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Original Research Article

Physical Health Problems and Hypertension among Elderly Residing in Old Age Homes in Varanasi, India

Yogesh Sahu[1], S.P. Singh[2], Manushi Srivastava[3], Sujeet Kumar Arya[4]

[1]Ph.D. Research Scholar Department of Community Medicine IMS BHU Varanasi-221008,
[2]Professor, Department of Community Medicine IMS, BHU Varanasi-221008
[3]Assistant Professor, Department of Community Medicine IMS, BHU Varanasi-221008
[4]Ph.D. Research Scholar Department of Sociology Banaras Hindu University

Corresponding Author: Yogesh Sahu

ABSTRACT

Background: Changing in demographic scenario and population projections of India indicate that the growth rate of Indian older adults (≥60 yrs.) is comparatively faster than other regions of the world. Modernization, urbanization, and globalization have changed the traditional concept of family in India, which was to provide natural and social security to the ill, dependent and the older family members. Health status is an important factor that has significant impact on the quality of life of an elderly population.
Objectives: To assess the Physical health problems Hypertension and of inhabitants residing in Old Age Homes of Varanasi. Methods: A cross sectional exploratory study conducted among elderly people with age ≥60 years residing at all old age homes in Varanasi district, Uttar Pradesh, India. Total 231study subjects participated in the study, data was collected by using predesigned and pretested Interview schedule.
Results: About three fourth inhabitants (73.6%) were females, 43.7% were 60-69 yrs age group, majority (59.7%) of them were illiterate, 49.2 % found hypertensive, 90% had some problem in walking and three fourth 74.0% suffered with some vision problem.
Conclusion: Females found in higher number, majority of them were Hindus, about half of elderly were illiterate and half of them were reported with hypertension. Problem in walking and vision problem found main physical problem in inhabitants in Old Age Homes.

Key words: Elderly, Hypertension, Physical Health

INTRODUCTION

Population ageing is an inevitable and irreversible demographic reality that is associated with welcome improvements in health and medical care. Declining fertility rates with longevity, the population of older persons (60 years and above) is globally growing faster than the general population. With rapid growing population of elderly, governments are not prepared to face the consequences that have the implications for the socio-economic and health status of the elderly. (India Ageing Report – 2017) [1]

Urbanization, modernization and globalization have led to changes in the socio-economic structure, the erosion of societal values, weakening of social values and social institutions such as the joint family system. [2]

In India the population of elderly is growing rapidly, in 1901 it was 12.1 million, but it has been recorded in 2011 as

103.2 million. [3] The percentage of the elderly in India has been increasing in recent years and the trend is likely to continue in the coming decades. The share of population over the age of 60 is projected to increase from 8% in 2015 to 19% in 2050. By the end of the century, the elderly will constitute nearly 34% of the total population of the country. [1]

In last few years the numbers of old age homes are increasing to catering and fulfill the needs of the senior citizens. Some important reasons for emergence of old age homes are migration of young couples from the rural areas in search of better employment opportunities to fend themselves. Many youngsters have moved away from their native homes and settled in other countries or abroad in temptation of money therefore, they cannot accommodate their parents in their own homes. [4]

Health:

Health is an essential component irrespective of all the ages. Old age is not a disease but there is increase in vulnerability to get the diseases related to many physical, social and economic factors. In our country there are very few studies on the health problems of the elderly residing in old age homes. [2] The present study aimed to find out some common physical health problems and their association with age, and also examined the Blood Pressure and seen their association with Gender of the elderly residing in old age homes of Varanasi District.

Rational of the study:

The elderly face a lot of health problems such as physical health problems that include eye sight problems, hearing problem and problem in walking and so on. They also suffer with cardiovascular problem like hypertension. There is no study available on the health problems of elderly residing in all old age homes of Varanasi addressing these issues. Some studies have been done but they have included a few Old Age Homes only. So in the present study we assess the Physical health problems and Hypertension of elderly in Old Age Homes of Varanasi.

MATERIAL AND METHODS

This is an institutional based cross sectional exploratory study. The Research work was carried out in all eleven Old Age Homes (OAH) of Varanasi district. All inmates aged 60 years and above residing for more than 6 months in Old Age Homes were the study population. Both males and females who gave written informed consent to participate were included in the study Elderly who were suffering from severe physical illness and debilitating illness were excluded from the study.

Sample size: All the 245 study subjects were present in 11 OAHs out of them 231 who gave their written inform consent were included in this study. Therefore there was no need to justify the sample size. However, external validity of the finding will be continued to the old age homes of Varanasi.

Study tools: Information was collected by using pre-designed and pre-tested interview schedule. BP measurement was done with standard digital BP instrument in left arm in the sitting position with feet kept firmly on ground and arm kept at the level of the heart. An average of two BP measurements with a minimum interval of at least 30 minutes was taken.

Data entry and Statistical analysis: Data was entered in the MS-Excel sheet. Statistical analysis was done by using the of SPSS 21st version. Pearson's Chi square test was used to see the statistical significance for categorical data.

Ethical aspects: Ethical approval was taken from the Ethical committee of Institute of Medical Sciences BHU Varanasi. Written informed consent was taken from the study subjects.

RESULTS

Table- 1: Socio-demographic characteristics of elderly.

Socio-Demographic Profile (n=231)		No.	(%)
Gender	Male	61	26.4
	Female	170	73.6
Age (Yrs.)	60-69	101	43.7
	70-79	79	34.2
	≥80	51	22.1
	Mean age ±SD: 72.17±8.4		
Religion	Hindu	223	96.5
	Others (Muslim, Buddhist, Christian)	8	3.5
Education	Illiterate	138	59.7
	Primary/Middle	58	25.1
	High School and above	35	15.2
Type of Family	Nuclear	91	39.4
	Joint	140	60.6
Marital Status	Married (spouse alive)	43	18.61
	Widow/Widower/ Divorced/Separated	175	75.76
	Never Married	13	5.63

Table 1 reveals the socio demographic characteristics. Males were 26.4% and females were 73.6 percent. Age was categorized in three categories; Young-old (60-69) were 43.7% followed by Old-old (70-79) 34.2% and Oldest-old (≥80) 22.1%. Age range varied from minimum 60 years and maximum 106 years with Mean ±SD 72.17±8.4 years. Most of (96.5%) the inhabitants were Hindus, rest 3.5% were Muslim, Buddhist, Christian. Majority of elderly were illiterate that was 59.7 followed by primary/middle 25.1% and High school and above 15.2%. More than half (60.6%) belonged to joint and 39.4% belonged to nuclear families. Majority of (75.76%) elderly were widow/widower/ divorced/separated followed by 18.61% married (spouse alive) and 5.63% unmarried.

Table – 2: Distribution of elderly according to Age and various Physical health problems in study subjects.

Physical health problems (Subjective Response)		Age groups (in Yrs.) 60-69 No. (%)	70-79 No. (%)	≥80 No. (%)	Total No. (%)	Test of significance
Walking problem	No Difficulty	17 (73.9)	6 (26.1)	0 (0.0)	23	$\chi^2 = 20.51$ df = 4 p<0.001
	Some Difficulty	50 (45.4)	42 (38.2)	18 (16.4)	110	
	Much difficulty	34 (34.7)	31 (31.6)	33 (33.7)	98	
Hearing Difficulty	No Difficulty	77 (53.1)	48 (33.1)	20 (13.8)	145	$\chi^2 = 20.08$ df = 2 p<0.001#
	Some Difficulty	23 (27.8)	30 (36.1)	30 (36.1)	86	
	Much Difficulty	1 (33.4)	1 (33.3)	1 (33.3)	3	
Verbal communication problem	No problem	85 (47.5)	63 (35.2)	31 (17.3)	179	$\chi^2 = 10.97$ df = 2 p = 0.004#
	Some problem	14 (28.0)	16 (32.0)	20 (40.0)	50	
	Much problem	2 (100.0)	0 (0.0)	0 (0.0)	2	
Vision Problem	No problem	35 (58.3)	12 (20.0)	13 (21.7)	60	$\chi^2 = 8.74$ df = 2 p = 0.013#
	Some problem	61 (37.4)	65 (39.9)	37 (22.7)	163	
	Much problem	5 (62.5)	2 (25.0)	1 (12.5)	8	
# Last two category of every health problem has been merged						

Table 2 represents the association of age and various physical health problems among elderly based on their feelings and subjective experiences. Nearly three fourth (73.9%) young-old (60-69), 26.1% old-old (70-79) and 0.0% oldest-old (≥80) had no difficulty in walking. The corresponding figures for some difficulty in walking were 45.4%, 38.2% and 16.4% respectively. And for much difficulty in walking were reported by 34.7%, 31.6 and 33.7% respectively. It was found statistically significant (p<0.001).

Considering difficulty in hearing 53.1% young old, 33.1% old-old, and 13.8% oldest-old had no hearing problem. The corresponding figures for some hearing problem were 27.7%, 36.1% and 36.1%. Much problem in hearing was reported by 33.4%, 33.3% and 33.3% respectively. Hearing problem was statistically significantly associated with age (p<0.001).

In verbal communication problem 47.5% young-old, 35.2% old-old and 17.3% oldest-old had no problem. The

corresponding figures for some verbal communication problems were 28.0%, 32.0% and 40.0% reported. It was also statistically significant (p=0.004).

Taking vision as a problem 58.3% young-old, 20.0% old-old and 21.7% oldest-old had no vision problem. The corresponding figures for some vision problems were 37.4%, 39.9% and 22.7%. For much vision problem they were reported by 62.5%, 25.0% and 12.5% elderly respectively. They were found statistically significant (p=0.013).

Table-3: Distribution of Elderly according to Gender and Blood Pressure. (JNC-7 Criteria)

Systolic BP (mmHg)	**Gender**			**Test of significance**
	Male (n=61) No (%)	**Female (n=170) No (%)**	**Total (n=231) No (%)**	
Normal (<120)/Pre-hypertension (121-139)	31 (50.8)	67 (39.4)	98 (42.4)	$\chi^2 = 2.39$ df = 1 p=0.122
Hypertension stage I (140-159)/Hypertension stage II (>160)	30 (49.2)	103 (60.6)	133 (57.6)	
Diastolic BP (mmHg)				
Normal (<80)/Pre hypertension (81-89)	45 (73.8)	116 (68.2)	161 (69.7)	$\chi^2 = 0.65$ df = 1 p=0.420
Hypertension stage I (90-99)/ Hypertension stage II (>100)	16 (26.2)	54 (31.8)	70 (30.3)	

Table no.3 shows the association of elderly according to gender and level of blood pressure according to JNC-7 criteria. Half of male (50.8%) inhabitants were normal or pre hypertensive and rests 49.2% had hypertension stage-I or hypertension stage-II the corresponding figure for females were 39.4% and 60.6%, respectively.

Taking with diastolic blood pressure 73.8% males were normal or pre hypertensive and rests of 26.2% were with hypertension stage-I or hypertension stage-II the corresponding figure for females were 68.2% and 31.8%, respectively.

DISCUSSION

In this study the majority of study subjects (73.6%) were females and rest 26.4% were males. In a study done in Pune Old Age Homes by Lt Col Reji R.K. et al. (2015) [5] reported similar findings to this study 74% were female and 26% males. Age criteria Young–old (60-69), old-old (70-79), and oldest-old (≥80) were 43.7%, 34.2% and 22.1% years with mean age of 72.17±8.4 years in this study. In a study in Chennai by Jaiganesh D. et al. (2013) [6] found similar 47%, 30% and 23%. Another study also done in Chennai by M. Anita Rani et al. (2012) [7] reported contradicting figures of 38.1%, 36.2% and 25.7% with similar mean age 72.6±8.9 years. In our study majority of (96.5%) inhabitants found Hindu and rest (3.5%) were from other religions. In a study in Maharashtra by Dr. Deotale M. K. et al. (2015) [8] found 83.3% Hindus and 16.7% Buddhist. More than half of inhabitants (59.7%) were illiterate followed by primary/middle 25.1% and high school and above 15.2 percent. Majority of (75.76%) elderly were widow/widower/ divorced/separated followed by 18.61% married (spouse alive) and 5.63% unmarried. Anantha E.V.M. et al (2017) [9] reported that 82% were widow/widower/ divorced only 5.2% married and 12.8% were unmarried.

The study reveals that with increasing age prevalence of physical health problems also increases. 38.2% of elderly of age group 70-79 years had some difficulty in walking, 36.1% had some problem in hearing, 32.0% had some problem in verbal communication and 39.9% had some visual problem. M. Anitha Rani et al. (2012) [7] reported that 35.1% had visual problem followed by speech disorder (5.7 %.) and 17.8% had hearing impairment. In a study by H. T. Pandve et al. (2015) [10] in Pune found 64% had vision and 76% hearing problem. Another study by J. Balamurugan et al. (2012) [11] in rural elderly of puducherry found 34.1% had difficulty in seeing and 23.5% had hearing problem. A study done in Amravati Maharashtra

reported 32.4% elderly had hearing impairment and 61.8% suffered from eye problem. [8]

In this study 49.2% male and 60.6% females had hypertension. In a study in old age homes of Gujarat by Punit G. Patel et al. (2015) [12] found 30.8% males and 28.75% females were hypertensive, which is not concordance to this study. In studies conducted in old age homes of Chennai by Jaiganesh D. et al. (2013) [6] found similar (54.0%) and contradict with M. Anitha Rani et al. (2012) [12] who reporting figure of 39.5%. Another studies reported figures 43.33% and 30.4 percent. [2,8]

CONCLUSION

Females were found three times higher than male elderly in Old Age Homes of Varanasi. Majority of inhabitants belonged to Hindu religion. More than half of inhabitants were illiterate. Three fourth of the elderly were widow/widower/divorced/ separated this could be the main reason for them to take shelter in Old Age Homes. More than half of them were hypertensive. Walking and vision problem was the main physical health problem reported by the inhabitants.

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