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Prevalence of Common Physical Health Problems among Elderly in Selected Old Age Homes of a Cosmopolitan City

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Abstract: ***Background: The last century has witnessed a rapid increase in the population of the elderly people in the developed and industrialized countries. India ranks 4th in terms of absolute size of elderly population .The country is not adequately equipped to look after their special health needs and the changing traditional value system. Method: A descriptive cross sectional study was undertaken to assess the prevalence of common physical health problems among elderly and study their relationship with selected socio demographic factors. A total of 150 elderly were selected from 07 old age homes of Pune by multi stage sampling method. The objective data was assessed by recording BP for hypertension, performing Hb analysis using Sahli's Haemometer, urine analysis using Benedict's solution, measuring BMI for obesity, screening vision problems by Snellen's vision chart and hearing problems by whisper voice test. The questionnaire was also used for assessing socio demographic data, present history of physical health problems .The health records for chronic ailments being maintained in the old age homes were checked. Descriptive and inferential statistics was used for the analysis of the tabulated data. Results: The findings of the study revealed that 67 (45 %) of the inmates were in the age group of 70-79 years. Women outnumbered men. Most of the elderly widow females and males preferring to live in old age homes with 79 (53 %) of elderly being financially supported by family members and 37(25 %) having spent more than 3 years in the old age homes. The most common morbidities found were vision problems affecting 125(83.3 %), anaemia 73(48.7 %), hypertension 65(43.3 %) and diabetes in 61(40.7 %) of the elderly. The study also found a significant association of hypertension and diabetes with age, diet and exercise.. In anaemia significant association was found only with age of the inmates. In addition a significant association was also observed between hypertension and diabetes mellitus. Conclusion: Proper elderly health care services are required to further curtail the prevalence of non communicable diseases and improve the quality of life of an elderly .Prevalence of high morbidity among elderly in old age homes needs strengthening of geriatric health care services in accordance with the common existing problems in the Old age homes.***

Keywords: Elderly, old age home, physical health problem, diabetes, hypertension and anaemia,

1. Introduction

Aging is a universal process. Sir James Sterling Ross commented: "You do not heal old age, you protect it, you promote it, and you extend it". [(1)] The demographic transition to an ageing society and epidemiological transition to non-communicable diseases accompanied with changing family and social structure and value system makes elderly moving into long term care and institutionalization. In this scenario old age homes are emerging as alternatives for shelter in late life. The elderly population is consistently increasing and there is a need to focus on their health problems and needs. [(2)]

The aim was the study to determine the prevalence of common physical health problems among elderly in selected old age homes of a cosmopolitan city(Pune) The methodology used in the study was anthropometric measurements to assess BMI, estimating hemoglobin level by using Sahli's Haemometer, urine analysis by Benedict's test, measuring blood pressure, assessing vision acuity and hearing acuity. The questionnaire was also used for assessing socio demographic factors like Age, gender, Income, diet, duration of stay, and present history of physical health problems among elderly. The health records for chronic ailments being maintained in the old age homes were checked. Descriptive and inferential statistics was used for the analysis of the tabulated data.

Ageing population is on the rise due to longevity and declining fertility. [(3)] There are many health problems of elderly which prevent aged from fully enjoying their golden years in peace and good health. In the world, one in every eight is an older American and one in every five is an older Indian. As chronic diseases are not curable, its prevalence also increases with an aging population.

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 psycho sociological economic factors. In our country the study on the health problems of the elderly residing in old age homes are sparse. In this context, the present study is an attempt to fill some of the gaps in the study of the elderly population and the existing institutional support available to them. The study was undertaken with the overall goal of estimating the prevalence of common physical health problems and understanding the association with selected socio demographic factors of the elderly residing in old age homes of cosmopolitan city.

Early diagnosis has always a better chance for cure, prevention of the diseases & delays its complications. Physical health assessments can help to identify early sign & symptoms of undiagnosed cases of physical health problems in elderly.

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2. Materials and Methods

The study was cross sectional descriptive in design. A total of 150 elderly (111 females and 39 males) were selected from 07 old age homes of Pune city by multi stage sampling method. Statistical methods of Chi squire and inferential statistics were used using SP-15

Socio -demographic profile of the elderly

The number of elderly in the age group of 70-79 years were more i.e. 67 out of 150 elderly people and considerably there were more number of females (111) than males (39).The mean age of population was 72.02 years. Illiterate among the elderly were 22 (14.67%) and 85.33 %percent of elderly had formal education Among the elderly 79(52.7%) were supported by their family members to stay in the old age home and 30 (20%) were financially stable to support themselves by their pensions or family pensions 32 % of the elderly were staying in the old age home for a shorter period between 1-3 years while 40(26%) of elderly lived for more than 5 years in the old age homes.84(56%) were following non vegetarian type of diet and 66 (44 %) were vegetarians by eating habit.

3. Results

Prevalence of common physical health problems among elderly

Majority of the elderly 125(83.3 %)had been suffering from vision problems followed by anaemia 73(48.7 %) hypertension 65(43.3%) and diabetes 61(40.7 %) .The other physical health problems were hearing problems 22(14.67 %)musculoskeletal problems33(22%) and Neurological problems(epilepsy)16(10.67 %) in elderly.

Prevalence of hypertension and its associated factors in elderly

Prevalence of hypertension in 150 elderly of old age homes was 65(43.33 %)

Prevalence of Hypertension in elderly males was 15(10%) and in elderly females were 50(33.3%).

A significant association was observed in hypertension with age, diet and exercise

Prevalence of anaemia and its associated factors among elderly

In the present study the overall prevalence of anaemia among elderly is 73(48.7%). Out of total anaemic elderly 39 elderly males 12(18.75%) were newly detected for anemia and in elderly females 52(81.25 percent) were detected as anemics by Sahli's haemometer and it can be seen that out of 150 elderly, 64(87.67 %) were newly detected as anemia. As far as the diet is considered it can be seen that most of the elderly with anaemia 42(28.0%) were non-vegetarian and 31(20.7 %) were vegetarians by habit. Among the non-anaemic elderly 42(28.05)were non vegetarians. A significant association was determined between anaemia and age.

Prevalence of Diabetes Mellitus and its associated factors among elderly

The total prevalence of diabetes in 150 sample population was 61(40.66 %).Out of 39 elderly males 15(24.5 %) were suffering from diabetes Out of females detected to have diabetes in 46 elderly were 14(30.43 %) while 32(69.57 %) were already diagnosed as cases of Diabetes in females. A significant association was found between elderly with diabetes and exercise (<0.0001)As well a significant association was also found between the diabetes mellitus and hypertension (p<0.005)

A significant association was found between elderly with diabetes and exercise. As well a significant association was observed between hypertension and diabetes in elderly.

Table 1: Prevalence of common physical health problems in elderly *n=150

Health problems	Diagnosed	Newly detected by researcher	No. of elderly	Prevalence %
Neurological Problems	16	-	16	10.7
Dental problems	10	-	10	6.7
Cardiac problems	18	-	18	12
Respiratory problems	10	-	10	6.7
Gastro intestinal problems	18	-	18	12
Genito- urinary problems	09	-	9.0	6.0
Musculoskeletal problems	33	-	33	22
Stroke	06	-	6.0	4.0
Skin diseases	07	-	7.0	4.7
Hypertension	40	25	65	43.3
Anemia	09	64	73	48.7
Diabetes Mellitus	40	21	61	40.7
Vision problems	119	06	125	83.3
Hearing problems	17	05	22	14.7
Overweight/Obesity	06	31	37	24.7

*Percentage will be more than 100 because of multiple health problems of respondents.

Table 2: Association of hypertension with socio demographic factors, n=150

Attributes	**Characteristics**	**Hypertensive No (%)**	**Non hypertensive No (%)**	χ^2	**p**
Age group	60 – 69	16 (10.6)	43 (28.6)	10.78	<0.005
	70 – 79	35 (23.4)	32 (21.3)		

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	=>80	14 (9.4)	10 (6.7)		df 2
	Total	65(43.4)	85 (56.6)		
Gender	Male Female	15 (10) 50(33.3)	24 (16) 61(40.7)	0.51	>0.5 df 1
Educational status	Illiterate Primary Middle school Higher secondary Intermed./Diplo Graduation Prof.degree	10(6.6) 09(6.0) 23(15.3) 11(7.3) 09 (6) 03(2.0) -	12 (8) 14 (9.3) 14 (9.3) 28(18.6) 07 (4.6) 08(5.3) 02(1.3)	12.95	>0.05 df 6
Diet	Vegetarian Non-vegetarian	21(14.0) 44(29.3)	45(30.0) 40(26.7)	6.36	<0.05 df 1
Exercise	Regular Irregular	17 (11.3) 48 (32.0)	52 (34.7) 33 (22.0)	18.2	<0.0001 df 1

Table 3: Association of Anaemia with selected socio demographic factors n=150

Attributes	**Characteristics**	**Anaemics No (%)**	**Non -anaemics No (%)**	χ^2	**p**
Age group	60 – 69 70 – 79 =>80	28(18.7) 27(18.0) 18(12.0)	31(20.6) 40(26.7) 06 (4.0)	8.57	<0.05 df 2
	Total	73(48.7)	77(51.3)		
Gender	Male Female	14(9.3) 59(39.3)	25(16.7) 52(34.7)	3.44	>0.05 df 2
Educational status	Illiterate Primary Middle school Higher secondary Intermediate/dip. Graduation Prof. degree	15(10.0) 16 (10.7) 15 (10.0) 18 (12.0) 5 (3.4) 4 (2.7) -	7 (4.6) 7 (4.6) 22(14.6) 21(14.0) 11(7.4) 7 (4.6) 2(1.4)	12.96	>0.05 df 2
Diet	Vegetarian Non-vegetarian	31(20.7) 42(28.0)	35(23.3) 42(28)	0.14	>0.05 df 1

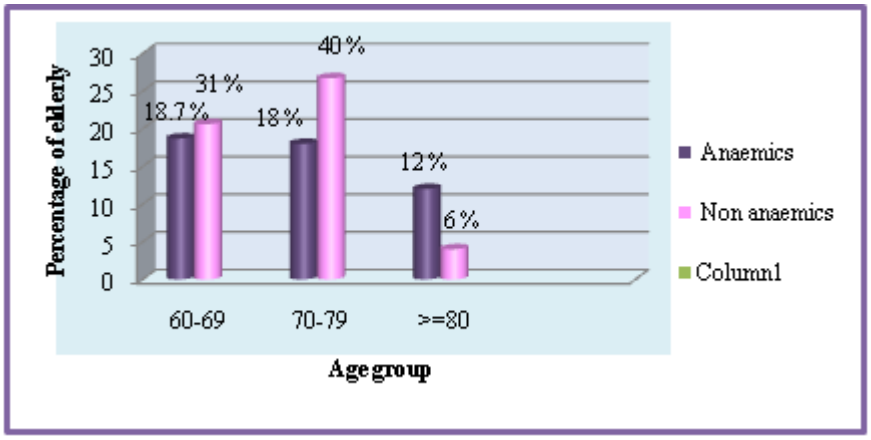


Figure 1: Association between anaemia and age in elderly

Table 4: Association of Diabetes with selected socio demographic factors among elderly, **n=150**

Attributes	Characteristics	Diabetics No (%)	Non-Diabetics No (%)	χ^2	p
Age group	60 – 69	19 (12.7)	40 (26.7)	8.57	<0.05
	70 – 79	26 (17.3)	41 (27.3)		df 2
	=>80	16 (10.7)	08 (5.3)		
Total		61(40.66)	89(59.33)		
Gender	Male	15 (24.5)	24 (26.9)	0.11	>0.05
	Female	46 (75.4)	65 (73.1)		df 1
	Illiterate	9 (6.0)	13 (8.6)		
	Primary	10 (6.7)	13 (8.6)		

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Educationa	Middle school	15 (10.0)	22 (14.7)	12.6	>0.05 df 6
	Higher secondary	18 (12.0)	21 (14.0)		
	Intermediate/diplo.	5 (3.3)	11 (7.4)		
		4 (2.7)	07 (4.7)		
	Graduation		02 (1.3)		
	Professional degree	-			
Diet	Vegetarian	19 (12.7)	47 (31.3)	6.89	<0.01 df 1
	Non-vegetarian	42 (28.0)	42 (28.0)		
Exercise	Regular	17 (11.3)	52 (34.7)	13.6	<0.0001 df 1
	Irregular	44 (29.3)	37 (24.7)		

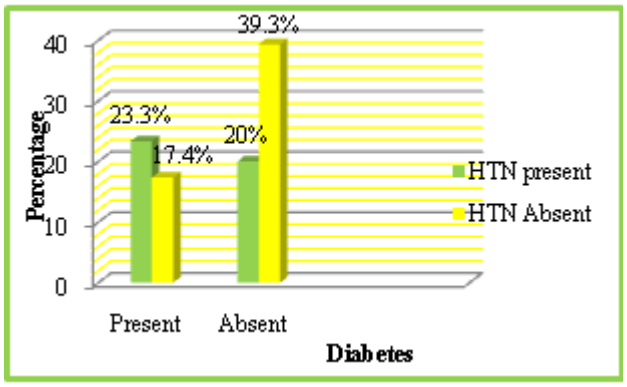


Figure 2: Association between hypertension and diabetes in elderly

4. Discussion

Change in socio–economic status and various health problems adversely affect an individual's way of life during old age. Shifting to old age homes has been found to have an influence on health status of the subjects as the subjects staying in the old age homes were found to be less overweight/ obese and higher percentage belonged to normal weight category (nutritional status) as compared to those staying with the families thereby indicating a positive impact of old age homes on the nutritional status of the subjects. But the psychological stress of staying away from the families is clearly reflected in deviance of the cardiovascular functions among old age home females.

A study carried out by Kalawathy MC among 357 elderly samples of 191 women and 166 men in urban area discovered that there was significant association with age .overall prevalence of Hypertension was 51.85 percent in 103 women and 82 men. [(4)]

Another study done by Ajay K Dewale in Urban area of central India it was revealed that there was a significant association of age with Anaemia in elderly. [(5)] As per the findings of the study done by Nico S. Rizzo showed that there was a significant association p<0.001 of diet and Diabetes. Vegeterian foods are associated with lower risk of metabolic syndrome including Diabetes Mellitus [(6).]

5. Conclusion

India is in a phase of demographic transition and constitutes about 7.5 percent of the elderly population with the number of people in the 60-plus age group about 324 million. As the number of the elderly increases, the physical health problems will also increases

Early identification of geriatric morbidities should be ensured through periodic screening and regular health check-ups. Regular & repeated counseling for monitoring of physical parameters is essential for timely interventions and treatment adherence. Proper elderly health care services are required to further curtail the prevalence of non communicable diseases and improve the quality of life of an elderly .Prevalence of high morbidity among elderly in old age homes needs strengthening of geriatric health care services in accordance with the common existing problems in the Old age homes.

The effects of ageing, low socioeconomic status and inadequate access to health care contributed to the elderly poor health status. Therefore, early identification of geriatric morbidities should be ensured through periodic screening and regular health checkups. Regular and repeated counseling for monitoring of physical parameters is essential for timely interventions and treatment adherence. Behavioral changes for weight reduction through dietary modification and regular exercise and avoidance of substance abuse will add to quality of geriatric health.

Hypertension, diabetes and anaemia are some of such chronic illnesses which if detected timely, can prevent morbidity among the elderly. 21(14%) percent of the elderly who had diabetes and 25(16.6%) percent of the elderly who had hypertension were neither detected nor aware of it, which means that there are elderly who are not aware of their signs and symptoms of disease status. Awareness about the disease, lifestyle modification and regular health checkup is all what is required for a healthy aging.

Health of the elderly is an important issue in today's developing world. The main reason for this concern is the rapid increase in the population of this vulnerable group. A more transparent and accessible health care infrastructure in the urban settings of the country can bring down the rate of morbidity and mortality due to physical health problems which are preventable and treatable to a great extent if detected at the earliest. This will not only improve the health of the elderly but also their quality of life.

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