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***Research Article***

# A STUDY ON MORBIDITY PATTERN AND CARE SEEKING BEHAVIOR OF ELDERLY IN A RURAL AREA OF WEST BENGAL, INDIA

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## ABSTRACT
Throughout the globe the elderly population is increasing-both in proportion and absolute number. Elderly people suffer from increasing morbidity-majority of which are chronic in nature. Present study aims to study the morbidity pattern among elderly in rural Bengal and also to ascertain their care seeking behavior .This cross sectional study was conducted in Singur block of West Bengal. Data were collected by interviewing the elderly with the help of a pre designed and pre tested schedule by house to house visit and Clinical examination of the elderly. Almost all (96.95% male and 98.15% female) were suffering from one or more diseases. Average morbidities were more than three. Majority (86.9%) were having chronic diseases. Common health problems were periodontal disease, dental caries, cataract, osteoarthritis, hypertension, constipation, anemia, refractive error, upper respiratory infection and glossits/stomatitis. Out of the elderly who perceived them as sick only 71.78% sought treatment. Majority (53.37%) availed modern method of treatment and more than one fourth(28.22%) sought no treatment.Only13.88% sought treatment from government health facility due to fixed outdoor timing and indifferent attitude of staff.

***Key Words*:** *Elderly, Morbidity, Care Seeking Behaviour*

## INTRODUCTION
Aging is an inevitable phenomenon in life of all living being. With the increase of life expectancy the numbers of people who are attaining old age are increasing throughout the globe. The world population of over 60 years of age, which was370 million in 1890 is expected to increase to 1100 million in 2025 (WHO, 1989). Life expectancy is steadily increasing in India also (National Health Profile of India-2008). In 2001 census the percentage of 60 plus population was 7.5% and in absolute number it was more than seven crores. Old age is associated with deterioration of health and increase in morbidity. More than half of the elderly suffer from one or more disease at any point of time (Soldo, 1986). Their increasing number demand for Comprehensive geriatric care at community level. To organize service we need to develop information base about different aspect of elderly population. Most important information that we need is their morbidity pattern in different areas of India, both in Rural and Urban areas. In this background the present study was undertaken to study the Morbidity pattern of elderly in a rural area of west Bengal and to find out their care seeking behavior during illness.

## MATERIALS AND METHODS
This cross sectional observational study was conducted in the Singur block of Hooghly district of West Bengal. It is situated about 35 km away from Kolkata. Sample size was calculated considering reported 88.9% prevalence of morbidity in elderly in Chandigarh (Swami *et al.*, 2002). Considering 5% permissible error and 95% confidence interval the sample size was calculated to be 199. Taking 5% non response rate final sample size came to be 209.Three villages of this block were randomly selected. Population of these three villages was 4513, which was sufficient to give the required sample size. A list of all the people aged 60 years and above in these three villages was prepared. From that list the required sample was selected following simple random technique. A pre designed pre tested schedule was used for the data collection. Information was collected by interview of the individual by house to house visit and clinical examination of the elderly by the investigators.

Age was enquired from the individual. In case where exact was not known age assessment was done with the help of other elderly individual family member or neighbor, correlating with events like age at marriage, age at first child birth or important national event like Independence of India or great famine of Bengal etc. Care seeking behaviour was ascertained from the elderly who were considering themselves sick at the time of data collection.
Information collected was compiled and appropriate statistical analysis was done.

## RESULTS AND DISCUSSION

In this study 204 elderly were included. Females (52%) were slightly more than the males (48%).Sex ratio was 1103 females for 1000 males. Majority (60.35 %) were in 60-69 years age group and 28 .5% were in 70-79 years age group and rest 11.2 % were 80 years and above. All the elderly were Hindus. Illiteracy was a predominant feature in female (91.59%) as well as among male (32.99%). Addiction was noted in 76% males and 55% females. Tobacco smoking and chewing, alcohol and betel leaf chewing are the predominant type of addiction. Majority are living in joint or extended nuclear family. A sizeable portion (32%) is living below poverty line.
Elderly person considered many conditions to be the manifestations of old age and accepting it as part of their life. Analysis of the perception of the elderly about their health at the time of interview revealed that 80.4% of males and 79.4% females considered themselves sick (table 1).

**Table 1: Self Perceived Health Status of Elderly Study Population at the Time of Study**

| Age (Yrs) | Total | | Sick | | Well | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female |
| 60-69 | 55 | 68 | 47(85.5) | 52(76.5) | 8(14.5) | 16(23.5) |
| 70-79 | 30 | 28 | 25(83.3) | 23(82.1) | 5(16.7) | 5(17.9) |
| ≥ 80 | 12 | 11 | 6(50.0) | 10(90.9) | 6(50) | 1(9.1) |
| All age | 97 | 107 | 78(80.4) | 85(79.4) | 19(19.6) | 22(20.6) |

*Figures in the parentheses indicates percentages*

Among males, self perceived sickness gradually decreased with aging (85.5% to50.0%).The probable explanation was that the more aged male elderly (≥80Years )did not like to disturb their care giver for condition that they considered to be the manifestation of aging. The younger elderly (<80 years) usually took care of their health themselves and they freely communicate about their discomfort to get relieve. On the other hand female by practice were always dependent on other family member for their heath and diseases from early years of life. So they were not hesitant to express their discomfort to others. There was an increased perception of sickness among female with increase in age (from 76.5% to 90.9%).
Medical examination revealed that almost all the elderly (96.95% male and 98.15% female) were suffering from one or more diseases at the time of study. The difference was small and statistically not significant ($z=0.54$, $P>0.05$). All elderly aged 70 years and above were found to be diseased. Only five elderly (2.45%) were well at the time of study in the age group of 60-69 years. All elderly in more than 80 years age group were suffering from some diseases. Similar high level of morbidities was reported by other studies. A community based study from Chandigarh reported 88.9% prevalence of morbidity in elderly (Swami *et al.,* 2002).Another study from Udupi, Karnataka have reported health problem in 100% elderly (Leena *et al.,* 2009). Another community based study from Kashmir reported at least one medical problem in 89% (Parry *et al.,* 2008).

Of all the elderly suffering from any disease 13.1 % are suffering from acute diseases, 76.9% were suffering from chronic diseases and 10% were suffering from both acute and chronic diseases. Similar observation was made by Khokhar and Mehra (2001) from Delhi. More than 90% elderly were suffering from more than one disease. In the present study prevalence of diseases was 3.46 diseases per elderly person. It was 3.34 diseases per male and 3.57 per female. This difference was small and was not statistically significant ($p > 0.05$). About one fifth are suffering from five or more diseases (21.7% in male and 24.3% in female). Disease load increases with age. Putty *et al.,* (2001) reported that in rural Tamilnadu 72.2% was suffering from two or more illnesses at the time of study.

In 67.2% elderly there is involvement of gastrointestinal system, followed by involvement of eye, cardiovascular and musculoskeletal system in 49.5%, 46.1% and 29.9% elderly respectively. Respiratory system was also involved in 29.2% study population. In 15.7% elderly there was Skin and subcutaneous tissue disease. Genito-urinary system, nervous system and ENT problem was seen in 9.8%, 5.4% and 4.9% study population. In 24% elderly there was other diseases (Table-2).

**Table 2: Distribution of elderly male and female population according to system of involvement**

| Systems | Male (n=97) | Female (n=107) | Total (n=204) |
|---|---|---|---|
| Gastrointestinal | 60(61.1) | 77(71.9) | 137(67.2) |
| Eye disorder | 48(49.5) | 53(49.5) | 101(49.5) |
| Cardio vascular | 45(46.4) | 49(45.8) | 94(46.1) |
| Musculoskeletal | 23(23.7) | 38(35.5) | 61(29.9) |
| Respiratory | 23(23.7) | 38(35.5) | 61(29.9) |
| Skin & subcutaneous tissue | 18(18.6) | 14(13.1) | 32(15.7) |
| Genito -urinary | 9(9.3) | 11(10.3) | 20(9.8) |
| Nervous | 4(4.1) | 7(6.5) | 11(5.4) |
| ENT | 4(4.1) | 6(5.6) | 10(4.9) |
| Miscellaneous | 16(16.5) | 33(30.8) | 49(24.0) |

Many elderly had multiple system involvement and many had more than one disease in a particular system. There was difference in percentage of male and female elderly affected by diseases of particular system but in no system difference was statistically significant.

Under gastrointestinal system, periodontal disease contributed to the highest proportion (38.72%) followed by Dental caries (34.31%).Peptic ulcer and cholecystitis featured out only among female (table-3).

**Table 3: Distribution of Diseases of Gastrointestinal System**

| Diseases | Male n= 97 | Female n= 107 | Total n=204 |
|---|---|---|---|
| Periodontal diseases | 37(36.14) | 42(39.25) | 79(36.72) |
| Dental caries | 30(30.92) | 40(37.38) | 70(34.31) |
| Glossitis | 10(10.30) | 6(5.60) | 16(7.84) |
| Constipation | 17(17.52) | 19(17.55) | 36(17.65) |
| Bacillary dysentery | 2(2.06) | 2(1.87) | 4(1.96) |
| Amoebiasis | 1(1.03) | 2(1.87) | 3(1.77) |
| Non ulcer dyspepsia | 1(1.03) | 2(1.87) | 3(1.47) |
| Peptic ulcer | - | 2(1.87) | 2(0.98) |
| Cholecystitis | - | 2(1.87) | 2(0.98) |
| Gastritis | 2(2.06) | 5(4.67) | 7(3.43) |
| Inguinal hernia | 1(1.03) | - | 1(0.49) |

Disease of musculoskeletal system was found in 23.7% male and 35.5% female elderly. Osteoarthritis was the most common manifestation (22.54%) in both sexes together (table-4).

**Table 4: Distribution of Diseases of Musculoskeletal System**

| Diseases | Male | Female | Total |
|---|---|---|---|
| Osteoarthritis | 17(17.35) | 29(27.10) | 46(22.54) |
| Rheumatoid arthritis | 1(1.03 | 3(2.80) | 4(1.960 |
| Kyphosis | 1(1.03) | 2(1.87) | 3(1.47) |
| Frozen shoulder | 2(2.06) | - | 2(0.96) |
| Fracture - | 2(1.87) | 2(0.96) | |
| Spondylitis | 1(1.03) | 1(0.93) | 2(0.96) |
| Bursitis | 1(1.03) | 1(0.93) | 2(0.96) |
| Hallux vulgus | 1(1.03 ) | 2(1.087) | 3(1.47) |

*Figures in the parentheses indicates percentages*

Of all the manifestation under cardiovascular system 24.74% male and 18.69% female elderly were hypertensive (Table-5), but the difference between sexes was not statistically significant ($z=1.04$, $p>0.05$)

**Table 5: Distribution of Diseases of Cardiovascular System**

| Diseases | Male n= 97 | Female n= 107 | Total N=204 |
|---|---|---|---|
| Borderline hypertension | 21(21.65) | 28(26.17 | 49(24.02) |
| Isolated systolic hypertension | 9(9.28) | 7(6.54) | 16(7.84) |
| Isolated diastolic hypertension | 5(5.15) | 4(3.74) | 9(4.41) |
| Both syst. & diast. Hypertension | 10(10.30) | 9(8.41) | 19(9.31) |
| Angina pectoris | 1(1.03) | - | 1(0.49) |
| Congestive heart failure | - | 1(0.93) | 1(0.49) |
| Internal haemarrhoid | 2(2.06) | - | 2(0.96) |
| Cardiac dysrhthmias | 1(1.03) | 3(2.80) | 4(1.96) |

In respiratory system, upper respiratory infection was the commonest, almost equal proportion in male and female. Chronic bronchitis was more common in males. Bronchial asthma was present in 4.41% of elderly persons (table-6).

**Table 6: Distribution of Diseases of Respiratory System in the elderly**

| Diseases | Male n=97 | Female n=107 | Total n=204 |
|---|---|---|---|
| Upper respiratory tract infection | 10(10.30) | 9(8.41) | 19(9.31) |
| Chronic bronchitis | 8(8.24) | 2(1.87) | 10(4.90) |
| Bronchial asthma | 5(5.15) | 4(3.74) | 9(4.41) |
| Pneumonia | 1(1.03) | - | 1(0.49) |
| Pulmonary tuberculosis | 1(1.03) | - | 1(0.49) |

Equal proportion of male and female elderly had various manifestation of eye (49.5%). Cataract was the commonest eye condition affecting 30.88% elderly study population, followed by refractive error (15.19%). Prevalence of cataract increased with age. Blindness was found in four persons (table-7). In two cases blindness was due to complication after cataract surgery and two cases due to keratomalacia in childhood.

**Table 7: Eye Condition in elderly study Population**

| Diseases | Male | Female | Total |
|---|---|---|---|
| Catarac | 29(29.87) | 34(31.78) | 63(30.88) |
| Refractive error | 15(15.46) | 16(14.96) | 31(15.19) |
| Pterigium | 8(8.25) | 5(4.67) | 13(6.37) |
| Aphakic eye | 6(6.19) | 3(2.80) | 9(4.41) |
| Destroyed eyes | 2(2.06) | 2(1.87) | 4(1.96) |
| Epiphora | 1(1.03) | 3(2.80) | 4(1.96) |
| Glaucoma | 1(1.03) | 1(0.93) | 2(0.98) |

*Figures in the parentheses indicates percentages*

Ten most common diseases among elderly were periodontal disease, dental caries, cataract, osteoarthritis, hypertension, constipation, anemia, refractive error, upper respiratory infection and glossits/stomatitis. Common diseases reported from Tamilnadu study by Purty *et al.,* (2006) were dental and periodontal diseases, joint pain, cataract, hypertension, refractive error etc. Hypertension and arthritis was reported to be common health problem in studies from Karnataka (Leena *et al.,* 2009) and Vadodara (Chandwani *et al.,* 2009). A study from Udaipur,Rajasthan (Prakash et al, 2004) reported eye diseases (70%), hypertension (48%), psycho social problem (42.6%), respiratory diseases (36%), and musculoskeletal problem (14.6%) to be the common condition in the elderly.

***Care Seeking Behavior***

His was ascertained in elderly who perceived themselves as sick at the time of study. Elderly persons considered many diseases to be the manifestation of old age. So, they did not seek treatment for these conditions.

**Table 8: Health Care Seeking of the Elderly who reported themselves sick (n=163)**

| Age group (yrs) | No of sick | Nature of Treatment | | | |
|---|---|---|---|---|---|
| | | No. Treat | Allo | Homeo | Other |
| 60-69 | 99 | 23 (23.23) | 62 (62.62) | 9 (9.09) | 5 (5.05) |
| 70-79 | 48 | 16 (33.33) | 20 (41.67) | 6 (12.50) | 6 (12.50) |
| 80 and Above | 16 | 7 (43.75) | 5 (31.25) | 4 (25.00) | 0 (0.00) |
| Total | 163 | 46 (28.22) | 87 (53.37) | 19 (11.66) | 11 (6.75) |

Even among persons who perceived sickness not all seek treatment. Health care seeking of the elderly depend on socio economic condition of the family, distance of health agency from living place, transport facility etc. Out of 163 elderly who perceived them as sick 117 (71.78%) were taking any type of treatment, rest 46 (28.22%) did not receive any treatment. Modern allopathic treatment was most popular among them. Majority availed this system of therapy (53.37%). Homeopathy was also used by a substantial percentage of elderly (11.66%).Other type of therapy like ayurveda, magic therapy; home remedy was also used by 11(6.75%) elderly. An important finding was that most of the individual is seeking therapy from Private registered practitioner (41.02%) followed by Unqualified practitioners (quack-35.89%).

**Table 9: Distribution of elderly according to agency of treatment (n=117)**

| Age group (Yrs) | Tr. Received | Agency of treatment | | | |
|---|---|---|---|---|---|
| | | Prv. | Quack. | Govt. | Other |
| 60-69 | 76 | 31 (40.79) | 30 (39.47) | 10 (13.16) | 5 (6.58) |
| 70-79 | 32 | 11 (34.37) | 10 (31.25) | 5 (15.63) | 6 (18.75) |
| 80 and Above | 9 | 6 (66.67) | 2 (22.22) | 1 (11.11) | 0 (0.00) |
| Total | 117 | 48(41.02) | 42(35.89) | 16 (13.68) | 11(9.41) |

*Figures in the parentheses indicates percentages*

Similar observation was made by Dasgupta (1991). Only 13.68% elderly were seeking therapy from government health institution and rest (9.41%) from other sources like temple, friends etc. In a study from Vadodara India (Chandwani *et al.,* 2009) 85% (38.1%-private practioner, 25.2-hospital, 21.7%-urban health centre) consulted practitioner of modern medicine. A remarkable observation of present study was the virtual absence of Ayurveda system of medicine from the rural area under study. Though government health facility is within reasonable distance the low rate of consultation was due to indifferent attitude of the staff and fixed outdoor hour in the morning.

***Conclusion***

Almost all the elderly were suffering from different morbidities-most of which were chronic in nature. Not all sick elderly were not seeking treatment and many had unrecognized diseases. This calls for development of community based geriatric care in our country in line with maternal and child care. This will provide primary care to the elderly at their door step. This must be supported by secondary and tertiary level geriatric care provided by personnel specially trained in different aspect of geriatric care.

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