

## Prevalence of the Late Life Depression: A Cross Sectional Study in Urban Population

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### ABSTRACT

**Introduction:** The prevalence of depression in the community, with a focus on the elderly, has been widely studied the world over. The study was conducted to know their sociodemographic status and to examine the magnitude and severity of depression among the elderly living in the community. **Materials and Methods:** Total 90 elderly people living in the urban region of Sangareddy, Telangana state were analyzed for the study. Out of all the elderly population, 90 study subjects i.e., 42 males and 48 females were randomly selected. Written consent was taken from all the study subjects prior to the collection of the data. The data was collected by using the standardized methods, which were described in previous studies. **Results:** Nearly half of the study population i.e., 42.2% of the urban community were depressed. Dysthymia was the most common diagnosis with mild severity of depression. Late life depression was much more among the living alone and nuclear families. **Conclusion:** Significantly high prevalence of depression was found among the elderly living population. Almost all the depressed had a physical illness with one or more impairments. Old age is associated with a decline in general health status and loneliness.

**Keywords:** Elderly, Depression, Nuclear family, Prevalence and living status.

Elderly 'or old' refers to ages nearing or surpassing the average life span of human beings. Government of India adopted a National Policy on Older Persons in January, 1999<sup>1</sup>. The policy defines senior citizen 'or elderly' as a person who is 60 years of age or above. Aging is a natural phenomenon and has its own dynamics, beyond human control<sup>2</sup>. The rate at which aging occurs does not strictly follow the chronological age. Aging differences in humans depend on genetic factors, being substantially influenced by nutrition, lifestyle and environment<sup>2,3</sup>.

With a rapidly aging society, geriatric mental health is emerging as an important public health concern. Depression is an important public health issue that affects approximately 121 million people worldwide. It is estimated that by 2020, depression will be the second leading cause of morbidity after ischemic heart disease<sup>2,4,5</sup>. The prevalence of depression in the community, with a focus on the elderly, has been widely studied the world over. Numerous studies looking at depression in this special population have consistently demonstrated that

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Received: May 10, 2019; Revision Received: June 27, 2019; Accepted: June 30, 2019

the prevalence of depressive symptoms (>27%) far exceeds that of diagnosable depressive illness. Accordingly, depression in this group can be categorized into a major depression and minor depression<sup>5,6</sup>. The prevalence of major depression is approximately 2 times higher in elderly women than in elderly men. It was also observed, the higher percentage cases with depressive symptoms are observed in women after the birth of a child (Postpartum depression), unemployed, older people after cardiovascular and neurological disturbances<sup>7</sup>.

The median prevalence rates of depression in the elderly population of India and the rest of the world revealed that the proportion of the depressed elderly in India (18.2%) was significantly higher than the rest of the world (5.4%)<sup>2,4,8</sup>. Aging has been found to be a significant risk factor for depression, which was confirmed by western studies. Older people, especially the very old (>75 years), usually report levels of depressive symptoms higher than those reported by younger and middle-aged people<sup>9</sup>. Numerous studies reveal that within the older population, depressive symptoms are highest among the oldest old. The needy elderly people should be intervened for individual health status and wider sociodemographic determinants in the community<sup>10</sup>. Such an initiative is all the more important in a rapidly changing society. The present study was undertaken to examine the magnitude, severity of depression among the elderly living population.

### MATERIALS AND METHODS

The present cross-sectional study was conducted for a period of 6 months in the department of psychiatry, Elderly people in and around sangareddy, Telangana state were considered for the study. Stratified random sampling technique was used to choose study subjects. Inclusion criteria of the study were based on age more than 60 years, Resident in the locality for a minimum of six months and Those who consent to participate in the study. Elderly people with severe cognitive deficits, difficulties in hearing and speech are excluded from the study. The study was approved by the institutional ethics committee.

House to house field visit was conducted to identify the elderly population residing in the urban area of sangareddy. Out of all the elderly population, 90 study subjects i.e., 42 males and 48 females were randomly selected. Written consent was taken from all the study subjects prior to the collection of the data.

The following data were collected using standardized methods;

1. Socio-demographic characteristics details, co-morbid physical illness were collected using a pretested structured proforma compiled in the department of psychiatry.
2. The psychiatric diagnostic profile of all the subjects was assessed by administering SCID. Structured interviews have been developed to increase diagnostic reliability through standardization of the arrangement process and to increase diagnostic validity by facilitating the application of DSM-IV diagnostic criteria and by systematically probing the symptoms.
3. The severity of depression was assessed by HDRS (also known as the Ham-D). HDRS is the most widely used clinician administered depression assessment scale.

#### *Total score levels for the severity of depression*

0-7 = Normal

8-13 = Mild Depression

14-18 = Moderate Depression

19-22 = Severe Depression

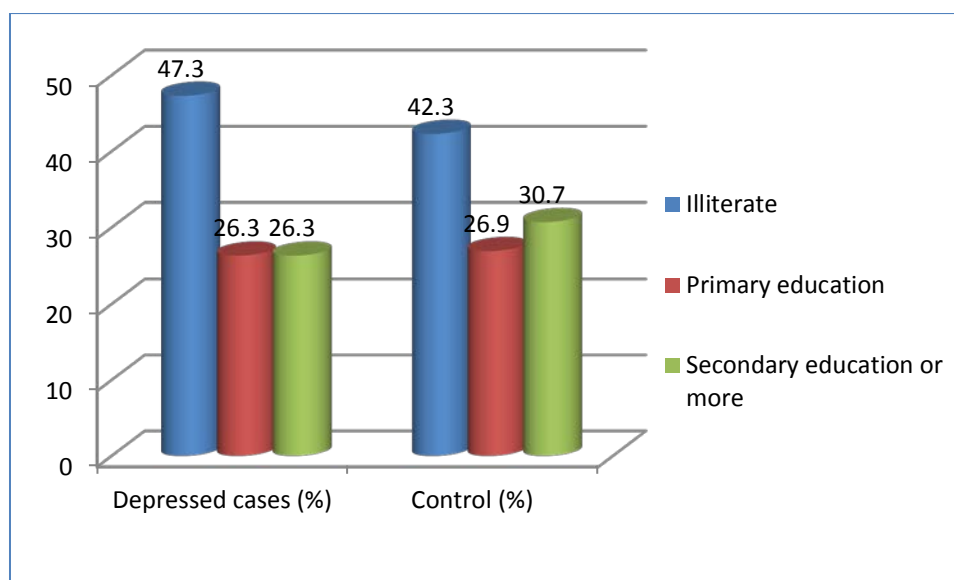
≥ 23 = Very Severe Depression

19-22 = Severe Depression

≥ 23 = Very Severe Depression

## RESULTS

The present comparative case-control clinical study on subjects of 90 elderly people to know the magnitude and severity of depression. Out of 90 samples, 38 were found depressed amounting to a prevalence of 42.2% in the urban population. Remaining 52 (57.8%) of the study population was not shown any kind of depressed symptoms. The mean age of study subjects was  $65.4 \pm 8.6$ , 52 cases (57.7%) were below 70 years of age and 38 (42.2%) cases were above 70 years.



*Figure 1: Comparison of educational status in the study population.*

Literacy population is statistically similar in two groups with  $P=0.16$ , hence education distribution results were not significant (Figure 1).

Depression was significantly more in nuclear families (65.7%) as compared to the control group where only 32.6% live in a nuclear family (Table 1). Living status of the study population revealed that more depressed cases were seen 39.4% in living alone and 18.4% in living with relatives. A higher number of control group samples belonged to elderly living with spouse and children (Table 1).

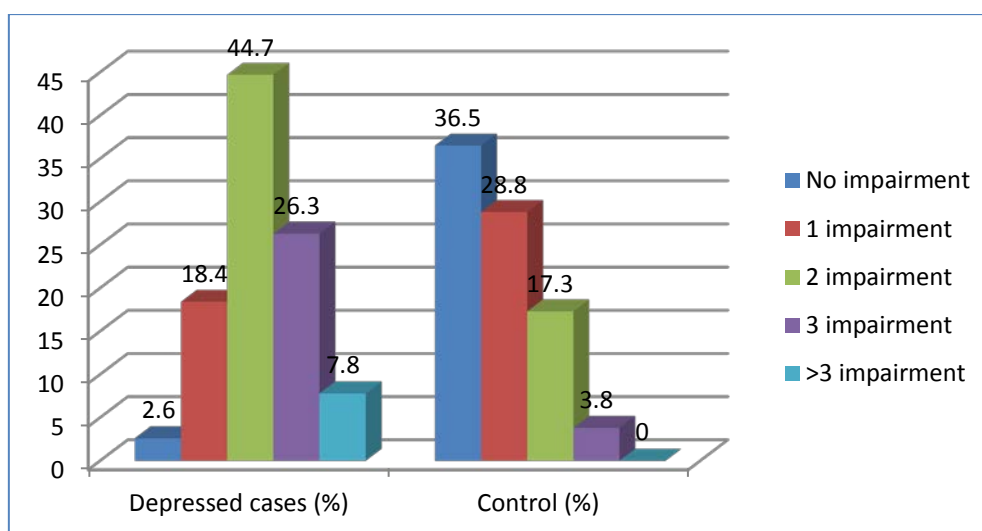
*Table 1: Comparison of living status & type of family in the study population*

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Living status and type of family	Depressed cases n=38	Control n=52	P value
Living status:			
Living alone	15(39.4)	9	0.154
Living with a spouse	6	15	
Living with spouse and children	5	16	
Living with children	5	9	
Living with relatives	7 (18.4)	3	
Family status:			
Nuclear family	25(65.7)	17(32.6)	0.029
Joint family	8(21)	31(59.6)	
3 generation family	5(13.1)	4(7.6)	

**Table 2: Distribution of SCID in cases and controls**

SCID-I	Depressed cases n=38
MDD	9 (23.6)
Dysthymic Disorder	12 (31.5)
Alcohol dependence	11 (28.9)
Alcohol abuse	2 (5.2)
Nicotine	4 (10.5)

Among 38 depressed elderly individuals, Dysthymia was most prevalent (31.5%). Major depressive disorder (MDD) was present in 23.6%, on the other hand, none of the non-depressed elderly had any psychiatric comorbidity. Alcohol dependence was also observed in 28.9% of depressed cases (Table 2).



**Figure 2: Comparison of the total number of impairments in cases and controls**

The elderly depressed community was shown a number of impairments as compared to the control group. Cases having 2 impairments are more in the depressed community (44.7%) with the majority of the cases had a physical illness. Three or more illnesses were present in 34.2% of the depressed cases as compared to only 3.8% of the controls (Figure 2).

**Table 3: Distribution of HDRS items of cases**

S. No	HDRS	No of patients (n=38)	Percentage (%)
1.	Depressed mood	31	81.5
2.	Feelings of guilt	3	7.8
3.	Suicide	5	13.1
4.	Insomnia-early in the night	6	15.7
5.	Insomnia middle of the night	33	86.8
6.	Insomnia early hours of the morning	10	26.3
7.	Work and activities	28	73.6
8.	Retardation	6	15.7
9.	Agitation	1	2.6
10.	Anxiety-psychic	26	68.4
11.	Anxiety-Somatic	2	5.2
12.	Somatic symptoms-GI	21	55.2
13.	Somatic symptoms-General	-	-
14.	Genital symptoms	-	-
15.	Hypochondriasis	2	5.2

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S. No	HDRS	No of patients (n=38)	Percentage (%)
16.	Loss of weight	5	13.1
17.	Insight	6	15.7
18.	Diurnal variation	9	23.6
19.	Depersonalization and derealisation	1	2.6
20.	Paranoid symptoms	-	-
21.	Obsessional symptoms	-	-

On HDRS, insomnia in the middle night was reported in highest 86.8%, followed by depressed mood (81.5%), work and activities (73.6%), Anxiety-psychic (68.4%). Whereas somatic symptoms-General, paranoid symptoms, obsessional symptoms, and genital symptoms were not reported by any depressing elderly cases (Table 3). HDRS scores revealed that 76.3% of the depressed elderly population had mild depression (8-13), whereas 15.7% had moderate (14-18) and 7.8% had severe depression (19-22) (Table 4).

**Table 4: Distribution of HDRS score of cases HDRS score**

HDRS score	No. Of cases (%)
Normal $\leq 7$	-
Mild (8-13)	<b>29(76.3)</b>
Moderate (14-18)	<b>6(15.7)</b>
Severe (19-22)	<b>3(7.8)</b>
Very severe(>23)	-

## DISCUSSION

The present study, conducted in an urban community of Sangareddy, Telangana state revealed the magnitude of elderly depression was found to be 42.2%. Our results are in conformity with Seby K (2011)<sup>11</sup>, few studies have reported lower prevalence i.e., 24.1% by Ramachandran V<sup>6</sup>, 16.3% by Jain RK (2007)<sup>12</sup>. The prevalence of depression in the elderly community could be due to a methodological difference in the study design, the inclusion of the prevalence of depressive symptoms, the instruments used for assessment, different races, and geographical variation. Studies done by Reddy VM (1998)<sup>13</sup>, Nandi DN (2000)<sup>14</sup> have estimated the prevalence of depression in the Indian community of various regions ranging from 0.17% to 7.4%. The present study shows a much higher prevalence of 42.2% in the elderly population, that the magnitude of depression in the elderly can be explained by a large number of stressful situations that they are exposed to, and need to cope with.

Even though the present study was done in an urban community, 47.3% elderly depressed people are illiterate and 26.3% people have attained up to primary education only. This is due to the migration of the elderly community from rural to urban areas. Several Indian studies reported a higher percentage of depressed subjects to be illiterate or have a lower level of education (Barua A<sup>15</sup>, Rajkumar AP<sup>16</sup>). Living status of the elderly depressed community revealed depression was significantly more in nuclear families (65.7%) as compared to the joint families. Similar findings were reported by Ramachandran V (1982)<sup>6</sup>, Rao AV (1981)<sup>8</sup>. With the changing family systems and the giving way of the joint family system to the nuclear one, physical, social and emotional support are at times wanting.

Majority of the cases had physical illnesses, with more than two impairment in a large number (44.7%), and three or more illnesses in some (34.1%). Sagar RS (1992)<sup>17</sup>, was reported physical illness in nearly 97.5% of elderly depressed with multiple illnesses in the majority of patients as compared to the controls. The significantly higher association of three

or more chronic medical diseases in the depressed group in our study has been replicated in earlier studies as well (48.44% in cases and 18% in control group) <sup>18</sup>.

Psychiatric profile of the sample population was assessed using SCID-1. Majority of the depressed cases was diagnosed Dysthymia (31.5%) followed by alcohol dependence (28.9%). In the present study, Mild depression was observed in higher incidences (73.5%), followed by moderate in 15.7% and severe in 7.8% on HDRS-Hamilton Depression Rating Scale. A study done by Ramachandran V <sup>6</sup> found 68.36% to have Mild depression, 87.75% to have neurotic depression and 12.24% to have endogenous depression. On HDRS, most common symptoms observed were insomnia in the middle night, followed by work and activities (73.6%), Anxiety-psychic (68.4%). Several studies are in conformity with present findings <sup>11, 15, 17, 19</sup>. Depressive episodes are known to occur for the first time in two peak decades, the second and the fourth.

Higher education levels probably result in a better-paid job, and a higher social status, insulating them in their later life from the stresses of a lower socioeconomic status. The absence of a spouse who is perceived as the main support system at this stage in life probably contributes to the occurrence of depression. Insensitivity of children in perceiving parental loneliness, and failing to recognize their needs, could contribute to the elderly becoming depressed.

### CONCLUSION

The Indian social system is undergoing a rapid transition, with the family changing in both its structure and functioning. Nuclear families are currently becoming the norm, and there are tremendous changes in the dynamics of interactions and interpersonal relationships. Even in those families where the elderly live with their children, there is a feeling of being alienated, Neglected, marginalized, helpless, leading ultimately to feelings of unhappiness.

The findings of the present study reveal the importance of developing adequate community based interventions for the depressed elderly especially in an urban community. Adequate measures should be taken to detect milder forms of late life depression at the earliest. The elderly depressed individual should be given timely help; it is, therefore, possible to improve the overall quality of life of the depressed elderly.

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### **Acknowledgment**

The authors profoundly appreciate all the people who have successfully contributed in ensuring this paper in place. Their contributions are acknowledged however their names cannot be mentioned.

### **Conflict of Interest**

The authors carefully declare this paper to bear not a conflict of interests

**How to cite this article:** P S Reddy (2019). Prevalence of the Late Life Depression: A Cross Sectional Study in Urban Population. *International Journal of Indian Psychology*, 7(2), 939-945. DIP:18.01.114/20190702, DOI:10.25215/0702.114