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Original Research Article

A cross sectional study to assess the modifiable risk factors and morbidity profile of elderly people in a village in tribal part of Maharashtra

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ABSTRACT

Background: Geriatrics population is an important part of the total community and comprises of about 7-8% of the whole population of one community. Since the expectation of life is also increasing steadily and quality of life being emphasized more & more in our country, the senior citizen group is getting importance day by day. The present study was carried to find the various social, economical and medical aspects related to geriatrics population in rural area.
Methods: The community based cross sectional study was carried out at a village among 427 study subjects using pre-validated questionnaire. Data was collected regarding their health related problems, Pallor was seen for anemia. Data was analysed using appropriate statistical methods.
Results: Majority of elderly population lies between the 60 to 70 years of population (84%). Joint pains followed by cataract, anemia were predominant among male subjects whereas anemia was found more in prevalence among female subjects followed by joint pains, cataract, hypertension and Diabetes.
Conclusions: Existing geriatric healthcare setup needs to be strengthened and should be sensitised enough to consider such differential nature of geriatric concerns.

Keywords: Elderly, Geriatric, Tribal, Diabetes, Hypertension, Cataract, Locomotor disability

INTRODUCTION

The elderly are the precious asset for any society.[1] The old age is natural process, someone says that. "These are the reservoir of the knowledge and experience, You can protect them, you can promote it, and you can help them". The elderly in developing countries are most likely to live with their families in rural areas and to continuous to work in agriculture, however this tradition support of elderly by their family members is being eroded due to urbanization and migration of young adult and popularization of nuclear family leaving the older adult with little social, economical and medical support.[2,3] Geriatrics population is an important part of the total community and comprises of about 7-8% of the whole population of one community. Since the expectation of life is also increasing steadily and quality of life being emphasized more and more in our country, the senior citizen group is getting importance day by day.[8] Today more than half of the elderly people are in developing countries. In India 6.5% of the total population is presented by aged persons.[2] The present study was carried to find the various social, economical and medical aspects related to geriatrics population in rural area. The good health enjoyed by these elderly will go a long way in strengthening one health care and economy. Needless to point out that even the WHO is also concerned about the health of this group and is promoting the concept of healthy aging throughout the World.

METHODS

The community based cross sectional study was carried out at a village in Dhule district of total population 4672 in Northern Maharashtra from October 2016 to February 2017. The survey teams and area map was prepared. The persons above age of 60 years were interviewed by survey team in detail. The information was fill up in the Pre-validated, semi-structured Performa. Study was carried out among sample size of 427 elderly people All the elderly persons who were ready to participate were included in the study. Those study subjects who were not presented at the time of survey, second house visit was carried out. Then per capita monthly income of the family was calculated and families were classified into five classes according to modified B.G. Prasad's classification. For hypertension, sphygmomanometer was used taking 140/90 mm of Hg as cut out limits and for diabetes simple urine testing was done using Benedict's qualitative reagent and graded accordingly. Cataract was diagnosed with the help of a torch and differentiated into mature senile cataract and immature senile cataract. Hearing loss was assessed by taking history of the subjects. In cases of loneliness the history of spouse was also taken. Data was entered using MS Excel software and data was tabulated and analyzed with the help of appropriate statistical methods using SPSS software.

RESULTS

The present study was done among 427 elderly study subjects living is a village. It has been observed that out of 427 elderly populations there are (55%) are females and (45%) are males. 71% of subjects belong to Hindu religion whereas 25% were new Buddhists and 4% were Muslim by religion (Figure 1). Literacy level was found low among elderly subjects, only 22% of female subjects were literate whereas 39% of male subjects were found literate (Figure 3). Majority of elderly population lies between the 60 to 70 years of population (84%) (Table 1). 73% families were from three generation family and (19%) are from nuclear family, (8%) are from joint family. Majority of elderly population coming from three generation family (Table 2). Out of our sample size population, 21% were farmer, and 21.5% were agriculture workers, 15.5% were doing nothing whereas 39.8% were doing household works (Table 3). After assessing their dependency status majority of subjects (66%) were dependant on their children for support whereas 34% were living independent (Figure 4). In personal history when we tried to assess subjects who perform physical exercise, we found that only 5% subjects used to do physical exercise (Table 5). Joint pains followed by cataract, anemia were predominant among male subjects whereas anemia was found more in prevalence among female subjects followed by joint pains, cataract, hypertension and Diabetes (Table 4). Other problems such as loss of teeth, GIT problem, diabetes, hearing loss, loneliness, chronic bronchitis, COPD were found more among male subjects as compared to female subjects (Table 4). Joint pains, cataract anemia was found more between middle and lower socio-economic classes, whereas hypertension and diabetes mellitus was found in higher percentages among upper middle and higher socio-economic classes (Table 5). Figure 6 shows health related problems faced by elderly subjects in decreasing order of their frequency, we can see that joint pain, cataract, anemia were present in highest propertion followed by hypertension, loss of teeth, Gastro-intestinal disturbances and so on (Figure 6).

Table 1: Age and sex wise distribution of study subjects (n= 427).

Age groups in years	Male (%)	Female (%)	Total (%)
60-65	67 (16)	127 (29)	194 (45)
65-70	103 (24)	67 (16)	170 (39)
70-75	9 (2)	20 (5)	29 (7)
75-80	9 (2)	10 (2)	19 (4)
>80	5 (1)	10 (2)	15 (3)
Total	193 (45)	234 (55)	427 (100)

χ^2=30.73, df=5, p>0.001

Table 2: Distribution of study population according to type of family (n=427).

Type of family	Number	Percentage (%)
Nuclear	82	19
Three generation	312	73
Joint	33	8
Total	427	100

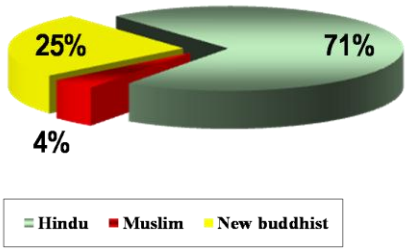

Figure 1: Distribution of study subject as per their religion.

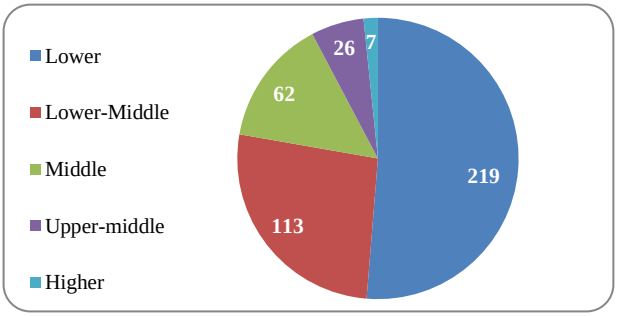

Figure 2: Pie diagram: income wise distribution among study population.

Table 3: Distribution of study subjects according to occupational status (n=427).

Occupation	Male (%)	Female (%)	Total (%)
Farmer	25 (12.9)	65 (27.78)	90 (21.08)
Agriculture laborer	51 (26.42)	41 (17.52)	92 (21.54)
Non-agricultural laborer	4 (2.07)	3 (1.28)	7 (1.63)
Business	2 (1.03)	0	2 (0.47)
Nothing	28 (14.51)	38 (16.24)	66 (15.46)
Household work	83 (43)	87 (37.18)	170 (39.81)
Total	193 (100)	234 (100)	427 (100)

Table 4: Distribution of study subjects according to morbidity conditions.

Morbid condition	Male (%)	Female (%)	Total (%)
Joint pains	118 (61.13)	120 (51.28)	238 (56)
Cataracts	119 (61.65)	112 (47.86)	231 (54)
Anemia	73 (37.82)	148 (63.24)	221(51)
Hypertension	62 (32.12)	49 (20.94)	111 (26)
Loss of teeth	61 (31.60)	42 (17.95)	103 (24)
GIT problem	44 (22.79)	32 (13.67)	76 (17)
Diabetes	29 (15.02)	18 (07.69)	47 (11)
Hearing loss	21 (10.88)	17 (07.26)	38 (9)
Loneliness	16 (08.29)	11 (04.7)	27 (6.3)
Chr. bronchitis	14 (07.25)	11 (04.7)	25 (6)
COPD	12 (06.21)	9 (03.8)	21 (5)

Table 5: Distribution of some leading morbidity conditions in study subjects according to socio-economic status. (n=427).

Socio-economic status	Joint pains (%)	Cataract (%)	Anemia (%)	Hypertension (%)	Diabetes mellitus (%)
Lower (219)	122 (55.7)	103 (47.03)	132 (60.27)	55 (25.11)	17 (7.76)
Lower-middle (113)	55 (48.67)	68 (60.17)	55 (48.67)	22 (19.47)	10 (8.85)
Middle (62)	41 (66.13)	39 (62.9)	26 (41.93)	20 (32.25)	13 (20.96)
Upper-middle (26)	12 (46.15)	16 (61.54)	6 (23.08)	10 (38.46)	5 (19.23)
Higher (7)	4 (57.14)	2 (28.57)	2 (28.57)	3 (42.86)	2 (28.57)
Total	238	231	221	111	47

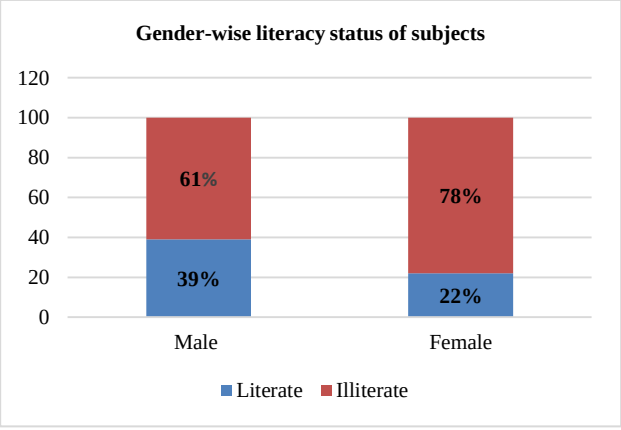

Figure 3: Distribution of the study subjects as per educational status.

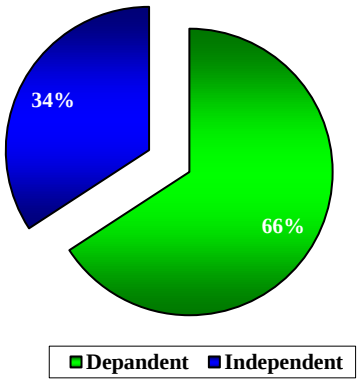

Figure 4: Distribution of study subject as per their dependency.

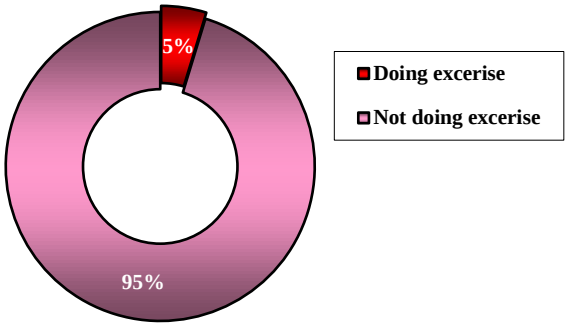

Figure 5: Distribution of the elderly as per the exercise.

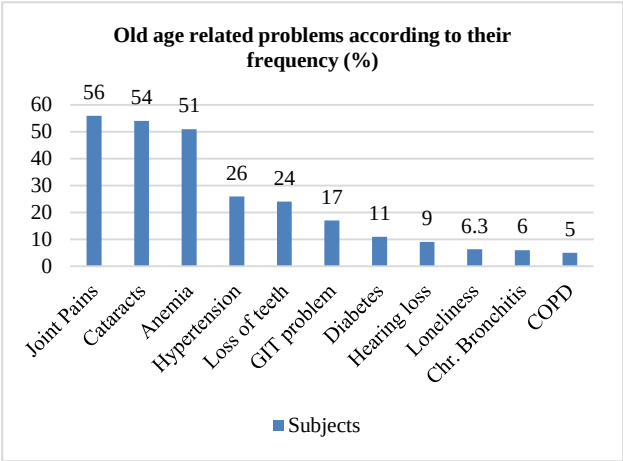

Figure 6: Distribution of study subjects according to health related problems faced by them.

DISCUSSION

In India the elderly population is 10 crore forming 10% of total population and it is estimated to reach up to 15 crore by the year 2020. The demographic population is rising due to better health control of communicable diseases resulting in increased longevity.[8] So we tried to assess various modifiable risk factors associated with the elderly population with the help of present study, which was done among elderly people in a tribal village in Maharashtra. We selected 427 elderly people from a village of 4672 population. Majority of subjects were females and Hindu by religion. Literacy status was found exceptionally low among the subjects. This may be due to lesser access and lack of awareness among tribal population to the primary education in the midst of 60s-70s decades since majority of study subjects were between age group of 60-70 years. However study done by Bhat et al shows 51% literacy among urban elderly population.[9] Lesser literacy affects utilisation of medical services. Majority of study population was between age group of 60-70 years of age group and belonged to three generation families, which implies greater dependency of them on their children. About 40% were having non sedentary type of lifestyle however 40% study subjects were doing household work which suggests that they are having sedentary lifestyle. This suggests that differential approch is needed in order to recommend preventive measures for health problems in old age population. Also we have seen that Joint pain and cataract followed by anemia were found prevalent among male subjects whereas Anemia, Joint pain followed by cataract were found common among Female subjects in decreasing order of its prevalence. Bhat et al found Locomotor problems followed by vision problems more common in their study subjects.[9] We have also found relation between health problems among elderly people and their socioeconomic statuses. Anemia and cataract were found more between lower and middle socio-economic class whereas hypertension and diabetes mellitus were found comparatively more between upper middle and higher socio-economic classes. Which itself signifies role of health education and policy making according to need of the community.

Health education and policy making should prioritize according to this prevalence according to gender. Hypertension and diabetes were found more among male subjects than in female subjects. And very minimal (5%) were doing physical exercise in this age group. Differential lifestyle modification approaches should be planned in order to achieve sustainable health status. It would be beneficial to equip overselves and the community with skills to tackle the physical as well as psychosocial problems related with the growing age in a holistic manner.[10]

CONCLUSION

The present study concludes that needs and concerns of old age group people are different according to their socio-economic statuses, gender, type of work they do etc. Problems need to be tackled with a comprehensive approach. Existing geriatric healthcare setup needs to be strengthened and should be sensitised enough to consider such differential nature of geriatric concerns. Policies with inter-sectoral coordination are essential between various departments in order to improve health care seeking behaviour, to improve trust in the minds of elderly persons and to reduce drop outs. Community participation and representation from various communities at policy formation levels is important in order to consider needs of various communities at planning levels.

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