

A Study of Prevalence and Pattern of Psychiatric Illness in Old Age Home Population**Gopal Lal Meena¹, Vijay Choudhary², Premraj Meena³, Mukesh Chand Daderwal⁴**¹Medical officer, Department of Psychiatry, Psychiatric Center, SMS Medical College, Jaipur, Rajasthan, India² Junior specialist , , Department of Psychiatry , Psychiatric Center, SMS Medical College, Jaipur, Rajasthan, India³Assistant Professor, Dept. of Psychiatry, Government Medical College, Karauli, India⁴ Consultant, Dept. of Psychiatrist, Manipal Hospital, Jaipur, Rajasthan, India

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Conflict of interest: Nil

Abstract:

Background: The geriatric population, defined as individuals aged ≥ 60 years, is rapidly increasing worldwide. According to the United Nations, a country is considered ageing when people over 60 comprise 7% of the population. With the rising demand for old age homes (OAH), psychiatric morbidity in this group requires careful evaluation. Aim & Objectives: To estimate the prevalence and pattern of psychiatric illnesses among elderly residents of old age homes in Jaipur.

Methods: A cross-sectional descriptive study was conducted among 200 elderly individuals residing in OAHs from May 2021 to April 2022. Demographic details, psychiatric diagnoses, family background, and duration of stay were recorded. Cognitive status was assessed using the Hindi Mental State Examination (HMSE).

Results: The study population had a mean age of 70.2 ± 8.9 years (range: 62–97). Duration of stay in OAHs ranged from 1–25 years (mean: 7.25 ± 5.27). Family size ranged from 1–10 members (mean: 4.51 ± 2.48). The most prevalent psychiatric illness was major neurocognitive disorder (MND) due to Alzheimer's disease (15%), followed by major depressive disorder (12%), MND due to vascular disease (6%), generalized anxiety disorder (5%), schizophrenia (4%), and obsessive-compulsive disorder (3%). The mean HMSE score was 24.24 ± 5.64 (range: 9–30). A significant negative correlation was observed between HMSE score and age ($R^2 = 0.4512$), indicating that 45.12% of the cognitive decline was attributable to increasing age.

Conclusion: Psychiatric morbidity is highly prevalent in the geriatric population of OAHs, with cognitive impairment and depression being most common. Increasing age strongly correlated with cognitive decline. Routine mental health screening and supportive interventions are essential to improve quality of life in institutionalized elderly.

Keywords: Old Age Home (OAH), Geriatric, Psychiatric Illness, HMSE, Jaipur.

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Introduction

The geriatric population can be defined as population aged 60 years and above. The United Nation (UN) defines a country as ageing when the proportion of people over 60 reaches 7%. India has already exceeded the proportion (7%) and is expected to reach 12.6% by 2025 [1]. Ageing, which is inevitable, plays a major role in the global demographic transition. Erickson has defined old age - the final stage in a man's life span, as the stage of maturity, since it entails the changes that often lead to personal, interpersonal and other social transformations [2]. Though, living in old age homes is neither popular nor feasible in India. Allowing the parents to live in old age home often leads to criticism from the relatives in particular

and Indian society at large. From the review of literature, it is well understood that there are both common as well as separate old age homes for males and females. While main focus of some of the old age homes is poor aged and destitute, others may focus on the sick and handicapped [3]. From staying alone in the old age to the natural age-related decline in the physical and physiological functions, both make the elderly more prone to psychological disturbances [4]. Risk factors leading to development of late life depression are complex interactions among genetic vulnerabilities, cognitive diathesis, Age associated neurobiological changes and stressful life events [5]. Though there is an increase in need of old age homes, one need

to be cautious about increased psychiatric morbidity in this population. However, developing countries like India lacks in such studies, and hence, there is an urgent need.

Aim & Objectives: Study was conducted to estimate the prevalence and pattern of psychiatric illness in geriatric population of old age home.

Materials & Method

A Cross – Sectional Observational study was conducted on population living in old age home Jaipur from 1st May 2021 to 30th April 2022 on 200 subjects on elderly person residing in old age home of Jaipur since last 6 months who gave consent to participate in study. We excluded subject having severe medical co-morbidities severe enough to prevent from participation and who do not have

caregiver. Proformas were filled, and the DSM-5 criteria were used for assessment. The Mini 7.0.2 scale and the HMSE scale were also utilised. The ethical approval was from the institutional ethical committee and funding was self-generated with no conflict of interest.

Results

The socio-demographic profile of the OAH population (N=200) shows majority aged 60–79 years (80%), with equal gender distribution. Most had stayed >5 years (67%), were widowed (43%), unskilled workers (48%), and uneducated (43%). Predominantly Hindu (90%), they mostly belonged to extended nuclear families (65%).

Table 1: Showing Socio-Demographic Profile Of OAH

		Frequency	Percent	Cumulative Percent
Age Group In Years	60-69	82	41.0	41.0
	70-79	78	39.0	80.0
	80-89	24	12.0	92.0
	90-99	16	8.0	100.0
Sex	Female	100	50.0	50.0
	Male	100	50.0	100.0
Durations Of Staying At OAH	<5 Year	66	33.0	33.0
	>5 Year	134	67.0	100.0
Marital Status	Divorced	8	4.0	4.0
	Married	82	41.0	45.0
	Separated	14	7.0	52.0
	Unmarried	10	5.0	57.0
	Widow	86	43.0	100.0
Previous Occupation	Businessman	14	7.0	7.0
	Farmer	2	1.0	8.0
	Professional	34	17.0	25.0
	Semiskilled Worker	46	23.0	48.0
	Skilled Worker	8	4.0	52.0
	Unskilled Worker	96	48.0	100.0
Educational Status	Up To Middle	50	25	25
	Middle To Secondary	14	7	32
	Graduation	32	16	48
	Postgraduate	18	9	57
	Uneducated	86	43	100
Religion	Hindu	180	90.0	90.0
	Muslim	16	8.0	98.0
	Other	4	2.0	100.0
Type Of Family	Extended Nuclear	130	65.0	65.0
	Nuclear	70	35.0	100.0

Table 2: Showing Frequency of Psychiatric Illness in Resident of Old Age Home

Psychiatric Illness	Frequency	Percentage (%)	Cumulative Percent
GAD	10	5.0	9.0
MDD	24	12.0	21.0
MND Due To AD	30	15.0	36.0
MND Due To VD	12	6.0	42.0
Schizophrenia	8	4.0	46.0
OCD	6	3.0	49.0
None	102	51.0	100.0

GAD: Generalized Anxiety Disorder, **MDD:** Major Depressive Disorder, **MND Due To AD:** Mild To Major Neurocognitive Disorder Due To Alzheimer's Disease, **MND Due To VD:** Mild To Major Neurocognitive Disorder Due To Vascular Disease, **OCD:** Obsessive Compulsive Disorder.

In present study most of the population from old age have MND Due To AD 30 subjects; 15%, followed by MDD 24 subject; 12%, MND due to VD 12, subject; 6 %, Schizophrenia 8 subject; 4%, GAD 10 subject; 5%. The least number of populations was affected by OCD 6 subject; 3%. (Table 2).

The Study Population From OAH Shows Minimum Age Of Resident Was 62 Year And Maximum Age Was 97 Year With Mean Age Of 70.2 ± 8.975 Years.

Minimum Duration Of Staying At Old Age Home Was 1 Year And Maximum was 25 Year With

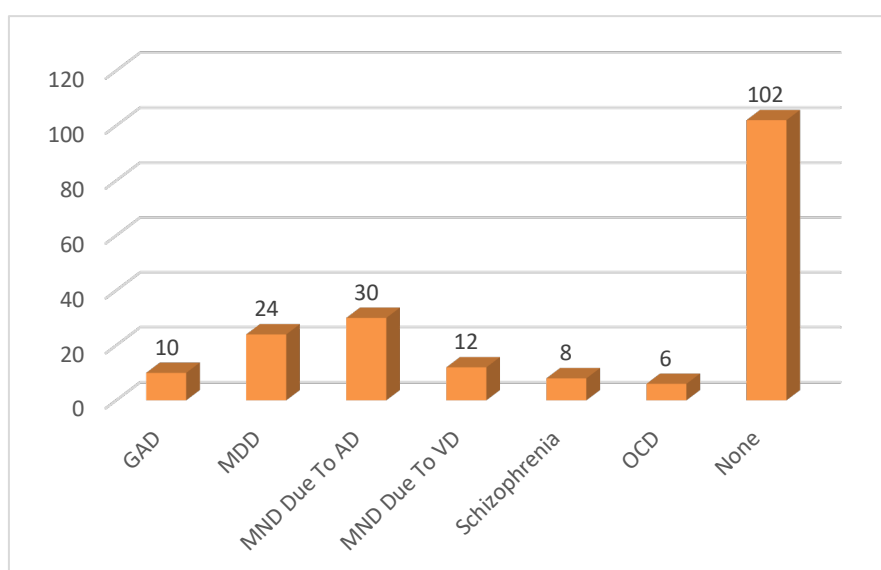
Mean Value Of Stay At Old Age Home Of 7.25 ± 5.274 Years.

Total Family Member Of The Study Subject Staying At Old Age Home Varies From a Minimum of 1 member to a Maximum of 10 Member. The Mean Value of the total family member was found to be 4.51 ± 2.48

The mean HMSE score of the Study population From OAH was 24.24 ± 5.64 . there was a minimum score of 9 in the study population and a maximum score of 30. (table 3)

Table 3: Descriptive Statistics of Sociodemographic and Cognitive Variables in the OAH Study Population (N = 200)

Descriptive Statistics of OAH Group					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	200	62	97	73.20	8.975
Durations OAH	200	1	25	7.27	5.274
Total Family Member	200	1	10	4.51	2.482
HMSE Score	200	9	30	24.24	5.643

**Figure 1: Showing Frequency of Psychiatric Illness in Resident of Old Age Home**

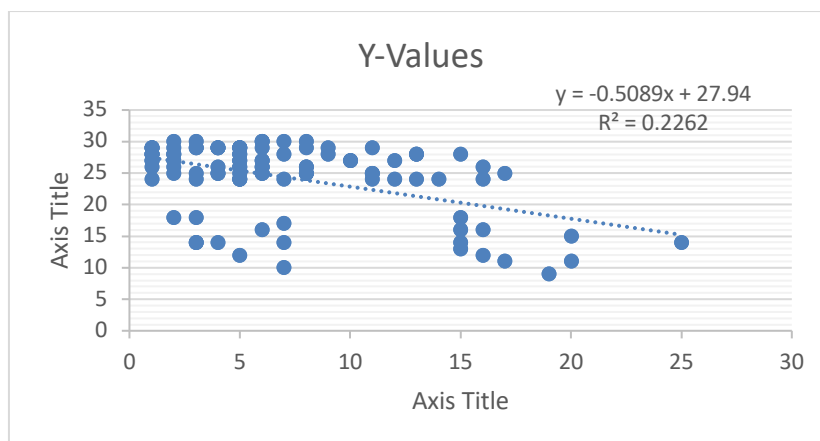


Figure 2: Showing correlation of HMSE & Duration of Stay at Old Age Home+

R^2 value of 0.2262 in correlation of HMSE Score with increasing age signifies that 22.62% of decrease in HMSE Score can be explained by increase in Age., Decrease in HMSE Score signifies an increase in severity of MND.

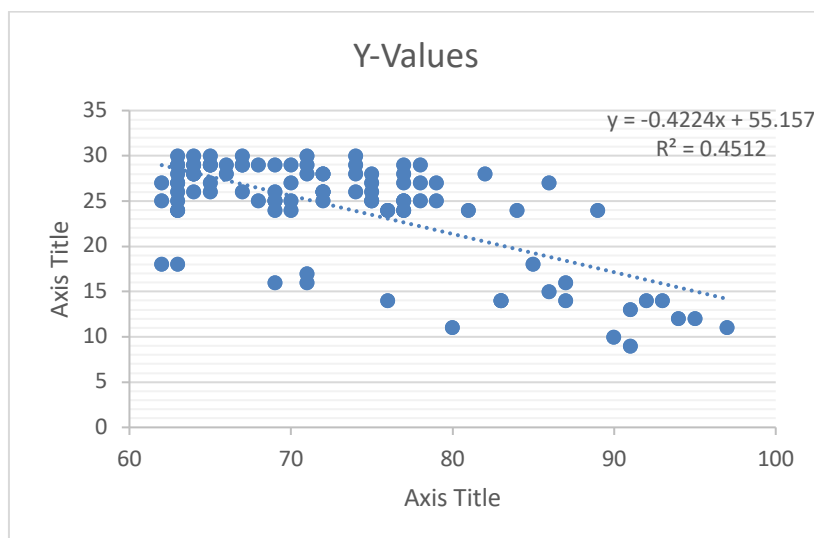


Figure 3: Showing correlation of Age & HMSE - Old Age Home

R^2 value of 0.4512 in correlation of HMSE Score with increasing age in old age home signifies that 45.12% of decrease in HMSE Score can be explained by increase in Age. Decrease in HMSE Score signifies an increase in severity of MND.

Discussion

The major focus of the present study was to estimate the prevalence and pattern of psychiatric illness in old age home population. Study subjects were selected after proper selection criteria. After comparing the socio-demographic profile, DSM-5 diagnostic criteria were used for psychiatric assessment. Mini 7.0.2, as well as HMSE were applied to assess the presence of any psychiatric illness. The mean Age in the OAH was 73.20 ± 8.97 years.

In present study we have taken a total 200 sample from OAH after applying the selection criteria. Most of the studies have sample size less than our study viz. Saritha CV, et al., Rajahmundry, 2022 [1]; Shailaja B, et al., Tamil Nadu, 2016[6]; Singh,

et al., Andhra Pradesh, 2012 [7]; Nagaraj AKM, et al., Mysore, 2011 [8] and Rao SS, et al., Hyderabad, 2014 [9] (50). Larger sample size will help us in validating our result in the generalized community.

In present study we have taken equal no of male and female subject in OAH (100: 100)). Equal number of male and female participant were present in study of Singh, et al., Andhra Pradesh, 20127. However, there is uneven distribution of study participant in study of Shailaja B, et al., Tamil Nadu, 2016 [6] and Rao SS, et al., Hyderabad, 2014 [9]. There was no comment about the gender in the study of Saritha CV, et al., Rajahmundry, 2022 [1].

In present study there is majority of widow (43%) population in OAH which is similar to the study of Shailaja B, et al., Tamil Nadu, 2016 [6]; Singh, et al., Andhra Pradesh, 2012 [7]. However, there is no comment about marital status in the study of Saritha CV, et al., Rajahmundry, 2022 [1] and Rao SS, et al., Hyderabad, 2014 [9].

In present study there is majority of literate population in OAH which is similar to the study of Shailaja B, et al., Tamil Nadu, 2016 [6]; Singh, et al., Andhra Pradesh, 2012 [7]. However, there is no comment about the education status in the study of Saritha CV, et al., Rajahmundry, 2022 [1]; Rao SS, et al., Hyderabad, 2014 [9].

In our study majority of population of OAH (65%) belongs to Extended Nuclear Family. Similar result was present in study of Saritha CV, et al., Rajahmundry, 2022 [1] however in study of Rao SS, et al., Hyderabad, 2014 [9] there is dominance of nuclear family in population of OAH.

In our study psychiatric comorbidity were present in 49% study population of OAH. Most of the population from old age home diagnosed with MND Due To AD 30 subjects; 15%, followed by MDD 24 subject; 12%, MND due to VD 12, subject; 6%, Schizophrenia 8 subject; 4%, GAD 10 subject; 5%. The least number of population was affected by OCD 6 subject; 3%. Similar result were present in study of Singh, et al., Andhra Pradesh, 2012 [7] and Rao SS, et al., Hyderabad, 2014 [9].

In this study, the mean score of HMSE was 25.27 with a standard deviation (SD) of 4.52 in cases compared to 24.24 with SD 5.64 in controls which was statistically significant. Majority of population of OAH (79%) there is no MND, there is mild MND in 3% population in OAH and there is severe MND in 18% population in OAH which can be easily explainable by the fact that in OAH due to no community activity and no one is professionally working currently which lead to cognitive decline. R2 value of 0.4512 in correlation of HMSE Score with increasing age in old age home signifies that 45.12% of decrease in HMSE Score can be explained by increase in Age, similar result were present in study of Singh, et al., Andhra Pradesh, 2012 [7] and Rao SS, et al., Hyderabad, 2014 [9], however there is no comment about severity of cognitive disorder in study of Singh, et al., Andhra Pradesh, 2012 [7].

Conclusion

From present study we conclude that there is less prevalence of psychiatric comorbidity in old age home. In old age home there is majority of major

neurocognitive decline. It was found that with increasing age there is decline in HMSE score suggestive of increasing severity of MND. And also, with increasing duration of stay in OAH there is decline in HMSE score suggestive of increasing severity of MND.

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