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MORBIDITY PATTERN AMONG GERIATRIC POPULATION IN URBAN SLUM OF BILASPUR CITY, CHHATTISGARH, INDIA – A CROSS SECTIONAL STUDY

Community Medicine

Ashish Baghel Assistant Professor, Department of Community Medicine, Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh, India.

Shakuntala Jitpure* Associate Professor, Department of Community Medicine, Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh, India. *Corresponding Author

Hemlata Thakur Professor, Department of Community Medicine, Govt.Medical College, Ambikapur, Chhattisgarh, India.

Vivek Sharma Associate Professor, Department of Community Medicine, Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh, India.

Sachin Pandey Assistant Professor, Department of Community Medicine, Chhattisgarh Institute of Medical Sciences, Bilaspur, Chhattisgarh, India.

ABSTRACT

BACKGROUND: In India for the year 2010 the estimates are 8% of total poulation were above 60 years & is likely to rise to 19% by 2050 which could bring higher rise in both medical & sociological problem in elderly. With this background, the present study was conducted to assess the morbidity pattern & its sociodemographic determinants among geriatric population.

MATERIAL AND METHODS: A community based cross sectional study was carried out among 100 elderly selected through systematic random sampling during October-November 2017 in urban slum of Bilaspur, Chhattisgarh. A predesigned, pretested questionnaire, clinical history & examination were used for data collection. SPSS 21.0 version software was used to analyze the data.

RESULTS: Out of total 100 respondents (44%) were men & (56%) were women. Maximum participants (46%) were in the age group of 60-69 years. Overall visual impairment (69%) was the most common morbidity found followed by hypertension (47%), diabetes (44%) & breathing difficulty (35%). Overall health status was significantly associated with age, gender, marital status & financial dependency.

CONCLUSION: This study revealed high prevalence of visual complaints, hypertension, diabetes & breathing difficulty. Common preventive measures which should become an integral part are emphasis on geriatric health in components of primary health care, promotion of physical activity, healthy diet, routine medical examination, Information, education, communication and adequate social support.

KEYWORDS

Morbidity pattern, Geriatric population, Urban slum

INTRODUCTION

Ageing is a natural process. In the words of Seneca; "old age is an incurable disease" but more recently, Sir James Sterling Ross commented; "You do not heal old age. You protect it; you promote it; you extend it"[1]. In the year 2002, there were an estimated 605 million old persons in the world, of which 400 million were living in low income countries. By 2025, the number of elderly people is expected to rise more than 1.2 billion with about 840 million of these in low-income countries.[2] In India, although the percentage of aged persons to the total population is low in comparison to the developed countries, nevertheless, the absolute size of aged population is considerable. For the year 2010 the estimates are 8% of total population were above the age of 60 years, and is likely to rise to 19% by 2050.[3] According to SRS report 2015, census of India, percentage share of elderly population is 8.3%, female & male comprises of 8% & 8.6% respectively.[4]

As the ageing population is increasing, the burden of their health problems are on a rise. This has led to an increase in the morbidities of both physical and mental health due to social isolation.[5] This profound shift in the share of older Indians, brings with it a variety of social, economic, and health care policy challenges.[3] With this background, the present study was conducted to assess the morbidity pattern & its sociodemographic determinants among geriatric population.

MATERIAL AND METHODS

This community based cross sectional study was carried out in urban slum of Bilaspur, Chhattisgarh during October-November 2017 among 100 elderly persons of age group 60 years and above. The methodology comprised of primary data collection through direct personal interview technique using a predesigned, pretested questionnaire, clinical history & examination. Sample size was calculated at 95% confidence level and taking the expected proportion to be 50% as it gives highest sample size and with an absolute error or precision of 10%, the sample size came out to be 96 (which is rounded up to 100), by using the formula $n = Z^2P(1-P)/d^2$

Where n = sample size,

Z = 1.96 value of the standard normal variant corresponding to level of significance alpha 5%

P = Expexted proportion in population (50%)

d = Absolute error or precision (10%)

House to house survey was done to cover up sample size in selected slum. Systematic random sampling was used for selection of households in the study. Verbal consent was obtained from the respondents. 60 years and above were considered to be elderly in our study as per the United Nations definition.[6] A self-administered questionnaire containing a set of questions pertaining to sociodemographic and morbidity profile followed by complete general physical examination, systemic examination and blood sugar estimation using a standardized glucometer. The blood pressure was measured using a standard mercury sphygmomanometer.

Table 1: Age and gender wise distribution of geriatric population.

AGE GROUP (In Years)	GENDER					
	MALE		FEMALE		TOTAL	
	NO.	%	NO.	%	NO.	%
60-69	14	31.8	32	57.1	46	46
70-79	18	40.9	14	25	32	32
≥80	12	27.2	10	17.8	22	22
TOTAL	44	44.0	56	56.0	100	100

INCLUSION CRITERIA

Permanent residents of age group 60 years and above who gave consent for the study.

EXCLUSION CRITERIA

Persons having speech & communication problem and those who were reluctant to participate in the study.

Data collected was compiled and entered into Microsoft excel sheets, doubly checked for any key board error and percentages were used to interpret and analyze the findings. SPSS 21.0 version software was

used to analyze the data.

RESULTS

Of the total respondents, (44%) were men and (56%) were women. Overall (46%) geriatric population was in the age group 60–69 years. (Table 1).

Overall visual impairment (69%) was the most common morbidity found followed by hypertension (47%), Diabetes (44%) & breathing difficulty (35%). (Table 2).

Out of total male & female around (70.5%) & (67.9%) were suffering from visual impairment respectively. Maximum cases of visual impairment was seen in age group of 60-69 (73.9%), more common in illiterate people (71.4%). Interstingly all financially independent and upper middle class population were found to be morbid in respect to visual problems. About (43.2%) of total male and (28.6%) of total females were suffering from breathing difficulty, maximum in age group of 60-69 (37%), literate (40.5%), widower (60%), financially independent (80%) and upper middle class (100%). Hypertension was present in 40.9% of males & 51.8% females. Maximum in age group ≥80 (59.1%), illiterate (47.6%), widowed (60.5%), financially partially dependent (56.3%), & in middle class (66.7%). (Table 3).

Table 2: Morbidity pattern among geriatric population. (n=100)

S. NO.	Morbidities	NO.	%
1	orientation absent	13	13
2	Insomnia	32	22
3	Depression	25	25
4	visual impairment	69	69
5	Cataract	28	28
6	hearing impairment	29	29
7	dental disorder	30	30
8	chronic cough	12	12
9	Hypertension	47	47
10	Asthma	10	10
11	Acidity	33	33
12	Breathing Difficulty	35	35
13	Constipation	29	29
14	Arthralgia	32	32
15	Fall	31	31
16	postural difficulty	33	33
17	Anemia	34	34
18	urinary problem	22	22
19	diabetes mellitus	44	44
20	skin disorder	15	15
21	major treatment & surgery	35	35

Table 3: Effect of sociodemographic factors on frequency of morbidities among geriatric population

Sociodemographic Factors	Categories	Total	Visual Impairment			Hypertension			Breathing Difficulty		
		NO.	NO.	%	chisq/df	NO.	%	chisq/df	NO.	%	chisq/df
SEX	MALE	44	31	70.5	0.077/01	18	40.9	1.16/01	19	43.2	2.31/01
	FEMALE	56	38	67.9		29	51.8		16	28.6	
AGE GROUP	60-69	46	34	73.9	1.5	17	37.0	3.63/02	17	37.0	0.17/02
	70-79	32	22	68.8		17	53.1		11	34.4	
	≥80	22	13	59.1		13	59.1		7	31.8	
LITERACY	LITERATE	37	24	64.9	0.40/01	17	45.9	0.01/001	15	40.5	0.79/01
	ILLITERATE	63	45	71.4		30	47.6		20	31.7	
MARITAL STATUS	SEPARATE	30	21	70.0	1.03/02	13	43.3	10.01/03	7	23.3	7.28/03
	MARRIED	17	13	76.5		9	52.9		7	41.2	
	WIDOWED	38	26	68.4		23	60.5		12	31.6	
	WIDOWER	15	9	60.0		2	13.3		9	60.0	
FINANCIAL DEPENDENCY	INDEPENDENT	5	5	100	-	1	20.0	2.05/02	4	80.0	7.23/02
	PARTIALLY DEPENDENT	16	13	81.3		9	56.3		8	50.0	
	FULLY DEPENDENT	79	51	64.6		37	46.8		23	29.1	
PER CAPITA MONTHLY INCOME	UPPER CLASS	0	0	0.0	-	0	0.0	2.95/05	0	0.0	-
	UPPER MIDDLE CLASS	1	1	100.0		0	0.0		1	100	
	MIDDLE CLASS	6	5	83.3		4	66.7		3	50.0	
	LOWER MIDDLE CLASS	12	10	83.3		5	41.7		6	50.0	
	LOWER CLASS	42	29	69.0		16	38.1		14	33.3	
	NONE	39	24	61.5		22	56.4		11	28.2	

DISCUSSION

In our study the majority of the elderly were in the age group of 60-69 (46%) followed by 70-79 (32%) and 80 and above (22%). Similar findings were found in studies conducted by Sudarshan et al, Subramanyam et al & Rakesh et al.

Sudarshan et al in their study showed (59.2%), (33.6%) and (7.2%) for the ages 60-69, 70-79 and 80-89 respectively.[7] Subramanyam et al in their study of community based health care for the elderly in Pondicherry showed (66%), (25%) and (8%) for the ages 60-69, 70-79 and 80-89 respectively which was similar to our findings.[8]

In our study (63%) of the elderly were illiterate.

Kammar et.al[11] in his study observed that (40%) of the elderly were illiterate.[9]

The difference of observation from our study may be due to the fact that our study included slum population.

In our study (79%) of the subjects were financially dependent. In study of Sudarshan et al majority of the elderly had a personal income of around Rs 500-1000. Around (34%) of the subjects said they did not depend on economic support from the family.[7]

Manda et al in his study observed that (27.2%) of the elderly subjects were in class V (poor)[10] where as our study showed (42%) were in class V. In our study overall visual impairment (69%) was the most common morbidity found followed by hypertension (47%), Diabetes (44%) & breathing difficulty (35%).

In study conducted by rakesh et al overall hypertension (52.8%) was the most common morbidity found in geriatric population followed by anemia (32.8%) and diabetes (32.3%).[11]

In study of sudarshan the major problem was hypertension (28%) followed by arthritis (25%), diabetes (22%), respiratory diseases including asthma and tuberculosis (9%), acid peptic diseases (5%), falls (4%), and dermatological conditions (2%) respectively.[7]

Subramanyam et al in their community based health care study for the elderly at Pondicherry observed that (28%) of the elderly had hypertension[10], which was not comparable was due to the fact that the former study was based on elderly attending geriatric clinic.[8] Visual impairment was found to be most prevalent in current study which is also a major difference compared to other study. This difference might be due to elderly population in current study was not used to undergo regular eye examination. Different geographical settings may be the reason for the difference in observations when compared to our study. Other morbidities like depression, hearing impairment, dental disorder, arthralgia, anemia, urinary problem & diabetes were found to be more or less similar with other studies.

CONCLUSION

The present study highlighted high prevalence of visual impairment followed by hypertension, diabetes and breathing difficulty. Common visual impairments found were age related macular degeneration, glaucoma, cataract, diabetic retinopathy. Also other age related morbidities were found to be remarkable. The study brings to light that almost all elderly had reported to have one or the multiple health problems. Most of the health problems increased with the age of elderly. As the age increases chances of multiple morbidities also increases. The overall morbidity status of elderly significantly associated with age, gender, marital status and financial dependency.

Common preventive measures which should become an integral part are emphasis on geriatric health in components of primary health care, promotion of physical activity, healthy diet, routine medical examination, Information, education & communication and adequate social support. Hence there is an urgent need of dealing the geriatric health problems in coordinated approach by health system with good compliance from the elderly. Also geriatric care should become an integral part of the primary health-care delivery system by establishing geriatric clinics at all levels of health care including the major referral hospitals. A multidisciplinary approach needs to be adopted with regular screening programs. Information, Education and Communication activities for the general population also need to be carried out for ensuring healthy aging by promoting healthy behavior.

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