Original Research Article

Prevalence of depression and associated risk factors among the elderly in rural field practice areas of a tertiary care institution in Katihar, Bihar

Sneha Soni[1], Mukesh Shukla[2]*, Manish Kumar[3]

[1]Department of Community Medicine, Hind Institute of Medical Sciences, Safedabad, Barabanki, India
[2]Department of Community Medicine, Hind Institute of Medical Sciences, Ataria, Sitapur, Uttar Pradesh, India
[3]Medical Oncologist, Command Hospital, Central Command, Lucknow, Uttar Pradesh, India

ABSTRACT

Background: Despite depression is one of the most common emerging psychiatric morbidity among elderly now days, yet the depressive symptoms are not diagnosed appropriately. The objective of the study was to estimate the prevalence of depression and identify associated risk factors in the elderly population.
Methods: A community based cross-sectional descriptive study was conducted from January 2013 to December 2013 in villages under field practice area of Katihar Medical College in the state of Bihar, India. Multistage sampling technique was employed, and a total 450 elderly persons were interviewed after obtaining written informed consent. Subjects with score >20 on the mini-mental state examination, were assessed for depression using the Short Form Geriatric Depression Scale. Study variables included bio-social parameters such as age, gender, literacy status, occupation, socioeconomic status, financial dependency and marital status.
Results: The prevalence of depression in the study population was 39.6%. Mild depression was present in one-fourth (24.4%) of the study population followed by moderate depression (11.55%). Even 3.7% of the elderly were severely depressed. It was significantly higher in females (p = 0.00), those who were single (p = 0.00), those who belonged to upper socioeconomic strata (0.00) and were financially dependent on others.
Conclusions: The study revealed the need for development of community based comprehensive strategy for early diagnosis and prompt treatment of depression among elderly as well as to promote mental health.

Keywords: Depression, Elderly, Rural

INTRODUCTION

Over the past few decades, life expectancy has increased drastically in India from 36.7 years in 1951 to as 67 years in 2012.[1] It is projected that by 2050, elderly will constitute 20–30% of India's population.[2] Ageing is a period during which a gradual transition takes place and one has to adapt themselves not only for physical changes, but also has to encounter and need to act accordingly with mental dilemmas as well as social wellbeing. Depression is the most common psychiatric disorder and commonest causes of disability in the elderly.[3,4] In a systematic of community based studies for mental health surveys on geriatric depressive disorders in those aged 60 years and above in Indian population, pooled prevalence of depression among elderly was found to vary between 8.9 to 62.16 percent.[5] Depression not only results in reduced life satisfaction and quality but also lead to cognitive decline as well as impairments in activities of daily living.[6] A major misconception that depression is part of aging rather than a treatable condition, has resulted in quite negligence this problem

with increased prevalence of depression among elderly over past few years.[7] Limited studies to assess the depression among the elderly population has been done in Bihar focussing on rural community, so the present study would enlighten about the problem of depression among geriatrics in a rural area Bihar.

METHODS

A community based cross sectional study was conducted in Katihar district in rural field practicing area Katihar Medical College, Bihar for a period of one year from January 2013 to December 2013.

A maximum of 450 elderly persons were enrolled using multistage sampling and were interviewed using pre-designed, pre-tested and semi-structured questionnaire after obtaining consent. Cognitive impairment was assessed using the Mini-Mental State Examination (MMSE), and subjects with MMSE score <25 (cognitively impaired) were excluded from the study.[8]

Assessment of depression

Assessment of depression was done using the 15-item geriatric depression scale (GDS) consist of 15 self-report items.[9] Accuracy of the GDS-15 is not affected due medical conditions, age, or other bio-social characteristics. Even presence of a major depressive episode among elderly home-bound adults can be reliably assessed.

Data analysis

Data entry and statistical analyses was done using Epi Info version-6 software. Frequency distributions were calculated for almost all the variables. To test significant associations between independent variables and depression, chi-square test was used (p <0.05).

RESULTS

Of 450 study respondents interviewed, about half (54.6%) were aged 60-74 years and 233 (51.7%) were male. Most of them were married (56.0%) and belonged to joint families (94.9%).

About two-third (68.0%) were illiterate and 67.2% were financially dependent on others.

Table 1: Distribution of elderly population on the basis of GDS-15 scores (N = 450).

Depression per GDS score	Number	Percentage
Absent (0-4)	271	60.2
Mild (5-8)	110	24.4
Moderate (9-11)	52	11.5
Severe (12-15)	17	3.7

Table 2: Association between socio-demographic variable and depression (N = 450).

Bio - social characteristic		Depression			p
Variables		No. (%)	Present No. (%)	Absent No. (%)	
Age group (Years)	60-74	246 (54.6)	97 (39.4)	149 (60.6)	0.53
	75-84	164 (36.5)	69 (42.1)	95 (57.9)	
	Above 85	40 (8.9)	13 (32.5)	27 (67.5)	
Gender	Male	233 (51.7)	73 (31.3)	160 (68.7)	0.00
	Female	217 (48.3)	106 (48.8)	111 (51.2)	
Religion	Hindu	88 (19.5)	36 (40.9)	52 (59.1)	0.80
	Non Hindu	362 (80.4)	143 (39.5)	219(60.5)	
Type of family	Nuclear	23 (5.1)	7 (30.4)	16 (69.6)	0.34
	Joint	427 (94.9)	172 (40.3)	255 (59.7)	
Socio economic status[#]	Lower middle and above	218 (48.4)	103 (47.2)	115(52.8)	0.00
	Upper lower and below	232 (51.6)	76 (32.8)	156 (67.2)	
Employment status	Employed	197 (43.7)	79 (40.1)	118 (59.9	0.48
	Unemployed	253 (56.3)	100 (39.5)	153 (60.5)	
Educational status	Illiterate	306 (68.0)	122 (39.9)	184 (60.1)	0.95
	Literate	144 (32.0)	57 (39.6)	87 (60.4)	
Marital status	Married	252(56.0)	78 (31.0)	174 (69.0)	0.00
	Others[##]	198 (44)	101 (51.0)	97 (49.0)	
Financial dependency	Independent	148 (32.8)	65 (49.2)	67 (50.8)	0.00
	Dependent	302 (67.2)	114 (35.8)	204 (64.2)	

[#] Modified BG Prasad socioeconomic scale 2013; [##]Includes divorced, separated, unmarried, widow/widower; *p value significant

Table 1 displays distribution of elderly population on the basis of GDS-15 scores. Mild depression was present in one-fourth (24.4%) of the study population followed by moderate depression (11.55%). Even 3.7% of the elderly were severely depressed. Table 2 shows association between bio-social variables and depression. Females were found to be more affected with depression than males (p = 0.00). Proportion of subjects in higher socioeconomic strata (middle and above) were found to be have more depressive symptoms than lower one (p = 0.00). Even the association between financial dependency with depression was found to be statically significant (p = 0.00). Those who were married and had spouse were significantly lesser affected with depression than those who were single (divorced, unmarried, widow/widower, separated). However the association between age, religion, type of family, employment status and education status were found to be statistically non-significant.

DISCUSSION

In the present study prevalence of depression, based on GDS-15 scores was found to be 39.6%. The results of present study were much higher as compared to studies in Ludhiana, Dharwad and that in Vellore which reported prevalence of depression 8.9%, 29.36% and 12.7% respectively.[10-12]

However, on the other hand the prevalence of depression was much lower as that reported in various other Indian studies.[13-16] This wide variation in prevalence rates of depression might be due to differences in baseline characteristic of study population and different sample sizes or might be attributed to the method used for assessment of depression. In the present study female preponderance was found to be significantly associated with depression. Similar findings were also reported in other studies.[10,11,13,14,16] However no such findings were observed by Kumar et al and Goyal et al.[12,15]

As reported by Sinha et al and Taqui et al those who were single (divorced, separated, widow, unmarried) were found to be more susceptible for depression.[13,16] But such type of findings was not reported in other studies.[10,15] Depression was found significantly higher among those who belonged to upper socioeconomic group and those who were not financially dependent on other. Contradictory to the findings as reported by majority of Indian studies no significant association was observed between education and employment status with depression.[11,14,15] In contrast to other studies no association was observed between depression and family composition.[10,16]

CONCLUSION

Depression in elderly is a significant problem in rural community. Particularly in females and among those who are single without partner.

These findings emphasized the need for community-based interventions to be formulated for effective and timely implementation of mental health promotion activities so as to prevent geriatric depression. On the other hand efforts must be made for early diagnosis and prompt treatment of depression in elderly.

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