



## Prevalence of Morbidity Profile among Geriatric Population in Urban Field Practice Area, Manikeshwari

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## ABSTRACT

**Introduction:** India has got the label of “an ageing nation” due to contribution of elderly population to demographic figures increasing day by day. Elderly persons face dual disease burden that is communicable as well as non-communicable diseases.

**Objectives:** To find out prevalence of various geriatric morbidities.

**Methodology:** A community-based cross-sectional study was conducted among 463 geriatric persons residing in urban field practice area from Jan 2018 to June 2018.

**Results:** Overall prevalence of musculoskeletal problems was found 72.3%. Prevalence of respiratory problems like asthma, tuberculosis etc. was 17.3%. As the age increases number of participants with presence of any morbidities also increases and this difference was found statistically significant. Presence of any morbidity was found higher among widow or widower compared to married participants and this difference was also found statistically significant.

**Conclusions:** Present study shows higher prevalence of morbidities among geriatric population like musculoskeletal disorders, hypertension, diabetes mellitus, impaired vision, anemia etc. Increased life expectancy, rapid urbanization and lifestyle changes all contribute to higher prevalence of morbidities. Lifestyle modification, appropriate delivery of preventive, curative and rehabilitative health care services to geriatric age group would definitely help them to lead a life in a healthy manner.

**Key words:** prevalence, geriatric morbidity, life expectancy, health care services.

## INTRODUCTION

In India there is rapid growth in aged population constituting 8.2% of country population and is projected to rise to 12.4% in 2026<sup>1</sup>. In this developing world, where the ageing of the population is rapidly increasing in one hand while in other hand there is slow deformation of joint family traditional practices, social values and increasing number of old age homes for elderly.

Certain diseases are more frequent among elderly than that of the young people, degeneration diseases of heart and blood vessels, visual defects,

hearing impairments, cancer, accidents, diabetes, mental illness, diseases of locomotors system, respiratory illness, genitor-urinary tract diseases<sup>2</sup>.

Government of India's health programs and policies have been largely directed on issues such as population stabilization, maternal and child health, and infectious disease control, there are very few policies for elderly. However, current statistics for the elderly in India shows a prologue to a fresh lay down of medical, social, and economic problems that could arise if a timely initiative in this direction is not taken by the program managers and policy makers. There is a need to focus on the med-

ical and socioeconomic problems that are being faced by the geriatric population in India, and strategies for bringing about evolution in their quality of life.

Urbanization, industrialization has already led to and would be leading to an increased number of slums, which is a great challenge to the government sector in terms of maintaining the health of this population. At this point in time, geriatrics is not a widely recognized specialty in India unlike the other clinical specialties. Very few institutions have recognized training facilities for geriatrics in India. Consequently and understandably, funding for geriatric studies and research is limited.<sup>3</sup>

Keeping this in mind this study was undertaken in field practice area of Urban Health and Training Centre of Department of Community Medicine, Gulbarga Institute of Medical Sciences, Kalaburagi to find out prevalence of various morbidities among geriatric population residing in said area.

## MATERIAL & METHODS

A community-based cross-sectional study was conducted among elderly persons living in the urban area Manikeshwari, which is field practice area of Urban Health and Training Centre of Department of Community Medicine, Gulbarga Institute of Medical Sciences in Kalaburagi. Study period was from Jan 2018 to June 2018. The study area has a population of 50,000 according to recent census.

**Sample size :** Considering default prevalence of (p) 50% for geriatric morbidity and an allowable error of 5%, sample size can be calculated by the formula  $n = (4pq) / l^2 = 400$ . So sample size collected was 463.

**Inclusion Criteria:** Person above age of 60 years, those who are residing in said field practice area for more than 2 years and persons who were willing to participate in the study were included.

**Exclusion Criteria:** Person < 60 years, those who are not residing in said field practice area for more than 2 years and persons who were not willing to participate in the study were excluded.

**Data collection:** House to house survey was conducted and persons above 60 years of age were identified and included in the study after obtaining their informed verbal consent. A set of pre designed, pre tested questionnaire was prepared in English as well as local vernacular language and same used to collect data. Information regarding socio-demographic profile ( age, sex, occupation, education, religion, type of family, number of family members, per capita income per month, marital status, living arrangements of the study partici-

pants was obtained. The socioeconomic status was calculated using modified B G Prasad Classification. On the basis of chief complaints, past history, through clinical examination, cross checking of medical records and medications taken by the participant's provisional diagnosis regarding different morbidities made at the time of interview. For study purpose morbidity was defined as any deviation from normal physiological wellbeing. Blood pressure was measured using a standardized mercury sphygmomanometer and the weight by an analog weighing machine after standardization.

## RESULTS

**Table 1** shows that in present study majority 68.2% of the participants belonging to age group of 60 to 69 years. There are 58.5% females while 41.5% males included in the study. 56.8% study participants were found illiterate in present study. Most 59.8% participants were married. 70% participants were not involved in any occupation. 30.2% and 28.9% participants were belonging to socioeconomic class V and class IV respectively. Majority 53.3% participants were living with their spouse, children and grandchildren.

**Table 1: Sociodemographic profile of respondents**

Variables	Number (Percentage)
<b>Age</b>	
60-69	316 (68.2)
70-79	103 (22.3)
≥80	44 (9.5)
<b>Gender</b>	
Male	192 (41.5)
Female	271 (58.5)
<b>Education</b>	
Literate	200 (43.2)
Illiterate	263 (56.8)
<b>Marital status</b>	
Married	277 (59.8)
Widow/Widower	186 (40.2)
<b>Occupational status</b>	
Currently working	139 (30)
Not working	324 (70)
<b>Socioeconomic class*</b>	
Class I	23 (5)
Class II	72 (15.5)
Class III	94 (20.3)
Class IV	134 (28.9)
Class V	140 (30.2)
<b>Living arrangements</b>	
Alone	43 (9.3)
With spouse	57 (12.3)
With spouse, children	116 (25.1)
With spouse, children, grand children	247 (53.3)
<b>Total</b>	463 (100)

\* Families are classified as per Modified BG PRASAD classification socioeconomic status scale.

**Table 2 Prevalence of various morbidities among study population (n=463)**

Morbidities	Overall Prevalence (n=463)	Prevalence in Males (n=210)	Prevalence in Females (n=253)
Musculoskeletal problems	335 (72.3)	154 (73.3)	181 (71.3)
Respiratory	80 (17.3)	58 (27.6)	22 (8.7)
Gastrointestinal track	109 (23.6)	43 (20.5)	66 (26.1)
Genitourinary	19 (4.1)	7 (3.3)	12 (4.7)
Nervous system	23 (5.0)	9 (4.3)	14 (5.5)
Diabetes mellitus	99 (21.4)	39 (18.6)	60 (23.7)
Hypertension	246 (53.2)	119 (56.7)	127 (50.2)
Impaired vision	271 (58.6)	143 (68.1)	128 (50.6)
Impaired hearing	27 (5.9)	13 (6.2)	14 (5.5)
Anemia	170 (36.8)	73 (34.8)	97 (38.3)
Skin	42 (9.1)	23 (11.0)	19 (7.5)

(Multiple response possible; Figures in parenthesis indicates percentage)

**Table 3 Association of morbidities and socio demographic variables**

Socio-demographic Variables	Morbidities			X <sup>2</sup> p value
	Present (n=409)	Absent (n=54)	Total (n=463)	
<b>Age Group</b>				
60-69	230 (84.9)	41 (15.1)	271 (58.5)	X <sup>2</sup> = 9.45 p= 0.008
70-79	125 (91.2)	12 (8.8)	137 (29.6)	
≥80	54 (98.2)	1 (1.8)	55 (11.9)	
<b>Sex</b>				
Male	190 (90.5)	20 (9.5)	210 (45.4)	X <sup>2</sup> = 1.70 p= 0.09
Female	219 (86.6)	34 (13.4)	253 (54.6)	
<b>Educational Status</b>				
Literate	171 (85.5)	29 (14.5)	200(43.2)	X <sup>2</sup> = 2.28 p= 0.13
Illiterate	238 (90.5)	25 (9.5)	263(56.8)	
<b>Occupational status</b>				
Currently working	118 (84.9)	21 (15.1)	139 (30.0)	X <sup>2</sup> = 1.83 p= 0.17
Not working	291 (89.8)	33 (10.2)	324 (70.0)	
<b>Marital status</b>				
Married	234 (84.5)	43 (15.5)	277 (59.8)	X <sup>2</sup> = 9.06 p= 0.002
Widow/Widower	175 (94.1)	11 (5.9)	186 (40.2)	
<b>Socioeconomic class</b>				
Class I	21(91.3)	2(8.7)	23 (5.0)	X <sup>2</sup> = 1.02 p= 0.90
Class II	63 (87.5)	9 (12.5)	72 (15.5)	
Class III	83 (88.3)	11 (11.7)	94 (20.3)	
Class IV	116 (86.6)	18 (13.4)	134 (28.9)	
Class V	126 (90.0)	14 (10.0)	140 (30.2)	
<b>Living arrangements</b>				
Alone	40 (93.0)	3 (7.0)	43 (9.3)	X <sup>2</sup> = 1.30 p= 0.72
With spouse	49 (86.0)	8 (14.0)	57 (12.3)	
With spouse, children	103 (88.8)	13 (11.2)	116 (25.1)	
With spouse, children, grand children	217 (87.9)	30 (12.1)	247 (53.3)	

**Table 2** shows musculoskeletal morbidities, respiratory system morbidities, prevalence of hypertension, impaired vision, impaired hearing and skin problems found more in males compared to female participants. The morbidities more prevalent in females compared to male participants were of gastrointestinal track, genitourinary, nervous system, diabetes mellitus and anemia. Total numbers of morbidities reported among the geriatric participants were 1421, so the morbidity load per person was 3.07

**Table 3** shows association morbidities with various

socio demographic variables. In present study it was found that as the age of participants increases number of persons with presence of morbidities also increases and this difference was found statistically significant (X<sup>2</sup> = 9.45 and p= 0.008) It was seen that married people had comparatively more chance of getting ill than those who were widowed. This association was found to be significant (X<sup>2</sup> =9.06, p=0.002) No statistically significant difference was found among sex of the participants and number of persons with presence of morbidities. (X<sup>2</sup> = 1.70 and p = 0.09) The educational status has no significant association with morbidity(X<sup>2</sup>

=2.28,  $p=0.13$ ). The occupational status has no significant association with morbidity ( $X^2 = 1.83$ ,  $p=0.17$ ). The socioeconomic status was found to have no significant association with morbidity ( $X^2 = 1.02$ ,  $p=0.90$ ). No significant association was found between living arrangements and morbidity ( $X^2 = 1.30$ ,  $p=0.72$ ).

## DISCUSSION

In present study overall prevalence of musculoskeletal problems like arthritis, spondylitis osteoporosis among geriatric population was 72.3%. **H Chandwani**<sup>4</sup> in his study reported 78.1% prevalence of arthritis which was higher than present study. **Janki Bartwal**<sup>5</sup> and **Nabarun Karmakar**<sup>6</sup> in their studies shows prevalence of musculoskeletal morbidity 34.8% and 45.0% respectively which was lesser than present study. Another study conducted by **Jain NC**<sup>7</sup> shows 43.33% prevalence of arthritis (musculoskeletal morbidities) **Pranay A. Jadav**<sup>8</sup>, **Vandana Verma**<sup>9</sup> and **R. Shankar**<sup>10</sup> in their studies finds out prevalence of musculoskeletal morbidity 64.9%, 59.7% and 57.08% respectively which was lesser than present study. Various factors like geographical variations, socioeconomic class and literacy status come into play for showing higher prevalence of musculoskeletal problems in present study compared to other studies.

Respiratory morbidities like asthma, tuberculosis etc was reported 17.3% in present study. Very near findings (20.2%) were reported in study conducted by **Rajshree Bhatt**<sup>11</sup>, **Nabarun Karmakar**<sup>6</sup> and **Vinay Kumar**<sup>12</sup> in their studies shows prevalence of Respiratory morbidities 28.0% and 45.6% respectively which was higher than present study. **Vandana Nikumb**<sup>13</sup> in her study finds prevalence of Respiratory morbidities 11.9% which was lesser than present study.

Prevalence of geriatric morbidities was found higher in widow/ widower compared to married participants in this study and the probable reasons was loneliness, depression, lack of support from the society, economic responsibility and lack of personal care etc.

Prevalence of gastrointestinal problems like gastritis, constipation, diarrhoea etc was found 23.6% in present study. **Janki Bartwal**<sup>5</sup> and **Rahul Prakash**<sup>14</sup> in their studies reported prevalence of gastrointestinal problems 17.5% and 4.7% respectively which was lesser than present study. **L Subedi**<sup>15</sup> in their study shows gastrointestinal morbidity 43.0% which was higher than present study

In present study it was found that very few number of participants 4.1% had genitourinary problems like burning micturition, increase frequency of

urination, vaginal discharge in females while prostatic enlargement in males etc. **Sanjay Polisetty**<sup>16</sup> and **Shilpa Sahukaiah**<sup>3</sup> in their studies reported prevalence of genitourinary problems 9.3% and 8.71% respectively which was higher than present study. **Ankit M. Sheth**<sup>17</sup> in his study reported 11.0% prevalence of genitourinary problems which was quite higher than this study.

Nervous system problems like hemeparesis, epilepsy, TIA was found 5.1% in present study. Very near findings 4.8% reported by **Janki Bartwal**<sup>5</sup> in her study. **Shilpa Sahukaiah**<sup>3</sup> in her study shows 6.66% participants suffered from Nervous system disorders.

Overall prevalence of Diabetes mellitus was found 21.4% in present study. Very near findings 19.7% reported by **Shahul Hameed**<sup>18</sup> in his study. **L Subedi**<sup>15</sup> in their study shows 15% study participants suffered from Diabetes mellitus which was lesser than present study.

In present study 53.2% study participants suffered from hypertension. Very near findings 56.8% reported by **Shahul Hameed**<sup>18</sup> in his study. **Kajal Srivastava**<sup>19</sup> and **Nabarun Karmakar**<sup>6</sup> in their studies reported prevalence of hypertension 22.2% and 12.3% respectively which was lesser than present study.

Overall prevalence of vision problems like cataract and refractive errors etc was 58.6% in present study. Very near findings 53.6% reported by **Janki Bartwal**<sup>5</sup> in her study. **Sanjay Polisetty**<sup>16</sup> in his study shows 76.3% elderly persons suffered from eye problems which was higher than present study. **R Shankar**<sup>10</sup> in his study reported 48.33% prevalence of cataract which was lesser than our study.

5.9% elderly people found to be suffered from hearing problems in present study.

**Pranay A. Jadav**<sup>8</sup> and **Shilpa Sahukaiah**<sup>3</sup> in their studies shows prevalence of hearing problems 14.0% and 10.76% respectively which was higher than present study.

In present study prevalence of anemia was found 36.8%. Very near findings 42.0% reported by **Nabarun Karmakar**<sup>6</sup> in his study. **Deotale M. K**<sup>1</sup> in his study shows 32.4% elderly persons suffered from anemia which was lesser than present study. Higher prevalence of anemia 68.7% was reported by **Abhishek Pathania**<sup>20</sup> in his study and this may be due to socio- cultural and geographical variations.

Prevalence of skin problems like pruritus, scabies etc was found 9.1% in present study. Very near findings 8.6% reported by **Janki Bartwal**<sup>5</sup> in her study. **Sanjay Polisetty**<sup>16</sup> in his study shows 3.7%

suffered from skin problems which was lesser than present study.

## CONCLUSION

Present study highlighted that nearly two thirds of the study participants suffered from musculoskeletal problems and more than half were suffered from hypertension and visual defects. There is need to increase awareness through IEC activities among elderly population for more utilization of available health care services like regular medical checkups for prevention and early detection of chronic diseases, prompt treatment and timely referral. Arrangement of free medical camps and specialized geriatric units for provision of preventive, promotive, curative and rehabilitative services focused on geriatric health.

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