

A comparative study on psychiatric morbidity among elderly population residing in old-age homes and community

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ABSTRACT

Aims and Objectives: The objective of this study is to study, assess and compare the socio-demographic profile, psychiatric morbidity, cognitive functioning, quality of life and social support of senior citizens in care homes as well as in the communities. **Material and Methods:** Hundred subjects (50 were from old-age home and the rest were from the community) were assessed using intake pro forma details and an interview questionnaire. The Geriatric Mental Status questionnaire, Mini-Mental Status Examination, Quality of Life Support, and Multidimensional Scale of Perceived Social Support scales were then performed on each subject from the two groups in that order, and they were rated on all scales. **Results:** Individuals with lack of spouse and lack of children were higher and common attitude was death in old-age homes. Past history of psychiatric illnesses was more in the inmates of old-age homes. Memory disturbances, concentration problems, hypochondriasis, somatic dysfunction, error behaviour, thought disturbances, perceptual disturbances, persecution, expressed happiness and satisfaction were greater in the inmates of old-age care homes. The quality of life was poor in community group than in old-age home group. **Conclusion:** There is a need to increase community and health-care professional awareness of mental health problems in later life, as well as improve access to appropriate geriatric and mental healthcare.

Keywords: Community, Geriatric Mental Status questionnaire, mental health, Mini-Mental Status Examination, old-age homes, Quality of Life Support, Multidimensional Scale of Perceived Social Support scale

Introduction

Ageing, which is an inescapable reality of the human existence on the planet earth, plays a crucial role in the global demographic transition. In his theory of personality, Eric Erickson correctly defined old age, the final stage in a man's life span, as the stage of maturity, since it entails changes which occur that lead to

personal, interpersonal and other social transformations. 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% in 2025. This is especially true in today's India, which is in the fast demographic transition, towards old age. The establishment of old-age homes in the early 1990s was prompted by the rising security and care concerns of the elderly. Yet, in India living in old-age homes is neither popular nor feasible. Allowing parents to live in old-age homes draws criticism from the family network and society at large. From the review of literature, it is understood

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Table 1: Marital status

Sample	Marital status				Total
	Never married	Married	Separated	Widowed	
Old-age home	0	26	2	20	48
	0%	54.2%	4.2%	41.7%	100.0%
Total	9	10	4	26	19
	18.4%	20.4%	8.2%	53.1%	100.0%
Total	9	36	6	46	97
	9.3%	37.1%	6.2%	47.4%	100.0%
	Value		Df		Asymp. Sig (two-sided)
Pearson Chi square	17.552 (a)		3		0.001

The Pearson's Chi-square value and *P* value imply that the difference is statistically significant

Table 2: Family type

Sample	Old-age home	Family type				Total
		Single	Nuclear	Joint	Extended nuclear	
Community	5	16	7	20	48	
	10.4%	33.3%	14.6%	41.7%	100.0%	
Total	5	16	7	20	48	
	10.4%	33.3%	14.6%	41.7%	100.0%	

This table shows the frequency distribution of type of family in community group

Table 3: Age, education and occupation of spouse

	Community n (%)	Old-age home n (%)	Chi-square value
1. Age			
No spouse	21 (43.8)	36 (73.5)	11.720*
40-59	07 (14.6)	01 (02.0)	
60-75	15 (31.3)	11 (22.4)	
76-90	05 (10.4)	01 (02.0)	
Total	48 (100)	49 (100)	
2. Education			
No spouse	21 (43.8)	36 (73.5)	11.024
Illiterate	06 (12.5)	03 (06.1)	
Primary	12 (25.0)	08 (16.3)	
SSC	05 (10.4)	02 (04.1)	
Above SSC	04 (08.4)	00 (00.0)	
Total	48 (100)	49 (100)	
3. Occupation			
No Spouse	21 (43.8)	36 (73.5)	16.082*
Never employed	15 (31.3)	13 (26.5)	
Employed	17 (14.6)	00 (00.0)	
Retired	05 (10.4)	00 (00.0)	
Total	48 (100)	49 (100)	

*Hence, statistically significant as it has $P < 0.05$

that elderly people represent a distinct group of population with increased vulnerability to various psychosocial stressors. It is also clear that the elderly, particularly those living in old-age homes, have a higher frequency of psychiatric disorder than the general population. Patients with mental illnesses have a high mortality rate,^[1] and psychological issues have been linked to a poor quality of life and reduced self-esteem in elderly people who are mentally ill.^[1,2] According to the survey conducted by the Madras Institute of Ageing, there were 529 old-age homes in India in 1995.^[3] However, HelpAge India has reported that there were 700 old-age homes in 1998.^[4] As of 1995, Kerala state is in lead in the country with 102 old-age homes, followed

by Tamil Nadu (94) and Maharashtra (65). Old-age homes are run by various agencies – secular organisations, religious groups (Christians, Hindu and Muslim), government and others. Taking the country as a whole, secular organisations run 224 old-age homes (42%) followed by Christian agencies with 216 (40%) old-age homes. In keeping with the cultural and religious traditions prevailing in India, there are separate old-age homes for males and females while some old-age homes are meant for the poor aged and destitute. Others concentrate on the sick and handicapped. To determine the level of psychiatric illness and the services essential, systematic research is required. In Rajahmundry, where the study was conducted, there are eight old-age homes currently. Though there is an increase in need of old-age homes, one need to be cautious, as there are reports from abroad the increased psychiatric morbidity in this population. However, such studies are lacking in our country, and hence, there is an urgent need. However, studies comparing psychiatric morbidity among inmates of old-age facilities and elderly people in the community are few in India. Such a study would be essential to raise awareness and to improve access to appropriate healthcare in this special group. As a result, before proposing the establishment of more old-age homes, it is necessary to investigate the psychiatric morbidity in this unique group. This study was done with the aim of studying the socio-demographic profile, psychiatric morbidity, to assess cognitive functioning, quality of life and social support. In addition, inhabitants of old-age homes and the elderly people in the community were studied to assess the disparities between various psychiatric illnesses (in the two groups). This is the important two places' backlog area where the family medicine speciality actually caters services the geriatrics cases over the various aspects of their life and health aspects.

Material and Methods

The study was conducted in GSL Medical College, Rajahmundry, and old-age homes in and around Rajahmundry between January 2014 and September 2015. Taken sample size was 100 subjects, among them 50 were from old-age home and the rest were from the community. The inclusion criteria of the study were the subjects aged above 60 years and those persons willing to give informed consent. And the exclusion criteria were the persons not willing to participate and terminally ill patients. Approval was obtained from

Table 4: Reasons for admission

Sample	Old-age home	Reasons for admission							Total
		Own preference	No carers	Children are away	No children	Problems with children	Peace	Problems with carers	
Total		16	19	3	2	7	1	1	49
		32.7%	38.8%	6.1%	4.1%	14.3%	2.0%	2.0%	100.0%
		16	19	3	2	7	1	1	49
		32.7%	38.8%	6.1%	4.1%	14.3%	2.0%	2.0%	100.0%

Table 5: Ideal requirements in old age

Sample		Ideal requirements in old age						Total
		Old-age homes	Joint family	Marriage	Property	Staying with children	Being independent	
Community		1	12	3	1	30	1	48
		2.1%	25.0%	6.3%	2.1%	62.5%	2.1%	100.0%
Old-age home		28	9	0	0	12	0	49
		57.1%	18.4%	00.0%	00.0%	24.5%	00.0%	100.0%
Total		29	21	3	1	42	1	97
		29.2%	21.6%	3.1%	1.0%	43.3%	1.0%	100.0%

The difference is statistically significant since the Pearson's Chi-square value of 38.275 at df - 5 yields a $P=0.001$

Table 6: Subjects scoring above-determined cutoff on Geriatric Mental Status

Variable	Cut-off value	Community, n (%) Scored above cut-off	Old-age home, n (%) Scored above cut-off	Chi-square
G-Orientation	3	17 (35.4%)	13 (26.5%)	14.185
G-Worry	1	22 (45.8%)	18 (36.7%)	14.568
G-Memory	4	25 (52.06%)	32 (65.3%)	08.005
G-Hypochondriasis	2	06 (12.50%)	08 (16.3%)	04.010
G-Tension	1	26 (54.10%)	26 (53.0%)	03.508
G-Somatic dysfunction	1	19 (39.50%)	22 (44.80%)	14.596
G-Phobia	1	03 (06.20%)	02 (04.00%)	01.033
G-Autonomic dysfunction	1	10 (20.80%)	04 (08.20%)	05.057
G-Thought dysfunction	1	16 (33.30%)	15 (30.60%)	02.197
G-Slowing	1	36 (75.00%)	35 (71.40%)	11.786
G-Mania	1	00 (00.00%)	00 (00.00%)	00.000
G-Loneliness	1	18 (37.50%)	13 (26.50%)	05.397
G-Persecution	2	09 (18.70%)	12 (24.40%)	10.476
G-Guilt	1	02 (04.10%)	01 (02.00%)	00.366
G-Irritability	1	18 (37.50%)	26 (53.00%)	07.893
G-Obsessions	1	05 (10.40%)	01 (02.00%)	03.065
G-Interest	1	07 (14.50%)	03 (06.10%)	07.611
G-Concentration	1	08 (16.70%)	11 (22.40%)	05.482
G-Perception disorder	1	03 (06.20%)	05 (10.20%)	05.001
G-Prescribed medication	1	30 (62.50%)	39 (79.50%)	43.951*
G-Self-medication	1	08 (16.60%)	06 (12.20%)	06.099
G-Alcohol	1	05 (10.40%)	00 (00.00%)	05.382
G-Error	1	01 (02.00%)	02 (04.00%)	00.393
G-Insight	1	03 (06.20%)	01 (02.00%)	04.087
G-Satisfaction	1	30 (62.50%)	40 (81.60%)	09.956**
G-Happiness	1	38 (79.10%)	46 (93.80%)	05.751

*Implies a statistically significant $P<0.05$; **denotes a $P<0.01$; $P=0.007$ indicates that the difference in values between the two groups is statistically significant

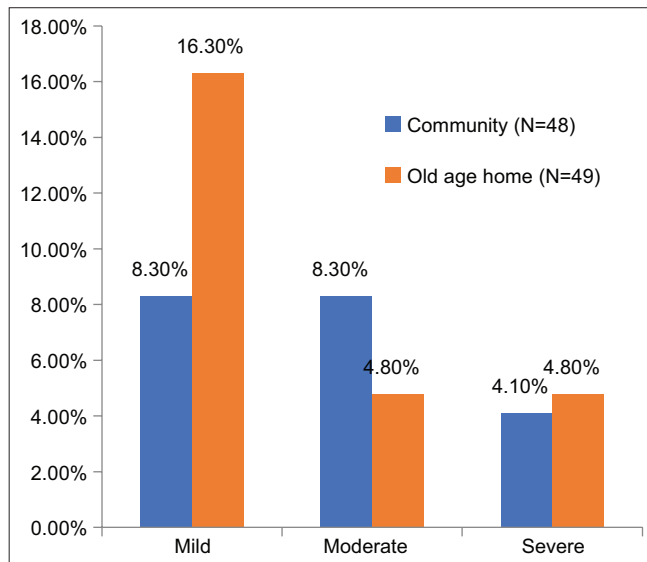
the appropriate authorities to carry out the study in Rajahmundry's old-age facilities. The method of research was told to the people chosen for it. Each individual then gave their verbal informed consent. Socio-demographic data, habits, attitudes towards life and other personal characteristics were acquired using intake pro forma details [Tables 1-5]. Each subject from the two groups was then administered, Geriatric Mental Status questionnaire [Tables 6

and 7], Mini-Mental Status Examination [Table 8], Quality of Life Support [Table 9] and Multidimensional Scale of Perceived Social Support scale [Table 10] in that order, and they were rated on all the scales. The time taken for the interview was 1–2 h approximately and the interview was conducted in a single session. Ethically approved by Approval No. - GSLMC/RC/155-EC/155-11/2013. Approval date - 18-11-2013.

Table 7: Geriatric Mental Status depression

S. no.	Geriatric Mental Status scores adopted to ICD 10 criteria for depression	Community (n=48)	Old-age home (n=49)	Total (n=97)
1	Mild	4 (8.3%)	8 (16.3%)	12 (12.3%)
2	Moderate	4 (8.3%)	2 (4.8%)	6 (6.1%)
3	Severe	2 (4.1%)	2 (4.8%)	4 (4.12%)
	Total	10 (20.8%)	12 (24.4%)	22 (22.6%)
	Value	Df	Asymp. Sig. (two-sided)	
	Pearson's Chi-square 2.547 (a)	2	0.276	

The difference in values between the two groups is statistically insignificant



Results

Age

The frequency distribution of age in two groups, the total sample consisted of 72.2% (n = 70) of individuals between 60 and 75 years, 22.7% (n = 22) between 76 and 85 years and 5.2% (n = 5) above 85 years. The Pearson's Chi-square value of 14.357 at df – 2 yields a two-sided P value of 0.001, indicating that the age distribution difference between the two groups is statistically significant.

Religion

In both categories, the frequency distribution of different religions is statistically insignificant.

Literacy

The old-age home group (22.4%, n = 21) and the community group (29.2%, n = 14) had the largest number of illiterates, with a P value of 0.015 indicating that the difference in values in both groups is statistically significant.

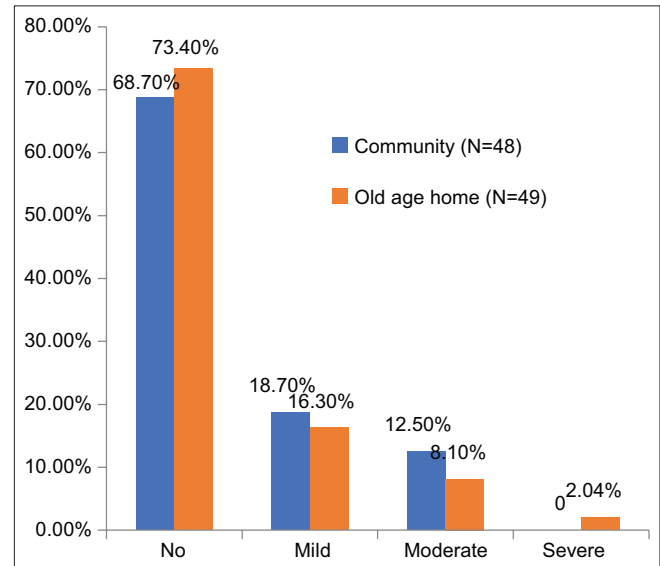
Sex

The frequency distribution of sex in both groups. The old-age home group, which consisted of 49% men (n = 24) and 51%

Table 8: Mini-Mental Status Examination

S. no.	Cognitive impairment	Cut-off value	Community (n=48)	Old-age home (n=49)
1	No	>25	33 (68.7%)	36 (73.4%)
2	Mild	21-25	9 (18.7%)	8 (16.3%)
3	Moderate	16-20	6 (12.5%)	4 (8.1%)
4	Severe	<15	0 (00.0%)	1 (2.04%)
	Value	Df	Asymp. Sig. (two-sided)	
	Pearson's Chi-square 6.374 (a)	3	0.09	

The difference between the values in both groups, as shown in the table, is statistically insignificant



females (n = 25), had a P value of 0.917, indicating that the difference in values between the two groups is statistically insignificant.

Socio-economic status

In the old-age home group, 10.2% (n = 5) belonged to low socio-economic status (SES), 75.5% (n = 37) to middle SES and 14.3% (n = 7) to high SES, with a P value of 0.017, indicating that the differences in SES distribution between the groups are statistically significant.

In both groups, the frequency distribution of spouse age has a P value of 0.008, indicating that the difference is statistically significant. Education had a P value of 0.051 in both groups, indicating that it is statistically insignificant. Occupation has a statistically significant P value of 0.004 in both groups.

Number of dependent, supporting and dead children

In the community sample, 77.1% (n = 37) had no dependent children, while in the old-age home sample, none had dependent children, P value of 0.005 which is statistically significant [Tables 4 and 5].

Habits

In the community group, 81.3% (n = 39) had habits, 12.5% (n = 6) consumed alcohol, 4.2% (n = 2) seemed to have no habits, only

2.1% ($n = 1$) were smokers and 4.2% ($n = 2$) had both alcohol intake and smoking. In the old-age home, none had any habits. A Chi-square value of 10.127 at $df = 3$ yields a statistically significant two-sided P value of 0.018.

Attitude towards life

In the old-age home group, the most common attitude was death ($n = 20$, 40.8%) followed by social service ($n = 15$, 30.6%) and no responsibility ($n = 11$, 22.4%), the two groups have a P value of 0.042, indicating that they are statistically significant.

Discussion

The results of this study are interpreted and discussed in relation to studies in review of literature.

The elderly old and the eldest old are more numerous in the old age homes (OAH) than in the community, according to the present study. This is consistent with the findings of certain known literature.^[5,6] This shows that the family members are unable to meet the increasing requirements of the ageing people. The community group had the largest number of illiterates in this survey (29.2%). The highest number of graduates was identified in the OAH group (22.4%). This suggests that highly educated people may be able to support themselves and would prefer to stay in OAHs on their own when they were having troubles with their children. However, no research comparing educational level and its association with OAH placement were found. In this study, the community group revealed higher number of married people (54.2%), whereas the OAH group had the highest number of widowhoods (53.1%), breakup from partners and not married. This is consistent with the findings of one study,^[7] which found that staying married is a substantial predictor of not entering home care. The number of people without a spouse was highest in OAH compared to the community group. The difference between the two groups' values is statistically significant ($P = 0.008$). The distributional difference between the two groups is statistically significant ($P = 0.001$). There is not a single person in the OAH sample who has a working spouse. This suggests that the lack of a spouse and the spouse's joblessness may be predictors of OAH placement. With a higher proportion of unemployed children in the OAH group and a higher number of working children in the community group, unemployment among youngsters could be a predictor of OAH enrolment. A higher number of dependent children in the community group may be a risk factor for admission to OAHs. Individuals with no supporting children were more common in both groups, but significantly more in the OAH group. This suggests that a lack of supportive children may be a factor in admission to OAHs. About 81.3% of the community group had no habits, 12.5% consumed alcohol, 4.2% had both habits, alcohol intake and smoking, and 2.1% were smokers, but none of the OAH participants had any habits. These results contrasted with prior research findings showing residents in OAHs are at risk of alcohol misuse and dependence.^[5] He discovered that alcoholism was the cause of home admittance rather than the result of it. It can be explained

by the fact that the OAHs examined in this study do not entertain or use alcohol or any other substance. In the present study, the community group of 85.4% were independent, 12.5% were partially dependent and 2.1% were fully dependent. In literature, this finding is consistent, on the people over the age of 85 years in the community.^[8] He found that in the OAH group, 85.7% were independent and 14.3% were partially dependent. In one of the studies, this finding was in contrast where it was found that 22.5% of the home residents were partially dependent and 55.6% were fully dependent on all activities of daily living.^[9] Two of studies stated that home residents were more limited with regard to their activities of daily living, above all with regard to their mobility, than the clients of geriatric day-care facilities.^[5,6] Twenty per cent of the participants indicated their willingness to enter OAHs in upcoming 6 months.^[10] In the present study, history of physical illness was in accordance with the findings in literature who stated that elderly people invariably suffer from Axis III co-morbidities more than Axis I co-morbidities.^[11] All the physical illnesses were found to be higher in the OAHs except for the history of cataracts, the prevalence of which was same in both the groups. The previous observational study stated that inter-current illnesses were more in OAH residents than in the home dwelling elderly. The difference between two groups' values is statistically insignificant. Blood pressure differences between two groups are statistically insignificant in our study. This was in line with the findings of a previous study.^[11] Dementia, depression, psychosis, hypochondriasis and somatic dysfunction were all found to be more common in OAHs. On these subscales, there is no statistically significant difference between the two groups. In both groups, no one else had mania. OAHs had higher rates of thought disturbances, perceptual disturbances and persecution than the normal community. Alcohol was used by 10.4% of those in the community group, but none of those in the OAH group. This was in contrast to previous findings, which indicated that alcohol use was higher in OAHs.^[5] The rate of stated happiness and satisfaction was higher in OAHs than in the community. This conclusion contrasted with previous research, which indicated higher rates of unhappiness in OAHs than in the general population.^[12] Mild depression was more common in the OAH group, but moderate depression was more common in the community group. This was in line with Ames and Weyerer observations.^[13,14]

In this study, cognitive impairment was similar to the observations of the few studies which already exists, which found the dementia rates ranging from 10% to 58.6% in OAHs.^[6,15-20] The OAH group had greater rates of inadequate social support, whereas the community group had greater rates of great social support (8.3%). One of the studies found poor social support in OAH residents.^[21] The distribution of values in both groups, however, is not statistically significant. The community group had a greater percentage of poor quality of life (QOL) (25%), while the OAH group had a higher rate of generally satisfied QOL (28.5%).^[22] The difference between the two groups' values was statistically significant. However, in a search of the literature, there were no studies that analysed the quality of living of both

Table 9: Quality of Life Scale

S. no.	Quality of Life Scale	Cut-off value	Community (n=48)	Old-age home (n=49)	Total (n=79)
1	Poor	<64	12 (25%)	8 (16.3%)	20 (20.61%)
2	Mostly satisfied	>80	13 (27%)	14 (28.5%)	27 (27.83%)
		Value		Df	Asymp. Sig. (two-sided)
Pearson's Chi-square		1.199 (a)		1	0.027

This table shows a significant disparity in values between the two groups ($P=0.02$)

Table 10: Social support

S. no.	Social support	Cut-off value	Community (n=48)	Old-age home (n=49)	Total (n=79)
1	Poor	<48	18 (37.5%)	28 (57.1%)	46 (47.4%)
2	Strong	>72	4 (8.3%)	2 (4.8%)	6 (6.18%)
		Value		Df	Asymp. Sig. (two-sided)
Pearson's Chi-square		1.661 (a)		1	0.1976

As seen in the table, the distribution of values in both groups is statistically insignificant

groups. So, this is the first study to our knowledge looking simultaneously quality of life. There were no studies done in the past comparing socio-demographic variables and psychiatric morbidity in community-living elderly and OAH elderly though there were studies of psychiatric morbidity in individual groups.

Conclusion

The study emphasises the high prevalence of psychiatric diseases among elderly people in nursing homes and in the community, as well as the importance of early detection and treatment. There is a need to promote community and professional awareness regarding mental problems in later life, as well as enhance access to appropriate geriatric and mental disease healthcare. Organisations that provide healthcare services should consider the needs of this unique demographic and stress professional training in appropriate assessment and treatment of the most common health conditions that affect the elderly. Old-age homes serve a critical role in the care and support of society's most vulnerable members, such as the elderly and mentally ill. The elderly's standard of living would be improved if the management of old-age institutions was more sensitive to their requirements in terms of physical, emotional, social, religious and cultural aspects.

Summary

- Past history of psychiatric illnesses was more in the inmates of old age homes.
- Memory disturbances, concentration problems, hypochondriasis, somatic dysfunction, error behaviour, thought disturbances, perceptual disturbances, persecution, expressed happiness and satisfaction were higher in the inmates of old-age homes.
- The quality of life was poor in community group than in old-age home group.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have

given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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