Research Article

Assessment of Clinico-socioeconomic status and health-care support among the elderly people aged older than 60 years in urban population of Bhopal, Central India

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Received December 17, 2014. Accepted December 22, 2014

Abstract

Background: Information on the morbidity profile and health-care support of elderly population is important for planning their health-care facilities.

Objective: To study the sociodemographic characteristics, morbidity pattern, and pattern of health-care support among the elderly people in urban area of Bhopal (Madhya Pradesh, India).

Materials and Methods: This community-based cross-sectional study was carried out among people aged older than 60 years residing in the field practice area of urban health training centre (UHTC) of a medical college in Bhopal. One hundred fifty study subjects were enrolled in study using simple random sampling method; 30 elderly people were selected from each one of the five localities catered by UHTC. Data were collected with the interview technique by door-to-door survey.

Results: Of the 150 study subjects, 86 were men and 64 were women; 35.3% of the elderly people received treatment for their morbidities from the government hospitals, while 26.7% from private clinic/hospital. Children bear the health-care expenses for 40% of elderly while 14% had health insurance; 50% women were dependant on their children, while 44.2% men utilized their savings for health-care expenses. Ninety-eight (65.3%) study subjects were presenting complaints and morbidity. Major presenting complaint was fatigue (48.7%), followed by backache (35.3%). Obesity (39.3%) and hypertension (24.7%) were chief morbid conditions among the elderly.

Conclusion: A high prevalence of obesity, hypertension, diabetes, arthritis, and cataract were identified. Economic independence and use of social security measures among the elderly people is very less. Most of the elderly people received treatment services from private setup or not receiving the treatment.

KEY WORDS: Elderly, urban, health-care support, morbidity

Introduction

In the words of Seneca, “old age is an incurable disease.” However, more recently, Sir James Sterling Ross commented “you do not heal old age, you protect it, you promote it and you extend it.” The number of elderly people is continually increasing in the developing nations owing to evolving age structure. These trends are appearing in many countries including India.

In the year 2002, the number of elderly people in the world was estimated to be estimated 605 million, which is expected to rise to more than 1.2 billion by the year 2025.[1] Both the share and size of the elderly population is increasing over time. The absolute number in India increased from 76 million in 2001 to 100 million in 2011. According to the Census 2011, the elderly population aged older than 60 years account for 7.5% of the total population and is projected to rise to 12.4% by the year 2026. In Madhya Pradesh, India, 6.7% population is aged older than 60 years.[2,3]

Access this article online	
Website: http://www.ijmsph.com	Quick Response Code:
DOI: 10.5455/ijmsph.2015.17122014115	

Health status is an important factor that has a significant impact on the quality of life. Many health problems are known to increase with age.[4]

From the morbidity point of view, studies had shown the prevalence of morbidities in elderly people to be ranging from 31% to 80% in various parts of India.[3,5–7] The challenge in the 21st century is to delay the onset of disability and ensure optimal quality of life for older people.

Aging results in a generalized deterioration of the most vital organs and systems, thereby leading to a lesser effectiveness in physiological functions. This decline accompanies an increase in risk factors that leads to various diseases. A decrease in bone mass causes osteoporosis and fractures; cartilage degeneration causes musculoskeletal problems; muscle loss causes functional weakness; a decline in immune function leads to increases in infections and cancer; and decline of cognitive function and dementia occurs because of increased neuronal degeneration.

Many factors, such as attribution of ill health to aging, low economic status, and negative attitude of health workers toward the care of the elderly people, play a role in the delay of health care-seeking behavior in the elderly population.[8–10]

The government should ensure effective planning of health-care services for the elderly people and prepare a feasible design relevant to the country needs for implementing the plan. The problems related to the aging of the population are that of inadequate facilities for medical treatment and of providing economic and social support; hence, information on the morbidity profile and health-care support of this population is necessary for planning their health-care facilities.

So, this study was planned with the objectives to study the sociodemographic characteristics, morbidity pattern, and pattern of health-care support among the elderly people in urban area of Bhopal (Madhya Pradesh, India).

Material and Methods

This community-based descriptive cross-sectional study was carried out among elderly people aged older than 60 years residing in the field practice area of urban health training centre (UHTC) of a medical college in Bhopal. The study was carried out from May to August 2014. UHTC caters the population of 14,597 in its field practice area comprising five localities namely Satnami Colony, Indrapuri "C" Sector, Labour Colony, Piplani Quarters, and Ramnagar with approximately equal populations. For deciding the sample size, to test the questionnaire, and for checking the feasibility, a pilot study was carried out in March 2014 in which the prevalence of musculoskeletal discomfort among 35 study participants was found to be 74.2%. On the basis of this prevalence, sample size was determined to be 134. So, it was decided to include 150 study subjects in the study. After the pilot study, necessary revisions were made in the pro forma. In the study, those who were aged 60 years and older were considered as elderly and the study subjects included elderly men and women. The study sample was obtained using simple random sampling method. In the five localities catered by UHTC, 30 elderly people were selected from each one. Each locality was divided in three parts with equal population (approximately). For each part, one house was selected randomly. Starting from this house, every nearest next house was surveyed until 10 subjects were enrolled for the study. A similar procedure was applied in the remaining parts of the area.

The study variables included were age, religion, occupation, education, socioeconomic status, type of residence, type of family, marital status, present and past illness, place of treatment, person taking health care and bearing expenses toward it, and financial support.

Data Collection

Ethical clearance was obtained from institutional Ethics Committee. The objective of the study was explained to participants and informed consent taken. The data were collected with the help of interview technique using predesigned and pretested questionnaires by house-to-house visits. The interview was carried out in the local language. The detailed history of sociodemography was taken along with present and past illness followed by thorough clinical examination and necessary investigations of study subjects. The available health records were also reviewed. Care was also taken to ensure privacy and confidentiality of the interview as part of the study.

For statistical analysis, descriptive statistics used were percentage, mean, and standard deviation (SD). All the analysis was carried out using Microsoft EXCEL.

Results

Totally, 150 elderly subjects were included in the study. Of the 150 subjects, 64 (42.66%) were women and 86 (57.33%) men. The mean age of men was 68.66 ± 6.473 years and that of women was 67.97± 6.300 years. Majority of the study subjects (77.3%) were in the age group of 61–75 years.

Table 1 shows the sociodemographic characteristics of the study population. In this study, 73.4% women and 91.9% men were married; 37.5% women were illiterate when compared with 10.5% illiteracy in men. Among the literate men, 48.8% were graduates, while only 10.9% women were graduates. In our study, majority (92.7%) of the elderly were Hindu by religion. Around 48% of the elderly people belong to middle class and 38% to upper-lower class according to modified Kuppuswami scale.

Table 2 shows the pattern of the health-care support received by the study subjects. Most of the elderly (35.3%) received treatment for their morbidities from the government hospitals, while 26.7% received it from private clinic/hospital. For 40% of the elderly, the health-care expenses were borne by their children. Among women, 50% received health-care expenses from children, while 44.2% of men had their health-care expenses borne by their own savings. Regarding health insurance, 14% of the elderly population possessed it to bear

Table 1: Sociodemographic characteristics of study subjects

Study variables	Sex				Total (*N* = 150)	
	Women (*N* = 64)		Men (*N* = 86)			
	N	%	*N*	%	*N*	%
Age (years)						
61–65	34	53.1	32	37.2	66	44.0
66–70	16	25.0	34	39.5	50	33.3
71–75	3	4.7	8	9.3	11	7.3
76–80	8	12.5	6	7.0	14	9.3
>80	3	4.7	6	7.0	9	6.0
Marital status						
Unmarried	0	0.0	4	4.7	4	2.7
Married	47	73.4	79	91.9	126	84.0
Widow/widower/divorced/separated	17	26.6	3	3.5	20	13.3
Education						
Illiterate	24	37.5	9	10.5	33	22.0
Primary school	13	20.3	5	5.8	18	12.0
Middle school	6	9.4	6	7.0	12	8.0
High school	3	4.7	4	4.7	7	4.7
Intermediate	11	17.2	16	18.6	27	18.0
Graduate/postgraduate	7	10.9	42	48.8	49	32.7
Professional course	0	0.0	4	4.7	4	2.7
Last occupation						
Unemployed	46	71.9	1	1.2	47	31.3
Unskilled worker	3	4.7	3.0	3.5	6	4.0
Skilled worker	9	14.1	35	40.7	44	29.3
Clerical/shop owner/farmer	4	6.3	14	16.3	18	12.0
Semiprofessional	2	3.1	29	33.7	31	20.7
Professional	0	0.0	4	4.7	4	2.7
SES						
Upper (I)	0	0.0	0	0.0	0	0.0
Upper-middle (II)	3	4.7	32	37.2	35	23.3
Lower-middle (III)	4	6.3	33	38.4	37	24.7
Upper-lower (IV)	38	59.4	19	22.1	57	38.0
Lower (V)	19	29.7	2	2.3	21	14.0
Religion						
Hindu	60	93.8	79	91.9	139	92.7
Muslim	2	3.1	5	5.8	7	4.7
Other	2	3.1	2	2.3	4	2.7

the expenses. Children were bearing health care in 58% of the study subjects, while, in 23.3%, it was taken care by the spouse. Fifty percentage of the study subjects were dependent on their children for the financial support, and 36.7% elderly people were independent for their financial support.

Presenting complaints of the elderly study subjects were shown in Table 3. Of the 150 study subjects, 98 (65.3%) were presenting complaints and morbidity, while 52 (34.7%) study subjects were normal. The most common presenting complaint was fatigue (48.7%) and backache (35.3%), followed by pain in calves (30.7%), watering of eyes (26%), itching (24%), and headache (17.3%). Among men, fatigue (37.2%) and watering of eyes (31.4%) were the major presenting complaints, while in women, fatigue (64.1%) followed by backache (43.8%) were major presenting complaints.

Table 4 shows the morbidity profile of the study subjects. Obesity (39.3%) followed by hypertension (24.7%), diabetes (18.7%), and uncorrected refractive error (18%) were chief morbid conditions among the elderly subjects. Proportion of hypertension was higher in women (35.9%) when compared with that of in men (16.3%). In addition, the obesity was more common in women (51.6%) when compared with men (30.2%).

Discussion

This study was carried out to identify the sociodemographic characteristics, morbidity pattern, and pattern of health-care support among the elderly people in urban area of Bhopal, Madhya Pradesh, India.

Table 2: Pattern of the health-care support among elderly

Study variables	Sex				Total (*N* = 150)	
	Women (*N* = 64)		Men (*N* = 86)			
	N	%	*N*	%	*N*	%
Place of treatment						
Government hospital	24	37.5	29	33.7	53	35.3
Private clinic/hospital	16	25.0	24	27.9	40	26.7
Unqualified persons	3	4.7	3	3.5	6	4.0
None	21	32.8	30	34.9	51	34.0
Health-care expenses borne by						
Children	32	50.0	28	32.6	60	40.0
Own saving only	14	21.9	38	44.2	52	34.7
Own saving and insurance	12	18.8	9	10.5	21	14.0
Spouse	6	9.4	6	7.0	12	8.0
Government schemes	0	0.0	5	5.8	5	3.3
Health care taken by						
Children	46	71.9	41	47.7	87	58.0
Spouse	9	14.1	26	30.2	35	23.3
All family members	9	14.1	14	16.3	23	15.3
Self	0	0.0	5	5.8	5	3.3
Living with						
Children	51	79.7	59	68.6	110	73.3
Spouse	13	20.3	21	24.4	34	22.7
Alone	0	0.0	6	7.0	06	4.0
Who is the financial support?						
Children	35	54.7	40	46.5	75	50.0
Self	13	20.3	42	48.8	55	36.7
Spouse	16	25.0	4	4.7	20	13.3

Of the 150 elderly, majority were men (57.3%), as was also seen in the studies by Garg et al.[11] in Meerut and Mehrotra et al.[12] in Agra, where they had 62.27%, 53.4% men respectively.[11,12] In this study, illiteracy among the elderly women was 37.5% and in elderly men 10.5%. The majority of elderly women had completed only education up to intermediate, whereas a majority of elderly men were graduates. These findings were similar to those observed by Thomas et al.[13] in a study carried out in Andhra Pradesh. Gurav and Kartikeyan[14] in their study noted that 58.76% of men and 22.85% of women had completed education up to secondary level.

In this study, most of the study subjects (52%) were belonging to low socioeconomic status, followed by middle class. Various studies have reported the similar socioeconomic status.[15,16]

In this study, it was found that most of the elderly people received the health care from the government hospitals (35.3%) when compared with the private clinics (26.7%). In addition, it was found that, in most (40%) of the elderly people, the health-care expenses were borne by their children, which was found to be similar to the findings of Sharma et al.,[6] Chinnakali et al.[16], and Thomas et al.,[13] who found government facilities as the most common source of health care.[6,16] However, according to the 2005–2006 National Family Health Survey (NFHS) and District-Level Household Survey (DLHS) data, private facilities are more utilized compared with government facilities. This difference might be because of higher proportion of study subjects belonging to lower socioeconomic status.

In this study, it was found that, in most of the elderly people, the health care is done by children (58.0%) and about 73.3% elders are living with their children and 22.7% were living with their spouse alone. The study by Srivastava and Mishra revealed that the majority of the elderly people were found living with their spouse and other members.[17]

One of the major social problems faced by the elderly was the high levels of economic dependence on others, especially for women. Owing to illiteracy, women are in more critical situation compared with men.[3] According to situation analysis of elderly in India, about 65% of the aged people had to depend on others for their day-to-day maintenance. Less than 20% of elderly women but majority of elderly men was economically independent. Among economically dependent elderly men, 6%–7% were financially supported by their spouses, almost 85% by their own children, 2% by grandchildren, and 6% by others. Of elderly women, less than 20% depended on their spouses, more than 70% on their children, 3% on grandchildren, and 6% or more on others including nonrelatives.[3] In this study, 36.7% of the elderly people were found

Table 3: Distribution of study subjects according to presenting complaints

Presenting complaints	Men (*N* = 86)		Women (*N* = 64)		Total (*N* = 150)	
	N	%	*N*	%	*N*	%
Musculoskeletal system						
Backache	25	29.1	28	43.8	53	35.3
Joint pain	11	12.8	7	11.0	18	12.0
Restricted joint movements	11	12.8	7	11.0	18	12.0
Pain in calves	19	22.1	27	42.2	46	30.7
Respiratory system						
Cough—nonproductive	8	9.3	3	4.7	11	7.3
Cough—productive	5	5.8	2	3.1	7	4.7
Nasal discharge	3	3.5	9	14.1	12	8.0
Breathlessness	3	3.5	3	4.7	6	4.0
Sore throat	9	10.5	9	14.1	18	12.0
Sneezing	3	3.5	9	14.1	12	8.0
Cardiovascular system						
Palpitations	6	7.0	7	11.0	13	8.7
Chest pain (intermittent)	2	2.3	1	1.6	3	2.0
Gastrointestinal system						
Pain in abdomen	4	4.7	2	3.1	6	4.0
Loose motions	2	2.3	0	0.0	2	1.3
Constipation	14	16.3	7	11.0	21	14.0
Flatulence	15	17.4	9	14.1	24	16.0
Heartburn	5	5.8	9	14.1	14	9.3
Bleeding per rectum	1	1.2	2	3.1	3	2.0
Eye and adnexa						
Watering	27	31.4	12	18.8	39	26.0
Diminution of vision	16	18.6	11	17.2	27	18.0
Redness	8	9.3	3	4.7	11	7.3
Ear						
Decreased hearing	6	7.0	9	14.1	15	10.0
Ear discharge	0	0.0	1	1.6	1	0.7
Dermatological						
Itching	17	19.8	19	29.7	36	24.0
Genitourinary system						
Burning micturition	2	2.3	1	1.6	3	2.0
Frequency of micturition	7	8.1	4	6.3	11	7.3
General symptoms						
Fatigue	32	37.2	41	64.1	73	48.7
Headache	9	10.5	17	26.6	26	17.3
Fever	3	3.5	1	1.6	4	2.7
Any other complaints						
Burning feet	6	7.0	11	17.2	17	11.3
Swelling in groin	2	2.3	0	0.0	2	1.3
Memory loss	2	2.3	2	3.1	4	2.7
Insomnia	7	8.1	11	17.2	18	12.0

financially independent and 50% found dependent on their children, which was similar to the findings of Thomas et al.[13] This is also as shown by Gupta et al.,[18] based on the 1994–1995 Human Development Indicator Survey data, where about 76% of the women and 42% of the men were supported by their family.[18]

Regarding the presenting complaints and morbidity, it was found that most of the study subjects were suffering from musculoskeletal, ophthalmic, and cardiovascular problems. These findings were similar to those observed in various studies carried out in India.[7,19–21] In this study, the most prevalent morbidity was obesity (39.3%), followed by hypertension (24.7%), diabetes (18.7%), uncorrected refractive error (18%), cataract (12%), and arthritis (12.8%). The morbidity proportions in this study were lower when compared with that observed by Thomas et al. in Andhra Pradesh, hypertension (46.7%),

Table 4: Distribution of study subjects according to morbidity profile

Morbid condition	Men (*N* = 86)		Women (*N* = 64)		Total (*N* = 150)	
	N	%	*N*	%	*N*	%
Musculoskeletal system						
Arthritis	11	12.8	7	10.9	18	12.0
Spondylosis	6	7.0	9	14.1	14	9.3
Prolapsed intervertebral disc	2	2.3	0	0.0	2	1.3
Respiratory system						
Chronic bronchitis	3	3.5	1	1.6	4	2.7
Bronchial asthma	3	3.5	3	4.7	6	4.0
URI	8	9.3	10	15.6	18	12.0
Rhinitis (allergic)	3	3.5	9	14.1	12	8.0
LRTI	5	5.8	2	3.1	7	4.7
Cardiovascular system						
Hypertension	14	16.3	23	35.9	37	24.7
CHD	5	5.8	4	6.3	9	6.0
Gastrointestinal system						
Acid peptic disease	5	5.8	9	14.1	14	9.3
Eye and adnexa						
Uncorrected refractive error	16	18.6	11	17.2	27	18.0
Cataract	11	12.8	7	10.9	18	12.0
Ear						
Hearing loss	6	7.0	9	14.1	15	10.0
CSOM	0	0.0	1	1.6	1	0.7
Dermatological						
Dermatitis	9	10.5	8	12.5	17	11.3
Boils	1	1.2	3	4.7	4	2.7
Other						
Diabetes	17	19.8	11	17.2	28	18.7
Hemorrhoids	1	1.2	2	3.1	3	2.0
Obesity	26	30.2	33	51.6	59	39.3
Inguinal hernia	2	2.3	0	0.0	2	1.3
Renal stone	1	1.2	0	0.0	1	0.7
Benign prostate hypertrophy	5	5.8	0	0.0	5	3.3

diabetes (26.5%), and arthritis (30.2%), in the elderly people. In addition, it was lower in comparison with the findings of Prakash et al.[7] This difference might be contributed to comparatively less mean age involved in this study.

Conclusions

This study carried out among elderly study subjects in urban area of Bhopal documented the higher load of morbidity. A high prevalence of obesity, hypertension, diabetes, arthritis, and cataract were identified. It also highlighted that economic independence and use of social security measures among the elderly people is very less. Study showed that, although most of the elderly received treatment services from government hospital, there is major group receiving it either from private or not receiving the treatment. On the basis of these findings, it can be recommended that there is a need to develop geriatric health-care services. Financial assistance and social security schemes are needed to enhance the economic independence and utilization of the available health-care facilities.

Acknowledgments

Authors like to acknowledge the medical social workers of UHTC, Indrapuri, for their active participation in data collection and providing community service. They also like to acknowledge Dr. Agarwal, Professor and Head, Department of Community Medicine, PCMS & RC, Bhopal, India, for his support in training activities to conduct the study.

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How to cite this article: Gupta M, Borle AL, Chhari N, Gupta S. Assessment of clinicosocioeconomic status and health-care support among the elderly people aged older than 60 years in urban population of Bhopal, Central India. Int J Med Sci Public Health 2015;4:558-564

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