A Cross-Sectional Comparative Study of Mental Health among Geriatric Population Living in Care Homes and Those Living with Family in Hadoti Region, Rajasthan

Swapnil Agrawal[1], Aftab Ahmed Khan[2]

[1]Department of Psychiatry, Mind Clinic, Jabalpur, Madhya Pradesh, India. [2]Department of Psychiatry, Netaji Subhash Chandra Bose Medical College, Jabalpur, Madhya Pradesh, India.

ABSTRACT

BACKGROUND

With recent advancement in health facility, both in urban and rural population, ratio of elderly people has increased and due to this apart from physical illness, mental health is also emerged as an important public health challenge. Psychiatric disorders such as depression, anxiety, cognitive disorders and substance use disorders were commonly found in elderly specially living alone and in care homes. The primary purpose of this study was to compare mental health of elderly people living in care homes with those living with family in Kota (Hadoti region, Rajasthan).

METHODS

This is a cross-sectional comparative study that was carried out in 50 elderly people living in care homes and 50 elderly people living with family. Both groups were screened for psychiatric disorders using general health questionnaire (GHQ – 12). Comparison was made under various headings between these groups including severity. Obtained data were analysed by using proportion, mean, standard deviation, chi-square, and Pearson correlation.

RESULTS

No statistically significant difference was found in having psychiatric disorders on screening with GHQ - 12. Difference in these groups for prevalence and severity was not statistically significant for depression and anxiety although significant higher mean of total geriatric depression score (GDS) score in control (10.74 ± 2.56) than in cases (9.38 ± 2.36) and total Hamilton's anxiety rating scale (HAM – A) score was seen in case group (24.53 ± 3.50) than in controls (23.15 ± 2.34).

CONCLUSIONS

In this study, it was found out that psychiatry morbidity was higher among elderly population living in old age home when compared to elders living with family in community. Possible reason for higher psychiatric morbidity in old age home group in our study appears to be because of lack of family support, pain of being separated from their children whom they cared and nurtured for their whole life. In psychiatric morbidity we found that depression was the most common disorder in elderly population in both groups.

KEYWORDS

Old Age Home, Mental Disorders, Depression, Anxiety

Corresponding Author:
Dr. Aftab Ahmed Khan,
Associate Professor,
Department of Psychiatry,
NSCB Medical College, Jabalpur,
Madhya Pradesh, India.
E-mail: draftab79@gmail.com

DOI: 10.18410/jebmh/2021/458

How to Cite This Article:
Agrawal S, Khan AA. A cross-sectional comparative study of mental health among geriatric population living in care homes and those living with family in Hadoti region, Rajasthan. J Evid Based Med Healthc 2021;8(28):2472-2477. DOI: 10.18410/jebmh/2021/458

Submission 25-03-2021,
Peer Review 05-04-2021,
Acceptance 26-05-2021,
Published 12-07-2021.

BACKGROUND

In India, geriatric population is defined as population aged 60 years & above.[1] As a result of better and easy to reach health care system, there is comparatively increased growth of geriatric population to general population. According to population census 2011, there are nearly 104 million elderly persons (aged 60 years or above) in India; 53 million females and 51 million males.[2] Improved health care system increases life expectancy to elderly population but other factors like poverty, breakdown of joint families and poor social services to this age are along with physical and psychological problems, psychosocial factors like loss of social roles, financial constraints, death of spouse or friends, etc predispose older people to mental disorders.[3] Functional dependency is common among elderly people and many would need assistance in their activities of daily living. Long-term care has become one of the major problems facing an aging society.[4]

At present in the economically developed countries like India, there is an advantage that population of young peoples are more than the elderly population which is important for financial growth but as like other countries with the availability of better health care, government policies and different financial schemes like pension schemes for all needy beneficiaries and health care schemes for elderly, management of disorders of aging population for which in past no treatment is available or treatment cost is high, better logistic services, recent advances in drugs causes reduction in mortality in elderly population. The ratio of elderly population to young population is gradually changing which is the reason of finding increased number of aged peoples nowadays. This trend of population aging is globally found in all developed and most of the politically stable developing countries. This trend of population aging in India seems to be continuing in future also and it affects Nation's social, financial, political and health care system. Gradually we need more number of health care centres with skilled staff, old age homes (as number of young family members to support elderly are also reduced due to decreased fertility, nuclear family and trend working of both spouse with one or no children), special social support system for elderly in community.

Government and society must prepare themselves for this changed population ratio and new policies should be made to overcome the needs of elderly population. One other point of special concern is that due to longevity of females, females are more as compare to their male counterparts, appropriate support must be given to them. Tiwari and Srivastava[5] conducted a study in rural population in Uttar Pradesh and found the prevalence of psychiatric disorders to be more in geriatric age group (42.21 %) when compared with the non-geriatric population (3.97 %), depression and the anxiety disorders being the most common. In a comparative study by Tipleetal.[6] between the people living in old age homes and community, those persons living in old age home perceived a better supportive care than those living with the families. Most of the elderly people with psychiatric disorders remain undiagnosed and untreated due to the lack of adequate knowledge of these disorders in the community, as these symptoms are considered to be a part of normal ageing.[7] Since the ancient times, Indian families have a custom to live together and elders are regarded as decision makers for all important matters of family as well as community. The children are expected to take complete care of their elders both religiously and legally as many states in India have law which bound the earning younger family members to care for the elderly. But due to urbanization, people are migrating from village to cities in search for employment and better education facility for their kids. It shatters our old system of joint families to nuclear one. In nuclear family system, role of elders has reduced drastically. They are often regarded as unimportant and burden to the family. The family is the major provider for long-term care in the elderly, especially in developing country like India, where institutional care is difficult to avail and costly.[8] The recent trend of nuclear families in India as mentioned above and due to other reasons like living lonely (kids working abroad, health issues) there is constant increase in old age home dwelling elderly populations. Urbanization, modernization, industrialization and globalization have brought major transformation in family in form of structural and functional changes. As a result of these socio demographic changes, elderly people at times are forced to shift from their own places to old age homes.[9] There are not sufficient studies done to find out the psychiatric morbidities among the elderly population living in care homes especially in India. Therefore, the present study was aimed at investigating the socio-demographic profile and presence of psychiatric morbidity in elderly subjects living in care homes and those living with family in Kota (Rajasthan).

Objectives

1. To determine the psychiatric co-morbidity among elderly people living in care homes and those living with family in Kota.
2. To compare the depression and anxiety scores among the two groups of people were living in care homes and those living with family in Kota.

METHODS

In the present study, psychiatric morbidity of people living in care homes were assessed and compared with the people from the general population in old age homes. They were screened for psychiatric illness and those who are found suffering from psychiatric illness were assessed for severity of depression and anxiety. After taking approval of the principal & controller of Medical College, institutional ethics committee (ECR/1042/Inst/RJ) and caretakers of respective old age homes for conducting the study. 50 subjects fulfilling the inclusion criteria residing in various care homes of Kota, Rajasthan and ready to give informed consent constituted the study group. This is a cross sectional study which was conducted on a total of 100 elderly people, among which 50 people were living in care homes and 50 people from the general population for the duration of one year from March

2013 to March 2014. The general population included were those people who were living with their families residing in Kota (Rajasthan) region. 50 elderly people residing in a community in Kota city along with their family members, and fulfilling the inclusion criteria were randomly selected from the voter list of that area. A home visit was done to evaluate these persons as per the prescribed proforma. They served as control group. All 100 subjects fulfilling the inclusion criteria were informed about the purpose of study & informed consent was taken, assuring them about the complete confidentiality.

The purpose of the study was explained and informed consent was taken from both the person and the caregiver. Subjects in both the groups were thoroughly evaluated on the especially designed proforma, which included identification data (name, age, sex etc.) of the subjects, socio demographic details (education, occupation, marital status, relations with family members etc.) including socio-economic status & historical data (past history, family history). Detailed history, physical and mental state examination was also included to find out the presence of any psychiatric morbidity. GHQ-12 was administered on all subjects. Cut-off score of the test was taken as equal to or more than 2. The subjects who crossed this cut-off mark was termed as GHQ positive cases. If found positive, diagnosis was confirmed by consultant psychiatrist according to ICD - 10 criteria. The GHQ positive subjects who did not meet criteria for any psychiatric diagnosis were excluded from having any psychiatric morbidity. The cases who met ICD-10 diagnoses of depression and/or anxiety were subjected to detailed evaluation by administering Yesavage's Geriatric Depression scale (Hindi version) and Hamilton`s Anxiety Rating Scale respectively and severity of depression & anxiety were assessed.

Inclusion and Exclusion Criteria

Subjects having age more than 60 years, living in old age homes for at least 6 months (for group 1st) and those who consented were included in the study. Severe difficulty in hearing and speech, with serious medical or surgical illness or substance dependence were excluded from the study.

Data Analysis

The statistical treatment of the data has been done by employing both non-parametric and parametric statistical measure. (e.g. proportion, mean, standard deviation, chi-square, Pearson correlation)

Tools of Study

A specially designed semi structured proforma was used for through evaluation of the peoples from both groups. It included the socio demographic data.

1. General Health Questionnaire - 12 (GHQ - 12)

It is a self-administered 12 - item questionnaire. It is a short version of original GHQ-60. The GHQ-12 is used as a screening tool in studies to find out psychiatric morbidity only. Findings from GHQ-12 are confirmed by applying international classification of diseases (ICD-10) or the diagnostic and statistical manual of mental disorders (DSM) criteria for making particular psychiatric diagnosis by qualified persons.

The GHQ-12 is a scale of 12 items which individually asses gravity of psychiatric problems during the last few weeks. Each item has 4 point scale (0 - 3). It gives a total score of 0 to 36. Increased score suggests bad state of mental health of individual which needs to be assessed with proper attention.

2. Yesavage's Geriatric Depression Scale (Hindi Version)

The original GDS is subjective scale (patient administered) which is very easy to use and having total 30 items and final calculations depends upon response of subjects. A 15-item version of the GDS has been devised by Sheikh & Yesavage (1986), and is probably the most common version currently used.[10] The scale contains 15 questions with yes or no answer format. Each answer counts one point. Because depression in elderly may manifest somewhat differently than depression in younger population, use of the GDS may be a better choice for assessment of mood disorder in later life. In GDS-15 higher scores suggest increased severity of depression.

3. Hamilton's Anxiety Rating Scale

The HAM-A is a very popular rating scale to asses anxiety symptoms. It is used globally in studies to evaluate anxiety symptoms in psychiatric patients. It is a subjective scale which is having total 14 questions (each is 5-point scale 0 - 4). The scale is designed to evaluate change in symptoms over time. Strength of scale includes its simplicity, availability multi language versions and valid everywhere. When HAM-A is used in patients of major depression, it is paired with a scale that measures severity of depressive symptoms.

RESULTS

		Case (Old Age Homes) (N = 50)	Control (Community) (N = 50)	P - Value
	Age in Years (Mean ± SD)	**72.1 ± 7.98 years**	**68.68 ± 8.00 years**	**P Value - < 0.05**
Gender n (%)	Males	17 (34 %)	39 (78 %)	P value - < 0.001
	Females	33 (66 %)	11 (22 %)	
Living n (%)	With Spouse	5 (10 %)	41 (82 %)	P value < 0.0001
	Without Spouse	45 (90 %)	9 (18 %)	

Table 1. Distribution According to Gender and Residence with or without Spouse

Psychiatric Diagnosis	Case (Old Age Homes) (N = 50)	Control (Community) (N = 50)
Current psychiatric disorder		
1. Present	30 (60 %)	21 (42 %)
2. Absent	20 (40 %)	29 (58 %)
Depressive disorder	13 (26 %)	08 (16 %)
Anxiety disorder	04 (08 %)	02 (04 %)
Depressive & anxiety disorder	11 (22 %)	11 (22 %)
Psychotic disorder & others	02 (04 %)	00 (00 %)

Table 2. Distribution of Current Psychiatric Disorder (According to GHQ - 12 and ICD - 10 Criteria)

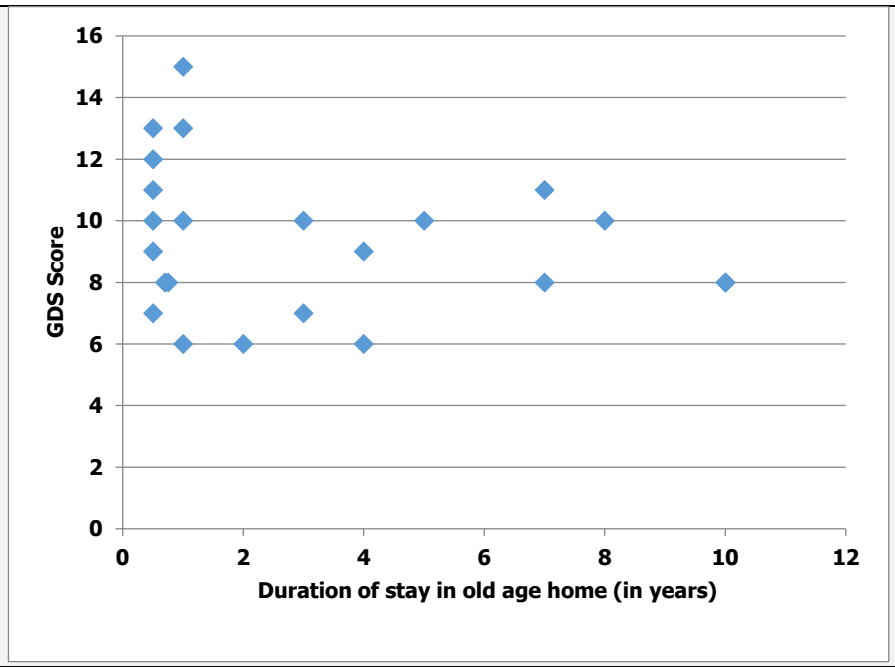

Figure 1. Correlation of Duration of Stay in Care Homes with GDS Score in Case Group

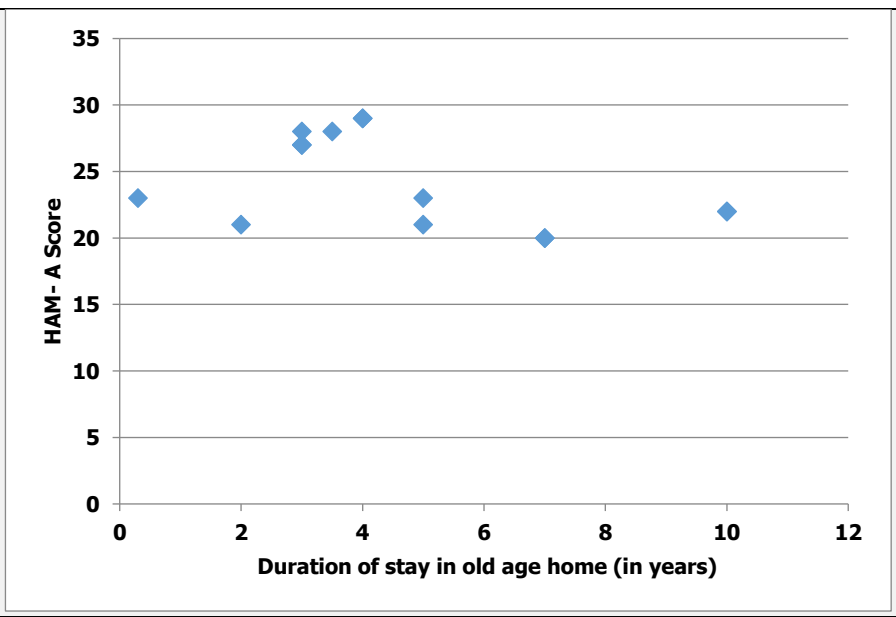

Figure 2. Correlation of Duration of Stay in Care Homes with HAM – A Score in Case Group

		Case (Old age homes) (N = 50)	Control (Community) (N = 50)	P - Value
Depression n (%)	Present	13 (26 %)	8 (16 %)	P value
	Absent	37 (74 %)	42 (84 %)	> 0.05
Anxiety	Present	4 (8 %)	2 (4 %)	P value
	Absent	46 (92 %)	48 (96 %)	> 0.05

Table 3. Distribution According to Type of Current Psychiatric Disorder

	Case (Old Age Homes) (N = 50)	Control (Community) (N = 50)	Unpaired t - Test t - Score	P - Value
GDS score (Mean ± S.D.)	9.38 ± 2.36	10.74 ± 2.56	- 2.7619	< 0.05
HAM - A score (Mean ± S.D.)	24.53 ± 3.50	23.15 ± 2.34	2.3177	< 0.05

Table 4. Mean ± SD. of GDS Score and HAM - A Score in Depressive Disorder Anxiety Disorder Subgroup

Living with / without Spouse	Psychiatric Morbidity in Cases		Psychiatric Morbidity in Controls	
	Present	Absent	Present	Absent
Living with spouse (05)	02 (40 %)	03 (60 %)	14 (34 %)	27 (66 %)
Living without spouse (45)	28 (62 %)	17 (38 %)	07 (78 %)	02 (22 %)
significance	p value - > 0.05, NS		p value < 0.05 Significant	

Table 5. Comparison of Psychiatric Morbidity in Case and Control Group According to Residence with or without Spouse

DISCUSSION

The present study attempted to find out and compare the prevalence of psychiatric morbidity people living in old age home and in the community dwelling old people. 66 % had scores ≥ 2 in persons living in old age home and 48 %

people in community in GHQ-12, i.e. above the cut-off score for possible psychiatric disorder for this screening instrument and requiring further mental health evaluation (X^2 - 2.611 p value - > 0.05) At the time of interview, 60 % of subjects in the case group and 42 % of the subjects in control group were suffering from some psychiatric disorder. Possible reason for higher psychiatric morbidity in old age home group (case) in our study appears to be because of lack of family support, pain of being separated from their children whom they cared and nurtured for their whole life. Psychiatric diagnosis according to ICD-10, in case group 26 % were having depressive disorder, 08 % were having anxiety disorder and 22 % were having both depressive and anxiety disorder. 04 % of the cases were having psychotic disorder. The respective figures in control group were 16 %, 04 %, 22 % and 00 %. The difference in these two study groups was not statistically significant. The most common reason of stay in old age home was family conflict/bad behaviour of family members seen in 44 % of the cases. Being alone was the second most common reason (40 %) followed by financial problem/lack of money (in 14 % of cases).[11,12]

The main reason found that younger ones in family not interested to care their elders as they think them unimportant and burden to family. In case group a higher psychiatric morbidity (62 %) was present in those who were living without spouse than in those who were living with spouse (40 %) Thus, living without spouse appears to be an important risk factor for the development of psychiatric illness in elderly although this difference was statistically not significant. Similarly, in control group also, a higher psychiatric morbidity (78 %) was present in those who were living without spouse than in those who were living with spouse (34 %) and here this difference was statistically significant. Depressive disorder (as per ICD-10) was present in 48 % of cases and 38 % of the controls and the difference was statistically not significant. On Geriatric Depression scale, for assessment of severity of depression it was found that mild, moderate and severe depression was present in 20 %, 20 % and 8 % subjects of case group and 06 %, 14 % and 18 % subjects of control group. Thus, although the prevalence of depression was higher in case group but the severity of depression was more in control group. Difference in these groups was statistically not significant although mean of total GDS score in depressed subjects was significantly higher in control group (10.74 ± 2.56) than in cases (9.38 ± 2.36).[13,14]

A non-significant (P > 0.05) very low positive correlation (r = 0.06249) was found between duration of stay in old age home and GDS score showing no specific correlation between the two parameters. Anxiety disorder (as per ICD - 10) was present in 30 % of cases and 26 % of controls and the difference was statistically not significant. On Hamilton Anxiety Rating scale, mild to moderate, moderate to severe and severe anxiety was seen in 16 %, 14 % and 00 % of subjects in case group, whereas in 20 %, 06 % and 00 % subjects in control group respectively. Difference in these groups was not significant[15] although significantly higher mean of HAM-A score was seen in case group (24.53 ± 3.50) than in controls (23.15 ± 2.34). A non-significant negative correlation (r = - 0.4739, P > 0.05) was seen between duration of stay in old age home and HAM-A score showing that as the duration of stay in old age home increases the severity of anxiety disorder.

CONCLUSIONS

In this study it was found out that psychiatry morbidity was higher among elderly population living in old age home as compare to elders living with family in community. Possible reason for higher psychiatric morbidity in old age home group in our study appears to be because of lack of family support, pain of being separated from their children whom they cared and nurtured for their whole life. In psychiatric morbidity we also found that depression was the most common disorder in elderly population in both groups.

Limitations of the Study

This study was a point prevalence study with relatively small sample size. Patients from other geographical and cultural areas (other cities) were not included in the study and their non-inclusion in the study might have partially affected the results. Therefore, a prospective study with larger sample including subjects from multiple old age homes located in different cities and different cultural areas may reveal better results.

Data sharing statement provided by the authors is available with the full text of this article at jebmh.com.
Financial or other competing interests: None.
Disclosure forms provided by the authors are available with the full text of this article at jebmh.com.

REFERENCES

[1] Elango S. A study of health and health related social problems in the geriatric population in a rural area of Tamil Nadu. Indian J Public Health 1998;42(1):7-8.
[2] Registrar General and Census Commissioner, India, Census of India 2001. Government of India, Ministry of Home affairs.
[3] Rao AV. Geropsychiatry in Indian culture. Can J Psychiatry 1979;24(5):431-436.
[4] Silva PYD, Estibeiro A, Dhume R, et al. Geriatric patients attending tertiary care psychiatric hospital. Indian J Psychiatry 2002;44(4):326-331.
[5] Tiwari SC, Srivastava S. Geropsychiatric morbidity in rural Uttar Pradesh. Indian J Psychiatry 1998;40(3):266-273.
[6] Tiple P, Sharma SN, Srivastava AS. Psychiatric morbidity in geriatric people. Indian J Psychiatry 2006;48(2):88-94.
[7] Katz IR. On the inseparability of mental and physical health in aged persons: lessons from depression and medical comorbidity. Am J Geriatr Psychiatry 1996;4(1):1-16.

[8] SathyanarayanaRao TS, Shaji KS. Demographic aging: implications for mental health. Indian J Psychiatry 2007;49(2):78-80.
[9] VijayaKumar S. Challenges before the elderly: An Indian Scenario. New Delhi: M.D. Publications 1995.
[10] Sheikh JI, Yesavage JA. Geriatric Depression Scale (GDS): recent evidence and development of a shorter version. Clinical Gerontologist: The Journal of Aging and Mental Health 1986;5(1-2):165-173. https://doi.org/10.1300/J018v05n01_09.
[11] Sood A, Singh P, Gargi PD. Psychiatric morbidity in non-psychiatric geriatric inpatients. Indian J Psychiatry 2006;48(1):56-61.
[12] Prakash R, Choudhary SK, Singh U. A study of morbidity pattern among geriatric population in an urban area of Udaipur, Rajasthan. Indian Journal of Community Medicine 2004;29(1):35-40.
[13] Wijeratne MDM, Wijerthne SA, Wijesekara SG, et al. Prevalence of depression among institutionalized elders in Colombo district. Student Med J 2008;1(1):27-31.
[14] Narkhede V, Likhar S, Rana A. A study on depression in elderly inmates living in old age homes in Gujarat. Indian Journal of Research and Reports in Medical Sciences 2012;2(3):21-23.
[15] Rahman TTA. Anxiety and depression in lone elderly living at their own homes & going to geriatric clubs versus those living at geriatric homes. Ain Shams University, Cairo, Egypt. 2013. http://www.globalaging.org/health/world/2006/egyptelderly.pdf.