

# Cross Sectional Study on Health Problems among Elderly inmates of Old age Homes in Urban areas of Chennai, India

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## Research Article

**Abstract: Introduction:** Elderly age also known as senior citizens are increasing in number in Developing countries. The care of the elderly aged is slowly shifting from the family to community level old age homes for those who are financially poor, lacking family care or the destitute. The health problems of the elderly in most of the developing countries who are institutionalized for shelter, health care, rehabilitation and recreation are not known adequately. This study is planned to estimate the problems among old age homes in urban area. **Objective:** To find prevalence of common Health problems among inmates of Old age homes in North zone of Chennai. **Materials and Methods:** A Cross sectional study was done among 450 elders in 19 old age homes during April to December 2012 for eight months. Subjects were selected by Simple random technique and the data were collected using standardized pre tested questionnaire after getting consent from the elders. The diagnosis made by clinical examination and some were confirmed by medical records possessed by the subjects. **Results:** Elders of 60-69 years constituted the maximum percentage of 47%. Number of females is more than the number of males and most of the elders were from upper lower socio economic status. The prevalence of individual health problems was Visual problems 67% followed by Hypertension 54%, Depression 45%, Arthritis 43% , Diabetes mellitus 32% and Hearing problems 24%. The overall prevalence of Visual impairment and Blind was 46 % and 21 % respectively. **Conclusion:** The prevalence of health problems among the inmates of old age homes are high and periodic health check up to identify the morbid conditions at the early stage and adequate treatment will lead them to have better quality of life.

**Key words:** Elders, health problems, inmates, old age home.

## Introduction

Ageing is a normal, physiological, inevitable, biological and universal phenomenon happens in all the living beings. <sup>[1]</sup> During the process ageing, the impairments in anatomical and physiological leads to affect physical, mental and social wellbeing of the individuals, to some extent these may further lead to pathological conditions. Globally the population aged above 60 years in increasing due to better life expectance and thereby some of the health problems among them are proportionally increased. To focus the attention of the

elder persons, the topic of world health day in the year 2012 is “Ageing and Health” with the theme of “Good health and life to years” <sup>[2]</sup>. In India the numbers of elders aged 60 years or more were increased from 5 percent in 1951 to 7.5 percent in 2011. <sup>[3]</sup> Older persons constitute one of the most vulnerable sections of the society. They are not only physically weak, but also lack economic resources and self esteemed social status. <sup>[4]</sup> The common health problems on Musculo skeletal, cardiovascular, neurological, endocrinological systems, cataract, hearing difficulties, etc. are known to impair the quality of life of the elderly population. The care of the aged is gradually showing shift from family to community level as old age home concept worldwide. Old age homes are being established by government and voluntary organizations to provide care as shelter and care, for financially poor, lacking family support and the destitute. Many studies are available on problems of geriatric age group conducted among the community in India. Inmates of old age homes constitute an important community in our country but there is lack of adequate information on health problems of these groups in old age homes. Hence this study was undertaken with an objective to explore the health problems of elders or senior citizens in old age homes in urban areas of Chennai.

## Materials and Methods

A descriptive, institution based, cross sectional study was done in 19 old age homes in North zone of Chennai during April 2012 to December 2012. Chennai is a metropolitan city with the population of 5,008,763, divided into three regional zones (North, South and Central). North zone of Chennai was selected by Simple random sampling. These old age homes have temporary and permanent residential facilities (shelter and food) runs throughout the year. Total strength of the inmates in all the 19 old age homes was 1252. Sample size was

estimated by conducting the pilot study and estimated sample of 450 were selected by Simple random sampling technique among these old age homes.

### Data collection

After obtaining the informed consent from the subjects, data was collected by using semi structured, standardized, pre tested questionnaire in local language, followed by clinical examination of the elders. The data were collected on age, sex, past and current health status, duration of suffering from disease, medications, disabilities, physical activity, previous and current habits on smoking, alcohol etc. clinical examination was done for each patient after obtaining the data at their doorsteps. The same instruments were used throughout the study and were standardized at regular interval. Hypertension in this study is defined as systolic blood pressure (SBP) 140 mm Hg or more and diastolic blood pressure (DBP) 90 mm Hg or more or history of hypertension and current antihypertensive medication use.<sup>[5]</sup> JNC VII criteria were used to classify the blood pressure status of the study subjects.<sup>[6]</sup> Diabetes mellitus identified as the elders who were already diagnosed by a physician or if they were on anti diabetic medicine irrespective of their blood glucose level, which were confirmed with medical records. Arthritis was diagnosed by the presence of swelling or pain in joints, with or without restriction of movements.<sup>[7]</sup> Vision was tested using Snellen's 'E' chart in a well illuminated room in a standard way.<sup>[8]</sup> If a person could not see the top letter, the perception of light and projection of light rays were tested in all the four directions. Vision in the better eye has been taken as person's visual impairment. Hearing was assessed using Voice test, after ensuring maximum possible silence and each ear was tested separately, after giving appropriate instructions.<sup>[9]</sup> Depression was assessed using Geriatric Depression Scale (GDS).<sup>[10]</sup>

### Data analysis

Data was analyzed using SPSS 18<sup>th</sup> version. P value < 0.05 will be considered as statistically significant value.

### Results

Among the 19 old age homes, 7 (37%), 9 (47%) and 3 (16%) old age homes were managed by government, private and trust respectively. Free services were available in 10 (53%) of old age homes and paid services in 6 (31%) old age homes and both services were available in 3 (16%) homes. Regarding the age distribution, 60-69 years of age constituted the maximum of 212 (47%) elders, followed by 70-79 years 135 (30%) and 80 years or above 103 (23%). The Mean age of males was 64.5 years and SD was 5.50, the mean age of females was 66.9 years and SD was 8.12. Among the 450 elders, 186 (41.3%) were males and 264 (58.7%) were females, majority were Hindus 279 (62%) followed by Christians

153 (34%) and Muslims 18 (4%). Regarding the educational status, 252 (56%) elders were literate and 198 (44%) were illiterates. Illiteracy was more in females 187 (74.4%) than in males 65 (25.6%). It was found that only 5% (22) of elders were free from Health Problem. The percentage of elders with at least one health problem was 18% (77), two and multiple chronic health problems were present in 32% (137), and 45% (194) of them respectively. The prevalence of individual health problems were shown in table 1. The major health problem was Visual problems 67% followed by Hypertension 54%, Depression 45%, Arthritis 43%, Diabetes mellitus 32% and Hearing problems 24%. The Blood Pressure Distribution of the study subjects according to JNC VII criteria was shown in table 2. Elders, who were tested for vision by Snellen's chart, showed that 288 (67%) elders had visual problems. The overall prevalence of Visual impairment and Blind was 46% and 21% respectively. Prevalence of depression according to Geriatric Depression scale was 45% (194), the prevalence of mild, moderate, severe depression was 43% (83), 39% (76) and 18% (35) respectively. Among the study subjects tested for hearing by voice test, 102 (24%) had hearing problem. The morbidity pattern of elders was shown in table 3.

### Discussion

Regarding the age distribution of elders in the institutionalized care, 60-69 years of age constituted the maximum of 212 (47%) elders, followed by 70-79 years 135 (30%) and 80 years or above 103 (23%). Compared to community based study, the proportion of 60 -69 years age group was less in this study may be attributed to the life expectancy of the elders which is higher in this community,<sup>[11]</sup> similarly more number of females was institutionalized than males which is same in the population based studies.<sup>[12]</sup> The prevalence of health problems in this study population was Visual problems 67% followed by Hypertension 54%, Depression 45%, Arthritis 43% , Diabetes mellitus 32% and Hearing problems 24% as similar to others studies,<sup>[13,14,15]</sup> irrespective of the residential statues Hypertension remains as a major problem since it may be related to ageing issue or essential hypertension. The prevalence of Diabetes was marginally higher compared to other studies in other parts of India.<sup>[15, 16]</sup> In Rajiv Khandekar et al<sup>[17]</sup> study found that, the prevalence of vision impairment was 37%, which is similar to this study. The prevalence of arthritis in this study was 43%, which was similar to a study conducted in Tamil Nadu<sup>[18]</sup> and other parts of India.<sup>[19]</sup> The problem of depression was high in this study compared to community based studies could be attributed to loneliness, loss of spouse or property, perceiving the lack of care by their children, etc.<sup>[20]</sup>

## Limitation

This study has taken the majority of the health problems exist or diagnosed rather than investigating the inmates for the presence of diseases. It is possible many would be known to have occult cancers, mild strokes and its residual effect, mental sickness etc.

## Conclusion

The prevalence of health problems was high among the inmates of old age home. The periodic health check up of their inmates will reduce the morbid sufferings and further deterioration of the already existing conditions which will enable them to lead a better quality of life.

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**Table 1:** Prevalence of Health Problems among elders

S. No	Health Problem	Males (174)	Females (254)	Total (428)	P value
		Frequency (%)	Frequency (%)	Frequency (%)	
1.	Visual Problem	119 (68.3%)	169 (66.5%)	288 (67%)	> 0.05
2.	Hypertension	81 (46.5%)	150 (59.0%)	231 (54%)	< 0.05*
3.	Depression	66 (37.9%)	128 (50.3%)	194 (45%)	< 0.05*
4.	Osteo Arthritis	66 (37.9%)	119 (46.8%)	185 (43%)	> 0.05
5.	Diabetes mellitus	59 (33.9%)	76 (29.9%)	135 (32%)	> 0.05
6.	Hearing Problem	38 (21.8%)	64 (25.1%)	102 (24%)	> 0.05

\*Statistically significant

**Table 2:** The Blood Pressure Distribution of the study subjects

JNC VII Criteria		Frequency (%) N= 450
1. Normal ( < 120/80 mmHg )		145 (32%)
2. Pre Hypertension ( 120 -139/ 80- 89 mmHg)		74 (16%)
3. Hypertension $\geq$ 140/90	Stage I ( 140- 159/90-99 mmHg)	166 (37%)
	Stage II ( $\geq$ 160/100 mmHg)	65 (15%)

**Table 3:** Morbidity pattern of elders

S. No	Health Problem	Males (186)	Females (264)	Total (450)	P value
		Frequency (%)	Frequency (%)	Frequency (%)	
1.	Musculoskeletal	76 (40.8%)	158 (59.8%)	234 (52%)	> 0.05
2.	Oral problems	63 (33.8%)	113 (42.8%)	176 (39%)	> 0.05
3.	Insomnia	71 (38.1%)	100 (37.8%)	171 (38%)	< 0.05*
4.	Respiratory problems	68 (36.5%)	76 (28.7%)	144 (32%)	> 0.05
5.	Gastro intestinal	43 (23.1%)	31 (11.7%)	74 (16%)	< 0.05*
6.	Genito-urinary	18 (9.6%)	32 (12.1%)	50 (11%)	> 0.05
7.	Skin diseases	20 (10.7%)	16 (6.0%)	36 (8%)	> 0.05
8.	CNS disorders	17 (9.1%)	15 (5.6%)	32 (7%)	> 0.05
9.	Endocrine disorders	7 (3.7%)	11 (4.1%)	18 (4%)	> 0.05

\*Statistically significant