DEPRESSION IN GERIATRIC AGE GROUP: MAGNITUDE AND ITS RISK FACTORS

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ABSTRACT

Background: Depression is a significant public health problem in the present scenario among developing countries. This problem of depression is not new, in the 1990, the World Health Organization (WHO) classified depression as a major public health problem and cause of disability around the globe. **Material & Methods:** In the present study, a total number of 200 patients were included in the study by simple random sampling over a period of one year. Cognitive impairment was evaluated by application of the Mini-Mental State Examination (MMSE), and study participants with an MMSE score of less than 25 (cognitively impaired) were excluded from the study. **Results:** Mild depression was present in one-fourth (28%) of the study population followed by moderate depression (12%). Out of total 3% of the elderly were severely depressed. Females were found to be more diagnosed with depression than males (p <0.001). The proportion of study participants in higher socioeconomic strata (middle and above) were reported to have more depressive symptoms than the lower one (p <0.001). Even the association between depression and financial dependency was found to be statically significant (p <0.001). **Conclusion:** The study concluded the need for the development of community-based comprehensive mental health programs for prevention, early diagnosis and prompt treatment of depression among the geriatric population and as well as to promote the overall mental health.

Keywords: Depression, Morbidity, Elderly.

INTRODUCTION

Depression is a significant public health problem in the present scenario among developing countries. This problem of depression is not new, in the1990, the World Health Organization (WHO) classified depression as a major public health problem and cause of disability around the globe (1). The global burden of mental and behavioral disorders were approximately 12 % cases of depression which accounts for near about 450 million people globally. From the ancient times, depression, among the other mental health problems has been neglected and segregated (2). The old age group is quite vulnerable to depression and also it was reported

with other coexisting mental health disorders. It was reported to be the most common mental health problem and among the common cause of geriatric disability (3). In previous studies among the Indian population, it was stated that the prevalence of depression among the elderly age group was reported in the range of 9% to 62%. Depression results in poor quality of life and decreased life satisfaction along with the decrease in cognitive abilities and day to day activities (4). Depression is a treatable condition, and there is the improvement in the patient's life along the treatment process. Hence it is a huge misconception that depression is a part of the aging process (5). There are very limited studies done to elaborate the effect of depression among the elderly age group in our study area. Hence the present study was conducted to know the snapshot of disease burden and magnitude of depression at study area of our tertiary care center.

MATERIALS & METHODS

The present prospective observational study was conducted at the department of psychiatry of our tertiary care hospital. The sample size was calculated from the epi info software version 7.0 at the acceptable margin of error of 5% and a confidence interval of 95% with the 95% power of the study. The calculated sample size was 200 which also include loss to follow up cases. Since there is no loss to follow up cases in the present study, hence a total number of 200 patients were included in the study by simple random sampling over a period of one year. Cognitive impairment was assessed by using the Mini-Mental State Examination (MMSE), and patients with a MMSE score <25 (cognitively impaired) were excluded from the present study. Clearance from Institutional Ethics Committee was taken before the start of the study. Evaluation of depression was carried out by using the fifteen-item geriatric depression scale (GDS) which consist of fifteen

self-report components. The accuracy of the GDS-15 is not varying due to medical problems, age, bio-social or other characteristics (6). Even the symptoms of a major depressive episode can be repeatably assessed in elderly patients which were home-bound. Data were entered in the MS office 2010 spreadsheet and Epi Info v7. Data analysis was carried out using SPSS v22. Qualitative data were expressed as the percentage (%), and Pearson's chi-square test was used to find out statistical differences between the study groups and sensitivity, specificity, positive predictive value, and negative predictive value were calculated. If the expected cell count was < 5 in more than 20% of the cells, then Fisher's exact test was used. All tests were done at alpha (level significance) of 5%; means a significant association present if the p-value was less than 0.05.

RESULTS

Of 200 study respondents interviewed, about half (56%) were aged 60-74 years, and 104 (52%) were male. Most of them were married (59.0%) and belonged to joint families (93%). About two-thirds (68.0%) were illiterate, and 67.2% were financially dependent on others. (Table 1)

Table 1: Distribution of elderly study population on the basis of GDS-15 scores (N = 200).

Depression per GDS score	Number of cases
Absent (0-4)	114 (57%)
Mild (5-8)	56 (28%)
Moderate (9-11)	24 (12%)
Severe (12-15)	6 (3%)

Table 1 depicts the distribution of elderly study participants on the basis of GDS-15 scores. Mild depression was reported among one-fourth (28%) of the study participants which was followed by moderate depression (12%). Out of the 3% of the elderly were severely depressed.

Table 2: Association between socio-demographic variable and depression among the study participants (N = 200).

Biosocial characteristic		Depression	P - value
Variable		Number	No. of cases	
Age group (Years)	60-74	56%	40%	0.58
	75-84	34%	44%	
	85 and above	10%	33%	
Gender	Male	52%	32%	<0.001
	Female	48%	47%	
Type of family	Nuclear	7%	34%	0.42
	Joint	93%	42%	
Socioeconomic status	Lower middle and above	51%	49%	<0.001
	Upper lower and below	49%	31%	
Marital status	Married	59%	30%	<0.001
	Others	41%	52%	
Financial dependency	Independent	31%	50%	<0.001
	Dependent	69%	36%	

Table 2 shows the association between socio-demographic variables and depression. Females were found to be more diagnosed with depression than males (p <0.001). The proportion of study participants in higher socioeconomic strata (middle and above) were reported to have more depressive symptoms than the lower one (p <0.001). Even the association between depression and financial dependency was found to be statically significant (p <0.001). Those study participants who were married and had spouse were significantly lesser diagnosed and reported with depression than those study participants who were single (unmarried, widow/widower, divorced, separated). However, the association between age, religion, employment status, type of family and education status were reported to be statistically non-significant. (Table 2)

DISCUSSION

In the present study the prevalence of depression, based upon GDS-15 scores, mild depression was reported among one-fourth (28%) of the study participants which was followed by moderate depression (12%). Out of the 3% of the elderly were severely depressed. A study conducted by Ganguli M et al. found that higher overall distribution of depressive symptoms among the elderly population and it was associated with older age and illiteracy and higher GDS-H scores were found among women (7). Similar study done by Sengupta P et al. found that the prevalence of depression in the elderly population was 9%. It was statistically higher among the urban population, women, nuclear families, singles, unemployed, illiterates, functionally impaired and low socioeconomic status (8). Another similar study which was conducted by Pracheth R et al. reported that the Prevalence of depression among the elderly population was 29%. It was statistically higher among women, nuclear families, unemployed, illiterates and low socioeconomic status along with elderly who indulging in substance abuse

(9). A study conducted by Raj Kumar A et al. reported that Age, female sex and disability status were not statistically associated with depression in elderly age group. DSM-IV diagnosis criteria of major depression were found significantly correlated with health morbidities of non-communicable and disabilities (10).

In the present study the association between socio-demographic variables and depression. Females were found to be more diagnosed with depression than males (p <0.001). The proportion of study participants in higher socioeconomic strata (middle and above) were reported to have more depressive symptoms than the lower one (p <0.001). Even the association between depression and financial dependency was found to be statically significant (p <0.001). Those study participants who were married and had spouse were significantly lesser diagnosed and reported with depression than those study participants who were single (unmarried, widow/widower, divorced, separated). However, the association between age, religion, employment status, type of family and education status were reported to be statistically non-significant. A study conducted by Sinha S et al. reported that 42.7% of study participants were found to be depressed. Out of them female sex and widowhood were statistically associated with depression (11).

A study conducted among the elderly age group of Mumbai by Jain R et al. found that magnitude of depression among elderly (using Geriatric Depression Scale) was 45.9% of the study participants. The variables which significantly associated with depression were low socio-economic status, marital status, unemployment and illiteracy (p < 0.05). Depressed elderly were reported to indulge in substance abuse, disturbed sleep patterns (p < 0.05) (12). A similar study was conducted by Goyal A et al. among the geriatric population of Punjab state and reported

that Sixty study participants (25 males and 35 females) were mildly depressed. Seventeen study participants (4 males and 13 females) had suffered from severe depression (13). Another study conducted by Taqui A et al. found that the magnitude of depression was 20 % in the geriatric population. By application of multiple logistic regression statistics, it was stated that nuclear family type, female gender, divorced/widowed status, having a low level of education and unemployment were associated with depression. The elderly participants who were living in a nuclear family type were 4 times more associated with depression than those participants who were living in the joint family (14).

CONCLUSION

We concluded from the present study that the Depression in the elderly population is a significant problem in the general community. Particularly in female gender and among those who are single without the partner. These findings emphasized the need for community-based interventions and health programs to be formulated for the effective and timely implementation of health promotional activities to combat and prevent the geriatric depression. On the other hand, the programs should be also implemented for early detection and management of depression among elderly to improve their quality of life.

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