

**ORIGINAL ARTICLE****STUDY OF HEALTH PROFILE OF RESIDENTS OF GERIATRIC HOME IN AHMEDABAD DISTRICT**Kavita Banker<sup>1</sup>, Bipin Prajapati<sup>2</sup>, Geeta Kedia<sup>3</sup>

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**ABSTRACT**

**Background:** Aging is a normal process. The modernization plays a vital role in aging process of an individual. The aged feel a sense of social isolation because of disjunction from various bonds viz work relationships, and diminish of relatives and friends, mobility of children to far off places for jobs. The situation of the elderly still worsens when there is presence of chronic diseases, physical incapacity and financial stringency.

**Objective:** To know the health profile and health related problems of the old age inmates residing at geriatric homes.

**Material and Methods:** A cross sectional study was carried out in geriatric homes of urban and periurban areas of Ahmedabad during January 2008 to January 2009.

**Result:** Out of total 530 inmates, 45.85% were males and 54.15% were females. 93.77% reported one or more health related complaints. 37.4% were obese and 11.9% were underweight. Most common presenting symptoms were: loss of teeth (70%), joint pain (60.2%), impaired vision (44.2%), weakness (34.9%), and insomnia (34%). 82.3% were using spectacles followed by walking sticks (21.7%) and denture (12.8%). The main health related problems were osteoarthritis (54.9%), hypertension (54.2%), cataract (16%) and diabetes mellitus (14.9%).

**Conclusion:** The study highlighted a high prevalence of morbidity and health related problems in old age groups. We need to strengthen geriatric health care services, social support by people, proper implementation of geriatric related legislation by government and further research like qualitative research to explore the problems of the elderly.

**Key words:** cross sectional study, Geriatric home, health profile.

**INTRODUCTION**

"Forty is the old age of youth; fifty is youth of old age." - a French phrase meaning that natural process of waxing and waning of the body ageing which start at very young age but is visible only in old age<sup>1</sup>

There has been a progressive increase in both the number and proportion of the aged in India over time, particularly after 1951. Between 1901 and 1951, the proportion of population over age 60 years increased marginally from 5 percent to

5.4 percent, while by 2001 this had increased to 7.0 percent. The size of the elderly rose in absolute terms during the last century from 12 million in 1901 to approximately 71 million in 2001 and is likely to reach 113 million in 2016. The proportion of elderly is much higher in the rural areas than in the urban areas and the increase is greater among women <sup>2</sup>. The modernization plays a vital role in aging process of an individual. The aged feel a sense of social isolation because of disjunction from various bonds viz work relationships, and diminish of

relatives and friends, mobility of children to far off places for jobs. The situation of the elderly still worsens when there is presence of chronic diseases, physical incapacity and financial stringency<sup>3</sup>.

Presently, there are 1018 geriatric homes in India today. Out of these, 427 homes are free of cost while 153 geriatric homes are on pay and stay basis, 146 homes have both free as well as pay and stay facilities and detailed information is not available for 292 homes. A total of 371 geriatric homes all over the country are available for the sick and 118 homes are exclusive for women. A majority of the geriatric homes are concentrated in the developed states including Gujarat<sup>4</sup>. The present study is to understand the health problems of elderly and analyse them.

Objective of the study is to know the health profile and health related problems of the old age inmates residing at geriatric homes.

## MATERIAL AND METHODOLOGY

The cross sectional study was carried out in geriatric homes of urban and periurban areas of Ahmedabad. A list of geriatric homes of Ahmedabad was obtained. The present study was conducted from January 2008 to January 2009. All inmates more than 60 years of age were included in study. Predesigned, pretested questionnaire was used for the study. Prior permission was taken from trusty/manager of geriatric home. Before data collection informed consent was taken from inmates. Each individual in the study was subjected to personal interview and clinical examination. Complete general and systemic examination was carried out for all the inmates of geriatric homes, especially Respiratory, Cardiovascular, Gastrointestinal, Genitourinary and Central nervous system were examined and findings were recorded on proforma. Information related to chronic diseases was reported based on their report of investigation done by their physician/doctor or file of patient. Data entry and data analysis was done in Epi-info software version 3.5. Percentage and chi-square test was applied.

## RESULTS

530 inmates were examined in all 13 geriatric homes in Ahmedabad district. Among them 45.85% (243) were males and 54.15% (287) were

females (Table 1). It was observed that 473(89.2%) of them were married, 86(78.8%) were widows / widowers, 14(2.9%) were separated and 57(10.8%) were unmarried. 497(93.77%) reported one or more health related complain.

**Table 1:** Age and Sex wise distribution of inmates of geriatric homes

| Age<br>(in<br>years) | Sex              |                    | Total<br>No. (%) |
|----------------------|------------------|--------------------|------------------|
|                      | Males<br>No. (%) | Females<br>No. (%) |                  |
| 60-70                | 101(41.6)        | 145(50.5)          | 246(46.4)        |
| 70-80                | 110(45.3)        | 120(41.8)          | 230(43.3)        |
| 80-90                | 29(11.9)         | 19(6.6)            | 48(9.1)          |
| 90-100               | 3(1.2)           | 2(0.6)             | 6(1.1)           |
| 100-110              | 00(0)            | 1(0.3)             | 1(0.1)           |
| Total                | 243(45.85)       | 287(54.15)         | 530(100)         |

Half (50.7%) of inmates were having normal Body Mass Index (BMI). 37.4% were overweight. More female inmates (41.8%) were overweight and more male inmates (16.0%) were underweight but there was no significant difference in the BMI among males and females (Table 2).

**Table 2:** Distribution of inmates according BMI

| BMI        | Males (%)<br>(n=243) | Females<br>(%) (n=287) | Total (%)<br>(n=530) |
|------------|----------------------|------------------------|----------------------|
| <18.5      | 39(16.0)             | 24(8.3)                | 63(11.9)             |
| 18.5-24.99 | 126(51.9)            | 143(49.5)              | 269(50.7)            |
| ≥ 25       | 78(32.5)             | 120(41.8)              | 198(37.4)            |

Most common presenting symptoms of the elderly were: loss of teeth (70%), joint pain (60.2%), impaired vision (44.2%), weakness (34.9%), and insomnia (34%) (Table 3).

Most of inmates (82.3%) were using spectacles for better vision followed by walking sticks (21.7%) and denture (12.8%). There was no significant difference among males and females and use of supportive aids (Table 4).

More than half (61.3%) of patients were suffering from morbidity of musculoskeletal system (Table 5). Among them majority of inmates were suffering from osteoarthritis (54.9%). More females (62.0%) were suffering from osteoarthritis than males (46.5%). Significant difference was found among males and females ( $\chi^2=13.87$ ,  $p<0.05$ ) (Table 6).

**Table 3:** Common presenting symptoms among inmates

| Symptoms            | Males (%) (n=243) | Females (%) (n=287) | Total (%) |
|---------------------|-------------------|---------------------|-----------|
| Loss of teeth       | 163(67.1)         | 208(72.5)           | 371(70.0) |
| Joint pain          | 117(48.1)         | 202(70.4)           | 319(60.2) |
| Impaired vision     | 109(48.1)         | 125(43.6)           | 234(44.2) |
| Impaired memory     | 79(32.5)          | 105(36.6)           | 184(34.7) |
| Weakness            | 87(35.8)          | 98(34.1)            | 185(34.9) |
| Insomnia            | 63(25.9)          | 117(40.8)           | 180(34.0) |
| Constipation        | 50(20.6)          | 70(24.4)            | 120(22.6) |
| Giddiness /Fainting | 36(14.8)          | 36(12.6)            | 72(13.6)  |
| Poor appetite       | 32(13.2)          | 59(20.6)            | 91(17.2)  |
| Body ache           | 23(9.5)           | 53(18.5)            | 76(14.3)  |
| Frequency of fall   | 19(7.8)           | 22(7.7)             | 41(7.7)   |
| Pedal oedema        | 14(5.8)           | 23(8.0)             | 37(7.0)   |
| Cough               | 20(8.2)           | 17(6.0)             | 37(7.0)   |
| Headache            | 15(6.2)           | 21(7.3)             | 36(6.8)   |
| Loss of weight      | 16(6.6)           | 19(6.6)             | 35(6.6)   |
| Shortness of breath | 13(5.3)           | 17(5.9)             | 30(5.7)   |
| Tremors of hand     | 13(5.3)           | 13(4.5)             | 26(4.9)   |
| Urinary problems*   | 13(5.3)           | 8(2.8)              | 21(4.0)   |
| Breathlessness      | 11(4.5)           | 9(3.1)              | 20(3.8)   |
| Diarrhoea           | 4(1.6)            | 10(3.5)             | 14(2.6)   |

(Multiple Response)

\*Urinary problems (incontinence, frequency of urination, hesitation)

**Table 4:** Use of supporting aids due to ageing

| Use of aids*   | Males (%) (n=243) | Females (%) (n=287) | Total (%) (n=530) |
|----------------|-------------------|---------------------|-------------------|
| Spectacles     | 198(81.5)         | 238(82.9)           | 436(82.3)         |
| Walking sticks | 52(21.4)          | 63(22)              | 115(21.7)         |
| Denture        | 38(15.6)          | 30(10.5)            | 68(12.8)          |
| Knee cap       | 6(2.5)            | 9(3.2)              | 15(2.8)           |
| Walker         | 3(1.2)            | 9(3.1)              | 12(2.3)           |
| Hearing aids   | 3(1.2)            | 3(1.0)              | 6(1.1)            |
| Back belt      | 4(1.6)            | 5(1.7)              | 9(1.7)            |
| Wheel chair    | 0                 | 1(0.003)            | 1(0.001)          |

(Multiple response)\*

More than half 300 (56.6%) of inmates had one or the other diseases of cardiovascular system (Table 5). Hypertension was found in maximum 287(54.2%) inmates. Hypertension was more common among females (59.6%) as compared to males (47.7%). This difference was statistically significant ( $\chi^2=8.27$ ,  $p<0.05$ ) (Table 6). 9.4% of inmates had diseases of respiratory system (Table 5), and 7.9% had bronchial asthma (Table 6). Health related problems in relation to dermatological disorders (10.9%), GI system (7.4%), Psychiatric disorders (4%), GUT (1.2%),

CNS and thyroid disorders (1.7%) were found (Table 5).

**Table 5:** Prevalence of morbidities of inmates according to system affected

| System diseases           | Males (n=243) | Females (n=287) | Total (%) (n=530) |
|---------------------------|---------------|-----------------|-------------------|
| Musculoskeletal system    | 122(50.2)     | 193(67.2)       | 325(61.3)         |
| Cardiovascular system     | 121(49.8)     | 179(62.4)       | 300(56.6)         |
| Dermatological disorders  | 22(9.1)       | 36(12.5)        | 58(10.9)          |
| Respiratory system        | 27(11.1)      | 23(8.0)         | 50(9.4)           |
| GI system                 | 15(6.2)       | 24(8.8)         | 39(7.4)           |
| Psychiatric disorders     | 13(5.3)       | 8(2.7)          | 21(4.0)           |
| Central Nervous Disorders | 4(1.6)        | 5(1.7)          | 9(1.7)            |
| GUT                       | 2(0.8)        | 4(1.4)          | 6(1.2)            |
| Thyroid disorders         | 4(1.6)        | 5(1.7)          | 9(1.7)            |

(Multiple morbidities present)

The prevalence of cataract 16%, diabetes mellitus 14.9%, deafness 12.5%, were also found

in the present study (Table 6). One male (0.4%) inmate was suffering from oral cancer and 2.8% of the females were suffering from either of the breast, uterine or cervix cancer. Over all

prevalence of cancer among the inmates was 1.7% in the present study (Table 6). 33(6.23%) inmates were not suffering from any diseases.

**Table 6:** Prevalence of diseases among inmates

| Disease condition | Males(°)(n=243) | Females(°)(n=287) | Total(°)(n=530) | X <sup>2</sup> value | P value |
|-------------------|-----------------|-------------------|-----------------|----------------------|---------|
| Osteoarthritis    | 113(46.5)       | 178(62.0)         | 291(54.9)       | 13.87                | <0.05   |
| Hypertension      | 116(47.7)       | 171(59.6)         | 287(54.2)       | 8.27                 | <0.05   |
| Cataract          | 33(13.6)        | 52(18.1)          | 85(16)          | 2.01                 | >0.05   |
| Diabetes mellitus | 40(16.5)        | 39(13.6)          | 79(14.9)        | 0.86                 | >0.05   |
| Deafness          | 32(13.2)        | 34(11.8)          | 66(12.5)        | 0.21                 | >0.05   |
| Bronchial asthma  | 22(9.0)         | 20(7.0)           | 42(7.9)         | 0.78                 | >0.05   |
| Cancer            | 1(0.4)          | 8(2.8)            | 9(1.7)          | 4.45                 | >0.05   |

(Multiple morbidities present)

## DISCUSSION

Old age is the last phase of human life cycle and the duration of this period depends upon the lifestyle enjoyed so far. Old age should be regarded as normal, inevitable biological phenomenon<sup>5</sup>.

In present study 37.4% inmates were obese and 11.9% were underweight (Table 2). This is in contrast to findings of the study done by G.K.Medhi et al<sup>6</sup> (prevalence of obesity was 19.4% and of underweight was 23.6%).

70% of inmates had complains of loss of teeth. Joint pain was the second common symptom, comprising 60.2% individuals who had restriction in mobility and limiting day to day activities. Other common presenting symptoms were impaired vision (44.2%), weakness (34.9%), and insomnia (34%) (Table 3). In a study done by H.M.Swami et al<sup>7</sup> pain in joints (38%), limitation of movements (22.4%), indigestion/heart burn (18.2%), backache (15.3%), and excessive tiredness/weakness (17.9%) were common finding. 93.77% had one or more health related problems, whereas Ray<sup>8</sup> observed same in 81.3% and SPS Bhatia<sup>9</sup> in 86.1% aged persons.

54.9% of inmates were suffering from osteoarthritis (Table 6). M.K.Sharma et al<sup>10</sup> observed osteoarthritis in 57.2% individuals. More females (62.0%) were suffering from osteoarthritis than males (46.5%). The reason for this may be that the post menopausal females suffer more from osteoporotic and degenerative changes due to hormonal withdrawal. High prevalence of arthritis/joint pain among females

was also reported by N.P.Das et al<sup>2</sup> (Female-57.1%, Male-43%).

In a study by Surekha Kishore et al<sup>11</sup> prevalence of hypertension in elderly persons was 41.4%. A study conducted in Chandigarh by Kumar<sup>12</sup> found 44.9% prevalence of hypertension. This is comparable with present study (54.2%). Hypertension was more common among females (59.6%) as compared to males (47.7%) in present study. Chadha et al<sup>13</sup> reported prevalence rate of 58.8% and 52.2% among females and males respectively. Similar results were also reported by SPS Bhatia<sup>9</sup> (Females-46.4%, Males-34.9%).

In this study dermatological problems were found in 10.4% inmates (Table 5). Similar finding was observed by the Kokhar<sup>14</sup> (8.5%).

9.4% of inmates had diseases of respiratory system (Table 5). Similar finding was reported by H.M.Swami et al<sup>7</sup>(8.6%) and Kishore<sup>15</sup> (7.3%). RB Gurav et al<sup>16</sup> found prevalence of bronchial asthma 7.92%, which matches with the present study (7.9%) (Table 6).

The prevalence of diabetes mellitus was 14.9% in present study (Table 6), similar finding was seen in study conducted by H.M.Swami et al<sup>7</sup> (12.2%).

Compared to our study results, higher GIT morbidity was found amongst study conducted by M.K. Sharma et al<sup>10</sup>(7.4% versus 31.9%)(Table 5). Prevalence of genitourinary disorder was found 1.2% in present study, where as in the study conducted in rural area of Varansi district<sup>17</sup> and Rajasthan based study<sup>18</sup> prevalence of genito urinary disorder was 5% and 2% respectively.

The presence of central nervous system problems and psychiatric disorders among the inmates were 1.7% and 4% respectively (Table 5). Rahul Prakash et al<sup>18</sup> reported the prevalence of disorders of nervous system to be 8.6% in elderly persons which is much higher as compared to the present study. 38.4% prevalence of psychiatric disorders was reported by Arvind Mathur<sup>19</sup>. The rapid urbanization and social modernization has brought breakdown in family values and the framework of family support, economic insecurity, social isolation and elderly abuse leading to a host of psychological illness<sup>20</sup>.

Eye problems were found to be present in 19.6% of inmates. The leading cause of diminished vision in developing countries is cataract, which was found in present study in 16% of elderly inmates (Table 5). SPS Bhatia<sup>9</sup> observed same in 18.6% of aged persons. 12.5% inmates were suffering from deafness (Table 6). This is in agreement with a study conducted in Pondicherry<sup>21</sup> (15.4%).

## RECOMMENDATION

The study highlighted a high prevalence of morbidity and health related problems in old age group. We need to develop geriatric health care services, regular health check up, social support by people, proper implementation of geriatric related legislation by government and training to health care providers and further research like qualitative research to explore the problems of the elderly.

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