ORIGINAL RESEARCH ARTICLE

Depression Among Elderly Women in Rural Mandya, Karnataka: A Cross Sectional Study

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ABSTRACT

Background: Depression is characterized by persistent sadness and lack of interest or pleasure in enjoyable activities and disturbed sleep and appetite. Women suffer from depression the most, as the hurdles faced by Indian women include lack of awareness, stigma, disadvantaged position of women, multiple roles, increased levels of stress, and domestic violence. This study is to determine the prevalence of depression among elderly women and to determine the factors affecting it.

Methodology: This cross-sectional study was conducted among 783 elderly women (aged 60 years or more), residing in rural Mandya (South Karnataka) by interviewing them using a semi-structured proforma. Geriatric Depression Scale (GDS-15) was used to assess depression.

Mean, standard deviation and proportion were used for descriptive statistics. Chi square test was used to determine association of risk factors.

Results: The prevalence of depression was found to be 31.6%. The major factors affecting depression were increasing age, illness and loneliness.

Conclusions: The prevalence of depression in the elderly women was high (31.6%). By identifying risk factors for depression among the elderly population and screening them on time, we can reduce the severity and burden of the disease to a greater extent.

Key words: Depression, elderly women, Rural Mandya, Cross sectional study, GDS-15

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INTRODUCTION

Depression is a common mental disorder. Globally, it is estimated that 5% of adults suffer from depression. Depression occurs in 7% of those aged over 60 years. It is a leading cause of disability worldwide and is a major contributor to the overall global burden of disease.1 Depression is characterized by excessive sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. It can be long-lasting or recurrent, substantially impairing an individual's ability to function at work or school or cope with daily life. At its most severe, depression can lead to suicide.[2]

More women are affected by depression than men.[3] Psychological and pharmacological treatments exist for depression. However, treatment and support services for depression are often absent or underdeveloped. More than 75% of people suffering from mental disorders do not receive treatment.[4]

Depression results from a complex interaction of social, psychological and biological factors. People who have gone through adverse life events (unemployment, bereavement, traumatic events) are more likely to develop depression. There are interrelationships between depression and physical health. For example, cardiovascular disease can lead to depression and vice versa.

Symptoms are often overlooked and untreated because they co-occur with other problems encountered by older adults. Older people with depressive symptoms have poorer functioning compared to those with chronic medical conditions such as lung disease, hypertension or diabetes. Depression also increases the perception of poor health, the utilization of health care services and costs. Prevention programs have been shown to reduce depression. Effective community approaches to prevent depression include exercise programs for older people. There is effective treatment for mild, moderate, and severe depression.[5,6]

This study is part of a program that screens elderly people for health issues in the rural field practice area of Mandya Institute of medical Sciences, Mandya, and helps provide treatment to them. We conducted the study with the objective of determining the prevalence of depression among elderly women in the Keelara PHC area of rural Mandya and the factors affecting it.

METHODOLOGY

Study design and study population: This cross-sectional study was carried out in the Keelara PHC area in rural Mandya district, south Karnataka between January to June 2022. The study subjects were elderly women aged ≥ 60years.

Inclusion and exclusion criteria: All the 789 elderly women residing in the area were enumerated. 783 elderly women were able to give the informed consent to participate in the study. The 6 elderly women who we were unable to interview were not able to communicate with us, due to being very ill, or having speech & communication problems,preventing normal conversation.

Data collection tool: A pretested semi-structured questionnaire was used to collect data. The households of the elderly were visited by trained investigator, after explaining the purpose of the research and getting informed consent, the elderly was interviewed separately for about half an hour in their residence.

The interview was done by the researchers in the vernacular language, Kannada. The questionnaire consisted of 3 parts.

The first part collected the socio-demographic data, like, age, literacy, economic condition, family members, etc.

The second part was the 15-item geriatric depression scale (GDS-15). GDS-15 is one of the most used instruments for screening depression among elderly persons in specialized and non-specialized settings. The original GDS-15 in English version was translated into Kannada language using the translation and back-translation method by independent bilingual experts, and both the original and the back-translated English version were compared. Finally, with the help of third reviewer in the reconciliation meeting, consensus version was developed.[7]A score of 0–5 indicates 'no depression', 6-10 indicates 'mild depression', and 11-15 indicates 'severe depression'.[8]

The third part collected data about co-morbidities (diabetes, heart disease, etc.), duration, severity and its effect on mental status both recently and in the past. Social pathologies (lack of social support, physical / mental abuse, etc.) affecting the mental status of the participants were also assessed using a 4-point likert scale.

Data analysis: Data was entered and analysed using Statistical package SPSS version 20. Descriptive analysis was expressed in proportions. Chi square test was used to find association. A p value of <0.05 is considered statistically significant. Multivariable binary logistic regressions were used to evaluate the association between various factors and depression among elderly women.

RESULTS

A total of 783 elderly women participated in the study. Of these, 248 (31.6%) were found to have depression. None of them had been diagnosed as persons having depression prior to the study. Using the

GDS-15 scoring, 202 (25.7%) of elderly women had mild depression, 46 (5.9%) had severe depression.

Pertaining to age groups, 104 (24.4%) of the 426 participants aged 60-69 years had depression; 137 (40.0%) of the 342 participants aged 70-79 years had depression and 7 (46.7%) of the 15 participants aged ≥ 80 years had depression. The difference in the prevalence of depression in the different age groups was statistically significant. Increasing trend in the prevalence of depression was seen with increasing age.

Concerning literacy, 122 (24.1%) of the 507 participants who were illiterate had depression; 108 (48.2%) of the participants who attended school had depression; 18 (34.6%) of the 52 college educated participants had depression. The difference in the prevalence of depression in the different literacy groups was not significant.

Relating to occupation, 123 (33.1%) of the 372 participants who were not working had depression; 105 (32.0%) of the 328 working in unskilled jobs had depression; 14 (29.2%) of the 48 semi-skilled working participants had depression; 6 (17.1%) of the 35 participants working in skilled jobs had depression. The difference in the prevalence of depression in the different occupational groups was not significant.

Table 1: Association of socio-demographic characteristics and depression

Characteristics	Depression (n=248) (%)	No Depression (n=535) (%)	χ^2 Value	P value
Age group(years)				
60-69	104 (24.4)	322(75.6)	23.045	p<0.01
70-79	137 (40.0)	205(60)		
≥80	7 (46.7)	8(53.3)		
Education				
Illiterate	122 (24.1)	385(75.9)	42.095	7.23
Primary	108 (48.2)	116(91.8)		
College	18 (34.6)	34(65.4)		
Occupation				
Not working	123 (33.1)	249 (66.9)	3.90	0.27
Unskilled	105 (32.0)	223 (68.0)		
Semiskilled	14 (29.2)	34 (70.8)		
Skilled	6 (17.1)	29 (82.9)		
Socioeconomic status*				
II	7(22.5)	24 (77.5%)	18.48	<0.01
III	11 (25.6)	32 (74.4)		
IV	86 (43.9)	110 (56.1)		
V	144 (28.0)	369 (72.0)		
Type of Family				
Broken	70 (72.2)	27 (27.8)	97.434	<0.01
Nuclear	46 (32.2)	97 (67.8)		
Three generation	121 (27.4)	321 (72.6)		
Joint	11 (10.9)	90 (89.1)		

*Modified BG Prasad Classification[9]

Table 2: Distribution of comorbidities & social pathology with depression

Variables	Depression (n=248) (%)	No Depression (n=535) (%)	χ^2 Value	P value
Diabetes				
Yes	99 (35.1)	183 (64.9)	2.400	0.12
No	149 (29.7)	352 (70.3)		
Locomotar Disability				
Yes	130 (71.4)	52 (28.6)	173.16	<0.01
No	118 (19.6)	483 (80.4)		
Heart disease				
Yes	22 (38.6)	35 (61.4)	1.361	0.24
No	226 (31.1)	500 ((68.9)		
Financial Dependency				
Yes	145 (36.1)	256 (63.9)	7.645	<0.01
No	103 (26.9)	279 (73.1)		
Lack of Social Support				
Yes	72 (72.7)	27 (27.3)	88.262	<0.01
No	176 (25.7)	508 (74.3)		
Physical / Mental Abuse				
Yes	89 (84.8)	16 (15.2)	15.759	<0.01
No	159 (23.4)	519 (76.6)		

Table 3: Odds ratios and adjusted odd's ratio of factors affecting the incidence of depression among elderly women

Variable	OR	95% CI	P-value	aOR	95% CI	P-value
Age group						
Less than 70 years	1					
70 years and above	2.656	1.852 - 3.809	<0.01	1.679	1.055 - 2.672	0.029
Education						
Illiterate	1					
Primary	0.38	0.169- 0.855	0.019	0.476	0.197 - 1.148	0.098
College	0.249	0.088- 0.703	0.009	0.329	0.101 - 1.070	0.065
Occupation						
Not working	1					
Unskilled	0.339	0.210- 0.546	< 0.01	0.503	0.276 - 0.917	0.025
Skilled	1.476	0.935 - 2.328	0.094	1.691	0.972 - 2.940	0.063
Socioeconomic status						
Class IV	1					
Class V	1.2	0.838 - 1.718	0.32	-	-	-
Type of Family						
Nuclear	1					
Three Generation	0.844	0.588 - 1.212	0.359	0.708	0.463 - 1.084	0.112
Joint	0.23	0.081 - 0.65	0.006	0.275	0.092 - 0.822	0.021
Diabetes						
No	1					
Yes	1.578	1.015 - 2.452	0.43	0.539	0.326 - 0.891	0.016
Locomotar Disability						
No	1					
Yes	0.804	0.502- 1.287	0.364			
Heart disease						
No	1					
Yes	0.849	0.337- 2.1410.729	0.729			
Financial Dependency						
No	1					
Yes	2.88	1.02- 8.13	<0.05	2.642	0.877 - 7.959	0.084
Lack of social support						
No	1					
Yes	2.407	1.64- 3.53	<0.01	1.984	1.288 - 3.055	0.002
Physical/Mental Abuse						
No	1					
Yes	5.898	3.78- 9.20	<0.01	3.421	2.077 - 5.633	< 0.001

OR – Odds Ratio; aOR – Adjusted Odds Ratio

In reference to socioeconomic class (Modified B G Prasad Classification)[9], higher prevalence of depression was seen in Class IV (43.9%) and Class V (28.0%) socioeconomic status followed by those belonging to Class III (25.6%) and Class II socioeconomic status (22.5%). It is seen that the lower socioeconomic status has higher prevalence of depression.

Considering types of family, higher prevalence of depression was seen in elderly women who were living alone or with other household members (72.2%) followed by those living with their husbands (32.2%) and those living with their children and grandchildren (27.4%). 11 (10.9%) of the 101 participants who were part of the joint family had the least prevalence of depression. The difference in the prevalence of depression in the different groups was significant.

99 (35.1%) diabetics had depression as compared to 149 (29.7%) of non-diabetic's participants. The difference was not statistically significant. 130 (71.4%) with locomotor disability had depression as compared to 118 (19.6%) of robust participants. The difference was statistically significant. 22 (38.6%) elderly women who were suffering from heart disease had depression as compared to 226 (31.1%) who did not have heart disease. The difference was not statistically significant. 145 (36.1%) who faced financial crisis had depression as compared to 103 (26.9%) of participants who were economically well. The difference was statistically significant. 72 (72.7%) who had lack of social support had depression as compared to 176 (25.7%) who had assistance. The difference was statistically significant. 89 (84.8%) who faced physical/mental abuse had depression as compared to 159 (23.4%) of other participants. The difference was statistically significant.

DISCUSSION

In our study, the prevalence of depression among the elderly population was found to be 31.6%. Various studies have revealed that the prevalence rates for depression in the community samples of the elderly in India varied from 6% to 58%.[8,9-11] Sampling strategies, sample sizes, study setting, and instruments used in different studies may be the factors for this

varied prevalence .We also tried to look for association of depression with a number of factors such as age group, education, occupation, socioeconomic status, type of family and various comorbidities and disabilities with depression.

In the current study, the magnitude of depression was found to increase with increasing age which was also statistically significant, similar findings were found in the prevalent studies conducted by Archana et al., Sandeep et al.[11,12]Some of the reasons for the sudden increase in the prevalence of depression from the age of 70 years may be an increased economical and physical dependency, loss of the spouse, negligence by the family members, and loss of self-esteem. Elderly people who were living without their spouse, that is either being widowed, or separated, or being divorced, and those who were suffering from chronic illnesses like diabetes were also found to be suffering from depression in various studies conducted.[13-15]

By abuse, we included abuse in the form of psychological abuse, exploitation, physical abuse, and neglect by the family members, mostly their sons or daughter-in-law, and by the neighbours. It was found that abuse was positively correlated to depression among the elderly study population. In an Indian study, it was found that around 54% of the elderly population with severe depression had experienced abuse.[16] Depression was significantly more among those who had experienced physical/mental abuse in our study. 15 (1.9%) participants suffered from physical/mental abuse, of which 53.3% had mild depression and 26.7% had severe depression. It was found that abuse was positively correlated to depression in various studies.[17]

This study demonstrated a substantial correlation between financial dependence and the prevalence of depression. Studies like Mullick et al. and Pilania et al., reported findings that were similar. Older people frequently experience a loss of self-respect and dignity with the loss of a job or retirement. Feelings of isolation or psychological discomfort may emerge from this. In our study, socioeconomic levels significantly correlated with the prevalence of depression, with the prevalence being highest among the lower classes. Studies carried out in various contexts have produced similar results. Lower socioeconomic stratum members frequently work extremely hard to meet their daily requirements. Because of financial limitations, they have limited access to numerous social activities. In the end, they end up getting depression.[18,19]

We found that there was no significant association between educational qualification and prevalence of depression among the respondents. Different studies like Rathod et al., Paul et al., showed a significant association with education. This might be because of different study settings and sociocultural factors which differ in different settings.[19,20]

There was a significant correlation between morbidity and the prevalence of depression. The common morbidities and social factors studied in the current study were diabetes, locomotor disability, heart disease, financial dependency, lack of social support and physical/mental abuse. similar findings were observed in various studies.[21-23]These comorbidities along with depression increase physical disability, poor compliance, and increased healthcare utilization leading to poor quality of life and further complicating the treatment of depression.[24,25]

Our study had certain limitations. The main limitation of the study is that being cross sectional in nature, it does not permit determination of the temporality of the relationship between the various factors and depression. India will have greater number of elderly people with depression not only due to high prevalence of depression but also increasing share of elderly population. Hence, re-orientation of scarce mental health services and resources including untapped potential of community health workers and new age technology may be useful. It is important to routinely screen elderly people in the community by using questionnaire tools, to detect depression early rather than letting them be diagnosed at very late stages, to reduce disease burden and complications for their families and society. The elderly should be encouraged and supported in engaging in physical activities, social activities, community, and religious activities in order to improve health.

Conclusion

The prevalence of depression in the elderly women was high (31.6%). Depression increased with age and was associated with type of family, lower socioeconomic status, financial dependence, and presence of comorbidities. Apart from this, diseases like heart disease and diabetes triggers depression.

By identifying risk factors for depression among the elderly population and screening them on time, we can reduce the severity of the disease to a greater extent.

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