A cross-sectional study of health and psychosocial problems among elderly people living in old-age homes of Ahmedabad and Gandhinagar districts, Gujarat, India

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ABSTRACT

Background: Old age is a big challenge to human life with respect to health needs as well as psychosocial needs. This study has explored the very important aspects of old age. Very few studies have been conducted in Ahmedabad and Gandhinagar districts on the same aspects. The present study was an attempt to fill the gap in knowledge about the existing health-related and psychosocial problems faced by elderly population. **Objectives:** To study the health profile, sociodemographic factors, and psychosocial aspects of the elderly in old-age homes. **Materials and Methods:** A cross-sectional study on the public health aspects and psychosocial problems of old-age persons (60 years and above) was carried out in old-age homes in Ahmedabad and Gandhinagar districts, Gujarat, India. **Results:** A total of 500 elderly people, living in nine old-age homes in Ahmedabad district, were interviewed and examined. In the study population, 42.20% were male and 57.80% were female. Majority of the elderly were residing in old-age home for 3–10 years (59.60%). Moreover, the most frequent reason of shifting to old-age home among them was family conflicts (45.60%). Majority of the elderly were having body mass index in normal and overweight ranges. And, more number of females had shown overweight pattern as compared to males. This study revealed the five common presenting symptoms of the elderly to be joint pain (47.40%), impaired vision (39.20%), insomnia (28.00%), weakness (23.20%), and impaired memory (23.20%). Health problems of elderly population are of much concern as per this study. The major health problems found in the elderly were cancer, anemia, diabetes, cataract, hypertension, coronary heart disease, asthma, and osteoarthritis. **Conclusion:** Majority of the elderly people felt neglected by their family members. Two-thirds of old-age homes were having facility for regular health checkup. Majority of the elderly were having hypertension and joint pain as the most common presenting complaints among all.

KEY WORDS: Elderly; Old-age Homes; Health Problems; Psychosocial Problems

INTRODUCTION

Elderly or old age refers to ages nearing or surpassing the average life span of human beings. The boundary of old age cannot be defined exactly because it does not have the same meaning in all societies. The Government of India adopted "National Policy on older Persons" in January, 1999. The policy defines "senior citizen" or "elderly" as a person who is of age 60 years or above.[1]

As per the sample registration system, 2017, at national level, the percentage of total elderly persons was 8.2%, while the percentage of male elderly persons was 7.9% and the percentage of female elderly persons was 8.4%. In Gujarat, the percentage of total elderly persons was 8.4%, while the percentage of male elderly persons was 7.6% and the percentage of female elderly persons was 9.3%.[2]

The physiological decline in aging refers to the physical changes an individual experiences because of the decline in the normal functioning of the body, resulting in poor mobility, poor vision, impaired hearing, inability to eat and digest food properly, a decline in memory, the inability to control certain physiological functions, and various individual's ways of life after retirement. The economic loss is due to a change from salary to pension or unemployment, leading to economic dependency on children or relatives. A feeling of low self-worth may be felt due to the loss of earning power and social recognition. This state of mind is harmful.[3]

Aging is more difficult in the rapidly changing materialistic society. Modernization plays a vital role in the aging process of an individual. Percentages of the elderly residing at old-age homes are increasing. As per a recent statistic, there are 1018 old-age homes in India today. A majority of the old-age homes are concentrated in the developed states including Gujarat. In Gujarat, there are 99 old-age homes.[4]

In the changing era of our community posing challengeable situation to senior support-needing population of the community, there is a need to know the different kinds of problems faced by the elderly. Studies have been conducted in various states of India to assess the health and psychosocial problems occurring in the geriatric population living at old-age homes, but very few studies have been conducted in the state of Gujarat. The present study was an attempt to fill the gap in knowledge about the existing health-related and psychosocial problems faced by elderly population living in the old-age homes of Ahmedabad and Gandhinagar districts.

MATERIALS AND METHODS

A cross-sectional (observational) study was conducted during the time span of 2 years from November 2011 to October 2013 in old-age homes of Ahmedabad and Gandhinagar districts. There were a total of 19 old-age homes in Ahmedabad and Gandhinagar districts, out of which a total of 9 old-age homes were selected randomly for the study. Data were collected using a predesigned and pretested questionnaire; the elderly were interviewed and examined accordingly, and their medical records were also taken into account. Geriatric population – persons aged ≥60 years – were included in the study. Institutional ethical committee clearance was sought, and prior permission was taken from the trustee/manager of the geriatric homes regarding conducting the study in the respective old-age homes. After taking informed consent, all the elderly persons living in the selected nine old-age homes were included in the present study. Persons <60 years of age and who were non-cooperative were excluded from the study. Hence, a total of 500 elderly persons were interviewed in the whole study period. Variables studied were health problems, psychosocial tendency, age, sex, occupation, religion, address, marital status, education, income, socioeconomic class (modified Prasad classification), hobbies, medical facility in old-age homes, body mass index (BMI), pulse, blood pressure, symptoms, health promotional activities, and supporting aids.

Statistics

Data were validated and analyzed using Epi Info 7. For continuous variables, range, mean, and standard deviation were calculated and for categorical variables, proportion and percentage were obtained. To know the association between two variables, tests of significance such as Chi-square test and Z test were applied.

RESULTS

The present cross-sectional study was carried out in old-age homes of Ahmedabad and Gandhinagar districts during November 2011–October 2013. A total of 500 participants of age 60 years and above were included in the study.

Out of the 500 elderly, 211 (42.20%) were male and 289 (57.80%) were female. The mean age of males was 73.1 ± 7.99 years, whereas the mean age of females was 72.1 ± 7.3 years. Marital status analysis of the elderly showed that 171 (81.04%) males were married, whereas 40 (18.95%) males were unmarried. Of those who were married, 70.1% of males and 79.7% of females were widower/widow. Education status of the elderly showed that majority (302 [60.40%]) were educated up to primary level followed by illiterate (85 [17.0%]). Majority of the elderly were belonging to socioeconomic class IV (males – 24.64% and females – 34.6%). This classification was according to updated Prasad's socioeconomic status classification. The major source of income was savings in 33.64% of males. Only 13.27% of males were earning pension, whereas in females, the major source of income was from sons (28.71%) and daughters (16.26%). Majority (157 [31.40%]) of the elderly had been residing in old-age homes for 6–10 years. Nearly 40% of elderly were visited by their children every month [Table 1].

Prior to the retirement age, majority (71 [33.64%]) of the total male elderly people were engaged in private job followed by 62 (29.38%) in business, 43 (20.37%) in labor, 28 (13.27%) in government job, and 7 (3.31%) were not engaged in any gainful occupation in past. While majority (234 [80.96%]) of the female elderly were homemaker. Very few elderly were engaged in some gainful occupations at the time of study.

Table 2 depicts that "familial conflicts" was the most frequent reason for shifting of the elderly to old-age home as observed in 228 (45.60%) elderly. "Ill health/no one to take

Table 1: Sociodemographic profile of the elderly living in old-age homes

Socio- demographic variables	Males (*n*=211) (%)	Females (*n*=289) (%)	Total (*n*=500) (%)
Age (in years)			
60–69	77 (36.49)	117 (40.48)	194 (38.80)
70–79	94 (44.54)	130 (44.98)	224 (44.80)
80–89	33 (15.64)	37 (12.80)	70 (14.00)
90–100	07 (03.31)	05 (1.73)	12 (2.40)
Total	211 (42.20)	289 (57.80)	500 (100.00)
Marital status			
Unmarried	40 (18.95)	13 (04.49)	53 (10.60)
Married	171 (81.04)	276 (95.50)	447 (89.40)
Spouse alive	42 (24.56)	46 (16.66)	88 (19.68)
Widow/widower	120 (70.17)	220 (79.71)	340 (76.06)
Divorced	09 (05.26)	10 (03.62)	19 (04.25)
Total	211 (42.20)	289 (57.80)	500 (100.00)
Education			
Illiterate	16 (07.58)	69 (23.87)	85 (17.00)
Primary	129 (61.13)	173 (59.86)	302 (60.40)
High school	32 (15.16)	20 (06.92)	52 (10.40)
Higher secondary	14 (06.63)	14 (04.84)	28 (05.60)
Graduate/above	20 (09.47)	13 (04.49)	33 (06.60)
Socioeconomic class			
I	45 (21.32)	52 (18.00)	97 (19.50)
II	28 (13.27)	19 (6.57)	45 (9.10)
III	50 (23.69)	64 (22.14)	114 (22.80)
IV	52 (24.64)	100 (34.60)	152 (30.50)
V	36 (17.06)	54 (18.68)	90 (18.10)
Total	211 (100.00)	289 (100.00)	500 (100.00)

Table 2: Reasons for shifting to old-age home

Reasons	Males (*n*=211) (%)	Females (*n*=289) (%)	Total (*n*=500) (%)
Due to familial conflicts	95 (45.02)	133 (46.02)	228 (45.60)
Did not want to be a burden for family members/lack of physical space	29 (13.74)	36 (12.45)	65 (13.00)
Due to own/spouse ill-health or disability/have no one to take care of self	46 (21.80)	77 (26.64)	123 (24.60)
All basic needs are taken care of at a reasonable cost/free	23 (10.90)	31 (10.72)	54 (10.80)
To live a life of dignity/live with self-respect	18 (8.53)	12 (4.15)	30 (6.00)
Total	211 (100.00)	289 (100.00)	500 (100.00)

care of self" was the second most frequent cause of shifting of the elderly to old-age home, as observed in 123 (24.60%) elderly.

Reasons for unhappiness in old-age life were also asked to them. Among the variety of reasons, the most common reason found among the elderly for feeling sad was being neglected by family members in 149 (29.80%) elderly followed by illness in 143 (28.60%), loneliness in 123 (24.60%), poverty in 122 (24.40%), and children staying away in 110 (22%) elderly. The major hobbies were reading in 43 (20.37%) and religious activity in 37 (17.53%) elderly. On the part of females, major hobbies were religious activity (33.91%) and reading (14.18%).

No old-age home had a full-time doctor, whereas six (66.70%) old-age homes had a part-time doctor. Ambulance facility was available in two (22.20%) old-age homes for emergency transfer of the elderly to the hospital. The most common health promotional activities among the elderly were walking, exercise, yoga, and meditation. No significant difference was found in health promotional activities between males and females.

Table 3 shows the distribution of the elderly according to their BMI. A total of 133 (63.03%) males and 165 (57.09%) females had BMI within the normal range. Majority of the females (89 [30.79%]) had BMI within overweight range as compared to males (32 [15.16%]), whereas 46 (21.80%)

males and 35 (12.11%) females had BMI within underweight range. Significant difference was found between males and females having BMI within normal range as well as for overweight range.

The most common supporting aid used was spectacles in 189 (89.57%) males followed by walking sticks in 19.43%, denture in 14.69%, and hearing aids in 5.21%. In females also, the most common supporting aid used was spectacles in 249 (86.15%) followed by walking sticks in 16.95% and denture in 14.76%. No significant difference was found in the use of any supporting aid between males and females [Table 4].

Table 5 reveals the most common symptom as joint pain among 237 (47.40%) elderly followed by impaired vision (39.20%), insomnia (28.00%), weakness (23.20%), impaired memory (23.20%), constipation (21.20%), and impaired hearing (20.20%). Impaired hearing, urinary problems, and cough were the symptoms which have shown significant difference between males and females.

Table 6 shows the common diseases found among the elderly. Among all diseases, hypertension was the most common disease found among elderly participants. Hypertension was the only disease which has shown statistically significant difference ($\chi^2 = 4.73$, df $= 1$, $P < 0.05$) among male and female elderly. No significant difference was found in other diseases among males and females. Occurrence of diseases such as anemia, cataract, and diabetes was found more in females as compared to males.

DISCUSSION

Population around the world is growing old at a high rate with increasing life expectancy. The challenge ahead for

health care in the coming years is to ensure the quality of life to a large group of elderly population. However, to address the health-care needs of this aging and heterogeneous population, reliable information about their health problems from different social settings is still lacking in India. The present study conducted at nine old-age homes reveals a variety of details regarding health and psychosocial aspects among the elderly.

Out of the total 500 elderly included in the study, 211 were males and 289 were females. Among males, majority were in 70–79 years' age group, whereas in females, majority were in 60–69 years' age group. Married elderly constituted 89.4%, whereas 10.6% were unmarried. Findings regarding marital status in the present study were comparable with that of a previous study conducted by Das and Shah.[5]

In the present study, majority of males were employed in private sectors in the past, and majority of females were homemakers. Similar findings were observed in the study carried out by Asadullah et al.[6]

The present study has demonstrated that majority of the elderly were economically dependent (57.40%), whereas 42.60% were economically independent. The findings of the present study were quite parallel to the findings of the previous study conducted by Das and Shah,[5] which found that 56.10% of the elderly were dependent and 43.80% were economically independent.

The present study found "familial conflicts" (45.60%) as the most frequent reason for shifting of the elderly to old age home followed by "ill health/no one to take care of self" (24.60%). In the previous study conducted by Das and

Table 3: Distribution of the elderly according BMI

BMI	Males (*n*=211) (%)	Females (*n*=289) (%)	Total (*n*=500) (%)	"Z" value	*P* value
<18.5 (underweight)	46 (21.80)	35 (12.11)	81 (16.20)	1.34	>0.05
18.5–24.99 (normal)	133 (63.03)	165 (57.09)	298 (59.60)	2.92	<0.05
≥25 (Overweight)	32 (15.16)	89 (30.79)	121 (24.20)	6.07	<0.05
Total	211 (100.00)	289 (100.00)	500 (100.00)		

BMI: Body mass index

Table 4: Use of supporting aids among the elderly

Use of aids*	Males (*n*=211) (%)	Females (*n*=289) (%)	Total (*n*=500) (%)	"Z" value	*P* value
Spectacles	189 (89.57)	249 (86.15)	438 (87.60)	1.19	>0.05
Hearing aids	11 (5.21)	7 (2.42)	18 (3.60)	1.57	>0.05
Walking sticks	41 (19.43)	49 (16.95)	90 (18.00)	0.96	>0.05
Denture	31 (14.69)	34 (11.76)	65 (13.00)	0.94	>0.05
Back belt	3 (1.42)	2 (0.69)	5 (1.00)	0.56	>0.05
Walker	5 (2.36)	7 (2.42)	12 (2.40)	0.58	>0.05
Wheel chair	2 (0.94)	3 (1.00)	5 (1.00)	0.12	>0.05

*Multiple responses

Table 5: Common presenting symptoms among the elderly

Symptoms*	Males (n=211) (%)	Females (n=289) (%)	Total (n=500) (%)	X^2 value[+]	P value
Body ache	43 (20.37)	49 (16.95)	92 (18.40)	0.95	>0.05
Headache	19 (9.00)	27 (9.34)	46 (9.20)	0.02	>0.05
Joint pain	96 (45.50)	141 (48.78)	237 (47.40)	0.53	>0.05
Loss of weight	31 (14.69)	27 (9.34)	58 (11.60)	3.40	>0.05
Insomnia	51 (24.17)	89 (30.79)	140 (28.00)	2.60	>0.05
Weakness	49 (23.22)	67 (23.18)	116 (23.20)	0	>0.05
Breathlessness	22 (10.42)	29 (10.00)	51 (10.20)	0.02	>0.05
Constipation	43 (20.37)	63 (21.79)	106 (21.20)	0.14	>0.05
Diarrhea	10 (4.73)	19 (6.57)	29 (5.80)	0.75	>0.05
Impaired vision	89 (42.18)	107 (37.02)	196 (39.20)	1.36	>0.05
Poor appetite	37 (17.53)	48 (16.60)	85 (17.00)	0.07	>0.05
Giddiness	17 (8.05)	14 (4.84)	31 (6.20)	2.16	>0.05
Impaired hearing	56 (26.54)	45 (15.57)	101 (20.20)	9.10	<0.05
Pedal edema	15 (7.10)	21 (7.26)	36 (7.20)	7.69	>0.05
Tremors of hand	14 (6.63)	19 (6.57)	33 (6.60)	4.15	>0.05
Impaired memory	49 (23.22)	67 (23.18)	116 (23.20)	0.005	>0.05
Urinary problems	21 (9.95)	11 (3.80)	32 (6.40)	0.001	<0.05
Cough	22 (10.42)	16 (5.53)	38 (7.60)	4.15	<0.05

*Multiple responses, [+]df=1

Table 6: Disease profile among the elderly as per the ICD classification

ICD code	Disease	Males (n=211) (%)	Females (n=289) (%)	Total (n=500) (%)	X^2 value*	P value
C00–D48	Cancer	3 (1.42%)	3 (1.03%)	6 (1.20%)	0.15	>0.05
D50–D53	Anemia	16 (7.58%)	24 (8.30%)	40 (8.00%)	0.086	>0.05
E10–E14	Diabetes	26 (12.3%)	43 (14.87%)	69 (13.80%)	0.67	>0.05
H25	Cataract	27 (12.79%)	42 (14.53%)	69 (13.80%)	0.3	>0.05
I10–I15	Hypertension	113 (53.55%)	182 (63.00%)	295 (59.00%)	4.73	<0.05
I20–I25	Coronary heart disease	17 (8.05%)	24 (8.30%)	41 (8.20%)	0.01	>0.05
J45	Asthma	14 (6.63%)	16 (5.53%)	30 (6.00%)	0.26	>0.05
M15.9	Osteoarthritis	111 (52.60%)	146 (50.51%)	256 (51.20%)	0.21	>0.05

*df=1

Shah,[5] 44.60% of the elderly were shifted to old-age home due to "ill health/no one to take care of self" and 33.90% due to "familial conflicts." Elderly people have been felt like burden to youth community, and this may be the reason for increasing familial conflicts nowadays.

When the elderly were asked regarding reasons behind unhappiness during old age, the present study revealed the most common reason to be being neglected by family members (29.80%) followed by illness (28.60%), loneliness (24.60%), poverty (24.40%), and children staying away (22.00%). This concludes that avoidance of senior members of the society by young ones has badly affected the life of senior members. In the study conducted by Lena et al.,[7] 13.10% of the elderly population were feeling neglected by family members, 41.30% were sad due to illness, 5.20% were sad due to loneliness, 17.90% were sad due to poverty, and 3.80% were sad due to children staying away. Hence,

comparatively a different scenario was found between the findings of these two studies, this may be due to differnce in geographic area affecting the cultures, as the present study was conducted in an urban area, while the previous one was conducted in a rural area.

The present study revealed that no old-age home had a fulltime doctor, whereas 66.70% of the old-age homes had a part-time doctor. In the study conducted by Das and Shah,[5] in 64% of old-age homes, medical facility was available.

In the present study, 18.80% of the elderly were used to walk on a daily basis. In a previous study, Banker et al.[8] showed that 12.10% of the elderly used to walk which was the more common mode of health promotional activity. Hence, the finding of the present study was comparable to that of the previous study. Nearly 74.40% of the elderly in old-age home had not adapted any kind of health promotional activity.

BMI is a very important index of health. In the present study, 59.60% of the elderly had BMI within normal range, 16.20% had BMI within underweight range, and 24.20% had BMI within overweight range. The findings of the present study were consistent with the findings of the previous study by Banker et al.[8] In the present study, significant difference was also found in overweight BMI between males and females. This difference was due to high sedentary lifestyle on the part of females, as majority of females were homemaker and also that health promotional activity was adapted by lesser number of females as compared to males.

In the present study, the most common symptom among the elderly was joint pain (47.40%) followed by impaired vision (39.20%). The findings of the present study were comparable with that of previous studies. Purty et al.[9] found joint pain in 43.40% and impaired vision in 32.10% of the elderly participants. Joint pain was frequently higher in the elderly in the previous as well as the present studies due to osteoarthritis at old age becoming more prevalent, while impaired vision is the result of senility of ocular tissues.

The occurrence of cancer in the elderly in the present study was 1.20%, which is quite comparable with the previous studies. In the previous studies, Medhi et al.[10] found the prevalence of cancer to be 1.10% and Banker et al.[8] found it to be 1.70%. In the present study, proportion of the elderly having anemia was 8%, whereas the prevalence of anemia as per the previous study by Kumar et al.[11] was 10.80%. Occurrence of anemia was little less in the present study as compared to the previous studies. No significant difference was found in the occurrence of anemia between males and females in the present study. Occurrence of diabetes in the present study was 13.80%. Findings of the present study were comparable to the findings of previous studies. The prevalence of diabetes reported by the previous studies was 8.20% by DAS and Shah.[5] and 13.40% by Kumar et al.[11] No significant difference was found in the occurrence of diabetes between males and females in the present study. Diabetes is known as one of the diseases related to lifestyle. Hence, lifestyle is one of the major determinants of the occurrence of diabetes. The occurrence of cataract in the present study was 13.8%, which was comparable with the findings of other studies. The prevalence of cataract reported by the previous studies was 18.60% by Bhatia et al.[12] and 44% by Rahul et al.[13] Hypertension is an important cause of morbidity and mortality in elderly population and is a risk factor for many other diseases. The occurrence of hypertension in the present study was 59.0% (53.55% in males and 63.00% in females), which is consistent with the findings of the previous studies. The prevalence of hypertension reported by the previous studies was 59.1% by Lena et al.[7] and 68.80%[14] by Medhi et al.[10] As per the study conducted by Padmanabha who did the study at old-age homes in Mangalore, South India, 64% of them were hypertensive.

Limitations of the Present Study

The present study was carried out in old-age homes; hence, findings of health problems were expressed in terms of occurrence and not prevalence. The study was based on clinical examination and past medical records only. At the time of conduction of the study, no pathological, radiological, or any other investigation were carried out.

CONCLUSION

Majority of the elderly people felt neglected by their family members. There is an urgent need for making our family system to be modified to combat the psychosocial problems faced by elderly population. Two-thirds of the old-age homes studied were having facility for regular health checkups. Proportions of various old-age health problems were almost similar among all old-age homes. A majority of elderly were having hypertension and joint pain as the most common presenting complaints among all.

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