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Prevalence of Depression among Geriatric Population in Old Age Homes of South Delhi

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ABSTRACT

Background: Ageing population is increasing globally year by year. Around 15% of adults aged 60 and above suffer from a mental disorder and depression being the commonest among them. Geriatric mental health and physical condition are more important for perceiving good quality of life.

Materials and methods: A cross-sectional study was conducted in three old age homes of South Delhi. Data was collected using a structured, pre-tested, validated questionnaire - Geriatric Depression Scale (GDS). After obtaining consent from the participants, the required number of samples (n=105) were collected through systematic random sampling method. Statistical analysis was done using SPSS v21.

Results: Overall prevalence of depression was found to be 73.3%. Of which 26.7% had mild depression, 31.4% had moderate depression and 41.9% had severe depression respectively. Statistical significance ($p<0.05$) was found between married, illiterate, female by gender, those with no regular income, those who had associated co-morbidities, participants whose family/friends did not visit regularly and depression.

Conclusion: Increased prevalence of depression among the geriatric population residing in old ages indicates the growing mental health burden and the need for it to be identified at early stage and treated with proper therapeutic measures.

Keywords: Elderly, mental health, depression, disability, mood disorder

INTRODUCTION

Depression is the fourth leading cause of disability and disease worldwide affecting about 121 million population globally.[1] The future projections of global disability adjusted life years (DALYs) in the year 2020 shows the global disease burden of unipolar major depression could become the second leading cause in the disease burden. (After ischemic heart disease, especially in high-income countries).[2] Depression is defined as "the presence of five or more of the following depressive symptoms for over a two-week period such as depressed mood most of the day, nearly every day, loss of interest or pleasure in most activities, significant weight loss or gain, sleeping too much or not being able to sleep nearly every day, slowed thinking or movement that others can see, fatigue or low energy nearly every day, feelings of worthlessness or inappropriate guilt, loss of concentration or indecisiveness, recurring thoughts of death or suicide."[3]

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The aged population in India is currently the second largest in the world.[1] The ageing population above 60 years has been estimated to almost double-up from 12% in 2015 to 22% in 2050.[4] According to WHO statement, the most common mental disorder among the elderly was found to be depression and it affects almost 7% of the world's geriatric population respectively.[4] Several community-based mental health studies have revealed that the point prevalence of depressive disorders among the geriatric population in India varies between 13 and 25%.[5,6] Another community-based study of psychiatric disorders carried out in Delhi reveals a prevalence rate of 23.6%.[7]

This increasing geriatric population face several unrecognised physical and mental health ailments. One among which is depression in the elderly and it is often undiagnosed or untreated. Thus, accurate assessment of depression in the elderly poses a challenge. Due to emergence of nuclear family system, there has been a lack of financial, emotional as well as social support for the elderly people.[8]

Many community-based studies have been conducted in various parts of India but there is a paucity of research in Delhi regarding the prevalence of depression among elderly residing at Old Age Homes. Knowing the prevalence of depression has important implications both in health planning as well as risk factor epidemiology. Hence, present study was undertaken to determine the prevalence and to find out various risk factors which could be associated with depression in persons living in an old age home.

MATERIAL AND METHODS

A cross-sectional study was conducted among three old age homes of South Delhi. All the residents of these three old age homes aged 60 years and above were included in the study. The residents who were not present at the time of survey even after 2 visits and those residents who did not consent to participate in the study and those in whom interview could not be carried out due to cognitive impairment, language barrier, speech or hearing disability were excluded. A structured, pre-tested, validated questionnaire - Geriatric Depression Scale (GDS) was used to collect data on depression. Socio-demographic details like age, gender, literacy, marital status was gathered during data collection.

Considering a 25% prevalence of depression in Geriatric population in India, the sample size was calculated to be 105 using the formula $Z^2p(1-p)/e^2$ with relative precision of 0.9 at confidence interval of 95% and at 10% non-response rate. The calculated samples were obtained through systematic random sampling. Every 4th resident fulfilling the study criteria were interviewed face-to-face using the GDS scale. The scoring was as follows: score of 0 - 4 is considered normal, 5 - 8 is considered Mild depression, 9 – 11 is considered Moderate depression and score of 12 – 15 is considered Severe depression.

Verbal and written consent from the participants were taken before starting data collection. Consent form had details regarding the purpose of study and data confidentiality written in their local language and English. This study was conducted initially after approval by the Institutional Human Ethics Committee. Those identified to be depressed were then referred to the nearby hospital for further management and counselling. The collected data was entered in Microsoft excel spreadsheet and analysed using SPSS v21. Quantitative variables are expressed in percentages and statistically significance was determined with chi-square test, $p<0.05$ is considered significant.

RESULTS

Table 1 shows the socio-demographic distribution of the geriatric population studied in South Delhi. Majority of the study participants belonged to 65 to 69 years of age (28.57%) followed by 70 to 74 years and other groups. Major group of the participants were female (60%), literate (66%), married (89.5%) and 92% had co-morbidities like diabetes mellitus, systemic hypertension, bronchial asthma, arthritis, cardiovascular diseases etc. Overall prevalence of depression among the participants of three old age homes were found to be 73.3%.

Table 1: Grading of depression (n=105)

Characteristics	Grading	Frequency (%)
Normal	0-4	0 (0)
Mild Depression	5-8	28 (26.7)
Moderate Depression	9-11	33 (31.4)
Severe Depression	12-15	44 (41.9)

Table 2 shows the grading of depression among the studied geriatric population. Of which mild depression was found to be 26.7%, moderate depression was 31.4% and severe depression was 41.9% respectively.

Table 3 shows that those married, illiterate, female by gender, those with no regular income, those who had associated co-morbidities, participants whose family/friends did not visit regularly were found to be more depressed and had statistical significance when compared to others.

DISCUSSION

The results of the present study being conducted at old age homes have greater percentage of depression when compared to other community-based studies. One such study being conducted in Delhi among the elderly residing in the community to find the prevalence of psychiatric disorders by Chowdary et al showed that depression (23.6%) was the most common psychiatric condition prevalent in Delhi.[7] This study also had a significance between family size and depression.

Table 2: Association between socio-demographic variables and depression (n=105)

Characteristics	Depressed (n = 77) (%)	Non-depressed (n = 28) (%)	Total (n = 105) (%)	p-value	Odds Ratio	95% CI
Age group (in years)						
60 - 64	20 (26)	4 (14)	24 (22.9)	0.465	1.8	0.81-3.4
65 - 69	23 (30)	7 (25)	30 (28.5)		1.2	0.5-2.9
70 - 74	18 (23)	9 (32)	27 (25.7)		0.9	0.3-4.9
>75	16 (21)	8 (29)	24 (22.9)		1	
Gender						
Male	26 (33.8)	16(57.1)	42 (40)	0.030	1	
Female	51 (66.2)	12(42.9)	63 (60)		2.1	1.2-3.9
Literacy						
Literate	44 (57)	25 (89)	69 (66)	0.002	1	
Illiterate	33 (43)	3 (11)	36 (34)		3.4	2.9-4.8
Marital status						
Married	72 (94)	22 (79)	94 (89.5)	0.027	1	
Unmarried	5 (6)	6 (21)	11 (10.5)		2.2	1.1-4.3
Regular income						
Yes	5 (6)	7 (25)	12 (11)	0.008	1	
No	72 (94)	21 (75)	93 (89)		2.4	1.6-3.4
Co-morbidities						
Yes	76 (99)	21 (75)	97 (92)	0.00005	4.1	3.6-4.9
No	1 (1)	7 (25)	8 (8)		1	
Family/Friends Visit						
Yes	17 (22)	13 (46)	30 (29)	0.014	1	
No	60 (78)	15 (54)	75 (71)		2.9	1.9-3.4
Family Conflict						
Yes	17 (22)	8 (29)	25 (24)	0.489	0.8	0.06-1.8
No	60 (78)	20 (71)	80 (76)		1	

*p<0.05 is significant

The more the elderly live in Joint/ Extended family less is the prevalence of depression among them when compared to those who live alone. A comparable community-based study by Baura et al in South India had elderly depression of 21.7% and depression more common among females.[9] Pongiya UD et al's community-based study on Elderly depression in Coimbatore, Tamilnadu had similar findings (21.9%) like other community-based studies.[10] The overall prevalence differs from our present study findings (73.3%) as it was conducted in old age homes where the participants had no family support. This finding further highlights the importance of elderly people living with family members and thereby its role in reducing depression. Depression among female study participants were higher when compared to male participants which coincided with our present study findings. The core reason is that majority of the female participants were (widowed) left alone without their partners which acted as a driving factor for many of the study participants to move towards old age homes.

Similar community-based study conducted in Surat by Vishal J et al showed 39.04% prevalence of depression.[11] Likewise, married/living with partners and literate participants had less depression prevalence when compared to unmarried/widowed and illiterate participants. This again emphases the need of partner support in old age to overcome depression. Another community-based study conducted in Southern India by Rajkumar et al had 12.7% of depression prevalence.[12] This study findings coincides with our present study where presence of Co-morbid medical conditions like diabetes mellitus, systemic hypertension, arthritis, cardiovascular diseases were significantly associated with depression. This result throws light on the prevalence of multimorbidity being a major cause of depression in old age irrespective of the residence of the participant. Study conducted by Jain RK et al in urban slums of Mumbai showed 45.9% of depression among the study population.[13] A similar study conducted by Kalra et al among the elderly population attending tertiary care hospital of Delhi revealed that 31.2% of the participants studied had depression.[14] However, this variation in the findings might be due to difference in the population studied. Also, those seeking proper health care service in a tertiary care hospital were found to be less depressed than those who lack such services in old age homes.

CONCLUSION

In order to improve the depression status among geriatric population, health care services for the elderly should be given greater importance as most geriatric individuals participated were dissatisfied with the health care provided to them. Irrespective of the reasons for sending the elderly to an old age home, the families/friends shall be encouraged to still visit them to overcome the feeling of abandonment. The staffs of the old age homes can conduct frequent psychological assessments and increase recreational activities with full participation from the

elderly so that they can still have a purpose in life. Policy makers shall consider providing incentives to the old age home staffs so that they perform their duties enthusiastically and curb the menace of depression.

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