sandhya GI. Geriatric Depression and Related Factors-A Cross sectional Study from a Rural Community in South Kerala. *Journal of the Indian Academy of Geriatrics* 2010; 6 (2): 61-63.
4. Brasil. Ministério da Saúde; Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Envelhecimento e saúde da pessoa idosa [Internet]. Brasília; 2007 [citado 2011 jun. 10]. Disponível em: <http://bvsms.saude.gov.br/bvs/publicacoes/mabcad19.Pdf>.
5. Research papers. Prevalence of depression among institutionalized elders in the Colombo district. URL available from <http://www.med.cmb.ac.lk>. Accessed on 14. 08. 2012 at 8pm.
6. Manjubhashini S et al. Depression among Population above 60 Years. 695 *International Journal of Medical Science and Public Health* 2013 Vol. 2 Issue 3.
7. Yesavage JA, et al. Development and validation of a geriatric depression screening scale: a preliminary report. *J Psychiatr Res* 1983; 17 (1): 37-49.
8. Ankur Barua, Das Acharya. Depression in elderly: a cross-sectional study in rural south india. *Jimsa* October - December 2007 Vol. 20 No. 4 pn 259-261.
9. Manjubhashini S et al. Depression among Population above 60 Years. *International Journal of Medical Science and Public Health* 2013 Vol. 2 Issue 3 p no -695-702.
10. Ramachandra V, Sharada Menon M., Ramamurthy B. Psychiatric disorders in elderly subjects. *Indian Journal of Psychiatry* 1979; 2; 193.
11. Sandhya GI. Geriatric Depression and Related Factors-A Cross sectional Study from a Rural Community in South Kerala. *Journal of the Indian Academy of Geriatrics* 2010; 6 (2): 61-63.
12. Nandi PS, Banerjee G, Mukherjee SP, Nandi S, Nandi DN. A study of psychiatric morbidity of the elderly population of a rural community in West Bengal *Indian J Psychiatry*. 1997; 39 (2):122-9.
13. Rajkumar AP, Thangadurai P, Senthilkumar P, et al. Nature, prevalence and factors associated with depression among the elderly in a rural south Indian community. *International Psychogeriatrics*. 2009; 21: 372-78.

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Background Variables		(N=388)	
		No.	%
Sex	Male	132	34.0
	Female	256	66.0
Age (in years)	60-69	269	69.3
	70=79	87	22.4
	>80	32	8.2
Religion	Hindu	232	59.8
	Muslims	156	40.2
Educational Status	Illiterates	201	51.8
	Literates	187	48.2
Occupation	Non-working	202	51.8
	Working	186	48.2
Socio-economic Status	Class I	36	9.3
	Class II	88	22.7
	Class III	101	26.0
	Class IV	149	38.4
	Class V	14	3.6
Family Type	Nuclear	118	30.4
	Joint	149	38.4
	Three Generation Family	121	31.2
Marital Status	Widowed/ Unmarried/ Divorced	127	32.7
	Married	261	67.3

Table1: Distribution of the elderly people Socio-Demographic Characteristics

Depression per GDS Score	Males (%)	Females (%)	Total (%)
Normal	101 (70.1)	155 (63.5)	256 (66.0)
Mild	27 (18.8)	67 (27.5)	94 (24.2)
Severe	16 (11.1)	22 (9.0)	38 (9.8)
Total	144 (37.1)	244 (62.9)	388 (100)

Table 2: Distribution of elderly people according to GDS-15 Scores (n=388)

($\chi^2 = 2.047$, $df = 2$, $p = 0.002$).

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Background variables	Normal (n=274)		Depression present (n=114)		χ^2 value	Degree of freedom	p-value
	No.	%	No.	%			
Age							
60-69	199	72.63	69	60.53	3.056	2	0.056
70-79	66	24.09	38	33.33			
>80	9	2.29	7	6.14			
Sex							
Male	107	39.05	37	32.46	0.546	1	0.063
Female	167	60.95	77	67.54			
Educational Status							
Illiterates	140	51.09	80	70.18	4.348	1	0.032
Literates	134	48.91	34	29.82			
Occupation							
Non-working	139	50.73	73	64.03	2.039	1	0.070
Working	135	49.27	41	35.96			
Socio-economic status							
Class I	56	20.44	16	14.04	17.760	4	0.002
Class II	39	14.23	24	21.05			
Class III	111	40.51	32	28.07			
Class IV	33	12.04	22	19.30			
Class V	35	12.78	20	17.54			
Family type							
Nuclear family	84	30.66	37	32.46	1.28	2	0.872
Joint family	105	38.32	41	35.96			
Three generation family	85	31.02	36	31.58			
Marital status							
Widowed/ unmarried/ divorced	75	27.37	66	57.89	1.762	1	0.896
Married	199	72.63	48	42.11			

Table 3: Relationship between Prevalence of depression and various variables

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