

Health Status of Elderly Persons in Rural Area of India

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Abstract

Introduction : The population in developing countries is increasing day by day due to the development of medical science and availability of medical facilities at their door steps. This results in an increasing numbers of elderly persons which contributes to 7% of India's population. Elderly are vulnerable to long term diseases of insidious onset such as cardiovascular illness, CVA, cancers, diabetes, musculoskeletal and mental illnesses. Hence the study was conducted to assessing the health status and morbidity pattern among the rural elderly. **Methods:** A cross sectional study was conducted in 6 Primary Health Centers (PHCs) in India among elderly persons who were 60 years and above. One PHC which was selected by random sampling method among six PHCs. 20% of all elderly persons from all the villages in selected PHC by systematic random sampling which formed the study sample (494). All these peoples were examined clinically & necessary information was collected from them. **Results:** Commonest morbidity observed among the elderly people was depression (31.4 %) followed by musculoskeletal disorder (25.5 %), hypertension (24.1 %), gastrointestinal problems (11.5 %),

diabetes mellitus (5.9 %), & neurological problems (4.7 %). **Conclusion:** This study has highlighted that the elderly suffers from multiple morbidities, which they often attribute to ageing. It requires the strengthening of geriatric health care services in accordance with the common existing problems in the community.

Keywords

elderly people, morbidities, rural area

Introduction

The population in developing countries is increasing day by day due to the development of medical science and availability of medical facilities at their door steps. Changing demographic transition stages have affected the population of the elderly worldwide.

Life expectancy of an average Indian has increased from 24 years in 1900 to 65.4 years in 2004. This results in an increasing numbers of elderly persons which contributes to 7% of India's population¹.

Ageing is considered as natural and universal process. It

is regarded as an inevitable biological phenomenon. Elderly people are suffering from various physical, mental, social and economical problems.

Elderly are vulnerable to long term diseases of insidious onset such as cardiovascular illness, CVA, cancers, diabetes, musculoskeletal and mental illnesses. They have multiple symptoms due to decline in the functioning of various body functions.

Ageing in Indian culture though considered disability, does not carry the connotation of becoming "Useless mouth to be fed". The Indian value system prescribes respect, reverence and physical care for elderly from their children.

With emerging changes in our social and cultural values, the elderly who are economically unproductive are sadly neglected. It is recognized that the elderly are prone to psychic disorders through vicissitudes such as social isolation, malnutrition, economic and emotional depression and so on.

Information on morbidity profile of elderly is the basis of any meaningful plan of action to improve the quality of life of this section of the population. Hence the study was conducted to assess the health status and morbidity pattern among the rural elderly persons.

Material and Methods

A cross sectional study was conducted among elderly persons above 60 years in Ahmednagar district of Western Maharashtra in India. Study area comprised of 100 villages in 6 Primary Health Centers (PHCs) of Ahmednagar district which also formed field practice area of Rural Medical College Loni, Dist. Ahmednagar. The study sample included one PHC which was selected by random sampling method (lottery method) among six PHCs. The population of the selected PHC was 43,520. Enlisting of all elderly persons from all the villages in selected PHC were done using Anganwadi workers survey records & Village Panchayat record. A 20% elderly people were selected from this record using systematic random sampling which formed the study sample (total 494). A pilot study was done on 21 subjects to test the pre-designed proforma. Then necessary modifications were done in the proforma before conducting the final study. Each study subject was interviewed with pre-structured & pre-tested questionnaire and their clinical examination was done. If they were having any treatment or health card, necessary information from it was noted.

Blood pressure was measured twice for each individual using a mercury sphygmomanometer from the right arm in the sitting position. The Korokoff phases I and V were recorded for systolic and diastolic pressures respectively. If high BP was detected, two more readings were taken on different occasions to confirm hypertension. They were graded as Hypertensive if systolic BP >140 and diastolic >90 mmHg (WHO 1996) and/or treatment with antihypertensive medication².

Respiratory diseases were diagnosed if they were having chronic bronchitis, asthma and tuberculosis which were diagnosed earlier by clinicians with necessary investigations or diagnosed during time of clinical examination.

Masculo-skeletal diseases were diagnosed if they were having kyphosis, rheumatoid arthritis, Sciatica, osteoarthritis and spondylitis already diagnosed by orthopedician with necessary investigation. For diagnosis of osteoarthritis of knee, criteria of knee pain plus patient age of 40 years or older, morning stiffness lasting less than 30 minutes and crepitus on motion was taken into consideration³.

Nervous system disorders were diagnosed if they were having cerebral infarction, epilepsy, hemiplegia, Parkinsonism neuritis, tremors, dementia etc. which was diagnosed by neuro physician and psychiatrist with necessary investigation. Clinical neuropathy was diagnosed when symptoms and signs of peripheral, sensory or motor involvement were present. Depression was diagnosed with the help of Goldberg's depression scale⁴. Screening for vision was tested by Snellen's chart⁵.

Per capita monthly income was calculated for each respondent and they were classified into various socioeconomic groups according to Modified Prasad's social classification, which is linked with the Consumer Price Index of the country⁶. The collected data was analysed, tabulated and statistically tested.

Results

Proportion of elderly persons in study population was 5.84%. Out of total 2581 elderly persons surveyed in the study population, 1175 were male (46.24%) and 1366 were female (53.76%). Out of these 2581, total 494 elderly persons (19.14%) participated in study (study sample). Literacy rate among the study sample was only 36.4%. Out of 494 study sample, 30.2% were in age group 60-65

years, 33.8 % were in age group 65-70 years, 22.5 % were in age group 70-75 years, 7.7 % were in age group 75-80 years and 5.8 % were in age group more than 80 years. Majority of the respondent in study sample belonged to socioeconomic class IV (34.6%) & III (32.0 %). 5.9 % respondents were from socioeconomic class I, 17.8 % from socioeconomic class II & 8.7 % from socioeconomic class V. Commonest addiction among the elderly people was tobacco chewing (61.7%) followed by smoking (7.9 %), alcohol (2.4%), chewing of pan with betel nut (12.6%). 31.2 % elderly people were having no addictions. At the time of study, 64.6 % elderly were staying with their spouse, 33.2 % were widowed, 1.2 % were divorced and 1% were unmarried.

The system wise morbidities observed among elderly persons are shown in **Table 1**. The various symptoms reported by elderly people were, gastric acidity (11.3 %), Hemorrhoids (3.4 %), haematuria (1.01%) and urinary incontinence (1.01%).

Type of Morbidity	Number (out of 494)	Prevalence percentage
Depression	155	31.4
Musculoskeletal	126	25.5
Hypertension	119	24.1
Diabetes mellitus	29	5.9
Neurological	23	4.7
Respiratory	25	5.1
Gastrointestinal	57	11.5
Genitourinary	10	2.0

Vision	Right Eye	Left Eye
Normal	376 (76.1)	370 (74.9)
Low	98 (19.8)	103 (20.9)
Blind	20 (4.1)	21 (4.2)
Total	494	494

Among musculoskeletal disorders, osteoarthritis of knee was the commonest problem among 122 (24.7%) respondents. Sciatica was diagnosed among 7(1.42%) people, spondylitis among 6 (1.2%) persons and rheumatoid arthritis among 5 (1%) persons. Among neurological symptoms, 5 (1 %) elderly people were hemiplegic, 3 (0.61 %) were known case of Parkinsonism, 3 (0.61%) were having facial palsy, and 15(3%) were having peripheral neuropathy. Asthma and chronic bronchitis was present among 13 (2.6%) and 12(2.4%) elderly people respectively.

Only one person gave history of urinary calculus and one woman was having cervical prolapse. One person was having pulmonary tuberculosis. Visual acuity among the respondent is shown in **Table 2**. **Table 3** shows sexwise distribution of major morbidities among elderly people.

Among all respondent 42 (8.5%) elderly people require some assistance from their family members for conducting day to day physical activity. 200 (40.3%) people feel that their care is not taken by their family members.

Discussion

In our study the prevalence of depression was 31.4%. Venkoba Rao and Madhavan *et al*⁷ reported 60 per 1000 depression cases in geriatric population in semi urban area of Madurai while Sinoff *et al* reported 60%⁸. The

Morbidity	Male (n=232)	Female(n=262)	Total(n=494)	Z value
Depression	57 (24.6)	98 (37.4)	155	3.11, p<0.05.significant
Osteoarthritis	43(18.5)	76(29)	119	2.79, p<0.05.significant
Hypertension	50(21.56)	69(26.34)	119	1.24
Acid peptic disease	23(9.91)	32(12.21)	55	0.81

prevalence of depression among geriatric population in rural area is very high. The depression was significantly more among females. Tellez Zento *et al*⁹ also reported the same observation. In present study 15.8% males and 20% females felt neglected/ignored by their kins. This indicates the need of geriatric psychiatry services in rural area of India.

Prevalence of osteoarthritis in present study was 24.1% and more among female. Rahul Prakash¹⁰ in his study reported that 14.6% elderly persons had musculoskeletal problems in which 8.42% males and 17.3% females were suffering from arthritis of knee joints and 2.6% males and 2.7% females were suffering from spondylitis. Donel *et al*¹⁰ reported the involvement of muscle-skeletal system in 19% of elderly in England and in present study it is comparable. Loss of estrogen at the time of menopause increases a woman's risk of getting osteoarthritis. Osteoarthritis compromises mobility and consequently tends to impair social and occupational functioning. It leads to dependency on others; especially family members. Gastric acidity among elderly persons may be due to consumption of analgesic tablets as osteoarthritis was very common among this group.

Overall, 4.7% elderly were suffering from neurological disorders. However, Rahul Prakash found, diseases of nervous system among 8.6% elderly, and Kethy and Machnatty¹⁰ reported the disorders of nervous system in 8.5% of elderly persons.

Prevalence of hypertension in our study was low (24.1) as compared to other studies probably because the present study was community based. Hanger *et al* (1990)¹¹ reported prevalence of hypertension about 43.6% among elderly persons in their Christ Church study. Study by Chadha *et al*¹² reported a hypertension prevalence rate of 52.2% and 58.4% among males and females respectively. Globally, studies have shown that the prevalence of hypertension is increasing and may become a major primary health care problem with an increasing elderly population because blood pressure rises with age in nearly all populations.

In present study prevalence of known diabetes was 5.9%. Rao PV *et al*¹³ reported that prevalence of known diabetes was 6.1% in individuals aged above 40 year which was unexpectedly high at that time for a rural area with low socio-economic status and decreased health awareness.

In present study around 4% people were blind either by right and left eye and around 20% people were having low vision either by left and right eye. The leading cause of diminished vision in developing countries is cataract. In a study by Purohit and Sharma¹⁴ cataract was reported in approximately 40% elderly, whereas, Mishra (1980) reported in 25.8% elderly and Agrawal (1992) reported in 40% elderly in one or both eyes¹⁰. The high prevalence of low vision is due to cataract and fear of its surgery, and the belief that the diminution of vision is the consequence of ageing.

Prevalence of asthma (2.6%) and chronic bronchitis (2.4%) in present study was low as compared to other studies. Rahul Prakash¹⁰ reported the prevalence of asthma upto 14% and chronic bronchitis upto 4.6.3% among elderly persons in urban area. Low prevalence in our study is attributed for rural area where there is low air pollution.

This study has highlighted that the elderly suffers from multiple morbidities, which they often attribute to ageing. Majority of them were in class IV and class V for whom treatment may not be affordable. The most prevalent health problems of the elderly were depression, osteoarthritis, hypertension, and cataracts, – all conditions that are treatable. It requires the strengthening of geriatric health care services in accordance with the common existing problems in the community. The elderly should be encouraged to undergo periodic medical checks at a clinic for routine appraisal of their health status, so as to allow early detection and treatment of their morbidities. These services should be accessible & affordable to them.

References

1. Dr. P.C. Bhatla — Care of elderly; Health for the millions; September – October 1999.
2. World Health Organisation — International society for hypertension guidelines for the management of hypertension. Guidelines subcommittee. *Jr. Hypertens.* **17**, 151-183, 1999.
3. A. Mahajan. — Osteoarthritis. *Journal Association of Physicians of India.* Vol. **53**, 634-641, July 2005.
4. Goldberg *et al.* — A scaled version of General Health Questionnaire: *Psycho. Med.* **9**, 139-145, 1979.

5. WHO — International classification of diseases. Vol.I, Page 242, 1977.
 6. Kumar P. — Social classification need for constant updating: *Indian Jr. of Community Medicine*. **17**(2): 60-61, 1993.
 7. Venkoba Rao — Depressive illness in India; *Ind. Jr. of Psychiatry*. **26**(4), 301- 311, 1984.
 8. Sinoff G. *et al.* — Validity of screening test for depression in the elderly; *Int. Jr. of Geriatric Psychiatry*. **17**(4), 309-314, April 2002.
 9. Tellez *et al.* — Risk factors associated with depression in patients with type 2 diabetes mellitus; *Archives of Medical Research*. **33**(1), 53-60, Jan. 2002.
 10. Rahul Prakash *et al.* — A study of morbidity pattern among geriatric population in an urban area of udaipur rajasthan. *Indian Journal of Community Medicine*. Vol. **XXIX**, No. 1, Jan.-Mar. 2004.
 11. Hanger H.C., Saisbury R. — Screening the elderly a Chirst Church study. *The NZ Med. J.* Oct. 1990.
 12. Chadha-. Chadha S.L., Radhakrishna S. — Epidemiological study of Coronary heart disease in urban population of Delhi. *Indian J. Med. Research*. **92**: 424-430, 1990.
 13. Rao P.V. *et al.* — The Eluru survey: prevalence of known diabetes in a rural Indian population. *Diabetes Res Clin Pract.* **7** : 29-31, 1989.
 14. Purohit C.K., Sharma R. — A study of general health status of persons aged 60 years and above in RHTC area, Naila. *Ind. J. Med. Research*. 1976.
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