



## MORBIDITY PATTERN AND HEALTH SEEKING BEHAVIOUR OF RURAL GERIATRIC POPULATION OF CENTRAL INDIA: A COMMUNITY BASED-CROSS SECTIONAL STUDY.

### Community Medicine

**Dr. Shrikrishna Nannaware**

Junior Resident, Dept. of Community Medicine, IGGMC, Nagpur

**Dr. Jyotsna Deshmukh**

Associate Professor, Dept. of Community Medicine, IGGMC, Nagpur

**Dr. Ashok Jadhao**

Professor & Head, Dept. of Community Medicine, IGGMC, Nagpur

**Mr. Sanjay Agrawal**

Statistician, Dept. of Community Medicine, IGGMC, Nagpur

### ABSTRACT

**Background:** Population aging is a worldwide phenomenon. According to population census 2011, there are nearly 104 million elderly peoples (aged 60 years and above) in India, it includes 53 million females and 51 million males. A report released by the United Nations Population Fund and Help Age India NGO suggests that the number of elderly peoples is expected to grow to 173 million by 2026. Aging results in a generalized deterioration of the most vital organs and systems, thereby leading to a lesser effectiveness in physiological functions and an increase in risk factors that leads to various diseases. Health-seeking behaviour is the sequel of remedial steps that persons undertake to cure their alleged medical ailment. **Aim and Objectives:** To assess the morbidity pattern and study the health-seeking behaviour of rural geriatric population of Nagpur district, India. **Material and Methods:** A cross sectional study will be conducted among 100 geriatric people who are residing in the field practice area of RHTC affiliated with the Indira Gandhi Government Medical College in Nagpur, from January 2022 to February 2022. data will be collected using pre-structured pre-tested proforma after obtaining informed consent. Data is entered in Excel sheet and SPSS 20 for analysis. Analysis will be done using Chi square test and a p Value of <0.05 will be taken as significant. **Results:** Out of 100 elderly people, maximum subjects (40%) belonged to the 60–65 years age group, 59% are male. Around 74% are experiencing at least one health problem. The average number of morbidities per diseased person is 2.11. The most frequent health problem is musculoskeletal problem (74%), followed by hypertension in 50% of the elderly persons. Of the 100 study subjects, majority of them preferred allopathic medicine (55%), followed by traditional medicines (7%) for their health problems. Most of the geriatric persons preferred going to a PHC/CHC/government hospital (59%) for treatment of their illness, followed by use of drug from consulting drug stores (29%) and private practitioners (12%). Those who has some education as well as those in upper class are likely to take treatment from a qualified allopathic practitioner. However, those in lower class are likely to take treatment from traditional healers or paraprofessionals. **Conclusion:** The elevated morbidity load among elderly population pressurizes for efforts to assist them with specialized healthcare. The elderly population must be made aware of periodic medical check-ups to enable prevention and early recognition of the chronic ailments. the study shows that elderly living in rural areas are the most vulnerable group in their healthcare-seeking behaviour. To overcome this, the policymakers must concentrate more on rural elderly population and their views, which stop them from seeking health care. The study showed that, although most of the elderly received treatment services from government health facilities, there is major group receiving it either from private sector or not receiving the treatment. The health-seeking behaviour of the elderly is influenced by level of education, occupation, socio-economic status and registration under govt. scheme. On the basis of these findings, it can be recommended that there is a need to develop geriatric health-care services. To tackle the issue of use of over-the-counter drugs, the existing laws should be strictly enforced and should govern the distribution of over-the-counter drugs.

### KEYWORDS

Morbidity pattern, Health seeking behaviour, Geriatric population

### INTRODUCTION

Increase in life expectancy with decrease in fertility has led to a demographic transition towards a higher proportion of older individuals in India [3]. Population aging is a worldwide phenomenon, and India is no exception. Indian population has grown by three times in the past 50 years, but the elderly population has increased more than four time [4]. Globally, 10% of the world population is elderly people and it is expected to increase to 21% in the year 2051[4]. In 2021, There are nearly 104 million elderly peoples (aged 60 years and above) in India, it includes 53 million females and 51 million males. A report released by the United Nations Population Fund and HelpAge India NGO suggests that the number of elderly peoples is expected to grow to 173 million by 2026[1]. The old age dependency ratio has increased from 10.9% in 1961 to 13.1% in 2001 and is projected to increase to 16.1% by 2021[5].

In India, the elderly people experience two types of medical complications: communicable and non-communicable diseases. In addition, they also reveal weakening of sensory functions such as vision and hearing. Moreover, a reduction in immunity and other age-related physiologic changes result in an elevated burden of communicable diseases in the elderly population [4].

The sequel of remedial steps that persons undertake to cure their alleged medical ailment is known as health-seeking behaviour [4]. An individual who perceives himself or herself to be sick shows distinct behavioural changes including confining to the bed or staying away from routine activities or going to a health practitioner [5]. In a rural

Indian population, health-seeking behaviour is a difficult phenomenon. The elderly people are commonly supposed to be more hesitant to seeking health care for their ill health. This leads to the worsening of the existing problems and the development of complications. Timely interventions can prevent many problems in the elderly people [4].

Studies have documented several important determinants of health-seeking behaviour such as age, sex, education, occupation, marital status, socio-economic status and registered under a govt. scheme [5].

This study is planned with the objectives to assess the morbidity pattern and study the health-seeking behaviour of a rural geriatric population of central India.

### MATERIALS AND METHODS

This is a cross-sectional study conducted from January 2022 to February 2022 at dhangarpura village, hingna block of Nagpur district, Maharashtra, India, is the field practice area of the Rural Health Training centre of the Indira Gandhi medical college.

A study conducted by D. Kumar et.al.[4] showed that around 56% of the elderly were experiencing the musculoskeletal problem. The total sample size is estimated by using formula:  $n = 4PQ/L^2$ , where n is the sample size; P, prevalence of characteristic studied; taken as 56%;  $Q = (1 - P)$ ; L, permissible margin of error in the estimated value, which is taken as a 10% with 95% confidence limit. The required sample size is calculated to be 99. the approximate number of persons to be selected

for interview is 100.

In a selected dhangarpura village, we have to use the simple random sampling technique for selection of elderly persons (>60 years of age) from the families that inhabited the practice area. Starting from one end of the identified ward, every house is visited to enquire about elderly persons for an interview. If no elderly person is found, the next house is visited. If a couple >60 years of age is present, both are included in the study. After 20 elderly people are included from one ward, we moved to the next ward; and thus included a total of 100 elderly persons from the five parts of the practice area. finally, 100 elderly persons are interviewed.

Respondents are asked for their various sociodemographic profiles that included their age, gender, caste, marital status, occupation, education, socioeconomic status (SES), and family type.

Respondents are asked for their various health problems and their treatment-seeking behaviours. Respondents are asked for their various joint problems, diminished vision, and previous cataract surgery. Eyes are examined for the presence of cataract. History of various other problems are also taken. It included hearing problems, asthma, cancer, gastritis, bleeding per rectum, fissure, filariasis, tuberculosis, difficulty in urination, and so on. Data will be checked for consistency and completeness and entered in Excel sheet and SPSS 20 for analysis. Descriptive statistics like mean, standard deviation and percentages will be used to describe the findings. Analysis will be done using Chi square test and a p Value of <0.05 will be taken as significant. Informed consent is taken from the head of the household and the study subject selected for this study.

## RESULTS

**Table 1: Distribution Of Study Subjects According To Their Demographic Characteristics**

| Characteristics              | Male (n=59) | Female (n=41) | Total (n=100) | P value   |
|------------------------------|-------------|---------------|---------------|-----------|
| Age (years)                  |             |               |               |           |
| 60- 64                       | 23(38.98)   | 17(41.46)     | 40            | 0.2213    |
| 65- 69                       | 9(15.25)    | 9(21.95)      | 18            |           |
| 70- 74                       | 16(27.12)   | 11(26.83)     | 27            |           |
| 75- 79                       | 8(13.56)    | 4(9.76)       | 12            |           |
| ≥ 80                         | 3(5.09)     | 0             | 3             |           |
| Religion                     |             |               |               |           |
| Hindu                        | 46(77.97)   | 36(87.80)     | 82            | 0.2082    |
| Muslim                       | 1(1.69)     | 0             | 1             |           |
| Buddhist                     | 12(20.34)   | 5(12.20)      | 17            |           |
| Marital status               |             |               |               |           |
| Married                      | 93.22       | 75.61         | 86            | 0.01255   |
| Widow/widower                | 6.78        | 24.39         | 14            |           |
| Education                    |             |               |               |           |
| Graduate/ Post graduate      | 1(1.69)     | 0             | 1             |           |
| Higher secondary / Diploma   | 3(5.09)     | 0             | 3             |           |
| High school                  | 11(18.64)   | 1(2.44)       | 12            | 0.004586  |
| Middle school                | 11(18.64)   | 5(12.20)      | 16            |           |
| Primary school               | 19(32.21)   | 14(34.15)     | 33            |           |
| Illiterate                   | 14(23.73)   | 21(51.21)     | 35            |           |
| Occupation                   |             |               |               |           |
| Clerical/ Shop-owner/ Farmer | 18(30.55)   | 0             | 18            |           |
| Skilled                      | 2(3.40)     | 0             | 2             |           |
| Semi-skilled                 | 1(1.70)     | 0             | 1             | 0.0000003 |
| Unskilled                    | 2(3.40)     | 0             | 2             |           |
| Retired                      | 4(6.70)     | 0             | 4             |           |
| Homemaker                    | 32(54.25)   | 41(100)       | 73            |           |
| Type of Family               |             |               |               |           |
| Joint                        | 41(69.49)   | 20(48.78)     | 61            | 0.03676   |
| Nuclear                      | 4(6.78)     | 2(4.88)       | 6             |           |
| Three generation             | 10(16.95)   | 9(21.95)      | 19            |           |
| Other                        | 4(6.78)     | 10(24.39)     | 14            |           |
| Socio-economic status*       |             |               |               |           |
| Class II                     | 3(5.09)     | 0             | 3             | 0.03277   |
| Class III                    | 13(22.03)   | 4(9.76)       | 17            |           |
| Class IV                     | 42(71.19)   | 36(87.80)     | 78            |           |

|                                           |           |           |    |        |
|-------------------------------------------|-----------|-----------|----|--------|
| Class V                                   | 1(1.69)   | 1(2.44)   | 2  |        |
| Registered under govt. scheme for elderly |           |           |    |        |
| Yes                                       | 35(59.32) | 24(58.54) | 59 | 0.9374 |
| No                                        | 24(40.68) | 17(41.46) | 41 |        |

**Table 2: Distribution Of Study Subjects According To Their Morbidity**

| Characteristics       | ICD 10  | Male (59) | Female (41) | Total (100) | p value |
|-----------------------|---------|-----------|-------------|-------------|---------|
| Morbidity             |         |           |             |             |         |
| Musculoskeletal pain  | M54.5   | 43(72.88) | 31(75.61)   | 74          | 0.7597  |
| Hypertension          | I10-116 | 29(49.15) | 21(51.22)   | 50          |         |
| Diabetes mellitus     | E08.9   | 20(33.90) | 18(43.90)   | 38          |         |
| Cataract              | H26.9   | 21(35.59) | 19(46.34)   | 40          |         |
| COPD                  | J44.9   | 3(5.08)   | 2(4.88)     | 5           |         |
| Stroke                | I63.9   | 1(1.69)   | 1(2.44)     | 2           |         |
| Thyroid disease       | E07.9   | 0         | 2(4.88)     | 2           |         |
| Filariasis            | B74.0   | 0         | 1(2.44)     | 1           |         |
| No morbidity          |         | 16(27.12) | 10(24.39)   | 26          |         |
| Number of morbidities |         |           |             |             |         |
| 0                     |         | 16(27.12) | 10(24.39)   | 26          |         |
| 1                     |         | 3(5.09)   | 0           | 3           |         |
| 2                     |         | 18(30.51) | 12(29.27)   | 30          |         |
| 3                     |         | 11(18.64) | 7(17.07)    | 18          |         |
| ≥4                    |         | 11(18.64) | 12(29.27)   | 23          |         |

**Table 3: Distribution Of Study Subjects According To Health Seeking Behaviour**

| Characteristics                  | Male (n=59) | Female (n=41) | Total (n=100) | P value |
|----------------------------------|-------------|---------------|---------------|---------|
| Preference of system of medicine |             |               |               |         |
| Allopathy                        | 32(54.24)   | 23(56.10)     | 55            | 0.8603  |
| Ayurveda/ Traditional            | 5(8.48)     | 2(4.88)       | 7             |         |
| Not seeking                      | 22(37.28)   | 16(39.03)     | 38            |         |
| Type of facility preferred       |             |               |               |         |
| Govt. hospital                   | 30(50.85)   | 29(70.73)     | 59            | 0.3971  |
| Private                          | 10(16.95)   | 2(4.88)       | 12            |         |
| Over-the-counter drugs           | 19(32.20)   | 10(24.39)     | 29            |         |

**Table 4: Determinants Affecting Health Seeking Behaviour Of Elderly**

| Characteristic             | Allopathic (55) | Traditional (7) | No treatment (38) | Total (100) | P value     |
|----------------------------|-----------------|-----------------|-------------------|-------------|-------------|
| Age(years)                 |                 |                 |                   |             |             |
| <74                        | 46(55.42)       | 5(6.02)         | 32(38.56)         | 83          | 0.8514      |
| ≥75                        | 9(52.95)        | 2(11.76)        | 6(35.29)          | 17          |             |
| Gender                     |                 |                 |                   |             |             |
| Male                       | 32(54.34)       | 5(8.47)         | 22(37.19)         | 59          | 0.8541      |
| Female                     | 23(56.10)       | 2(4.88)         | 16(39.02)         | 41          |             |
| Education                  |                 |                 |                   |             |             |
| Literate                   | 53(81.54)       | 3(4.61)         | 9(13.85)          | 65          | < 0.0000001 |
| Illiterate                 | 2(5.71)         | 4(11.43)        | 29(82.86)         | 35          |             |
| Occupation                 |                 |                 |                   |             |             |
| Working                    | 23(85.18)       | 2(7.41)         | 2(7.41)           | 27          | 0.0002243   |
| Homemaker                  | 32(43.84)       | 5(6.85)         | 36(49.31)         | 73          |             |
| Socio-economic status      |                 |                 |                   |             |             |
| Upper class                | 18(90)          | 1(5)            | 1(5)              | 20          | 0.0004354   |
| Lower class                | 37(46.25)       | 6(7.5)          | 37(46.25)         | 80          |             |
| Marital status             |                 |                 |                   |             |             |
| Married                    | 48(55.81)       | 5(5.82)         | 33(38.37)         | 86          | 0.6851      |
| Widow/ Widower             | 7(50)           | 2(14.29)        | 5(35.71)          | 14          |             |
| Register with govt. scheme |                 |                 |                   |             |             |

|     |           |         |           |    |           |
|-----|-----------|---------|-----------|----|-----------|
| Yes | 43(72.88) | 4(6.78) | 12(20.34) | 59 | 0.0000162 |
| No  | 12(29.27) | 3(7.32) | 26(63.41) | 41 |           |

As shown in [Table 1], maximum subjects (40%) belonged to the 60–65 years' age group, 59% are male, 82% subjects belonged to Hindu religion and about 73% of the subjects are home maker. Around one-third (35%) of the subjects are illiterate, and about 78% of the subjects are from SES class IV. About 59% are registered under govt. scheme for elderly.

Of the 100 study subjects, around 74% are experiencing at least one health problem. The average number of morbidities per diseased person is 2.11. The most frequent health problem is musculoskeletal problem (74%), followed by hypertension in 50% of the elderly persons. Prevalence of cataract and diminished vision is 40%, respectively. Diabetes is prevalent in 38% of the study subjects [Table 2].

Of the 100 study subjects who are experiencing at least one health problem, majority of them preferred allopathic medicine (55%), followed by traditional medicines (7%) for their health problems. Most of the geriatric persons preferred going to a PHC/CHC/government hospital (59%) for treatment of their illness, followed by use of drug from consulting drug stores (29%) and private practitioners (12%) [Table 3].

People in the age group of 60–74 years are likely to choose allopathic treatment. Those who has some education as well as those in upper class are likely to take treatment from a qualified allopathic practitioner. However, those in lower class are likely to take treatment from traditional healers or paraprofessionals [Table 4].

## DISCUSSION

This study recorded a high prevalence of health problems (74%) in the study population. In agreement with our finding, studies carried out among older persons in Assam, India had reported presence of high morbidity (78%) [6].

This study revealed that the most common chronic morbidity is musculoskeletal problems (74%). Barua k et al. [6] in a study conducted in a rural area of Jorhat district of Assam also reported that the most common morbidity was musculoskeletal problems (70.4%). In this study, hypertension is registered as the second most common morbidity (50%). Similar finding has been reported in a study among older persons in Karnataka, India [7]. In this study, Cataract is present in 40% elderly subjects. Shankar et al. [11] reported 48% and Shradha et al. [20] 30.2%, from different rural parts of India.

In this study, the average number of morbidities per diseased person is 2.11. Shankar et al. [11] in their study reported 2.18 illnesses per morbid person, while Sharma et al. [12] reported it to be 2.34.

This study revealed that 62% sought treatment for their chronic illness and majority (59%) sought treatment from government hospitals, followed by over-the-counter drug (29%) and private practitioner (12%). Sharma et al. [12] in their study conducted in Shimla hills of north India reported that most of the older persons (60.7%) preferred going to a PHC/CHC/government hospital for treatment for their illness, 26.7% sought treatment from private practitioners, and 12.6% took over-the-counter drug. However, Narapureddy et al. [22] in a study conducted in a rural area of Allahabad district, Uttar Pradesh, revealed that, among the 411 elderly persons, 188 (45.7%) sought treatment from private practitioners and private hospitals, 133 (32.3%) from nonregistered practitioners (quacks), only 77 (18.9%) sought treatment from government hospitals, and remaining 13 (3.1%) used home remedies or sought help from traditional healers.

In this study, of the 62 elderly people who sought treatment for their chronic illness, 55% received allopathic treatment, while Ayurveda and homeopathic treatment is received by 7%. Kumar D et al. [3] found that 57.6% preferred allopathic medicine, 16.3% preferred Ayurveda & homeopathic treatment. We are simply asking their history of health problem. there are possibilities that we are unable to identify other health problems in geriatric population, which might be taken as limitation of this study.

We found that education, occupation, socio-economic status and registration under govt. scheme are significant determinants for the

health-seeking behaviour of the elderly. The educated elderly is more likely to seek allopathic treatment than the illiterate. Those with lower levels of education sought healthcare less often, indicating that they are either less willing or able to seek care [5]. Socio-economic status is an important determinant and those are in upper class preferred allopathic treatment [5]. we did not find a significant difference in age, gender, marital status.

## CONCLUSIONS AND RECOMMENDATIONS

The elevated morbidity load among elderly population pressurizes for efforts to assist them with specialized healthcare. The elderly population must be made aware of periodic medical check-ups to enable prevention and early recognition of the chronic ailments. the study shows that elderly living in rural areas are the most vulnerable group in their healthcare-seeking behaviour. To overcome this, the policymakers must concentrate more on rural elderly population and their views, which stop them from seeking health care. The study showed that, although most of the elderly received treatment services from government health facilities, there is major group receiving it either from private sector or not receiving the treatment. The health-seeking behaviour of the elderly is influenced by level of education, occupation, socio-economic status and registration under govt. scheme. On the basis of these findings, it can be recommended that there is a need to develop geriatric health-care services. To tackle the issue of use of over-the-counter drugs, the existing laws should be strictly enforced and should govern the distribution of over-the-counter drugs.

## Acknowledgment

We are grateful to the elderly people of the selected villages of Dhangarpura, Hingna block, Nagpur District for their cooperation.

## Conflicts Of Interest: Nil

## REFERENCES

- United Nations Population Fund and Help Age India NGO report.
- Health action. Eldercare 2004;17(2):2.
- Situation Analysis of Elderly in India. 2011. Available at: [http://mospi.nic.in/mospi\\_new/upload/elderly\\_in\\_india.pdf](http://mospi.nic.in/mospi_new/upload/elderly_in_india.pdf) (last accessed on March 20, 2015).
- Kumar D, Kumari R, Shankar H. Health status and health seeking behaviour of rural geriatric population of Varanasi district, India. *Int J Med Sci Public Health* 2015;4:1711-1714
- RUPALI A. PATLE, GAUTAM M. KHAKSE. Health-seeking behaviour of elderly individuals: A community-based cross-sectional study. *Natl Med J India* 2015;28:18,1-4.
- Barua K, Borah M, Deka C, Kakati R. Morbidity pattern and health-seeking behavior of elderly in urban slums: A cross-sectional study in Assam, India. *J Family Med Prim Care* 2017;6:345-50.
- Dr. A. SANGAMITHRA, T.MAHADEVASWAMY HEALTH STATUS AND HEALTH SEEKING BEHAVIOUR OF RURAL ELDERLY IN CHAMARAJANAGAR DISTRICT, KARNATAKA, *Shanlax International Journal of Economics* 2018;6(4):146-150.
- Christman NJ. The health seeking process. *Cult Med Psychiatry* 1977;1(4):1357-68.
- Sharma S, Thakur M, Kaur S. Health problems and treatment seeking behavior among elderly. *Help Age India-Res Devel J* 2012;18(2):21-7.
- Joshi K, Kumar R, Avasthi A. Morbidity profile and its relationship with disability and psychological distress among elderly people in northern India. *Int J Epidemiol* 2003;32:978-87.
- Shankar R, Tandon J, Gambhir IS, Tripathi CB. Health status of elderly population in rural area of Varansi district. *Indian J Public Health* 2007;51(1):56-58.
- Sharma D, Mazta SR, Parashar A. Morbidity pattern and health seeking behaviour of aged population residing in Shimla hills of north India. *J Fam Med Prim Care* 2013;2(2):188-93.
- Sunder L, Chadha SL, Bhatia PC. A study on senior citizens in rural areas health for the millions. *Health Millions* 1999;25:18-20.
- Padda AS, Mohan V, Singh J, Deepti SS, Singh G, Dhillion HS, et al. Health profile of aged persons in urban and rural field practice areas of Medical College Amritsar. *Indian J Community Med* 1998;23:72-6.
- Clausen F, Sandberg E, Ingstad B, Hjortdahl P. Morbidity and health care utilisation among elderly people in Mmankodi village, Botswana. *J Epidemiol Community Health* 2000;54:58-63.
- Cheng YH, Chi I, Boey KW, Ko LS, Chou KL. Self-rated economic condition and the health of elderly persons in Hong Kong. *Soc Sci Med* 2002;55:1415-24.
- Munshi YI, Iqbal M, Rafique H, Ahmad Z. Geriatric morbidity pattern and depression in relation to family support in aged population of Kashmir valley. *Internet J Geriatr Gerontol* 2008;4:14-6.
- Graciani A, Banegas JR, López-García E, Rodríguez-Artalejo F. Prevalence of disability and associated social and health-related factors among the elderly in Spain: a population-based study. *Maturitas* 2004;48:381-92.
- Kaplan MS, Huguier N, Feeny DH, McFarland BH. Self-reported hypertension prevalence and income among older adults in Canada and the United States. *Soc Sci Med* 2010;70:844-9.
- Shradha K, Prashantha B, Prakash B. Study on morbidity pattern among elderly in an urban population of Mysore, Karnataka. *Int J Med Biomed Res* 2012;1(3):215-23.
- Hakmaosa A, Baruah KK, Baruah R, Hajong S. Health seeking behaviour of elderly in rani block, Kamrup (Rural) district, Assam: a community based cross sectional study. *Int J Community Med Public Health* 2015;2(2):162-6.
- Narapureddy B, Naveen KH, Madithati P, Singh RK, Pirabu RA. Sociodemographic profile and health care seeking behaviour of rural geriatric population of Allahabad district of UP: a cross sectional study. *Int J Med Sci Public Health* 2012;1(2):87-92.