

## MORBIDITY PROFILE AMONG ELDERLY POPULATION IN A RURAL FIELD PRACTICE AREA OF DEPARTMENT OF COMMUNITY MEDICINE, ANDHRA MEDICAL COLLEGE, VISAKHAPATNAM

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### ABSTRACT

#### BACKGROUND

The elderly are one of the most vulnerable and high-risk groups in terms of health and their health-seeking behaviour is crucial in any society.

The aim of the study is to assess the morbidity profile among the elderly population aged 60 years and above.

#### MATERIALS AND METHODS

A community-based, cross-sectional, observational study was carried out in the Rural Health and Training Centre (RHTC), Simhachalam, attached to Community Medicine Department, Andhra Medical College, Visakhapatnam. A convenient sample of 100 elderly individuals were considered as study subjects. Semi-structured pre-tested interview schedule has been used in interviewing the subjects. General physical examination and checking of individual medical records has been done. Data was entered using Microsoft excel and analysis was done by SPSS 20, trial version. Relevant statistical tests like Chi-square were applied. Ethical considerations- An informed and written consent was taken from all the participants before conducting the study.

#### RESULTS

In our study, it was observed that visual problems was the commonest morbidity, 72% were suffering from it followed by musculoskeletal problems and cardiovascular problems, 29% elderly were having dental problems, 24% were having endocrine/DM-2 problems, ENT/hearing loss 23%, gastrointestinal problems 21%, 15% were having pallor, 12% skin problems, CNS or cerebrovascular problem 12% and respiratory problems 3%. One individual suffering with genitourinary problems and one elderly was having malignancy.

#### CONCLUSION

The prevalence of morbidity among elderly aged 60 years and above was high. Hence, special clinics for elderly need to be organised and integrated services should be provided.

#### KEYWORDS

Elderly, Morbidity Profile, Rural Health and Training Centre (RHTC).

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#### BACKGROUND

The world is in the midst of a unique and irreversible process of demographic transition that will result in older population everywhere. Population ageing is a recognised international reality, both in developed and developing countries. Increased longevity is a triumph for public health and is the result of social and economic development of society. But, with longevity, exposure to known and

unknown health risks is longer and impact of biological decline of ageing is greater in later life.

The elderly population has special health problems that are basically different from those of adult or young. Most diseases in aged are chronic in nature; cardiovascular, arthritis, stroke, cataract, deafness, cancer, chronic infections, etc. and disease process are usually multiple. In India, almost 50% of the elderly suffer from chronic diseases with the prevalence showing an increasing trend with rising age.<sup>1</sup> This poses a great responsibility on health services especially in developing countries like India where there is greater strain on available health infrastructure.

A thorough examination of geriatric morbidity and relative risk factors are required to improve the delivery of healthcare to the elderly. In the light of above facts, the present study was carried out in rural field practice area of Department of Community Medicine to know the

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sociodemographic profile of elderly population and to assess the morbidity among elderly population.

**AIMS AND OBJECTIVES**

To assess the morbidity profile among the elderly population aged 60 years and above.

**MATERIALS AND METHODS**

A community-based, cross-sectional, observational study was carried out in the Rural Health and Training Centre (RHTC), Simhachalam, attached to Community Medicine Department, Andhra Medical College, Visakhapatnam.

Sampling Technique- Three subcentres (Adavivaram, Indira Nagar and Lakshmi Nagar) were selected by lottery method out of twelve subcentres of RHTC. House-to-House survey was done in each subcentre till the required sample of 100 was achieved.

**Inclusion Criteria**

Elderly population equal to or more than 60 years willing to participate in the study.

**Exclusion Criteria**

Elderly 60years and above not willing to participate and very sick elderly.

Sample Size- A convenient sample of 100 elderly individuals were considered as study subjects.

**Collection of Data**

Semi-structured pre-tested interview schedule has been used in interviewing the subjects. General physical

examination and checking of individual medical records has been done. The past history of diabetes mellitus, hypertension, asthma and cataract, refractive error whether diagnosed, treated or taking treatment was asked. Where ever medical records were available, the diagnosis was obtained from the written medical records.

**Activities of Daily Living (ADL)**

ADL's are the essential elements of self-care. Inability to independently perform even one activity may indicate a need for supportive services. It includes bathing, dressing, transfer and feeding (Barthels index, Katz Index<sup>2</sup>).

**Instrumental Activities of Daily Living (IADL)**

These are associated with independent living in the community and provide a basis for considering the type of services necessary in maintaining independence. It includes administering own medication, grocery shopping, preparing meals, using the telephone, driving and transportation, handling own finances, housekeeping and laundry (Lawton scale).<sup>3</sup>

**Analysis**

Data was entered using Microsoft Excel and analysis was done by SPSS 20, trial version. Relevant statistical tests like Chi-square were applied.

Ethical considerations- An informed and written consent was taken from all the participants before conducting the study.

**RESULTS**

Sl. No.	Characteristics	Males N=36	Females N=64	Total N=100	
1.	Age (yrs.)	60-65	15	38	53
		66-75	16	21	37
		76-85	4	4	8
		>85	1	1	2
2.	Religion	Hindu	33	55	88
		Muslim	1	8	9
		Christian	2	1	3
3.	Marital status	Married	31	26	57
		Widowed	4	38	42
		Single	1	0	1
4.	Literacy	Illiterate	8	37	45
		Primary school	8	15	23
		Middle school	4	6	10
		High school	10	4	14
		Intermediate	2	1	3
		Graduate and above	4	1	5

**Table 1. Baseline Characteristics of Study Population (n=100)**

Among 100 elderly persons, 36 were males and 64 were females.

SI. No.	Characteristics		Total N=100
1.	Current occupation	Employed	9
		Unemployed	26
		Retired	41
		Housewife	24
2.	Socioeconomic status	Upper middle	10
		Lower middle	36
		Upper lower	48
		Lower	6

**Table 2. Characteristics of Study Population According to Current Occupation and Socioeconomic Status**

SI. No.	System*	Male (%)	Female (%)	Total (%)
1.	Visual problems	27	45	72
2.	Musculoskeletal problems	17	45	62
3.	Cardiovascular problems/hypertension	17	30	47
4.	Dental problems	11	18	29
5.	Endocrine/type 2 diabetes	11	13	24
6.	Ear, nose,throat/hearing loss	10	13	23
7.	Gastrointestinal problems	9	12	21
8.	Anaemia	4	11	15
9.	Skin problems	5	7	12
10.	Central nervous system/cerebrovascular problems	5	7	12
11.	Respiratory problems	1	2	3
12.	Genitourinary problems	0	1	1
13.	Malignancies	0	1	1

**Table 3. Distribution of Study Participants According to System Wise Morbidity**

Table 3 reveals that visual problems was the commonest morbidity 72% were suffering from it followed by musculoskeletal problems and cardiovascular problems. 29% elderly were having dental problems, 24%were having endocrine/DM-2 problems, ENT/hearing loss 23%, gastrointestinal problems 21%, 15%were having pallor, 12% skin problems, CNS or cerebrovascular problem 12%, respiratory problems 3%, one individual suffering with genitourinary problems and one elderly was having malignancy.

SI. No.	Activities*	Dependent n (%)	Partially Dependent n (%)	Independent n (%)
1.	Bathing	1 (0.2)	18 (3)	81 (96.8)
2.	Dressing	2 (0.3)	17 (2.8)	81 (96.8)
3.	Toilet use	1 (0.2)	18 (2.8)	81 (97.0)
4.	Moving about	1 (0.2)	18 (3)	81 (96.8)
5.	Grooming	0	17 (2.8)	83 (97.2)
6.	Feeding	0	16 (2.7)	84 (97.3)
7.	Mobility	2 (0.3)	19 (3.2)	79 (96.5)

8.	Stairs	4 (0.7)	25 (4.2)	71 (95.2)
9.	Bowels and bladder activity	Incontinent	Occasional accident	Continent
	Bladder	2 (0.3)	3 (0.5)	95 (99.2)

**Table 4. Distribution of Study Participants According to Activities of Daily Living**

As per Table 4, majority of the study participants (95 to 99%) were independent and able to perform their activities of daily living. Only 2-4% were partially dependent for activities like bathing, for dressing, for toilet use, moving about, grooming, feeding and while going on stairs.

IADL*	Sex		Total= 100	P-value
	Male= 36 n (%)	Female= 64 n (%)		
Administering own medication	35 (97.2)	61 (95.3)	96 (96)	0.567
Grocery shopping	32 (88.8)	52 (81.2)	84 (84)	0.064
Preparing meals	28 (77.7)	50 (78.1)	78 (78)	0.573
Using telephone	21 (58.3)	12 (18.7)	33 (33)	0.001
Driving and transportation	11 (30.5)	3 (4.7)	14 (14)	0.001
Handling own finances	19 (52.7)	9 (14.0)	28 (28)	0.001
House keeping	33 (91.6)	58 (90.6)	91 (91)	0.999
Bed making	32 (88.8)	60 (93.7)	92 (92)	0.178
Laundry	32 (88.8)	58 (90.6)	90 (90)	0.271

**Table 5. Gender Wise Distribution of Study Participants on Performance of IADL**

As far as instrumental activities of daily living was concerned (Table 5),majority of study subjects 96% were

able to administer their own medication, 84% were able to do grocery shopping, 78% were able to prepare meals by themselves. About 33% were able to use telephone, 14% were able to drive, 28% were able to handle their own finances. About 90.5% were able to do housekeeping, 92% were able to do bed making and 90% were able to do laundry activities. More male were able to use telephone, handle own finances and transportation than female counterparts and this difference is statistically significant. More females were able to do bed making, preparing meals and laundry than males and this difference was not statistically significant.

## DISCUSSION

Majority of the study participants that is 53 belonged to the age group of 60-65 years among them 15 were males and 38 were females. Our study findings correlate with the findings of a similar study done by Lena et al<sup>4</sup> in 2009, Muralidhar MK et al<sup>5</sup> 2014 in Karnataka and Vandana Nikumb et al<sup>6</sup> in 2015 study in Urban Navi Mumbai where major fraction of the population are in the age group of 60-69 years.

As far as sex of the study participants was concerned, 64 participants were females and the ratio of male-to-female elderly was 1:1.58. Our study findings correlate with the findings of a similar study done by Vandana Nikumb et al<sup>6</sup> in 2015 in an urban area at Navi Mumbai where there are more number of females 110 (68.8%) and study done by Bhawalkar J. S et al<sup>7</sup> 2013 in urban area of Pune with females 898 (55.3%), Jadhav VS et al<sup>8</sup> 2012 in the field practice area of Rural Health Centre at Aurangabad with females 328 (52.48%).

Out of 100 elderly studied majority were Hindus, i.e. 88 followed by Muslims 9 and 3 Christians. In a similar study on the morbidity profile of elderly in Arehalli village of Hassan district Karnataka by Shiva Kumar S et al<sup>9</sup> among 100 elderly studied majority of respondents in the study 74 (74%) belonged to Hindu, 18 (18%) Muslim and 8 (8%) were Christians.

Regarding educational status of elderly, we found that out of 100 subjects, 45 were illiterate (males 8, females 37) and remaining 55 were literates. Among literates, most of them had high school or below high school education. Only 3 studied upto intermediate and 5 elderly were graduates. Our findings are similar to study done by Sanjiv Kumar Barman et al<sup>10</sup> in Bihar. In their study on morbidity profile of geriatric population in an urban community in Bihar, it was mentioned that out of 160 elderly 26 (16.25%) males and 38 (23.75%) females were illiterate, total 64 (40%) elderly were illiterates. Similar to our study, more number of females were illiterate than males. Primary school 54 (33.75%), secondary school 30 (18.75%) and high school and above were 12 (7.50%).

Among 100 study population, maximum elderly 57 were married, 42 were widowed and only 1 male was staying alone. Among those who were widowed, majority, i.e. 90% were females and 10% were males. Similar findings were observed in a study conducted by Syed Qadril and SK

Ahluwalia et al<sup>11</sup> in 2013 in an epidemiological study conducted among rural elderly of North India, out of 660 respondents majority were married (60.81%), whereas <1% were staying alone or divorced. In a similar study by MK Muralidhar et al<sup>5</sup> in 2014 on morbidities among elderly in a rural community of coastal Karnataka, out of 276 elderly about 165 (60%) were married, 104 (37.68%) were widowed, 4 (1.4%) had divorced and 3 (1%) of them were unmarried.

So far as socioeconomic status was concerned, our study analysis showed that 54 elderly belonged to lower and upper lower class, 36 lower middle, 10 upper middle class and there were none from upper class. This is comparable with study on morbidity profile among geriatric population in an urban area at Navi Mumbai by Vandana Nikumb et al 2015 showing 97.5% elderly were from lower and upper lower class while there was no one in upper class.

Regarding morbidity profile, we observed that visual problems was the commonest morbidity, 72% were suffering from it followed by musculoskeletal problems and cardiovascular problems. The most common health problem in Gurav RB et al, Vandana Nikumb et al<sup>6</sup> and Parray S. H et al<sup>12</sup> studies was also visual problems, which was 32.18%, 46.3% and 39%, respectively among elderly. Similar results were reported by K. Srivastava et al<sup>1</sup> also who stated that 37% had musculoskeletal problems, 35.8% visual disorders and 25% had cardiovascular disorders. Arthritis was the most common musculoskeletal problem contributing to 52% in the present study and was higher among females compared to males. Our study findings are in concurrence with Vsandana Nikumb<sup>6</sup> et al and Prakash Ret al<sup>13</sup> studies. 29% elderly were having dental problems, 24% were having endocrine/DM-2 problems, ENT/hearing loss 23%, gastrointestinal problems 21%, 15% were having pallor, 12% skin problems, CNS or cerebrovascular problem 12%, respiratory problems 3%, one individual suffering with genitourinary problems and one elderly was having malignancy.

Regarding activity of daily living, our study revealed that majority of elderly were independent of daily activities of living in our study. Similar results were found in another study done by Sonu U et al where most persons were independent in all activities at age of 70. Harinder Sekhon et al<sup>14</sup> in their study observed that 72% individuals were able to manage having a bath independently, 80% dress independently.

## CONCLUSION

Prevalence of high morbidity among elderly needs strengthening of geriatric health care services in accordance with the common existing problems in the community. Preventive, curative and rehabilitative programmes for the elderly are required for the control and management of health problems among elderly. In spite of the current morbidities, most of the elderly were having no impairment in their activities of daily living and instrumental activities of daily living.

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