Section: Community Medicine

Original Research Article

A CROSS- SECTIONAL STUDY ON MAJOR HEALTH PROBLEMS AMONG GERIATRIC POPULATION IN RURAL FIELD PRACTICE AREA OF GANDHI MEDICAL COLLEGE, SECUNDERABAD, TELANGANA, INDIA

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ABSTRACT

Background: Ageing is a universal process. The Common medical problems elderly people suffer from include cardiovascular, musculoskeletal, visual, and gastrointestinal diseases etc. The objectives of the present study were to estimate the prevalence of most common medical health problems and their patterns among the study subjects and to assess the relationship between socio-demographic factors and the medical health problems.

Materials and Methods: A Community based Cross sectional study was conducted in rural field practice of study area. A sample of 614 persons aged 60 years and above residing in the study area was taken. Simple Random Sampling was done to select the sub centre and population.

Results: Majority 449(73.1%) were in the age group of 60 – 69 years. The most common morbidities reported were Musculoskeletal, Visual, Cardiovascular and Dental problems. Age was found to be significantly associated with musculoskeletal, visual, cardiovascular, genitourinary problems and Diabetes mellitus. Gender was found to have significant association with musculoskeletal problems.

Conclusion: Musculoskeletal, visual, cardiovascular, genitourinary problems and Diabetes mellitus were common among the elderly population. This can be reduced by regular screening for non - communicable diseases and consuming nutritious, low calorie and fiber rich diet. Inculcating healthy life style practices life walking, yoga and meditation will be helpful.

Keywords: Ageing, Geriatrics, Health problems, Rural area

INTRODUCTION

The two extremes of life, childhood and elderly need special care. While ageing of the population is essentially a simple phenomenon, its consequences are multiple and not always well recognized.[1] Ageing is a universal process. Ageing is defined as a process of deterioration in the functional capacity of an individual that results from structural changes, with advancement of age.[2] Ageing is a part of growth and development."Geriatrics" is the branch of medicine dealing with the physiologic characteristics of ageing and the diagnosis and treatment of diseases affecting the aged.[3]

At the moment, there is no standard numerical criterion, but the United Nation agreed cutoff is 60+ years to refer to the older population.[4] The world's older population continues to grow at an unprecedented rate. Today 8.5 percent of people worldwide (617 million) are aged 65 and over. According to a new report, "An Aging World: 2015" this percentage is projected to jump to nearly 17 percent of the world's population by 2050 (1.6 billion).[5]

According to the census 2011, 8% of persons are in the age group of 60+ years compared to 7.5% in census 2001.[6] As the life expectancy has increased, the proportion of elderly has increased. This in turn has led to increased need for health care services to combat chronic and degenerative diseases. Ageing of the world's population is the result of two factors:

decline in fertility and an increase in life expectancy.[7]

Most of the present health programmes have been focusing on maternal and child health, but the health status of the elderly has not been given due consideration. Also, ill health among the elderly would considerably add to the morbidity burden of any nation, especially in developing countries like India.Hence, the present study was undertaken to gain insight into the morbidities faced by elderly; to estimate the prevalence of most common health problems and their patterns and to assess the relation between socio-demographic factors and health problems among elderly in rural field practice area of Gandhi Medical College.

MATERIALS AND METHODS

A community based Cross sectional study was conducted during November 2017 to November 2019 among the geriatric population residing in the Rural Health Centre (RHC) field practice area, Narsingi of Department of Community Medicine. RHC Narsingi, of Rajendranagar mandal, Ranga Reddy District has a population of 1,09,038. Study was conducted among the persons aged 60 years and above and who were residing in the study area. Among 7 sub centres of Narsingi, 1 sub centrei.eNarsingi was selected by Simple Random Sampling - Lottery method and serving area includes 6 villages. All the 6 villages were included in the study and population proportion sample was selected for each village. A pretested, semi structured questionnaire was used to collect information on socio-demographic characteristics and health problems. No investigations were performed. Sample size is calculated by taking least prevalence of Ear problems as 13.2% from a study conducted on elderly by Rajesh Kumar Seth 2and 20% allowable error as follows. Sample size (n) = 4PQ/L2, Where P is the prevalence of least occurring health problem (Ear problems) - 13.2%. Nearest value 14% was taken to achieve maximum sample size Q = 100-14 = 86, L = 20% allowable error of prevalence,n = 4X 14X 86 /2.8 X 2.8 = 614. The study protocol was approved by the ethical committee of the institute. The purpose of the study was explained, written & signed informed consent was obtained.

Inclusion criteria

Persons aged 60 years and above who were willing to participate.

Exclusion criteria

People who were not available at the time of study.

The information was collected regarding socio-demographic characteristics, chronic health problems and physical examination findings among the geriatric population. Data was analyzed by using Epi info software version 7.1 and statistical measures obtained were frequencies, percentages, means and deviation. Analytical measures were obtained using chi square test. p value < 0.05 was considered statistically significant.

RESULTS

In the present study the mean age of respondents was 66.94 ± 6.39 years, majority 449 (73.1%) were in the age group of 60-69 years. Among the total 614 geriatric study subjects, 301(49%) were males and 313(51%) were females. Majority (63.2%) were illiterate, and only 36.8 % were literates, majority 282(45.9%) belong to nuclear families, followed by 3 generation 218(35.5%) and joint families 114 (18.6%). Majority 307(50%) belong to class II, followed by class III 158(25.8%), class I 131(21.3%) and only a few 18(2.9%) belong to class IV. None of them belonged to class V. [Table1].

Table 1: Socio-demographic characteristics of the respondents

Variables		Number(n)	Percentage (%)
Age in years	60-69	449	73.1
	70-79	124	20.2
	80 & above	41	6.7
Sex	Male	301	49
	Female	313	51
Religion	Hindus	387	63
	Muslims	144	23.5
	Christians	83	13.5
Education	Illiterate	388	63.2
	Literate	226	36.8
Type of family	Nuclear	282	45.9
	Joint	114	18.6
	3 generation	218	35.5
Socio-economic status	Upper class	131	21.3
	Middle class	465	75.8
	Upper lower class	18	2.9
Total		614	100

About 30.6% study subjects were doing physical activity. Smoking and alcohol consumption were seen in 20.5% and 20.9% elderly respectively, followed by pan &betelnut chewing in 16.3% elderly. [Table 2].

[Table 3 & 4] represents distribution of various health problems, their distribution among study participants were depicted in these tables.

Table 2: Lifestyle Factors of the respondents

Variables		Number	Percentage (%)
Physical activity	Yes	188	30.6
Habits*	Smoking	126	20.5
	Alcohol	128	20.9
	Pan& Betel chewing	100	16.3

*Multiple responses

Table 3: Distribution of various health problems among geriatric population

	Number(n)	Percentage (%)	Variables	Number(n)	Percentage (%)
Musculo-skeletal	455	74.1	Osteoarthritis	290	47.2
			Muscle and joint pains	230	37.5
			H/o of falls& fractures	14	2.3
			Others	11	1.8
Cardio-vascular	319	52	Hypertension	298	48.5
			H/o Myocardial Infraction/ Coronary artery disease	32	5.2
			Others	21	3.4
Gastro-intestinal	229	37.3	Acidity	121	19.7
			Constipation	80	13.0
			Loss of appetite	48	7.8
			Others	21	3.4
Neurological	103	16.8	H/o of stroke	21	3.4
			Others	82	13.4
Visual	448	73	Refractive Errors	299	48.7
			Cataracts	187	30.5
			Others	11	1.8
Dental	283	46.1	Caries	149	24.3
			Loss of teeth	162	26.4
Endocrinal	218	35.5	Diabetes mellitus	172	28.0
			Thyroid disorders	58	9.4
Genitourinary	87	14.2	Stress/ Urge Incontinence	21	3.4
			Urinary tract infections	18	2.9
			Others	43	7
Hearing				149	24.3

*Multiple responses

Table 4: Distribution of Musculoskeletal, Cardio-vascular and Respiratory problems of respondents in relation to socio-demographic characteristics

Problems	Socio -demographic factor	Present (%)	Absent (%)	Total (%)	Chi-Square & p value
Musculoskeletal problems	Age in years				18.06 (p<0.001)
	60-69	313(69.7)	136(30.3)	449(73.1)	
	70-79	104(83.9)	20(16.1)	124(20.2)	
	80 & above	38(92.7)	3(7.3)	41(6.7)	
	Gender				23.05 (p< 0.001)
	Male	197(65.4)	104(34.6)	301(49)	
	Female	258(82.4)	55(17.6)	313(51)	
Cardio-vascular Problems	Age in years				18.1 (p<0.001)
	60 – 69	210(46.8)	239(29.8)	449(73.1)	
	70 – 79	81(65.3)	43(34.7)	124(20.2)	
	80 & above	28 (68.3)	13(31.7)	41(6.7)	
	Socio-economic status				12.91 (p< 0.05)
	Upper Class	86(65.6)	45(34.4)	131(21.3)	
	Middle Class	223(48)	242(52)	465(75.7)	
	Lower Class	10(55.6)	8(44.4)	18(3)	
Visual Problems	Age in years				6.68 (p<0.05)
	60 – 69	315(10)	134(29.8)	449(73.1)	
	70 – 79	100(80.6)	24(19.4)	124(20.2)	
	80 & above	33(80.5)	8(19.5)	41(6.7)	
Genito-urinary problems	Age in years				
	60 – 69	45(10)	404(90)	449(73.1)	24.28 (p <0.0001)
	70 – 79	30(24.2)	94(75.8)	124(20.2)	
	80 & above	12(29.3)	29(70.3)	41(6.7)	
Diabetes mellitus	Age in years				
	60 – 69	134(29.8)	315(70.2)	449(73.1)	5.954 (p < 0.05)
	70 – 79	33(26.6)	91(73.4)	124(20.2)	
	80 & above	5(12.2)	36(87.8)	41(6.7)	
	Physical activity				
	Present	38(20.2)	150(79.8)	188(30.6)	8.176 (p < 0.05)
	Absent	134(31.5)	292(68.5)	426(69.4)	

DISCUSSION

In the present study, the mean age of the study population is 66.94 ± 6.39 years, with mean age of females being higher than males, similar to a study done by Mannapuret al,.[8] Higher life expectancy among females may be the reason for this. In our study, males and females were almost equally distributed, and majority (45.9%) belong to nuclear families. About half of the respondents belong to Upper middle class, rise in standards of living may be the reason for this. Smoking and alcohol consumption were seen in 21%, pan & betel nut chewing were present in 16.3% of the elderly persons and only30.6% subjects were doing physical activity. Osteoarthritis and other musculoskeletal problems may be the hindering factors to perform physical activity.

The most common health problems were musculoskeletal (74.1%), visual (73%) followed by cardiovascular and dental problems. Similar findings were observed in a study conducted in Karnataka.[9] In the present study, almost 37.3% subjects had gastrointestinal problems, which matched with findings of Mrinal Ranjan Srivastava et al,.[10] About 16.8% subjects had Neurological problems, similar to a study done in Kadapa.[11]

In the present study musculoskeletal problems were higher (92.7%) among those aged 80 years and above, and among females (82.4%), Anil et al study findings were similar.[12] As the age advances, loss of bone density occurs, the reason for musculoskeletal problems being higher among elderly. Post-menopausal hormonal changes cause loss of minerals in bone tissue, the reason for higher prevalence among females. Similar findings were observed in a study conducted by Mohd. Maroof et al,.[13]

Cardiovascular problems were significantly more among older age group and in Upper class, but were almost equal among males & females. Degenerative changes in heart and blood vessels increases the risk of cardiovascular problems. Change in lifestyle may be the reason for high prevalence of cardiovascular problems among elderly of upper class. Different findings were found in a study by Mrinal Ranjan, where cardiovascular disorders were almost equally distributed among all age groups.10Karthik N, study findings were different, where Cardiovascular disorders, were more among elderly males.[14]

Visual problems were more (80.6%) among those aged above 70 years, among females (75.1%) and among Upper Socioeconomic Class, but with no difference among literates and illiterates. Similar findings were observed by Nighat Yasmeen, Gurmeet Kaur et, al,[15,16] Women's access to eye care in developing countries is low, which could be the reason for higher prevalence. In this study, there was no role of education in visual problems, which differed from findings of Nighat Yasmeen, where Literacy status had significant association with visual problems.[15]

Genito-urinary problems were significantly more among elderly aged 70 years and above, were slightly higher among Christians, with no significant difference but, were equally distributed among males and females. Older age is susceptible to urinary infections and bladder dysfunctions, the reason for higher proportion of urinary problems. Different findings were observed by Chandrashekhar et al, with equal distribution of Genitourinary problems among elderly.[17] Rakesh et al, study observed that Genitourinary Problems were more among females than males.[18] Mrinal Ranjan Srivastava et al, observed that Genitourinary symptoms were found to be significantly higher among Hindus.[10]

In the present study Diabetes was significantly higher in those aged below 80 years old, and among males who were not performing any physical activity. Lack of awareness of their blood glucose levels, may be the reason for lower prevalence. Different findings were seen by Vijayakumar G et al, where, rising age was associated with higher prevalence of diabetes.[19] Biologically men are more prone to diabetes than females, the reason for higher prevalence among males. Similar findings were observed by Tanuja Mohapatra, where Diabetes was found to be slightly higher among elderly males but with no statistical significance.[20] Physical activity increases glucose absorption, and hence people who were performing physical activity were less diabetic. Similar findings were observed by Tanuja Mohapatra.[20]

CONCLUSION

The present study demonstrates that the most common morbidities reported were Musculoskeletal, Visual, Cardiovascular and Dental problems. Osteoarthritis was the most common musculoskeletal problem. Refractory error was the common visual problem and hypertension was the common cardiovascular problem. Age was found to be significantly associated with musculoskeletal, visual, cardiovascular, genitourinary problems and Diabetes mellitus. Gender was found to have significant association with musculoskeletal problems. This can be reduced by regular screening for non - communicable diseases and consuming nutritious, low calorie and fibre rich diet. Inculcating healthy life style practices like walking, yoga and meditation will be helpful.

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