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Original Research Article

A cross-sectional study on geriatric depression and its associated risk factors in an urban area of Hyderabad, India

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ABSTRACT

Background: The geriatric population is increasing with advancements in the health sector all over the world. At the same time, old age tackles physical, mental and social challenges. Mental health of the elderly is least concerned in developing countries, especially depression, which is easy to screen and our study aims to know its burden and associated risk factors.
Methods: A cross-sectional study was conducted between October 2021 and November 2021 among the geriatric population of Mansoorabad, an urban area in Hyderabad, using the short form of geriatric depression scale (GDS) to assess their depression status. Study subjects who met our criteria were selected through simple random sampling. Data collected were entered and analyzed with MS excel software 2007 and Epi info 3.5.3.
Results: In our study sample of 161, males were 61 (37.9%), females-100(62.1%). Most of the study subjects were in the age group 60-70 years (137, 85.1%), followed by the 70-80 years age group (24, 14.9%). Nearly 59.6% of subjects had no depression, 19.9% suffered from mild depression, 8.1%-moderately depressed, whereas 12.4%-severely depressed. The mean age of subjects was 65.6 (±5.9) years. Chi-square test was used to study the association of various factors with geriatric depression and age group, and socio-economic status showed a statistically significant association.
Conclusions: This study points towards the sensitization of healthcare workers and other subsidiary health personnel at the grassroots level to detect geriatric depression in nascent stages. Many longitudinal follow-up studies are needed to address various aspects of depression.

Keywords: Depression, Geriatric depression scale, Mental health. Geriatric population

INTRODUCTION

Depression is a neuropsychiatric disorder that impairs the quality of life. Depression is prevalent among the elderly worldwide and around 3.8% of the population worldwide are suffering from depression, of which 5.7% are adults of age 60 years or more, according to the world health organization (WHO).[1] Modern medical innovations, epidemiological transition have added years to life and by the year 2050, India's geriatric population is expected to contribute about 19% (324 million) of the country's population.[2] Mental health issues are given minor importance in developing countries like India, especially in the geriatric population, with depression being common. Aging is natural and inevitable, which leads to physical and mental health deterioration. Quite often, the feeling of loneliness and isolation causes depression in the elderly. Mental disorders can be diagnosed and intervened at the initial stages of the disease if older people in the community are cared for, by regular and

routine check-ups at primary health care centres, under trained health workers.

The prevalence of geriatric depression varies depending on factors like literacy, marital status, financial status, co-morbidities associated with old age etc.[3] In developing countries, geriatric depression is one of the causes of escalated health care costs. The urban population especially seems to be "at risk" category due to the lifestyle changes and increasing nuclear family structures. Moreover, the environmental factors, work schedules, retirement, lack of social empathy in urban areas makes these population prone to depression. Hence, this study was conducted to find out the prevalence of depression in the elderly.

METHODS

A community-based cross-sectional study was conducted in Mansoorabad, an urban field practice area of Kamineni academy of medical sciences and research centre to study the prevalence of geriatric depression and the role of risk factors. It covers a population of 53,259. The study was conducted for one month between October 2021 and November 2021.

Inclusion criteria

Elderly above 60 years of age, residing in the study area, were willing to participate in the study and had given informed consent.

Exclusion criteria

Critically ill patients, elderly with major psychiatric disorders, relatives of the study area residents, and those who were not present on day of study were not included.

Sample size and sampling method

In view of non-availability of data on the prevalence of depression among the elderly in this area, we considered the prevalence of 11.3% for calculating the sample size using $n=4pq/l^2$ as reported in the meta-analysis.[4] Using an absolute precision of 5%, at 95% confidence limits, the minimum sample size calculated was 161.

Out of 17 colonies, five colonies were selected by systematic random sampling method. The first colony was selected by the last digit of the currency note. From each colony, 33-35 elderly were selected by going lane to lane and house to house by simple random sampling method after obtaining institutional ethical committee permission.

Study tool

Depression was assessed on a score of 15 using a shorter version of Yesavage's geriatric depression scale a 15-question instrument. The 0-4 were considered normal, 5-8 indicated mild depression, 9-11 implied moderate depression, and 12-15 pointed towards severe depression.[6] A semi-structured questionnaire was used to assess their socio-demographic data, and co-morbidities like arthritis, diabetes, and hypertension with complications, CAD, CVD, impaired vision, and hearing.

Statistical analysis

Data collected was entered and analysed with MS excel software 2013 and Epi info 7.2.2.6. Data were summarized in percentages. The chi-square test was done with a significance level of 5% ($p<0.05$ considered statistically significant).

RESULTS

Out of the 161-sample size, the prevalence of depression was 40.4%, of which mild depression was 19.9%, moderate depression was 8.1%, and severe depression was 12.4% (Figure 1). In our study, 61 were male, 100 were female, 23 (14.3%) were male, and 42 (21.3%) were females who are depressed. The age group of 60-70 years showed a higher prevalence of depression, i.e., 48 (29.8%) in comparison to 70-80 years 17 (10.6%), which was statistically significant. The prevalence of depression was higher in the illiterate group of 38 (23.6%) compared to literate which is 27 (16.8%). Surprisingly, there was no statistically significant association between depression and co-morbidities. Out of 65 members with depression, according to modified BG Prasad classification, the highest prevalence was found in the lower class, i.e., 37 (23%), which was statistically significant (Table 1).[6]

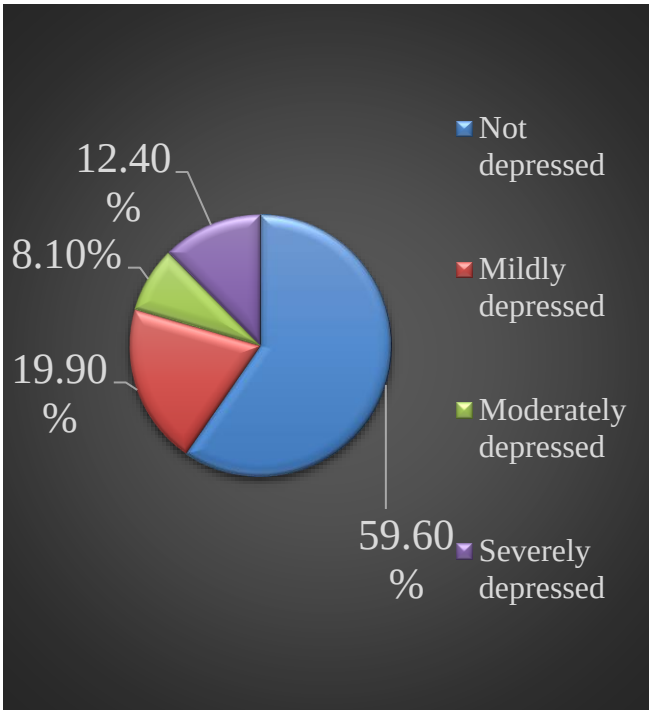

Figure 1: The distribution of study participants based on grades of depression.

Table 1: Characteristics of the study participants (n=161)

Variables	With depression (n, %)	Without depression (n, %)	Percentage (%)	p<0.05* is statistically significant
Age group (Years)				
60-70	48 (29.8)	89 (55.3)	85.1	0.001*
70-80	17 (10.6)	07 (4.3)	14.9	
Gender				
Males	23 (14.3)	38 (23.6)	37.9	0.590
Females	42 (26.1)	58 (36.0)	62.1	
Education				
Literate	27 (16.8)	49 (30.4)	47.2	0.236
Illiterate	38 (23.6)	47 (29.2)	52.8	
Age at marriage (Years)				
<18	33 (20.5)	47 (29.2)	49.7	0.822
≥18	32 (19.9)	49 (30.4)	50.3	
Marital status				
Widowed	08 (5.0)	06 (3.7)	8.7	0.181
Married	57 (35.4)	90 (56)	91.3	
Number of children				
No. of children ≤ 2	25 (15.5)	38 (23.6)	39.1	0.886
No. of children >2	40 (24.8)	58 (36.0)	60.9	
Home status				
Own house	47 (29.2)	70 (43.5)	72.7	0.932
Rented house	18 (11.2)	26 (16.1)	27.3	
Co-morbidities status				
Without co-morbidities	16 (10)	33 (20.5)	30.5	0.187
With co-morbidities	49 (30.4)	63 (39.1)	69.5	
Pension status				
With pension	46 (28.6)	61 (37.9)	66.5	0.341
Without pension	19 (11.8)	35 (21.7)	33.5	
Health insurance status				
With health insurance	11 (6.8)	21 (13.1)	19.9	0.440
Without health insurance	54 (33.5)	75 (46.6)	80.1	
SES				
Upper class	06 (3.7)	26 (16.1)	19.8	0.034*
Upper middle	10 (6.2)	10 (6.2)	12.4	
Middle	06 (3.7)	11 (6.8)	10.5	
Lower middle	06 (3.7)	12 (7.5)	11.2	
Lower class	37 (23)	37 (23)	46	

DISCUSSION

The present study shows the prevalence of depression of 40.4%. The prevalence of depression was seen in 34.4% in a meta-analysis done by Pilania et al.[4] The prevalence of depression was 23% in a study conducted in Hyderabad by Konda et al.[7] In contrast to our studies, the prevalence noticed was 80.5% in a study conducted by Goyal et al.[8] The prevalence of mild depression was 19.9%, moderate was 8.1%, severe was 12.4%. Similar findings were noticed in a study conducted by Sahni in North India.[9] The depression in females was higher in our study group, which is consistent with the findings conducted in a study by Ahmed et al.[10] In our study, 60-70-year age group showed a higher prevalence of depression, the cause for which could be that this age group faces retirement from work and there is a sudden cut off from their colleagues and social circle. This drastic change in their day-to-day activity and coping up with this may be a contributing factor. In our study, the influence of socio-economic status showed statistical significance with geriatric depression, which was consistent with a systematic review done by Barua et al.[11] In the present study despite the percentage of illiterates more than the literates, there was no statistically significant association with the depression but in a study conducted by Mamatha et al and other similar studies, observed that illiteracy is found to be increasing with advancing age and found to be associated with depression.[12-16]

Considering the small sample size, the study findings could not be generalized to other settings and there is no confirmed diagnosis of the depression in the study

population due to lack of follow-up which were the main limitations of this study.

CONCLUSION

This study points towards the sensitization of healthcare workers and other subsidiary health personnel at the grass-root level to detect geriatric depression in nascent stages. Many longitudinal follow-up studies are needed to address various aspects of depression in the geriatric age group.

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