



ASSESSMENT OF DEPRESSION AMONG ELDERLY PEOPLE ATTENDING A TERTIARY CARE CENTRE IN KANYAKUMARI DISTRICT, TAMIL NADU

Community Medicine

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ABSTRACT

Background: In view of the increasing elderly population worldwide, diagnosis of geriatric depression remains a challenge. Depressive symptoms in elderly are very often misdiagnosed as neurological issues or as consequences of multiple morbidity. Hence, this study was conducted to assess depression among the elderly population attending a tertiary care center in Kanyakumari district. **Methods:** This cross sectional, questionnaire-based study was done among 104 elderly people aged 60 years and above attending a tertiary care hospital in rural Kanyakumari. Critically ill patients, psychiatric and postoperative patients were excluded. Data was collected using a predesigned questionnaire based on Geriatric Depression Scale (GDS). Descriptive statistics and chi square test were used to obtain the results. **Results:** More than one third of the subjects (34.6%) had mild depression with 3.8% having moderate depression. Female gender, rural residence and being single were identified as risk factors for depression. **Conclusion:** Even though the overall prevalence of depression among the elderly population seeking tertiary health care in Kanyakumari is lower, mild depression prevalence is still substantial. Hence screening is needed for depression otherwise it may go undetected.

KEYWORDS

Geriatric Depression Scale, Elderly, Screening

INTRODUCTION:

The world's population is aging rapidly and elderly persons, aged 60 or above, are estimated to double from about 12% to 22% between 2015 to 2050 (from 900 million to 2 billion people).¹ Concerted efforts have increased life expectancy at age 85 by 24% since 1960 in the developed countries.² In India the population of elderly is increasing alarmingly, from 8% of the total population currently to 12.2% by 2026.^{3,4}

Elderly people have a higher risk of developing mental health disorders, neurological disorders and substance use problems. Furthermore, as people age, they may experience several conditions at the same time. Long standing depression among elderly will impair their quality of life. Depression among the elderly population is a major public health issue affecting nearly 5% to 7% of the world's elderly.⁵ The community-based studies have revealed that the prevalence of geriatric depression in India varies between 13% and 25%.⁶ Few studies showed that factors associated were to be multifactorial- comorbidities, loss of spouse or living alone, financial dependency and lack of family support.^{7,8} Depression and depressive symptoms are common in older people and are often difficult to recognize since they do not present with the classical symptoms of depression.⁹

Despite the quantum of this problem, there are very few studies from South India investigating geriatric depression and its associated risk factors. Geriatric Depression Scale- short form (GDS) is a scale suitable as a screening test for depressive symptoms in older patients. It needs no prior psychiatric knowledge and has been well-validated in many environments. The 15-item GDS is easy and quick to perform, with a high sensitivity and specificity.¹⁰ Hence, this study was conducted to assess the depression among the elderly population that are seeking tertiary care centre among the admitted patients and their attenders in Kanyakumari using GDS.

METHODOLOGY:

The present cross-sectional study was done among 104 elderly people attending a tertiary care center in Kanyakumari district over a period of 6 weeks. Based on the prevalence of geriatric depression of 72.4% from Kerala, the minimum sample size was estimated to be 66, with 15% relative precision and 5% significance level.¹¹ Patients and attenders aged 60 and above attending the hospital were included in the study. Critically ill patients, those with previous psychiatric disorders and postoperative patients were excluded.

After getting informed consent and ensuring privacy, details are assessed using a predesigned questionnaire including questions on baseline sociodemographic characteristics, clinical history and Geriatric Depression Scale (GDS): short form. GDS is a screening tool for depression in older adults with 15 items. Scores of 0-4 are

considered normal, 5-8 as mild depression; 9-11 indicate moderate depression; and 12-15 indicate severe depression.¹⁰ Data was entered into Microsoft Office Excel 2019 and analyzed using SPSS 20. Descriptive statistics, independent t test and Chi square tests were used for statistical analysis.

RESULTS:

Among the 104 participants, the mean age was 69.9 +/- 5.8 years. Almost three fourths of population (71.2%) was males and 28.8% were females. Majority of the subjects were married at 83.7% (84). The socio-demographic characteristics of subjects are as described below in Table 1.

Table 1: Baseline characteristics of study population

Characteristics	Frequency	Percentage
Marital Status		
Married	87	83.6
Unmarried	3	2.9
Widowed/ Separated	14	13.5
Area of Residence		
Rural	89	85.6
Urban	15	14.4
Type of Family		
Nuclear	55	52.9
Joint	36	34.6
Three generation family	13	12.5
Education		
Illiterate	2	1.9
Upto High School	74	71.1
Graduate	21	22.2
Professional Degree	5	4.8
Occupation		
Unemployed	13	12.5
Unskilled	5	4.8
Skilled	47	45.2
Clerical	19	18.3
Professional	20	19.2

When asked about the frequency of being visited by their children, more than one third of subjects, 39.4% (41) said they were visited by their children at least once in 4-6 months, while 30.8% (32) subjects said they were visited at least once a month. Others (5.8%, ie 6) reported a visit once in a year while 3 subjects (2.9%) were not visited at all by their children. The gender distribution of elderly according to the frequency of their children's visits reveals that male parents are more frequently visited by their children to the female parents, as given in Figure 1 below.

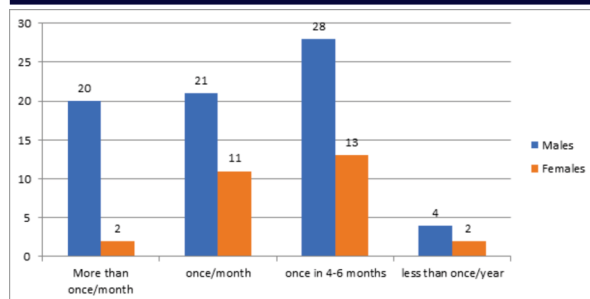


Figure 1: Frequency of children's visit according to gender

Morbidity profile of elderly:

Almost 86.5% (90) of the elderly people were hypertensive while 77.9% (81) were suffering from diabetes. Chronic kidney disease and coronary artery disease were seen in 32.7% (34) patients each. About 28 subjects (26.9%) were suffering from bronchial asthma, 12.5% (13) from stroke and 17.3% (18) from different type of cancers. Smaller numbers of 4.8% (5), 1.9% (2), and 1% (1) each were suffering from tuberculosis, chronic pulmonary disease, liver cirrhosis and parkinsonism respectively.

Geriatric Depression:

The mean score of subjects on the GDS scale was 4.05 (+/- SD of 2.2), with scores ranging from 0 to 10. More than half of subjects, 61.5% (64) had no depression as per GDS while 34.6% (36) were suffering from mild depression. Around 4.8% (4) subjects were suffering from moderate depression. None of the patients had severe depression (GDS score >12). The detailed description is as shown in Table 2 below.

Table 2: Prevalence of Depression Among The Rural Elderly

	Males N (%)	Females N (%)	Total N (%)
Normal	51 (68.9)	13 (43.3)	64 (61.5)
Mild depression	21 (28.4)	15 (50)	36 (34.6)
Moderate depression	2 (2.7)	2 (6.7)	4 (3.9)
Total	74	30	104

Factors Affecting Depression:

The major factors significantly associated with the prevalence of mild or moderate depression was female gender ($p < 0.05$), residence in a rural area ($p < 0.05$), while being married having a protective effect with higher proportion of single elderly having depression when compared to normal mental health status (35% versus 4.7%; $p < 0.001$); as given below in Table 3.

Table 3: Factors affecting geriatric depression

Variables	Depression N (%)	Normal N (%)	χ^2 value	P value	Odds ratio 95%CI [#]
Gender					
Females	17 (42.5)	13 (20.3)	5.904	0.015*	2.9 (1.2, 6.9)
Males	23 (57.5)	51 (79.7)			
Area of residence					
Rural	39 (97.5)	50 (78.1)	7.486	0.006*	10.92 (1.4, 86.6)
Urban	1 (2.5)	14 (21.9)			
Marital status					
Married	26 (65)	61 (95.3)	16.541	<0.001*	0.09 (0.024, 0.345)
Single	14 (35)	3 (4.7)			

*Statistically significant ($p < 0.05$); # (Lower & Upper Limits)

Suffering from multiple morbidities versus single morbidity ($p < 0.464$), family type ($p < 0.950$) and increased frequency of kids' visits ($p < 0.275$) did not have any statistically significant association with prevalence of depression.

DISCUSSION:

In the present study, the overall prevalence of mild or moderate depression was 38.5%. This was slightly lower than the 41.1% prevalence of geriatric depression in urban community and 45.8% in rural community reported by Arumugam et al in Chennai. They identified that female sex, living without spouse, illiteracy, time spent with children and grand children and dietary habits were strong predictors of geriatric depression in both communities but money dependence and health problems were strongly associated with

depression in urban community.¹² The present study identified that elderly women had a 2.9 times higher risk while rural residents had a 10.9 higher risk of having depression. Being married carried a 0.09 times lower risk of having depression. Rural elderly were also reported to have higher risk for depression by Manjubhashini et al.¹³

From a long term study conducted in Kannur by Thilak et al, out of 250 participants, mean age was 69.7±6.7 years which were similar to this study (69.9±5.8 years). The prevalence of depression among them was 72.4% which was alarmingly higher than this study and mainly due to presence of one or two co morbidities and financial dependency on others.¹¹

Tiple P et al studied psychiatric morbidity among elderly patients from the psychiatric Outpatient Department, an old age home and religious ascetics in Varanasi and explored their sociodemographic profile and clinical characteristics. They suggested that the prevalence of depressive disorders (Single/recurrent episodes and dysthymia) was highest among those suspected to have psychiatric disorders referred to geriatric clinics and least in ascetics.¹⁴ Whereas in this study, psychiatric subjects were excluded and the main medical conditions were hypertension (86.5%) and diabetes (77.9%)..

The limitations of the study were small sample size and selection bias because data collection was done by convenient sampling method from patients attending outpatient services of a tertiary health centre. Apart from GDS short form scoring no other tests or clinical evaluations were done to confirm the diagnosis of depression.

CONCLUSION:

The prevalence of mild or moderate depression detected among rural elderly in this study is much lower than reported from other studies. However, the number of elderly people with mild depression is still significant. This shows that there is an urgent need for screening elderly patients for depression as mild cases may go undetected.

REFERENCES:

- UNFPA. Ageing [Internet] [updated 205 Oct 13; cited on 2023 June 26] Available from: <https://www.unfpa.org/ageing/readmore-expand>
- Meisheri YV. Geriatric services- need of the hour. J Postgrad Med 1992; 38 (3): 103-05.
- Census of India. Population composition. Ministry of Home Affairs, Government of India. New Delhi: 2011.
- Ministry of Statistics and Programme Implementation. Situation analysis of elderly in India. Government of India. [Internet] [cited on 2023 June 28] Available from: http://mospi.nic.in/mospi_new/upload/elderly_in_india.pdf
- WHO. Mental health of older adults. [Internet] 2017 Dec 12. [cited on 2023 June 26] Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- Goyal A, Kajal KS. Prevalence of depression in elderly population in the Southern part of Punjab. J Family Med Prim Care. 2014 Oct-Dec; 3 (4): 359-61.
- Ibrahim N, Din NC, Ahmad M et al. Relationships between social support and depression, and quality of life of the elderly in a rural community in Malaysia. Asia Pac Psychiatry. 2013 Apr; 5(S1): 59-66.
- Naveen KHS, Goel AD, Dwivedi S et al. Adding life to years: Role of gender and social and family engagement in geriatric depression in rural areas of Northern India. J Family Med Prim Care. 2020 Feb 28; 9(2): 721-728.
- National Institute on Aging. Depression and Older adults. [Internet] [updated on 202 July 7; cited on 2023 June 26] Available from: <https://www.nia.nih.gov/health/depression-and-older-adults>
- Geriatric Depression Scale (GDS). [Internet] 2013 Nov 12 [updated 2017 Jan 10; cited on 9 June 2023]. Available from <https://patient.info/doctor/geriatric-depression-scale-gds>
- SA Thilak, A.K. Sarada, Nelopant SA. Prevalence and factors associated with depression among elderly in rural areas of Kannur, North Kerala, India: a cross sectional study. Int J Community Med Public Health. 2016 Aug 3(8):1986-1991.
- Arumugam B, Nagalingam S, Nivetha R. Geriatric depression among rural and urban slum community in Chennai--a cross sectional study. J Evol Med Dent Sci. 2013 Feb. 2 (7): 795-801.
- Manjubhashini S et al. Epidemiological study of depression among population above 60 years in Visakhapatnam, India. Int J Med Sci Public Health 2013; 2: 695- 702.
- Tiple P, Sharma SN, Srivastava AS. Psychiatric morbidity in geriatric people. Indian J Psychiatry. 2006 Apr-Jun; 48(2): 88-94.