

Depression Among Geriatrics: Prevalence And Risk Factors

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ABSTRACT

INTRODUCTION: India in this era of demographic transition, has an enormous geriatric population prone to depression. Presently one in every three elderly suffer from major depression. Even then it is misdiagnosed and undertreated due to social misconceptions and its somatic presentation of mood features, leading to increased morbidity, mortality and health care costs. This could become the second leading cause of disease burden in 2020 **OBJECTIVE:** To know the prevalence and factors associated with depression among elderly. **METHODOLOGY:** A community based cross-sectional study was conducted in rural and urban field practice area of Kanachur Institute of Medical Sciences, Mangalore. In the study conducted for one week, 125 elderly population (>60years) were included. Geriatric depression scale (GDS) 15 and preformed validated questionnaire were used. **RESULTS:** In our study, 89(71.2%) of them belonged to age group 60-70 years, 77(61.6%) were females, 88(70.4%) were married and 78(62.4%) belonged to nuclear family. The prevalence of depression was 47.2%. It was higher in females (53.25%) compared to Males (27.5%). Depression in elderly was associated with paying interests to loans (80%, p <0.001), not satisfied with their children's job (77.5%, p= 0.00011), and children not obeying them (82.5%, p=0.00049). Among those depressed, 64.3% refrained themselves from meeting friends (p <0.001) and 78.43% often felt helpless (p=0.00001). **CONCLUSIONS:** High prevalence of depression reflects the need to focus on greater awareness of depression among general population and making consolidated effort towards its diagnosis and treatment, which may go a long way in reducing morbidity, mortality and in improving their quality of life.

Key Words: Depression; Geriatric, Elderly, Geriatric Depression Scale 15, pension.

INTRODUCTION

Today, Depression is an important public health challenge in developing countries. Approximately 450 million people worldwide are affected with depression according to the estimate, constituting a major portion of mental health disorders¹. India, the second largest country by population in the world, is undergoing demographic transition 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 2051². Demand for health care services and social security will increase with increase in the number of elderly.³

Societal modernization has led to breakdown in family values and the framework of family support. Ongoing economic development has led to migration of children to urban areas leaving their parents alone at home. This leads to feelings of loneliness, ultimately having a detrimental influence on the psychological health of the elderly.¹ Depression among the elderly is not uncommon but often remains undetected and thereby untreated³ and most of the time people think that depression is a normal part of aging and a natural reaction to chronic illness⁴.

The elderly constitute a vulnerable group as they suffer from physical, economic, social and nutritional

problems³. Depression being difficult to diagnose, will lead to an increase in morbidity, mortality and health care costs along with a reduction in quality of life⁵. Elderly patients with depression are more prone for cardiovascular, lung diseases and are less likely to adhere to their diet, exercise and medications². Depression is projected to become the second-leading cause of disease burden after Ischemic Heart Disease by 2020⁶.

To address this issue we first have to know the burden of the disease and risk factors leading to depression in elderly. There are only few studies done especially in this region of Karnataka. Hence this study was undertaken to know the prevalence of depression among elderly and to know the factors leading to depression.

MATERIAL AND METHODS

A Community based Cross-Sectional study was conducted in Rural and Urban field Practice area, Department of Community Medicine, Kanachur Institute Of Medical Sciences, Mangalore.

STUDY POPULATION: All Geriatric population above the age of 60 years in the study area. Individuals above the age of 60 years residing in old age homes, critically ill and unable to comprehend and respond were excluded from the study.

SAMPLE SIZE: Using the formula, $S=4pq/d^2$, (taking p as 45.90% and d as 20% of p) a sample size of 125 was calculated which also included a non response rate of 5%.

METHODOLOGY FOR DATA COLLECTION: Institutional Ethical Approval was taken prior to conducting the study. Elderly are people above 60 years of age. In the study area defined, a house to house survey was done. Using simple random sampling, 125 subjects were enrolled for the study. Written informed consent for the study was taken from all the participants.

TOOLS FOR DATA COLLECTION: Socio demographic characteristics like Socio-economic status, Educational history, Environmental history, Marital history were collected by a pretested performa. Socio-economic status was assessed using Modified B G Prasad’s classification.

Geriatric Depression Scale (GDS) is a widely used Screening instrument for depressive symptoms in elderly. GDS 15 is a brief questionnaire that consists of 15 questions which are answered Yes or No. Of the 15 items, 10 indicated the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively. Elderly who scored ≥ 5 was considered to be depressed.⁸

The Short Form is more easily used by physically ill and mildly to moderately demented patients who have short attention spans and/or feel easily fatigued. It takes about 5 to 7 minutes to complete.⁸

STATISTICS: The data was collected, coded and compiled in Excel sheet and statistical analysis was done using IBM SPSS software version 25. Descriptive statistics were presented as Mean and standard deviation for continuous variables and as frequency, percentage for categorical variables. Chi square test was used to study the association between different variables and magnitude of depression. P value < 0.05 was considered as statistically significant.

RESULTS

Of the 125, 71.2% of the study population belonged to the age group of 60-70 years, 77 (61.6%) were Female participants, 72 (57.6%) had primary education and 41 (32.8%) were illiterate, 64 (51.2%) reside in Urban area and 61 (48.8%) in Rural area. 78 (62.4%) are living in a Nuclear family and 40 (32%) belonged to Class 3 Socio-economic status. (Table I)

Amongst the 125 participants, 59 (47.2%) had Depression. Depression was found to be more among the Females (53.25%) and those who had no education or up

TABLE I: Socio demographic features of the study participants

| Age (in years) | Number (N=125) | Percentage (%) |
|------------------------------|----------------|----------------|
| 60-70 | 89 | 71.2 |
| 71-80 | 32 | 25.6 |
| >80 | 4 | 3.2 |
| Sex | | |
| Male | 48 | 38.4 |
| Female | 77 | 61.6 |
| Place | | |
| Rural | 61 | 48.8 |
| Urban | 64 | 51.2 |
| Marital status | | |
| Unmarried | 2 | 1.6 |
| Married | 88 | 70.4 |
| Widow | 33 | 26.4 |
| Separated | 2 | 1.6 |
| Education | | |
| Illiterate | 41 | 32.8 |
| Primary schooling | 72 | 57.6 |
| High school | 6 | 4.8 |
| Pre-university | 5 | 4 |
| Graduate | 1 | 0.8 |
| Type of family | | |
| Nuclear | 78 | 62.4 |
| Three generation | 39 | 31.2 |
| Joint | 8 | 6.4 |
| Socio-economic status | | |
| Class I | 15 | 12 |
| Class II | 35 | 28 |
| Class III | 40 | 32 |
| Class IV | 29 | 23.2 |
| Class V | 6 | 4.8 |

TABLE II: Association between Depression and Socio-demographic variables

| Socio-demographic characteristic | | Depression absent, n (%) | Depression present, n (%) | Chi square value, p value |
|----------------------------------|-----------------------------------|--------------------------|---------------------------|---------------------------|
| Sex | Male | 30 (72.5) | 18 (27.5) | 2.941 , 0.086 |
| | Female | 36 (46.75) | 41 (53.25) | |
| Education | Primary and below | 56 (49.56) | 57 (50.44) | 4.965 , 0.2585 |
| | High school and above | 10 (83.33) | 2 (16.67) | |
| Address | Rural | 34 (55.73) | 27 (44.26) | 0.412, 0.52 |
| | Urban | 32 (50) | 32 (50) | |
| | Nuclear | 58 (49.57) | 59 (50.42) | |
| Type of Family | Three generation and Joint family | 7 (87.5) | 1 (12.5) | 4.315, 0.037 |

*P value < 0.05 is considered statistically significant

TABLE III: Association between depression and medical status of study participants

| Characteristics | Depression Absent | Depression Present | Chi square value, p value |
|---|-------------------|--------------------|---------------------------|
| Are you suffering from any ailment? (Yes) | 33 (46.48) | 38 (53.52) | 2.635, 0.104 |
| Are you suffering from any physical disability? (Yes) | 11(47.83) | 12 (52.17) | 0.279, 0.596 |
| Have you ever met with an accident? (Yes) | 11(55) | 19(63.33) | 0.046, 0.829 |
| Drug/alcohol/smoking/tobacco usage (Yes) | 18(69.23) | 8(30.77) | 4.610,0.3178 |

*P value <0.05 is considered statistically significant

TABLE IV: Association between depression and socio economic status of study participants

| Characteristics | Depression Absent | Depression Present | Chi square value, p value |
|---|-------------------|--------------------|---------------------------|
| Are you facing any occupational problems? (Yes) | 3(50) | 3(50) | 0.0198, 0.88 |
| Are you paying any interest against any kind of loan? (Yes) | 5(20) | 20(80) | 11.11, <0.001 |
| Are you receiving any kind of pension (No) | 46 (45.5) | 55 (54.5) | 10.559, 0.001 |
| Are you satisfied with your children's job?(No) | 7 (22.5) | 24 (77.5) | 14.876,.00011 |

*P value <0.05 is considered statistically significant

to primary (50.44%). However on application of Chi square test, there was no statistically significant association of depression with these socio-demographic variables. Elderly those who lived in a Nuclear Family and three generation (50.42%) were more depressed compared to those living in joint family and was statistically significant (p value =0.037). (Table II)

Depression in elderly was associated with paying interest against loans (80%, P value<0.001), not receiving any kind of Pension (54.5% , P value= 0.001), not being satisfied with their Children's job (77.5%, P value=0.00011), not being satisfied with the relationship towards their Family (58% , P value=0.00049) and Children not obeying them (82.5%, P value=0.00049). Amongst the Depressed, 60% of them found difficulty in making decisions (P value=0.007), 64.3% of them refrained themselves from hanging out with their friends (P value <0.001) and 78.43% of them often felt helpless (P value=0.00001).(Table III, IV,V)

DISCUSSION

In this study 47.2% elderly had Depression. The prevalence of depression in females (53.25%) was more when compared to that of males (27.5%). Similar finding was observed in a study conducted by Poonam Ramesh Naik et al³, where the prevalence of depression was more among elderly females (62.7%). Family responsibilities and burden contributes to increased perception of mental stress on them. However there was no statistically significant association of gender with depression.

TABLE V: Association between depression and relationship of study participants with family and friends

| Characteristics | Depression Absent | Depression Present | Chi square value, p value |
|---|-------------------|--------------------|---------------------------|
| Is it easy for you to make decisions? (No) | 24 (40) | 36 (60) | 7.039, 0.007 |
| Do you like to hangout with your friends? (No) | 25 (35.7) | 45 (64.3) | 18.635, <0.001 |
| Do you feel helpless/Do you think you can rely on someone in such situations? (Yes) | 11(21.57) | 40(78.43) | 83.7174,.00001 |
| Are you satisfied with your relationship towards family? (No) | 11 (42) | 15 (58) | 1.332,.00049 |
| Do your children obey you? (No) | 3 (17.5) | 16 (82.5) | 12.133,.00049 |
| Have you lost any family member/child in past 1 year? (Yes) | 4(26.67) | 11(73.33) | 4.671,.30674 |

*P value <0.05 is considered statistically significant

According to our study, 73.33% were depressed due to loss of one of their family members in the last one year. This was similar to the study done by Mayur SS et al², in which the elderly who had lost their spouse (57.81%) were suffering from higher rate of depression. Irreparable psychological negative impact can be caused in those who have lost their spouse and make them more vulnerable to depression. However there was no statistically significant association of this with depression.

Depression is higher among those elderly people who worry a lot about their past (55%) and who feels helpless (78.43%) most of the time, according to our study. In contrast to this, the study done by Ganguli M⁹ et al showed that depression among elderly who feel often helpless was 36.3% and depressed due to their past was 33.3%.

In our study most of the depressed subjects are those who lack social participation (25.45%). Similarly it was seen that 44.32% lacked social participation in a study conducted by Rajkumar A P et al⁷. This can lead to feeling of loneliness and emptiness which eventually makes them depressed. This had statistically significant association with depression.

In our study, most of the elderly people were not satisfied with the relationship towards their family (44.4%) and were depressed of their children's behavior (40.78%) due to which they are not getting more emotional support which is required to face the challenges caused by physiological and psychological stressors.

CONCLUSION: According to our study, the prevalence of depression in geriatrics is significantly high with every other elderly is suffering from depression. The very nature of depression interferes with the ability of a person to seek help, draining energy, loss of interest in life and self-esteem. The physical, social and psychological health of the geriatrics have to be monitored. Education should be given at individual, community and the national level about how to combat depression. Quality health care of the elderly is necessary to reduce the future burden of diseases and disabilities. Health care services should introduce Geriatric clinics. Support through counseling should be done in those who are isolated and vulnerable for developing depression.

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