Study of Depression Among Elderly in An Urban Area of Bangalore

Vijetha Vikram N*, Shalini S**, Radhika K***

Abstract

Background: Geriatric depression is a major cause of morbidity which can incapacitate life. The objective of this study was to find the prevalence of depression among elderly in an urban area of Bangalore.

Methods: Seventeen areas under ward number 17 and 36 of Bruhath Bengaluru Mahanagara Palike were randomly selected from the field practice area of a Medical College. Semi-structured pre-tested questionnaire regarding socio-demographic profile, family details and 15-item Geriatric Depression Scale (GDS) were administered. Brief information about the habits, recreational activity, sleep ailment, any medication (for the ailments, if present), death of close relatives and number of hours spoken to the family members was asked.

Result: Of the 185 subjects studied, majority (84%) belonged to the young old category. The proportion of depression was higher among women 60 (42.6%) as compared to men 18 (40.9%). Risk of depression was found to be 0.43 times higher among illiterates as compared to the literates. The proportion of diabetics being depressed (54.1%) was higher than non-diabetics. Risk of depression was found to be 2.68 times higher among hypertensive patients.

Conclusion: Prevalence of depression in present study was 15.7% who were further evaluated for counselling and treatment.

Key Words: Geriatric depression, geriatric depression scale.

Introduction

Depression is one of the major threats of the rapidly growing developing world. The prevalence of depression among elderly was considered to be low in India due to various sociocultural factors but with increasing urbanisation and westernisation, the incidence in India is growing to reach that of the western world. It is a mood disorder which threatens to affect 8% of the population with the risk of females (20-26%) affected being higher than that of males (8-12%). It is characterised by a series of events including depressed mood with pervasive sadness (loss of interest in all the activities) and persistent sadness (present throughout the day), depressive cognition/ideation – the ideas being hopelessness (there is no hope in the future), helplessness (no help is possible now) and worthlessness (feeling of inadequacy and inferiority), psychomotor activity– retardation in younger patients and agitation in older patients, physical symptoms– heaviness of head and vague body ache, biological functions– insomnia, psychotic features and suicide.[1]

Psychopathological feeling of sadness is known as depression. It is often associated with anhedonia which is loss of interest in and withdrawal from all regular and pleasurable activities.[2] It is considered to be a common mental health

*Undergraduate Medical Student, **Associate Professor, *** Statistician; Department of Community Medicine, M S Ramaiah Medical College, Bangalore

Address for correspondence: Vijetha Vikram N, M S Ramaiah Medical College, Bangalore.
E-mail: vijethavikramn@gmail.com

problem in geriatric population and overall prevalence rate of depression in this age group varies between 13-25% though the World Health Organistion estimated prevalence rate of depression in the elderly is 10-20%.[3]

The cause of depression in elderly varies from psychiatric events– loss of job, social status, loss of loved ones and various life events to non-psychiatric events- medical illness. The patient loses energy, concentration, appetite and weight along with difficulty in pursuing daily tasks. There is associated sleep problem with low self-esteem, feeling of worthlessness, suicidal thoughts and somatic complaints. The prevalence is higher in minorities, less educated and those above 80 years.

Insight oriented psychotherapy, supportive psychotherapy, cognitive therapy, interpersonal therapy, problem solving therapy, group therapy and family therapy are the various psychotherapies along with pharmacotherapy to treat depression. It can be achieved by adapting to recurrent and diverse losses (as that of loved ones), assuming new roles (adjusting to loss of previously defined roles) and accepting mortality[4]. Depression may result in the most unexpected complication. Hence, this study was conducted to find the prevalence of depression in an urban area in Bangalore as early identification and intervention helps to prevent complications.

Material and Methods

Bruhath Bengaluru Mahanagara Palike (BBMP) has 198 wards. BK Nagar Health Centre (ward no. 17) is the urban field practice area of the medical college. This cross sectional study to estimate the prevalence of depression in the elderly was conducted in 17 areas of ward no. 17 and 36 by simple random sampling method. The population of this area is 49,936. Census Enumeration Blocks (CEB of 2011 census data) was applied to divide the wards into smaller units. The sample size required for the study was estimated to be 185 with an absolute precision of 5% and desired confidence level of 95% based on the prevalence of depression of 25% in other Indian studies.

The areas selected were Netaji Nagar, MRJ colony, Purnapura, MK Nagar, Muniswamy Badawane, Akkiappa Garden, Sanjeevappa colony, Brindavan Nagar, AK colony, Sampangappa Badawane, Muthyalanagar, Govindappa garden, HMT layout, Bandappa garden, Deevanrapalya, Netaji circle and Ramaiah colony. Eleven elderly from each area were randomly selected.

Informed consent was obtained from all the selected subjects in the age group of 60-80 years. Those with recently diagnosed psychiatric illness and on treatment were excluded from the study. A semi-structured, pre-tested questionnaire regarding socio-demographic profile and family details were administered along with 15-item Geriatric Depression Scale (GDS). GDS is a questionnaire containing 15 questions to be answered in Yes/No type. They were graded 0-15 based on their answers. A score of 0-4 is considered to be normal, score of >5 is suggestive of depression and a score of >10 is indicative of depression.

Brief information about the educational status, habits, recreational activity, sleep ailment, any medication (for the ailments, if present) and family history – type of family, per capita income, death of close relatives, number of hours spoken to the family members was asked.

Results

Out of the 185 subjects studied, 155 (84%) were in the age group 60-74 years, 30 (16%) in the age group 75-85 years and none in the age group >85 years. Young old (60-74 years) comprised 84% of the study subjects. The proportion of depression was found to be higher in age group 70-80 years (43.2%) as compared to the lower age group 60-70 years (41.9%) but was not statistically significant

The education level of the study participants and their socio-economic status showed statistically significant association with depression (Table 1). Risk of depression was 0.43 times higher among illiterates, 1.95 times higher in high socio-economic group and 1.83 times higher among people suffering from other co-morbid conditions (Table 3). Risk of depression was 1.81 times higher in people chewing betel leaf (Table 4)

Also, the proportion of depression was found to be higher among people with family members less than 4 (43.3%). Risk of depression was found to be 2.68 times higher among hypertensive patients.

Discussion

Out of the 185 subjects in present study, 29 (15.7%) scored >10 in the GDS and were suffering from depression. Forty nine (26.5%) scored between 5-9 and they are prone to be depressed in the recent future. Score <4 was observed among 107 (57.8%) subjects and they did not show any signs of depression. This study also stressed the role of sociocultural factors in depression.

A study which was undertaken in five continents – Asia, Europe, Australia, North America and South America showed that the prevalence of depression among elderly in India is 13-25%.[4] According to the World Health Organisation statistics (WHO), the overall prevalence of depression in the geriatric population is 10-20%.

According to a study conducted by Kulaksizoglu et al in Kodikoy district of Istanbul, rate of clinical depression in a community was 1-16%.[5] The study involved 1067 individuals and included Mini Mental State Examination along with the use of GDS and demographic data for depression. In a study conducted by Hammami et al in Tunisia, females, illiterates and people with past medical history were depressed.[6] The present study also showed similar results when related to various predictors of risks of depression. In another cross-sectional study conducted by Taqui et al in Karachi in Pakistan, the prevalence of depression was found to be 19.8%.[7]

Table 1. Association of depression with sociodemographic variables among study subjects.

Sociodemographic variables	Levels	Depressed n (%)	Not depressed n (%)	Odds Ratio	95% CI	Chi Square	p Value
Age (years)	60-70	62(41.9%)	86(58.1%)	1.06	(0.51-2.19)	0.02	0.88
	70-85	16(43.2%)	21(56.8%)				
Gender	Female	60(42.6%)	81(57.4%)	1.07	(0.54-2.13)	0.04	0.85
	Male	18(40.9%)	26(59.1%)				
Education	Literate	18(29%)	44(71%)	0.43	(0.22-0.83)	6.59	0.01*
	Not literate	60(48.8%)	63(51.2%)				
Number of family members	>4	36(40.9%)	52(59.1%)	0.91	(0.51-1.63)	0.11	0.74
	≤4	42(43.3%)	55(56.7%)				

*p<0.01, hence statistically significant

Table 2. Association of different co morbidities, diabetes and hypertension on depression among study subjects.

Factors	Levels	Depressed n (%)	Not depressed n (%)	Odds Ratio	95% CI	Chi Square	p Value
Any Ailment	Present	35(51.5%)	33(48.5%)	1.83	(1-3.35)	3.82	**0.05***
	Absent	43(36.8%)	74(63.2%)				
Diabetes	Present	20(54.1%)	17(45.9%)	1.83	(0.88-3.77)	2.68	0.101
	Absent	58(39.2%)	90(60.8%)				
Hypertension	Present	33(58.9%)	23(41.1%)	2.68	(1.41-5.1)	9.26	**0.002***
	Absent	45(34.9%)	84(65.1%)				

*p<0.05, hence statistically significant

Table 3. Association of various psychographic factors with depression among study subjects.

Psychographic factors	Levels	Depressed n (%)	Not depressed n (%)	Odds Ratio	95% CI	Chi Square	p Value
Recreational activity	Yes	26(38.8%)	41(61.2%)	0.81	(0.44-1.48)	0.49	0.49
	No	52(44.1%)	66(55.9%)				
Walk	Yes	26(38.8%)	41(61.2%)	0.81	(0.44-1.48)	0.49	0.49
	No	52(44.1%)	66(55.9%)				
Death of close relatives	Yes	5(55.6%)	4(44.4%)	1.76	(0.46-6.79)	0.70	0.40
	No	73(41.5%)	103(58.5%)				
Hours of sleep	>6 hours	12(41.4%)	17(58.6%)	0.96	(0.43-2.15)	0.01	0.93
	<6 hours	66(42.3%)	90(57.7%)				
Hours spoken to family Members	>2 hours	47(37.9%)	77(62.1%)	0.64	(0.32-1.27)	1.65	0.20
	<2 hours	22(48.9%)	23(51.1%)				

Table 4. Association of various habits on depression among study subjects.

Habits	Presence	Depressed n (%)	Not depressed n (%)	Odds Ratio	95% CI	Chi Square	p Value
Smoking	Yes	10 (55.6%)	8 (44.4%)	1.82	(0.68-4.85)	1.47	0.23
	No	68(40.7%)	99(59.3%)				
Alcohol consumption	Yes	7(50%)	7(50%)	1.41	(0.47-4.19)	0.38	0.54
	No	71(41.5%)	100(58.5%)				
Beetle leaf chewing	Yes	34(51.5%)	32(48.5%)	1.81	(0.98-3.33)	3.68	**0.05***
	No	44(37%)	75(63%)				

*p<0.05, hence statistically significant

Table 5: Prevalence of depression among study subjects

Score	Frequency	Percentage (%)
0-4	107	57.8
5-9	49	26.5
>9	29	15.7
Total	185	100

Conclusion

The GDS scale is a quick, useful, validated screening tool to identify older population with depression. In the present study, the prevalence of depression (score > 9 on GDS) in the age group 60-85 years was 15.7%. The presence of depression warrants prompt intervention and treatment. Any positive score from 5-9 on the GDS Short Form should prompt an in-depth psychological assessment and evaluation for suicidality.

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