

## GERIATRIC DEPRESSION AMONG RURAL AND URBAN SLUM COMMUNITY IN CHENNAI – A CROSS SECTIONAL STUDY

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**BACKGROUND:** Depression is the most common psychiatric disorder among the elderly which can manifest as major or minor depression. The community-based studies have revealed that the prevalence of depression in geriatric population in India varies between 13% and 25%. In spite of quantum of this problem there are very few studies from India investigating geriatric depression and its associated risk factors. This study aimed to establish the prevalence, socio-demographic correlates and factors associated with geriatric depression in urban slum and rural communities in Chennai. **METHODS:** This study was done as a cross sectional study in the urban and rural field practice areas of ACS Medical College and Hospital among 60 years and above age group by house to house survey method using Geriatric Depression Scale during July and August 2011. All the houses in the urban and rural field practice areas were surveyed and those who fulfilled the eligibility criteria were interviewed after getting informed consent. The results were expressed in percentages and chi-square test was done to find out the association. **RESULTS:** Totally 173 study participants were interviewed and the prevalence was found to be 41.1% and 45.8% in urban and rural communities respectively. Geriatric depression is significantly associated with female sex, living without spouse, illiteracy, time spent with children and grand children and dietary habits in both communities but money dependence and health problems were strongly associated with depression in urban community. **CONCLUSION:** The prevalence of depression in the elderly population in our study was moderately high in both areas and a cause of concern.

**KEY WORDS:** Geriatric depression, socio-demographic factors, money dependence, Geriatric depression score.

**INTRODUCTION:** Ageing is a natural process associated with: Physical, Biological and Psychological changes. Elderly population aged 60 years and above in the world will reach 1.2 billion by the year 2025, the majority of whom will be in developing countries<sup>1</sup>. The proportion of elderly persons in the population of India raised from 5.63 per cent in 1961 to 6.58 per cent in 1991 and to 7.5 per cent in 2001<sup>2</sup>. A high prevalence of mental disorders is seen in old age. Predominant among these is “Depression”, which is an affective illness characterized by depressive in mood, cognition and behaviour<sup>3</sup>. “GERIATRIC DEPRESSION” is a common clinical

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condition in which “A prolonged state of mental depression in anyone over the age of 60 years”. Community-based mental health studies have revealed that the point prevalence of depressive disorders among the geriatric population in India varies between 13 and 25 %<sup>4, 5</sup>. Though depression is the commonest mental health problem in old age, very few community-based studies have been conducted in India to understand the problem.

### **AIMS AND OBJECTIVES:**

1. To estimate the prevalence of Geriatric Depression among 60 years and above individuals.
2. To study the socio-demographic correlates and pattern of Geriatric Depression.
3. To find out the factors associated with Geriatric Depression like: History of any chronic illnesses, Gender, Living without Spouse, Money Dependence and Time spent with Children and Grandchildren, Dietary Habits, etc.

**MATERIALS AND METHODS:** The study was conducted as a community based cross sectional study among 60 years and above age group residing in the field practice areas namely Adayalampattu and Parivakkam of ACS Medical College and Hospital, Chennai in between July 4<sup>th</sup> and August 31<sup>st</sup>, 2011. Urban field practice area has approximately 2000 houses and rural field practice area has approximately 2500 houses. “House to House Survey” was done in both the areas. The people who were aged 60years and above were selected as our Study participants after getting informed consent. Our study excluded the individuals above 60years with the following criteria: Stroke with Aphasia, Loss of Hearing and those who were affected with loss of memory. The study tool which we had used was questionnaire which had two parts, one with general informations like socio-demographic profile, risk factors of geriatric depression. The second part of the questionnaire was Geriatric Depression Scale<sup>6</sup> (GDS), first created by Yesavage et al., has been tested and used extensively with the older population. The GDS was found to have 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. The GDS may be used with healthy, medically ill and mild to moderately cognitively impaired older adults. GDS Screens for seven characteristics of depression in elderly, which are Somatic Concern, Lower Affect, Cognitive Impairment, Feelings of Discrimination, Impaired Motivation, Lack of Future Orientation and Lack of Self-esteem<sup>7</sup>. According to this scale, scores between - 0 - 9 will be considered as Normal, 10-19 is mildly Depressive and 20-30 Severely Depressive. The data were analyzed with Epi-info software Version 3.5.1(2008) and Chi-square test was used as the test of significance.

**RESULTS:** Out of total 173 study participants 90 were from urban slum (Adayalampattu) and 83 from rural area (Parivakkam). In both urban slum and rural areas the female gender constituted 67% (116), majority of them belonged to 60 to 69 years of age that is 70% (63) from urban slum and 59% (49) from rural areas. Sixty three percent (57) from urban slum and 68.6% (57) from rural areas were illiterates and most of them among the study participants 78 (86.7%) of urban slum and 69 (83%) of rural areas were in Class V socioeconomic status. Sixty seven percent (60) from urban slum and 59% (49) of rural population were living singly without spouse because of death. Among the study participants 31% from both the areas were not dependent on their children or others for money. 48.8% (44) from urban and 50.6% (42) from rural said that the time spent with their children and grandchildren were insufficient. The study participants from urban slum and rural areas showed 62.2% (56) and 78.3% (65) of multi

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system problem in the body and very few from both areas showed no morbidity. The prevalence of depression was found to be 41% (37) from urban slum and 46% (38) from rural area (table – 1) . In our study geriatric depression was significantly associated with: female sex (0.0136), living without spouse (0.0214), Illiteracy (0.015), insufficient time spent with children and grandchildren (0.0209), irregular dietary habits (0.0004) and those who are economically dependent (0.0431) on their children in urban slum community. The rural community showed female sex (0.0597), living without spouse (0.0004), Illiteracy (0.0046), insufficient time spent with children and grandchildren (0.0000) and irregular dietary habits (0.0003). Our study results showed that socioeconomic status, health problems and sleep disturbance were not significantly associated with depression in both rural and urban slum community as given in the table 2 and 3.

**DISCUSSION:** The results of this study revealed that approximately 41% and 46% of elderly population were suffering from severe depression according to this Geriatric depression scale which is used for the assessment. This seems to be on much higher (almost twice) side when compared to the World Health Organization estimated overall prevalence rate of depressive disorders among the elderly generally varies between 10% and 20%, depending on the cultural situations<sup>8</sup>. But the recent retrospective study of various 75 original research reports conducted between 1995 and 2005 which included only community based cross sectional surveys of 4,87,275 elderly individuals, in the age group of 60 years and above, residing in various parts of the world revealed that the median prevalence rate of depressive disorders in the world was determined to be 10.3% and among the Indian elderly population was found to be 21.9%<sup>9</sup>. As far as the risk factors are concerned our study results showed that female gender, living alone without spouse, illiteracy, economic dependence, irregular dietary habits, insufficient time spent with children and grandchildren but surprisingly the factors like suffering multiple health problems, sleep disturbances and advancing age were not associated with the depression. Similar study conducted in urban slum of Mumbai concluded that depressed elderly (using GDS) constituted 45.9% of the study population which is on par with our study results and the significant variables associated with depression were poor socioeconomic status, marital status, non working or dependency, and illiteracy<sup>10</sup>. The study conducted at Pune among 202 elderly persons showed 19.36% prevalence of depression and was associated with female sex, single/widowed/separated status, staying in nuclear families, economic dependence on others and co-morbid physical illnesses<sup>11</sup> and a study at Vellore revealed low income, history of cardiac illness, past head injury and diabetes increased the risk of depression among elderly<sup>12</sup>.

**CONCLUSION:** The prevalence of depression in the elderly population in our study was moderately high in both areas and a cause of concern. It is important to screen elderly persons for depression in order to determine the true prevalence of the condition and health systems must be geared up to play a greater role in early detection and prevention of “Geriatric Depression” using such screening tools.

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**Table - 1 Distribution of Geriatric depression among rural and urban community**

<b>Prevalence of depression</b>	<b>Rural (n = 83)</b>	<b>Urban slum (n = 90)</b>
Normal	17 (20.4%)	18 (20%)
Mild depression	28 (33.8%)	35 (38.9%)
Severe depression	38 (45.8%)	37 (41.1%)
Total	83 (100%)	90 (100%)

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**Table - 2 Distribution of factors versus geriatric depression (rural community)**

Variable	Rural community (n=83) With GDS score classified as normal, mild and severe depression			Chi - square value	P value
	Mild	Normal	Severe		
<b>Age group</b>				0.6007	0.7406 (NS)
60 to 69	18	9	22		
More than 70	10	8	16		
<b>Appetite</b>	Mild	Normal	Severe	8.5237	0.0141 (S)
Normal	18	14	16		
Reduced	10	3	22		
<b>Dietary habits</b>	Mild	Normal	Severe	16.0527	0.0003 (HS)
Irregular	10	3	27		
Regular	18	14	11		
<b>Education</b>	Mild	Normal	Severe	10.7553	0.0046 (HS)
Illiterate	15	9	33		
Some schooling	13	8	5		
<b>Health problems</b>	Mild	Normal	Severe	5.4217	0.0665 (NS)
Single or nil problem	8	6	4		
Multiple problems	20	11	34		
<b>Living</b>	Mild	Normal	Severe	15.4378	0.0004 (HS)
With spouse	13	13	8		
Without spouse	15	4	30		
<b>Money dependence</b>	Mild	Normal	Severe	1.1166	0.5722 (NS)
No	8	4	14		
Yes	20	13	24		
<b>Sex</b>	Mild	Normal	Severe	5.6370	0.0597 (NS)
Male	10	9	8		
Female	18	8	30		
<b>Socioeconomic status</b>	Mild	Normal	Severe	2.4177	0.2985 (NS)
Class III and IV	7	3	4		
Class V	21	14	34		
<b>Sleeping pattern</b>	Mild	Normal	Severe	2.3058	0.3157 (NS)
Normal	18	13	21		
Reduced	10	4	17		
<b>Occupation</b>	Mild	Normal	Severe	3.6346	0.1625 (NS)
Going for some job	7	3	3		
At home	21	14	35		
<b>Time spent with children and grand children</b>	Mild	Normal	Severe	27.2498	0.0000 (HS)
Sufficient	17	16	8		
Insufficient	11	1	30		

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**Table - 3 Distribution of factors versus geriatric depression (Urban slum community)**

Variable	Urban slum community (n=90) With GDS score classified as normal, mild and severe depression			Chi - square value	P value
	Mild	Normal	Severe		
<b>Age group</b>				0.6568	0.7201 (NS)
60 to 69	24	14	25		
More than 70	11	4	12		
<b>Appetite</b>	Mild	Normal	Severe	10.4504	0.0054(HS)
Normal	21	16	16		
Reduced	14	2	21		
<b>Dietary habits</b>	Mild	Normal	Severe	15.8934	0.0004(HS)
Irregular	21	3	27		
Regular	14	15	10		
<b>Education</b>	Mild	Normal	Severe	8.4055	0.015 (HS)
Illiterate	21	7	29		
Some schooling	14	11	8		
<b>Health problems</b>	Mild	Normal	Severe	4.93	0.085 (NS)
Single or nil problem	16	9	9		
Multiple problems	19	9	28		
<b>Living</b>	Mild	Normal	Severe	7.688	0.0214 (S)
With spouse	13	10	7		
Without spouse	22	8	30		
<b>Money dependence</b>	Mild	Normal	Severe	6.2893	0.0431 (S)
No	9	10	9		
Yes	26	8	28		
<b>Sex</b>	Mild	Normal	Severe	8.5909	0.0136 (S)
Male	11	11	8		
Female	24	7	29		
<b>Socioeconomic status</b>	Mild	Normal	Severe	1.2359	0.5391 (NS)
Class III and IV	5	1	6		
Class V	30	17	31		
<b>Sleeping pattern</b>	Mild	Normal	Severe	2.7909	0.2477 (NS)
Normal	19	14	23		
Reduced	16	4	14		
<b>Occupation</b>	Mild	Normal	Severe	7.8018	0.0202 (S)
Going for some job	8	10	8		
At home	27	8	29		
<b>Time spent with children and grand children</b>	Mild	Normal	Severe	7.7327	0.0209 (S)
Sufficient	18	14	14		
Insufficient	17	4	23		

Figure - 1

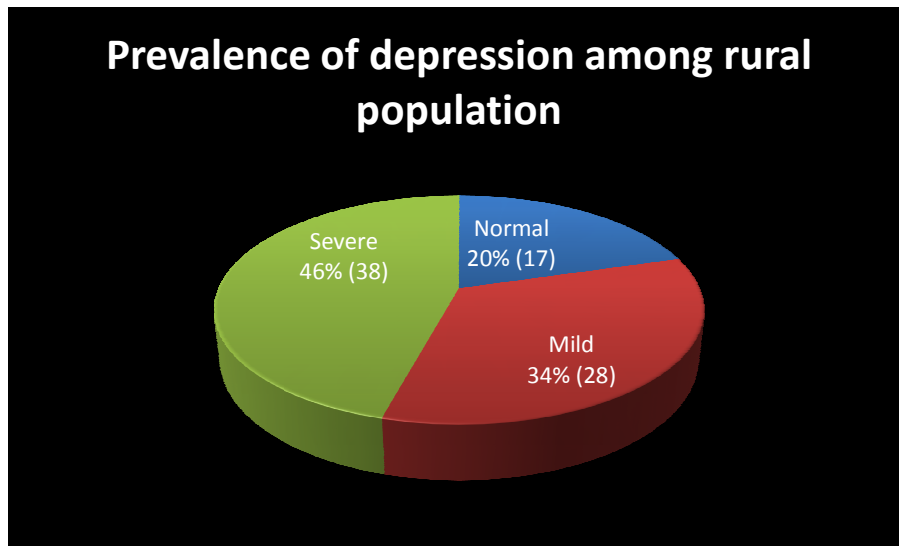


Figure - 2

