Research Article

Morbidity profile of elderly population in Ghaziabad district: a cross-sectional study

Harsh Bardhan[1], Anand Mohan Dixit[1], Renu Agarwal[2], Pankaj Kumar Jain[1], Sandip Gupta[1], Sushil Kumar Shukla[1]

[1]Department of Community Medicine, Rural Institute of Medical Sciences and Research, Saifai, Etawah, Uttar Pradesh, India.
[2]Department of Community Medicine, SN Medical College, Agra, Uttar Pradesh, India.
Correspondence to: Harsh Bardhan, E-mail: dr.harsh83@gmail.com

Received August 24, 2015. Accepted October 1, 2015

Abstract

Background: The geriatric population is defined as a population aged 60 years and above. The United Nation's principles address the independence, participation, care, self-fulfillment, and dignity of older persons as an ensured priority. Keeping all these issues in mind we conducted this study.

Objective: To access various medical and social problems and treatment-seeking behavior among geriatric population in Ghaziabad District, Uttar Pradesh, India.

Materials and Methods: The present cross-sectional study was conducted in the rural and urban area of Ghaziabad District. A total of 980 elderly interviewed on pretested protocol to find out the health and social problem of elderly.

Result: In geriatric population musculoskeletal problem (59.08%), dental problem (58.77%), and problem of vision impairment (55.61%) were quite higher. The overall prevalence of diabetes and heart disease were 10% and 12.2%, respectively. In social aspect, financial dependence on family members (45.9%) was a bigger issue among elderly population. Almost one-fourth population (23.6%) reported the problem of loneliness and depression. On psychological issue forgetfulness (32.96%) was reported by person of geriatric age group. When it comes to treatment-taking behavior, approach of elderly is quite different for different morbidities.

Conclusion: Elderly are suffering the triple burden in respect of high burden of morbidity, social negligence, and financial dependency. However, many of the rules and government welfare schemes are running but their impact and access to elderly need to be evaluated.

KEY WORDS: Elderly, morbidity, prevalence, social

Introduction

The elderly are precious asset for any country with rich experience and wisdom; they contribute their might for progress of the nation. The geriatric population is defined as a population aged 60 years and above.[1] The United Nation's principles address the independence, participation, care, self-fulfillment, and dignity of older persons as an ensured priority.[2] Aging is considered as a natural and universal process. It is characterized by time altered changes in an individual's biological, psychological, and health-related capabilities and its implications for the consequent changes in the individual's role in the economy and in the society.[3]

India has acquired the level of aging nation, with 7.7% of its population being more than 60 years old. The population projection and changing demographic scenario of India indicate that the growth of older Indian population in absolute number is comparatively faster than the other region of the world. The geriatric population aged 60 years and above will be doubled by the year 2026 (173 million) in comparison with the year 2006 (83.6 million) in India.[4] Recognizing the need for the care of elderly, the government of India adopted the national policy for older people in 1999.

Access this article online	
Website: http://www.ijmsph.com	Quick Response Code:
DOI: 10.5455/ijmsph.2016.24082015162	

Old age is not a disease in itself, but the elderly are vulnerable to long-term diseases of insidious onset. They have multiple symptoms due to decline in various body functions. The problems faced by this segment of the population are numerous owing to the social and cultural changes that are taking place in the Indian society. This poses a greater responsibility on the health services especially in developing countries like India, where there is greater strain on available health infrastructure. In the view of all these facts, this study was conducted with the objective to study the health and social problem and common heath practices in this age group.

Objectives

1. To study the health and social problems among geriatric age group.
2. To find out treatment-seeking behavior in study population.

Materials and Methods

The present cross-sectional study was conducted in Ghaziabad District, Uttar Pradesh, India. In urban Ghaziabad area out of 80 wards, two wards selected with the help of simple random sampling. In rural areas out of eight community development, two blocks were selected randomly. There after house-to-house survey was conducted in identified areas till the desired sample size was achieved.

Sample size was calculated: In one of the studies, prevalence of cataract was 30%.[5]

Therefore, the prevalence (P) = 30.

The sample size is calculated by the formula $n = \frac{Z_{\alpha}^{2}PQ}{l^{2}}$

Calculated sample size was 933. We interviewed 980 elderly people from urban (490) and rural areas (490).

Our study tool consists of two parts, family schedule and individual schedule. Data were collected after informed consent by house-to-house visit using pretested questionnaire. Morbidity was recorded on the basis of self-reporting with or without medical prescription.

Result

Out of 980 elderly people, one-fourth was widow or widower. Most of the elderly (85.5%) belong to Hindu religion. In urban area, 58.6% were from general category while in rural area general category constitutes 43.1%. In rural area 85.1% elderly were living in joint family [Table 1].

In geriatric population musculoskeletal problem (59.08%), dental problem (58.77%), and problem of vision impairment (55.61%) were quite higher. Hypertension (22.04%), respiratory problem (29.08%), and problem related with gastrointestinal (GI) system (26.83%) were also reported by elderly population. The overall prevalence of diabetes and heart disease were 10% and 12.2%, respectively. On psychological issue forgetfulness (32.96%) and loneliness (23.67%) were reported by person of geriatric age group. In social aspect, financial dependence on family members (45.9%) was a bigger issue among elderly population. Almost one-fourth population (23.6%) reported the problem of loneliness and depression. Musculoskeletal problem was most commonly reported by the woman of rural area (70.4%), however, the problem was comparatively less (59.4%) in urban counterpart. Morbidity related with vision impairment (68.22%), hypertension (38.07%), GI problem (37.61%), and diabetes (18.43%) was higher in urban men in comparison to other group of elderly population. Dental problem was clearly high among elderly of rural area (68%) in comparison to urban residents (50%). Problem related to urinary system was more than double among elderly men (20.8%) in comparison to women (8.8%). Financial dependency more commonly reported by elderly women of rural area (71.6%). Feeling of negligence was more common among elderly women (33%) of urban area [Table 2].

When it comes to treatment-taking behavior, approach of elderly is quite different for different morbidities. In case of morbidity related with vision almost one-fourth (23.5%) of elderly did not seek any treatment, whereas 42.9% Elderly taken the treatment from government health facilities. Problem of hearing was not consulted by 86.4% elderly. In case of dental problem maximum proportion of elderly either not treated (35.6%) or treated by quacks (26.9%). Proportion of elderly people who were not taking any medication for hypertension was 15.7%. One-fifth (19.3%) of elderly people were not taking any medication for their respiratory problem. Practices of self-treatment among elderly were maximum for GI and musculoskeletal morbidities 28.1% and 25.7%, respectively. The main source of treatment for morbidities such as hypertension, respiratory, urinary, GI-related, and musculoskeletal problems was quacks [Table 3].

Discussion

In our study, out of total 980 study population, 25.1% idlers were widow/widower. Chandwani et al.[6] in their study found only 13% of the elderly men were widowed while 37% of the women were widows. The difference may be due to age composition of elderly population. It is indeed true that it is the marital status that determines ones position within the family as well as the status in society. Shah[7] reported that 64.3% of the elderly women were widows and most of them dependent on their family members. In our study population, 85.41% population belonged to Hindu religion while 12.14%, 1.73%, and 0.72% were Muslim, Sikh, and Christian, respectively. In another study conducted by Chandwani et al.[6] majority (92%) of the respondents were Hindus. Jadav et al.[8] in a study found majority (89%) of the geriatric respondents were Hindus. In this study, 81.12% older people were living in joint family. Contrary to that Bharati et al.[9] show that 61.7% older people from rural and 53.3% from urban areas belonged to nuclear families. This could be attributed to high level of migration by younger generation from the state in search of livelihood. In this study 23.67% elderly population felt lonely

Table 1: Demographic profile

		Urban (490)	Rural (490)	Total
Marital status	Married	370 (75.5)	353 (72)	723 (73.4)
	Unmarried	3 (0.6)	6 (1.2)	9 (0.9)
	Divorcee/separated	0 (0)	2 (0.4)	2 (0.02)
	Widow/widower	117 (23.9)	129 (26.3)	246 (25.1)
Religion	Hindu	431 (87.8)	406 (82.5)	837 (85.5)
	Muslim	35 (7.1)	84 (17.1)	119 (12.1)
	Sikh	17 (3.5)	0 (0)	17 (1.7)
	Christian	7 (1.4)	0 (0)	7 (0.7)
Caste	General	287 (58.6)	211 (43.1)	498 (50.8)
	SC	49 (10)	87 (17.8)	136 (13.9)
	ST	11 (2.2)	0 (0)	11 (1.1)
	OBC	143 (29.2)	192 (39.2)	335 (34.2)
Type of family	Nuclear	112 (22.9)	73 (14.9)	185 (18.9)
	Joint	378 (77.1)	417 (85.1)	795 (81.1)

Figures given in parenthesis are in percentage.

Table 2: Morbidity pattern in elderly people

Medical problems	Rural *n* = 490		Urban *n* = 490		Total *n* = 980
	Male (293)	Female (197)	Male (218)	Female (272)	
Vision impairment	166 (56.8)	84 (42.76)	149 (68.22)	146 (53.6)	545 (55.61)
Impaired hearing	69 (23.4)	58 (29.6)	43 (19.6)	50 (18.4)	220 (22.44)
Dental problem	196 (66.9)	135 (68.3)	119 (54.7)	126 (46.2)	576 (58.77)
Heart disease	30 (10.4)	19 (9.8)	41 (18.5)	30 (11.1)	120 (12.24)
Hypertension	49 (16.6)	27 (13.7)	83 (38.07)	57 (20.95)	216 (22.04)
Diabetes mellitus	31 (10.42)	12 (6.34)	18 (18.43)	37 (13.76)	98 (10)
Respiratory problem	79 (26.9)	57 (29.2)	72 (33.1)	77 (28.2)	285 (29.08)
Urinary problem	59 (20.13)	15 (7.61)	43 (19.72)	28 (10.29)	145 (14.79)
Gastrointestinal problem	78 (26.62)	52 (26.39)	82 (37.61)	51 (18.75)	263 (26.83)
Musculoskeletal problem	155 (52.9)	139 (70.4)	123 (56.3)	162 (59.4)	579 (59.08)
Personal/Family H/O Cancer	11 (3.8)	6 (2.9)	12 (5.7)	17 (6.3)	46 (4.69)
Mental problem					
Forgetfulness	107 (36.6)	82 (41.8)	68 (31.3)	66 (24.4)	323 (32.96)
Loneliness/depression	49 (16.7)	38 (19.2)	59 (27.2)	86 (31.5)	232 (23.67)
Social problem					
Neglected by family/society	34 (11.6)	39 (19.7)	48 (22.1)	90 (33)	211 (21.53)
Financially depends on family member	142 (48.44)	141 (71.6)	40 (18.4)	127 (46.75)	450 (45.92)

Figures given in parenthesis are in percentage.

or depressed and 21.53% felt neglected by family or society. Prakash et al.[10] also reported that 17.3% having feelings of neglect. Similarly in the results of two of the largest epidemiological studies carried out in the urban and rural Lucknow in North India with support from the Indian Council of Medical Research[11] revealed that 17.3% urban and 23.6% rural older adults aged 60 years and above suffer from syndromal mental health problems.[12] In this study, the prevalence of diabetes mellitus was 10%. In a study conducted by Kumar et al.[13] in South India, 13.4% geriatric population was suffering from diabetes mellitus. Jadav et al.[8] also found that 13.92% geriatric population was suffering from diabetes mellitus. The lower prevalence of diabetes mellitus might be due to unidentified cases in the community.

Study shows that 55.61% geriatric population had vision impairment, Kumar et al.[13] found that 63% of elderly were

Table 3: Treatment-taking behavior of elderly

	Not treated	Government hospital	Private doctor	Quacks	Self
Vision impairment (545)	128 (23.5%)	234 (42.9%)	183 (33.6%)	0 (0%)	0 (0%)
Hearing problem (220)	190 (86.4%)	19 (8.6%)	8 (3.6%)	3 (1.4%)	0 (0%)
Dental problem (576)	205 (35.6%)	99 (17.2%)	117 (20.3%)	155 (26.9%)	0 (0%)
Heart problem (120)	8 (6.7%)	37 (30.8%)	38 (31.7%)	37 (30.8%)	0 (0%)
Hypertension (216)	34 (15.7%)	47 (21.8%)	35 (16.2%)	61 (28.3%)	39 (18%)
Respiratory problem (285)	55 (19.3%)	46 (16.1%)	46 (16.1%)	87 (30.5%)	51 (17.9%)
Urinary problem (145)	17 (11.7%)	33 (22.8%)	27 (18.6%)	40 (27.6%)	28 (19.3%)
Gastrointestinal (263)	56 (21.3%)	30 (11.4%)	27 (10.3%)	76 (28.9%)	74 (28.1%)
Musculoskeletal (579)	56 (9.7%)	114 (19.7%)	61 (10.5%)	199 (34.4%)	149 (25.7%)

suffering from one or more eye problems, which is slightly lower than Prakashet al.[10] they found 70% of their sample had one or more eye problems. Study shows that out of total geriatric population, 22.44% had hearing impairment and these finding supported by Jadav et al.[8] they reported that 24.8% geriatric population had hearing impairment. An Indian Council of Medical research report on the chronic morbidity profile in the elderly states that hearing impairment is the most common morbidity[14] as we reported in our study too. Kishore and Garg[5] have reported that 15.2% elderly people were having urogenital problems, which is quite similar to our findings.

The prevalence of dental problem among geriatric age group was 58.77%. Purty et al.[15] found that 42% total geriatric population had dental and chewing problem. Higher prevalence of dental problem in our study may be attributed to pan masala and tobacco chewing habit of elderly population. In our study we found 12.24% had heart disease. Similarly, in their study, Goel et al.[16] found 15.8% geriatric population had heart disease. In a study by Purty et al.[15] carried out in rural area, 9% prevalence of heart disease was found.

In our study, prevalence of hypertension in geriatric age was 22.04%. Bhatia *et al*.[17] reported an almost similar (19.7%) prevalence of hypertension in elderly in Shimla, India.

Our study shows that 29.08% geriatric aged had respiratory problems of which 27.76% were rural and 30.41% were urban geriatric population. In a study conducted by Kishore et al.,[18] 36.1% geriatric aged people were found to have respiratory problems.

We found that 59.08% geriatric aged people had musculoskeletal problems; of which 52.90% were rural men, 70.4 % rural women, 56.3% urban men, and 59.4% urban women. In a study conducted by Sharma et al.,[19] 362 elderly people were interviewed and assessed clinically, and they found that the overall prevalence of osteoarthritis was 56.6%; osteoarthritis was more in women as compared to men (70.1% vs 41.6%).

Conclusion

This study highlighted that the elderly suffer from multiple morbidities, which they often attribute to aging. Most of the health problems of elderly are controllable if addressed properly. The elderly are encouraged to undergo periodic medical checkup in a heath facility so as to allow early detection and treatment of their morbidities. The services should be accessible and affordable to them. Family members and community should be sensitized about the heath care of the elderly.

References

1. Elango S. A study of health and health related social problems in geriatric population in a rural area of Tamil Nadu. Indian J Public Health 1998;42(1): 7–12.
2. World Health Organization. *United Nations Principles for Older Person*. Geneva, Switzerland: WHO, 1999.
3. Rajan SI, Mishra US, Sharma PS. *India's Elderly: Burden or challenge?* New Delhi, India: Sage Publication, 1999.
4. National Institute of Social Defense. *Age Care in India: National Initiative on Care for Elderly*. India: NISD, Ministry of Social Justice and Empowerment, Government of India, 2008.
5. Kishore S, Garg BS. Sociomedical Problems of aged population in rural of Wardha district. Indian J Public Health 1997;41(2):43–8.
6. Chandwani HR, Jivarajani PJ, Jivarajani HP. Health and social problems in geriatric age group in an urban setting of Gujarat. Internet J Health 2009;9(2). doi: 10. 5580/d8f.
7. Shah B. Rights of the aged. Available at: http:// www.islamset.com/healnews/aged/main.html (last accessed on May 10, 2009).
8. Jadav VS, Mundada VD, Gaikwad AV, Doibale MK, Kulkani AP. A study of morbidity profile of geriatric population in field practice area of Rural Health Training Centre Paithan, government medical college, Aurangabad. IOSR J Pharmacy 2012;2(2):184–8.
9. Bharati DR, Pal R, Rekha R, Yamuna TV, Kar S, Radjou AN. Ageing in Puducherry, South India: An overview of morbidity profile. J Pharm Bio allied Sci 2011;3(4):537–54.

10. Prakash R, Choudhary SK, Singh US. A study of morbidity pattern among geriatric population in an urban area of Udaipur, Rajasthan. IJCM 2004;29(1):35–40.
11. Tiwari SC, Kar AM, Singh R, Kohli VK, Agarwal GG. *An Epidemiological Study of Prevalence of Neuro-psychiatric Disorders with Special Reference to Cognitive Disorders, amongst (Urban) Elderly-Lucknow Study*. New Delhi, India: ICMR Report, 2009.
12. Tiwari SC, Kar AM, Singh R, Kohli VK, Agarwal GG. *An Epidemiological Study of Prevalence of Neuro-psychiatric Disorders with Special Reference to Cognitive Disorders, amongst (Urban) Elderly-Lucknow Study*. New Delhi, India: ICMR Report, 2010.
13. Kumar TA, Sowmiya KR, Radhika G. Morbidity pattern among the elderly people living in a southern rural India: a cross sectional study. Nat J Res Com Med 2012;1(1):1–60.
14. Kacker SK. Hearing impairment in the aged. Indian J Med Res 1997;106:333–9.
15. Purty AJ, Bazroy J, Kar M, Vasudevan K, Veliath A, Panda P. Morbidity pattern among the elderly population in rural area of Tamil Nadu, India. Turk J Med Sci 2006;36:45–50.
16. Goel S, Srivastava VK, Nigam S, Saxena SC, Varma P, Sharma RP. Study of morbidity in geriatric population and correlation of housing conditions with relevant morbidities in a rural area of Kanpur. IJCH 2008;20(1):20–4.
17. Bhatia SP, Swami HM, Thakur JS, Bhatia V. A study of health problems and loneliness among the elderly in Chandigarh. Indian J Comm Med 2007;32(4):255–8.
18. Kishore S, Juyal R, Semwal J, Chandra R. Morbidity profile of elderly persons. JK Science 2007;9(2):87–9.
19. Sharma MK, Swami HM, Bhatia V, Verma V, Bhatia SPS, Kaur G. An epidemiological study of correlates of osteoarthritis in geriatric population of UT Chandigarh. Indian J Comm Med 2007;32(1):77–8.

How to cite this article: Bardhan H, Dixit AM, Agarwal R, Jain PK, Gupta S, Shukla SK. Morbidity profile of elderly population in Ghaziabad district: a cross-sectional study. Int J Med Sci Public Health 2016;5:1098-1102

Source of Support: Nil, **Conflict of Interest:** None declared.