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An observational study on assessment of depression among geriatric population attending Nalanda Medical College, Patna, Bihar, India

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Abstract
Objectives: *This present study was to evaluate the depression in geriatric population.*
Methods: *A detail history, clinical examination and relevant investigations were performed to all geriatric population. Diagnosis was made based on International Classification of Diseases (ICD-10) criteria.*
Results: *Data was analyzed by using simple statistical methods with the help of MS-Office software.*
Conclusions: *Majority of geriatric population were suffered with mild depression. Depression was commonly occurred in age group 60-70 years of geriatric population. Male population, ex service man, farmer, middle class family and secondary educated population were commonly suffered with depression.*
Keywords: *Geriatric population, depression, age group, socioeconomic status.*

Introduction

Age is an important determinant of mental health. Old age is a period of transition when one has to deal not only with the physical aging, but also with the challenges affecting the mental and social wellbeing. Due to normal aging of the brain, deteriorating physical health and cerebral pathology, the overall prevalence of mental and behavioral disorders tends to increase with age.[1] Disability arising due to various illnesses, loneliness, lack of family support, restricted personal autonomy, and financial dependency are other important contributing factors for higher prevalence of mental and behavioral disorders.

Among the various mental disorders, depression accounts for the greatest burden among elderly. Depression decreases an individual's quality of life and increases dependence on others. If depression is left untreated, it can have significant clinical and social implications in the lives of the elderly.[2]

The most common instrument that has been used to evaluate depression has been Geriatric Depression Rating Scale (GDS), used in various studies. Other instruments that have been used to diagnose depression include international classification of diseases (ICD), tenth revision (ICD-10) criteria, patient health questionnaire-9,

Zung depression scale, and case detection schedule, etc. In most of the studies, the age cut-off which has been used to identify elderly patients is 60 or above.[3] Objectives of our study was to evaluate the depression in geriatric population.

Materials & Methods

This present study was conducted in department of Medicine with the collaboration of department Psychiatry, Nalanda Medical College and Hospital, Patna, Bihar.

Attendant /entire subjects signed informed consent approved by institutional ethical committee of Nalanda Medical College & Hospital, Patna, Bihar, India was sought. This present study was conducted during a period from 02nd August 2018 to 10th January 2019.

A total of 100 geriatric cases with age group 60 to >80 years were enrolled in this study. Cases with chronic illness like chronic kidney disease, chronic liver disease, metastases and AIDS were excluded from this study.

Methods

A detail assessment, clinical examinations and relevant investigations were performed to all geriatric cases.

Cognition and depression assessment- Cognition of the participants was assessed using Hindi Mental State Examination (HMSE). HMSE, a tool developed by IndoUS-Cross National Dementia Epidemiology 1975, intended to screen for cognition impairment. It consists of 22 items, which examine various cognitive aspects like orientation to time /place /memory, attention, language, registration and recall. Each question with the right answer was given 1 mark, with a maximum score of 30 if all the answers were correct. And score of 25 or lower is indicative of cognitive impairment. Diagnosis was made based on International Classification of Diseases (ICD-10) criteria.

Statistical Analysis

Data was analyzed by using simple statistical methods with the help of MS-Office software.

Observations

In this present study, we were enrolled a total of 100 geriatric cases of depression with age group 60 to greater than 80 years. 62(62%) Male and 38(38%) female was included.

Table.1. Age wise distribution

Age (years)	Number of cases	Percentage
60-70	71	71%
71-80	20	20%
>80	9	9%

Majority of cases 71(71%) were belonged in age group of 60-70 years.

Table.2. Showing the socioeconomic status of geriatric cases.

Socioeconomic status	No. of cases	Percentage
Low	30	30%
Middle	60	60%
High	10	10%

In this present study, majority of cases 60(60%) were belonged from middle socioeconomic status.

Table.3. Showing the education of geriatric population.

Education	No. of cases	Percentage
Illiterate	10	10%
Primary	20	20%
Secondary	45	45%
Higher secondary	25	25%

In this present study, education of geriatric cases were 45% secondary, 25% higher secondary, 20(20%) primary and 10(10%) was illiterate.

Table.4. Occupation wise distribution of geriatric cases.

Occupation	No. of cases	Percentage
House wife	24	24%
Ex service man	35	35%
Service man	10	10%
Farmer	31	31%

Majority of cases 35(35%)of depression were ex service man, farmer 31(31%) and house wife 24(24%),

Table.5. Showing the prevalence of depression in geriatric cases.

Status	Number	Percentage
Mild depression	75	75%
Moderate depression	20	20%
Severe depression	5	5%

In this present study, we were seen that majority of geriatric cases 75(75%) had mild depression. And least number of cases 5(5%) were severely depressed.

Discussion

In a review of world literature, Barua et al., (2011) [4] evaluated the median prevalence rates of depression in elderly population of India and compared the same with the rest of the world. The median prevalence rate of depression among elderly was reported to be 18.2%, which was significantly higher than the rest of the world (5.4%). However, it is important to note that the comparison was based on only six relevant studies from India, which formed only 0.5% of total study sample evaluated, in contrast to the 68 studies from the rest of the world covering 99.5% of the participants. The largest community-based data arising from India come from the study on Global aging and adult health Wave-1 study.[5] This study was conducted from 2007 to 2010 in six countries (China, Ghana, India, Mexico, Russian Federation, and South Africa) across the world. Depression was diagnosed on the basis of reporting of one or more of three symptoms (1) had a sad, empty, or depressed feelings (2) lost interest in most things that they usually enjoy such as personal relationships, work, hobbies/ recreation, and (3) decreased energy or feeling tired all the time for 2 weeks in 12 months. [3]

In this present study, age group of 60-70 years geriatric (71%) population were commonly suffered from depression. Out of 100 geriatric cases, Depression was commonly seen in male (62%) than female (38%).

Similar study was conducted by Anuj Natyal, et al. (2015),[6] in their study majority 104(58.75%) of geriatric people were found to be in age group of 60-69 and least number 11(6.21%) of geriatric

people were found in the age group of 80-89. Fifty-three (29.94%) of the geriatric people was found to be depressed. 44 people (24.85%) found to be males, there by reflecting depression conditions more in males. 32(18.07%) were financially dependent, 9(5.08%) geriatric population had lost their partner and 41(23.16%) population were living in nuclear families. These factors show that depression among geriatric people could be due to lack of financial dependency on others, loss of their partner or living in nuclear families.

Similar findings was obtained in our present study, depression was more seen in middle socioeconomic financial status cases.

In this present study, majority (45%) of depressive geriatric cases had secondary level of education. 25(25%) cases were higher secondary educated. And least number cases 10(10%) were illiterate. Majority of cases of depression 35(35%) were seen in ex service man. 31(31%) cases of farmers were depressed. 24(24%) house wives were depressed. Least number of cases 10(10%) were depressed.

In this study, according to GD score, 75(75%) geriatric cases were mild depressed, 20(20%) cases were moderate depressed, and least numbers of cases 5(5%) were no depression.

Most of the studies conducted in other countries and India showed the prevalence between 6%-53%.[7,8] Prevalence of geriatric depression in studies conducted in other Asian countries by Sherina M et al in Malaysia was 6.3%, Taqui AM et al in Pakistan was found to be 19.5% and Khattri JB et al in Nepal was 53.2%.[7,9,8] The studies conducted in India showed a varied geriatric depression prevalence ranging from 12.7% to 52.2%.[10,11,12] Rajkumar AP et al at rural south India found prevalence of 12.7%, Barua A et al at South India showed a prevalence of 21.7%, Jariwala V et al at Gujarat found a prevalence of 39.04%, Jain RK et al found a prevalence of 45.9% in urban slums of Mumbai and Nandi P et al in rural community of West Bengal showed a prevalence

of 52.2%. [10,13,14,11,12] Sandhya GI conducted a study in rural community of South Kerala and found a geriatric depression prevalence of 25.4% and compared to all these studies, the geriatric depression prevalence in our study was very high which involves almost three fourth of the study participants.[15]

Shubhada Kale et al. study revealed that, the majority i.e. 70% of the geriatrics were having poor depression score (0-5), 29% of the geriatrics were having average depression score (6-10) and only 1% geriatrics had good depression score (11-15)[16]. Guha et al. conducted study in old age home population, and reported that major depressive disorder (13.4%) was the most common psychiatric diagnosis in this population [17]. Rao et al. reported that depression was more common in elderly males[18]. Singh et al. conducted in his study done in 103 elderly people in Kancheepuram District in the state of Tamil Nadu and reported 44% depression among elderly people[19]. Sanjay et al. conducted study on 100 elderly people in Bengaluru city using GDS scale and reported 36% depression[20]. Nair et al. conducted study in Dharwad and observed a prevalence rate of 32.4% depression in older population[21].

Conclusions

This present study concluded that the majority of geriatric population were suffered with mild depression. Depression was commonly occurred in age group 60-70 years of geriatric population. Male population, ex service man, farmer, middle class family and secondary educated population were commonly suffered with depression. Hence, the healthcare professional should take proper interventions to overcome the depression in geriatric population. The family members should take care of their elderly people and should spend time with them to make them feel comfortable. Also the government should take initiative to set up geriatric club where they can spend time along with other friends of the community and share their thoughts.

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