Depression and associated socio-demographic factors among Geriatrics-An Experience from a tertiary Hospital.

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Abstract: *Depression in old age is associated with genetic susceptibility, chronic disease and disability, pain, frustration with limitations in activities of daily living. The present study was undertaken to find out the prevalence of depression and associated socio-demographic factors among geriatric patients attending a tertiary care hospital by Geriatric Depression Scale. 65.3% of the study population had depression (mild-36.2%, severe-29.1%) and the association of this depression with age (p<.001), gender (p<.001), residence (p=.027), marital status (p=.004), education (p<.001), occupation (p<.001), family type (p<.001) and economic dependency (p=.002), living condition (p<.001) was statistically significant. Social support group, local clubs and respective families should address the issue of depression among elderly.*
Key Words: *elderly, depression, mental health, GDS*

I.   Introduction

Ageing is a universal phenomenon. It has not only social but also economical, political and health-related implications.[1] The population aged 60 years and above will grow from 77 million in 2001(7.4%) to 150 million (14.41%) in 2020.[2] Age is an important determinant of mental illness. The overall prevalence of mental and behavioural disorders tends to increase with age due to the normal ageing of the brain, deteriorating physical health and cerebral pathology.[3] Lack of family support and restricted personal autonomy are other important contributing factors. Mental health of the elderly is an important concern and depression accounts for the greatest burden among them. It is expected to become the leading cause of disability by year 2020 closely following ischemic heart disease.[4] Globally, prevalence of depression in geriatric population varies from 10% to 20%, while in India; it is even higher varying from 13% to 25%.[5] Depression in old age is associated with genetic susceptibility, chronic disease and disability, pain, frustration with limitations in activities of daily living, personality trait (dependent, anxious or avoidant), adverse life events and lack of adequate social support. In a hospital-based study, Abhay *et al.*[6] found that nearly 52.5% of the patients with chronic medical illness suffer from psychiatric illness, depression being the most common. Uwakwe et al [7] evaluated all the patients aged more than 60 years, who were admitted in non-psychiatric wards in a teaching hospital and observed that 45.3% of the patients had psychiatric illness, with depression being the commonest, followed by organic disorders, adjustment disorder, and generalized anxiety disorder. Only 2.8% of the mental disorders could be recognized by the physicians. This reflects the need for psychological assessment among the geriatric patients. With this background, we have conducted this study with the following objectives:
1. To find out the prevalence of depression among elderly patients attending a tertiary care hospital.
2. To assess the socio demographic factors affecting depression among them.

II.   Methodology

An observational, cross- sectional study was conducted among the patients aged 60 years and above attending Geriatric OPD and IPD of Medical College, Kolkata from July 2012 to December 2012. Informed verbal consent was taken from each patient; anonymity and confidentiality were ensured. Patients those who were seriously ill and unwilling to give consent excluded from the study. A predesigned pre-tested schedule (for background information) and Geriatric Depression Scale GDS-30/Stroke 2006[8] (for assessment of Depression) were used as study tools. The GDS, developed by TL Brink et al is a 30 item self-rated scale used to evaluate depression in elderly. The GDS has demonstrated very good internal consistency (alpha 0.94) and split half reliability of 0.94. Stability of GDS is also very good with a test-retest correlation of 0.85 over one week. GDS score 0-9 considered as normal. GDS score 10-19 and 20-30 considered as mild and severe depression respectively. Interview time took approximately 15 to 20 minutes. 7 to 8 patients were interviewed per day by systematic consecutive sampling. Every 3rd patient was interviewed. If the patient was not willing or interviewed earlier then the next patient fulfilling the inclusion criteria was selected. So during the study period 157 patients were interviewed. Due to incompleteness of response by 4 patients, finally 153 schedules were used for analysis. Data was tabulated in Microsoft Excel 2010 spread sheet and were analysed by appropriate statistical methods in SPSS version 16.

III.   Results

Maximum study population (69%) belonged to 60-69 years age group. Majority of study population attending tertiary care hospital reside in urban area. Majority of study population (81%) belongs to hindu religion. Among the study population, 24% were illiterate & only 12% having higher education. Majority of study population (64%) were married. 39% & 26% of study population are homemakers and retired respectively. About 22% & 36% of study population living with spouse, unmarried and spouse, married children respectively while 12% (19) living alone. About 37% of study population have PCI< Rs 547. Majority of study population (77%) were residing in pucca house. Only 44% of study populations were economically fully independent. Nearly 28% of the study populations were addicted to tobacco smoking. Among the study population, 36 % were lonely and had other member's problem. 65.3% of the study population had depression (figure 1) (mild-36.2%, severe-29.1%) and the association of this depression with age ($p<0.001$), gender ($p<0.001$), residence ($p=0.027$), marital status ($p<0.05$) (table4), education ($p<0.001$), occupation ($p<0.001$), family type ($p<0.001$) and economic dependency (table 1) ($p<0.05$), living condition ($p<0.01$) (table 2) was statistically significant.

IV.   Discussion

This cross-sectional study was conducted to analyze the socio-demographic profile and prevalence of depression among geriatric patients of a teaching hospital setting. The initial study sample was 157 patients out of which, 4 had to be excluded due to incompleteness of the proforma. The final study sample was 153. Out of 153 patients, 100 (65%) had depression. Other studies conducted in different parts of India highlighted the prevalence of depression among geriatrics varied from 31.2% to 81.02%.[9,10,11,13] This difference may be due to different study setting and difference in guideline for consideration of geriatric population. In our study 54% were male and 46% were female. Mean age was 66.18 years with SD ±5.56 years. A study conducted at Government Medical College Amritsar showed that among the study population 64% were men and 36% were women.[9] Study in tertiary care hospital of Delhi showed that the age of the patients ranged from 60 to 88 years with the mean age being 64.5 years and there were 122 (61%) males and 78 (39%) females.[10] Study from Aga Khan university of Karachi showed 78% were male and mean age was 69 years.[12] This variation was due to different socio-economic status of the study population. The present study highlighted that age ($p<0.001$), gender ($p<0.001$), residence ($p=0.027$), marital status ($p<0.05$), education ($p<0.001$), occupation ($p<0.001$), family type ($p<0.001$) and economic dependency ($p<0.05$), living condition ($p<0.01$) were the major predictors of depression among the study population. Significant association between age and depression was found by Sood et.al.[9] Persons from nuclear family had more depressive symptoms.[11] Study from Aga Khan University Hospital Karachi depicted that females were found to be 2.6 times more likely to suffer from depression compared to males ($p < 0.001$). Married people were less likely to suffer from depression compared to those who did not marry or who were separated or widowed ($p < 0.001$). The subjects living in a nuclear family system were more likely to suffer from depression than those living in a joint family system. Other factors that showed a significant association with depression in the subjects included being uneducated ($p = 0.03$), living alone ($p < 0.001$), being childless ($p < 0.001$), and being unemployed ($p < 0.001$).[12] A study conducted by V Jariwala in Surat City showed that illiterates have a much lower rate of depression (26.6%) than literates (44%).[13] Study conducted by Grover S et. al. explored that depression was more common in women, younger subjects, in subjects from poor economic background, Muslims, those who were divorced or widowed, those residing in nuclear families and urban resident.[14] These differences could be due to the difference in the study population and different study setting. Decreased prevalence of depression among the patients from joint families could be due to a better emotional and social support that a person gets in a joint family, compared to a nuclear family. Various factors like changing social circumstances, lifestyle changes could be responsible for this. This also emphasizes that awareness and support have to be improved at social and community level. Adequate training of medical professionals was needed to recognize and refer the patients for a better geriatric care.

V.   Conclusion

Health education should be given to geriatric people regarding regular physical exercise, nutrition and annual medical check up for early detection of disease. Strengthening of medical services exclusively for elderly population was needed at CHCs and tertiary care hospital. The service providers should be given special training in management of geriatric health problems. The elderly people themselves should be encouraged to form old age club and participate in various cultural programme to improve their quality of life. Social support group, local clubs and respective families should address the issue of depression among elderly.
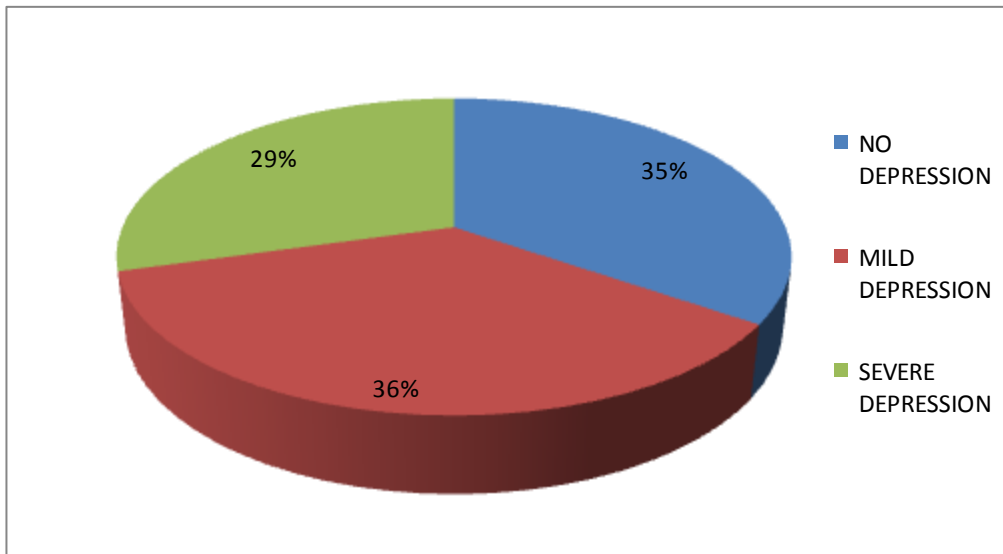
VI.   Tables and Charts

Fig1: Pie diagram showing prevalence of depression among the study population   (n = 153)

Table 1: Relationship between economic dependency of the study population with Depression
(n = 153)

Economic dependency	GDS Scale (0 – 30)			Significance
	No depression (0-9)	Mild depression (10-19)	Severe depression (20-30)	
Fully dependent	15	31	27	$\chi^2 = 13$ df=4 p<0.05
Partially dependent	3	5	3	
Independent	33	19	15	
Total	53	55	45	

Table 2: Relationship between living condition of the study population with Depression (n = 153)

Living With	GDS Scale (0 – 30)			Significance
	No depression (0-9)	Mild depression (10-19)	Severe depression (20-30)	
Alone	0	5	14	
With Spouse	2	2	8	
Spouse & unmarried Children	15	13	6	
Spouse with married Children	24	23	8	$\chi^2 = 40.31$ df=12 p<0.01
With unmarried Children	4	6	2	
With married Children	6	2	4	
Others	2	4	3	
Total	53	55	45	

Table 3: Distribution of study population according to social problem (n=153)*

Social Problem	Frequency	Percentage
Loneliness	37	24.2
Destitution	4	2.6
Property problem	14	9.1
Other members problem	30	19.6
None	81	52.0

*Multiple responses

Table 4: Relationship between Marital Status of the study population with Depression (n = 153)

Marital Status	GDS Scale			Significance
	No depression (0-9)	Mild depression (10-19)	Severe depression (20-30)	
Married	41	36	21	
Unmarried	2	4	3	χ^2 =13.71 df = 6 p<0.05
Widow/Widower	10	15	19	
Husband absconded	0	0	2	
Total	53	55	45	

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