Original Research Article

A study of prevalence and risk factors associated with depression in elderly

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Abstract

Background: Ageing is inevitable. It is irreversible, progressive and is associated with decline in functions. The individual gradually becomes dependent physically, functionally, socially and economically. Elders usually exhibit multiple health problems with complex interactions. Depression is more common among elderly. It was influenced by various factors. Study was conducted to find prevalence and associated risk factors. **Aim and Objective:** To study the prevalence and risk factors associated with depression in elderly. **Methodology:** 100 elderly patients residing in old age homes were studied. Pre designed questionnaire was used for collection of sociodemographic data and history. GDS scale was used to calculate depression scores. Result and Discussion: Prevalence of depression among elderly was 35%. Increased age and increased associated co morbidities were significantly associated with depression in elderly. ($p < 0.05$)
Key Words: depression.

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INTRODUCTION

The oldest, theory of aging is wearing and tearing. Just like part of machine that deteriorates with each year of exposure to pollution, radiation, toxic foods, drugs, diseases, repeated movements, and various other stresses. Other popular theory is genetic clock. As the genetic clock gradually "switches off" the genes that promote growth; it might switch on genes that promote aging.[1] There has been considerable increase in the absolute and relative numbers of elderly in the world population of both developed and developing countries in the 20th century. At this stage in life people become physically and mentally weak and dependent on others to take care of them. Old people have limited regenerative abilities and are more prone to disease, syndromes, and sickness than other adults and it is also associated with a need to adjust to changing roles and role losses. The most common chronic conditions affecting older adults are cardio vascular diseases, cancer, diabetes, osteoartheritis, alzheimer's disease and psychiatric disorders, most commonly depression and dementia[2] Depressive disorders are the most common affective illness found in old age. Depression is a mood disturbance characterized by exaggerated feelings to sadness despair, lowered self esteem, loss of interest in former activities and pessimistic thoughts. The incidence of increased depression among the elderly is influenced by the variables of physical illness, functional disability and cognitive impairment[3]. Depression may sometimes be hidden behind an array of vague symptoms and it becomes necessary to carefully assess the elderly to identify marked depression to treat the person holistically so this study was conducted to find prevalence and associated risk factors in depression in elderly.

MATERIAL AND METHODS

A cross sectional study was carried out in 100 elderly patients residing in old age homes of an urban area. Two old age homes in an urban area were selected randomly. Study was approved by ethical committee of tertiary care

institute. Study was explained in detail to the participants and valid written consent was taken. Prior permission was taken from the authorities of old age homes. An eld9erly is a person who is 60 years and above for the study.

Inclusion Criteria

1. Person with > 60 years age and above of any gender
2. Those who willing to participate in the study

Exciusion Criteria

1. Person above 90 years of age.
2. Bed ridden patients.
3. Person with severe debilitating diseases.
4. Not willing to participate in the study

A pre tested, pre validated questionnaire was used to collect data. Data includes sociodemographic data, detailed history, clinical examination of the patients. Geriatric depression scale-short form (GDS-SF) was used to assess their depression status.[4-6] The GDS was interpreted by taking a score of 0 to 5 as normal and a score greater than 5 as suggestive of presence of depression. A score greater than 10 was taken to be suggestive of severe depression. Cognition of the participants was assessed by performing a simple 4 word recall test and those who were unable to recall more than one word after the distractor activity were excluded from the study as the GDS cannot be used in the cognitively impaired elderly.

Statistical analysis was done with appropriate statistical test to see association between various sociodemographic factors and depression in elderly.

RESULTS

Table 1 shows distribution of patients according to various sociodemographic characters. Majority of the patients were in age group of 81-90 years (40%) followed by 71-80 years (35%). Male to female ratio was1:1.17. Out of total 100 elderly 53 were married. 36 were widowed or separated and 11 were unmarried. 62% elderly were educated up to HSC. 15 of all were studied above HSC upto post graduation. Out of total 100, 47 were dependent for financial support while 53 were financially independent. Table 2 shows distribution of patients according to GDS score. Out of total 100 patients 65 patients were having GDS score less than 5. 22% patients had score of 6-9. Severe depression was defined as having GDS score more than 10. Overall prevalence of depression was 35% in elderly. Table 3 shows comparison of depressed and normal elderly persons according to various factors. Depression was more common in older age group. In 60-70 years age group 12% of elderly shows depression. In the 71-80 age group 28.57% were having depression while 71.43% were normal. In 81-90 years age group 55% showed depression and 45% were normal. This difference was statistically significant. (p value <0.05). Among male prevalence of depression was 43.48% and that of in female was 27.78% this difference was statistically not significant. (P> o.o5) Depression was more common in widowed or separated (38.89% vs 61.11%) followed by married (depression 33.96% vs normal 66.04%). This difference was statistically not significant. (P> o.o5) Depression among those who were educated upto secondary school was less (43.48%) as compared to those educated above secondary school (47.17%). This difference was statistically not significant. (P> o.o5) Depression in financially dependent elderly was more (38.3%) than those in financially independent (32.08%). This difference was statistically not significant. (P> o.o5) We compared prevalence of depression in associated co morbidities among elderly. Those elderly with co-morbidities above 2 were more as compared to those with co morbidities two and less than 2. This difference was statistically significant. (p value 0.03)

Table 1: Distribution of patients according to sociodemographic characterstics

Sr no	Risk factors	No of patients	Percentage
1	Age (years)		
2	60-70	25	25
3	71-80	35	35
4	81-90	40	40
5	Gender		
6	Male	46	46
7	Female	54	54
8	Marital status		
9	Unmarried	11	11
10	Married	53	53
11	Widowed/ separated	36	36
12	Education		
13	Up to Secondary school	23	23
14	Up to HSC	62	62
15	Up to graduation, post gradution	15	15
17	Financial status		
17	Dependent	47	47
18	Independent	53	53

Table 2: Distribution of patients according to GDS SCORE

Sr no	Depression (score)	No of patients	Percentage
1	No depression (<5)	65	65
2	Mild depression(6-9)	22	22
4	Severe depression(≥10)	13	13

Table 3: Comparison of depressed and non depressed patients according to various factors

Sr no	Risk factors	Depression (35)	No Depression (65)	P value
1	Age (years)			
2	60-70	3(12%)	22(88%)	
3	71-80	10(28.57%)	25(71.43%)	<0.05
4	81-90	22(55%)	18(45%)	
5	Gender			
6	Male	20(43.48%)	26(56.52%)	>0.05
7	Female	15(27.78%)	39(72.22%)	
8	Marital status			
9	Unmarried	3(27.27%)	8(72.73%)	
10	Married	18(33.96%)	35(66.04%)	>0.05
11	Widowed/ separated	14(38.89%)	22(61.11%)	
12	Education			
13	Upto Secondary school	10(43.48%)	13(56.52%)	>0.05
14	Above secondary school	25(47.17%)	52(67.53%)	
17	Financial status			
17	Dependent	18(38.3%)	29(61.7%)	>0.05
18	Independent	17(32.08%)	36(67.92%)	
19	Associated Co morbidities			
20	<2	9(22.5%)	31(77.5%)	
21	3-4	14(41.18%)	20(58.82%)	<0.05
22	>5	12(46.15%)	14(53.85%)	

DISCUSSION

Overall prevalence of depression was 35% in elderly. 22% patients had score of 6-9 showing mild depression and 13% showed severe depression. Prevalence of depression varies in different studies from 6 to 50%[7-10] In 60-70 years age group 12% of elderly shows depression. In the 71-80 age group 28.57% were having depression while 71.43% were normal. In 81-90 years age group 55% showed depression and 45% were normal. This difference was statistically significant. (p value <0.05). Similar findings were observed in Reddy *et al*[11] A study performed in Canada, observed the prevalence of depression indicators among the elderly in rural zones was highest among individuals older than 80 years[12.] This increase in prevalence was due to increased dependence on others for activities and increased in associated co-morbidities. Among male prevalence of depression was 43.48% and that of in female was 27.78% this difference was statistically not significant. (P> o.o5). contradictory results were seen in Reddy *et al* and Nandi *et al*[11,13] where females showed singnificant depression than males. This may be due to increased awareness in women and study population was urban area. Depression was more common in widowed or separated (38.89% vs 61.11%) followed by married (depression 33.96% vs normal 66.04%). This difference was statistically not significant. (P> o.o5). Similar findings were seen in Raul *et al* and jariwala *et al*[8,10] where widowed ans separated elderly showed more prevalence of depression. This difference was due to loneliness due to loss of partner. Depression among those who were educated upto secondary school was less (43.48%) as compared to those educated above secondary school (47.17%). This difference was statistically not significant. (P> o.o5) in a study by reddy *et al*[11] higher education was associated with less number of depressive patients. Depression in financially dependent elderly was more (38.3%) than those in financially independent (32.08%). This difference was statistically not significant. (P> o.o5). On the contratory to our study some studies showed statistically significant association between financial dependency and depression.[10,11] We compared prevalence of depression in associated co morbidities among elderly. Those elderly with co-morbidities above 2 were more as compared to those with co morbidities two and less than 2. This difference was statistically significant. (p value 0.03) Similar findings were seen in previous studies.[7,13] there were increased pain, increased dependency on others so prevalence was more.

CONCLUSION

Prevalence of depression among elderly was 35%. Increased age and increased associated co morbidities were risk factors for development of depression in elderly.

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