Original Research Article

Health problems in geriatric population of age group ≥70 years in rural Kerala, India: a cross sectional study

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ABSTRACT

Background: The proportion of elderly population is increasing considerably world over. The health and socio-economic issues of this section is to be considered separately and in depth insights about them is needed for formulating elderly friendly health policy. This study intends toidentify the important health concerns of elderly population above the age group of 70 years in a rural area in North Kerala, India.
Methods: It is a community based cross-sectional descriptive study involving all individuals above the age group of 70 years in a randomly selected panchayath ward from rural North Kerala. The data regarding demography, socioeconomic aspects, medical history, access to health care and treatment of chronic illnesses were collected through interview of study participants by a trained health care volunteer using a pre-validated questionnaire.
Results: A total of 93 individuals above the age group of 70 years were included in the study out of which 63% were females and 37% males. In the study population 55.9% of the elderly were widowed and 87.1 % were staying along with their children. Almost 75% of the elderly received social welfare pension from government agencies and 14.3% received service pensions. 67.74% of the study population were hypertensive and 35.56% were diabetic. Other health issues included arthritis, coronary artery disease, chronic kidney disease, genito urinary symptoms and cerebrovascular accident.
Conclusion: The study provide valuable insights into the health and social issues of elderly in Kerala and points to the importance of formulating an elderly friendly health policy in the state.

Keywords: Disease prevalence, Elderly, Health issues, North Kerala

INTRODUCTION

The proportion of elderly among total population have drastically increased in India, more so in Kerala, owing to the reduction in fertility rates and increased life expectancy. According to the 2011 census total 8.6 percentage of Indian population comprises of people above the age of 60 years.[1] In kerala the figure is much higher at 12.6%.[1] An estimate calculates that the proportion may climb up to 20% by 2021.[2] A study showed that out of the elderly population up to 40% were

above 70 years and it is estimated to be around 8% of the total population by 2021 in Kerala. The health concerns of elderly population are a challenge that should be carefully studied in the background of changing demographics. Especially those above the age of 70 years are having health concerns with diverse physical, psychological and social aspects to it. Increased prevalence of non-communicable diseases and its chronic complications leading to severe morbidity and decreased quality of life is a major concern in elderly population. Data regarding this is essential in every geographical

locality such that health care policy may be fashioned in a manner that caters to our aging population. In this study we aimed to identify the important health concerns of elderly population above the age group of 70 years in a rural area in North Kerala. It also aimed at shedding some light in social aspect of geriatric health in our community including social security, attitude of the care givers and access to health care.

METHODS

It is a community based cross sectional descriptive study conducted in a rural area in North Kerala, India.

Study population

One ward was selected by simple random method from a panchayath in rural area. Ward no. 2 in Mokeri panchayath of Kannur district, Kerala, India was selected as the study population by this process.

Inclusion criteria

All individuals above the age of 70 years giving consent for study from the selected ward in a panchayath were included in the study. Study was conducted between March 2017 and August 2017.

Methodology

A questionnaire was developed initially after adequate consultations which included the details regarding demography, socioeconomic aspects, medical history, access to health care and treatment of chronic illnesses. Five health care volunteers were trained in data collection using the questionnaire. All the study subjects were interviewed by the trained health care volunteers by the pre-validated questionnaire through individual house visits Participation in the study was voluntary and informed consent was taken prior to the interview. Privacy of the patient and confidentiality of the data were ensured.

Statistical analysis

Data was analysed by PSPP free software and descriptive statistics were reported in frequency and percentage.

RESULTS

The panchayath under study had a total population of 23680 and the selected ward contained a population of 1741. Out of this all 93 subjects above the age of 70 years were selected for the study.

Table 1: Characteristics of study population.

Characteristics	Frequency n (%)	* Total N=93
Age Distribution		
70-80 yrs	69(74.2)	93
80-90 yrs	18(19.3)	
>90 yrs	6 (6.5)	
Sex distribution		
Male	34(37.0)	93
Female	59(63.0)	
Marital status		
Unmarried	5 (5.4)	93
Married	36(38.7)	
Widow/widower	52(55.9)	
Dietary habits		
Vegetarian	4 (4.7)	85
Mixed	81(95.3)	
Tobacco usage	13(26.0)	50
Alcoholism	3 (7.3)	41
Mode of stay		
Alone	3 (3.2)	93
With spouse	6 (6.5)	
With children	81(87.1)	
With other relatives	3 (3.2)	
Source of income		
Agriculture	4 (4.8)	84
Social welfare pension	63(75.0)	
Service pensioners	12(14.3)	
No income	5 (5.9)	

* Total number of available data in a particular characteristic.

The prevalence of elderly above the age group of 70 years in the study population was 5.34%. Age distribution showed that out of the study group 74.2% were between 70 and 80 years (old-old), 19.3% were between 80 and 90 years (oldest old) and the remaining 6.5% were above the age of 90 years (extreme old). Mean age of the study population is 76.4±6.3.

Proportion of females in the study population is 63% and that of males is 37%. As the age increases the proportion of females is found to be increasing with 62.7% in age group of 70-80, 64.7% in age group of 80-90 and 83.3% in age group of >90. Marital status of the study population shows that 5.4% of them are unmarried, 38.7% are married and living with their partners and rest 55.9% are married but lost their partners. Even though 81% of females in the study population are widows only 13% of men are widowers.

According to the medical history, 67.74% of the study population is hypertensive and 35.56% are diabetic. Apart from these the study population also have history suggestive of arthritis (20.43%), cerebrovascular accident (4.30%), coronary artery disease (12.90%), chronic kidney disease (6.54%) and cancers (2.15%). One of the major medical problems that elderly population faces is that of genitourinary system. In the current study population the prevalence of genitourinary symptoms was 35.1%. The symptoms include nocturia, urgency, frequency and stress incontinence.

Out of the total study population 78.5% preferred modern medicine treatment whereas 13.9% preferred alternate medicinal system and rest utilized both. Total 12.9% of the study population is using palliative and rehabilitative care under public health institutions. Following are the data regarding treatment and monitoring of diabetes and hypertension among the study population.

Table 2: Treatment seeking pattern in diabetes and hypertension.

Treatment seeking pattern	Percentage
BP monitoring once per month	68.4
BP monitoring more than once per month	8.0
No regular BP monitoring	23.7
Once monthly diabetes monitoring	50.0
Less than monthly diabetes monitoring	50.0
Regular compliance of diabetic medication	23.5

DISCUSSION

The proportion of individuals above the age group of 70 years in the selected ward is 5.34%. Centre for development studies report estimates that by 2021 the proportion of individuals with more than 70 years of age will be 3.8% in whole of the country but will be as high as 8% in the state of Kerala.[2,3] The current study

definitely upholds the prediction. Females constituted 63% of the study group whereas males were 37%. Marital status among elderly showed that out the total study group 55.9% was widowed, 38.7% were living with their partners and 5.4% were unmarried. In the widowed category there was a disproportionately higher number of females than males. This was in accordance with previous reports from the country.[4] This trend can very well be explained by the higher life expectancy of females compared to males and also points to the importance of having a gender sensitive perspective in dealing with elderly population.

Usage of tobacco and alcohol in our study group was comparatively less with respect to previous national reports. Previous reports showed that daily tobacco use fluctuated in the range of 49-52% in the elderly population on all India bases. And the proportion of alcohol usage in elderly was around 16%.[4] In our study population the proportion was just 26% and 7.3% respectively. Even though the response rates in these two variables are comparatively low in our study, this finding may have its reason in the better awareness of health hazards about smoking and alcoholism in Kerala population. Higher proportion of females in elderly population who are less probable to have addictions may also be a factor.

The current study shows that elderly population has multiple chronic illnesses causing considerable co-morbidities. Major diseases affecting our study population include hypertension, diabetes, arthritis, coronary artery disease, chronic kidney disease and cerebrovascular accident. Previous studies showed that in age group over 70 years more than 50% population suffers from one or more chronic illnesses.[5] Out of this hypertension, coronary heart disease and cancer comprises the major share.

Studies conducted in India shows the proportion of elderly hypertensive to be at 40%.[6] Some studies conducted in urban kerala showed the prevalence of hypertension in elderly to as high as 69%.[7] Our study report is showing a similar prevalence rate of 67.74% even though it is conducted in a rural population. This may point to the fact that urban rural divide in lifestyle diseases may be minimal in state like Kerala.

According to the surveillance data, the prevalence of diabetes among U.S. adults aged over 65 years varies from 22 to 33%.[8] The prevalence of diabetes among older adults was 7% at the national level[4]. Prevalence of Diabetes mellitus in our study population was 36.56%, which is far higher than the normal expected prevalence in Indian population. One interesting fact in the study result is that the compliance of diabetic medication including oral hypoglycaemic agents or insulin in the study population was far less than the previously reported levels world over which is 36-93%.[9-11] In our study group it is as low as 23.5%. The ignorance about the scientific

treatment of diabetes and difficulty of administration of treatment like insulin may be the reason behind this abysmally low compliance to anti diabetic medication in our population.

Our study throws light into the specific problems faced by elderly population more than 70 years in rural Kerala. But limitations of the study include lack of adequate representation of diverse population in the state. A larger study with due representation of both urban and rural population need to do for data regarding the social and health issues of elderly in the state.

CONCLUSION

World over the proportion of elderly population is ever increasing more so in Kerala and the challenge it poses to the public health policy and planning is enormous. The current study gives a glimpse in to the magnitude of health and social issues of elderly in Kerala and points to the necessity of more thorough studies which will guide the health policy of the state in elderly friendly manner.

REFERENCES

1. Elderly in India-Profile and Programmes 2016. Ministry of statistics and programme implementation. Feb 2016. Available at: www.mospi.nic.in/publication/elderly-india-2016.
2. Rajan IS, Sarma PS, Mishra US. Demography of Indian aging, 2001-2051. Journal of Aging and Social Policy. 2003;15(2-3):11-30.
3. Rajan SI. Home away from home: A survey of old age homes and inmates in Kerala, India. Journal of Housing for the Elderly. 2002 May 29;16(1-2):125-50.
4. Arokiasamy P, Parasuraman S, Sekher TV, Lhungdim H. India: Study on global ageing and adult health (SAGE), Wave 1. International Institute for Population Sciences. Geneva: WHO; 2013. Available at: www.who.int/healthinfo/sage/national_reports/en/.
5. Reddy PH. The health of the aged in India. Health Transit Rev. 1996;6:233-44.
6. Palanivel C, Bharathy M, Upadhyay RP, Singh AK, Srivastava R, Yadav K. Hypertension in the Elderly: Prevalence and Health Seeking Behavior. N Am J Med Sci. 2012 Nov; 4(11): 558–562.
7. Hypertension study Group. Prevalence, Awareness, treatment and control of hypertension among elderly in Bangladesh and India: a multicentric study. Bulletin of the World Health Organization, 2001; 79(6):490-500. Available at https://apps.who.int/iris/handle/10665/74773.
8. Kirkman MS, Briscode VJ, Clark N, Florez H, Haas LB, Halter JB, et al. Diabetes in older adults. Diabetes Care. Dec. 35(12):2650-64.
9. Cramer JA. A systematic review of adherence with medications for diabetes. Diabetes Care 2004; 27(5):1218-24.
10. Mukherjee S, Sharmasarkar B, Das KK, Bhattacharya A, Deb A. Compliance to Anti-Diabetic Drugs: Observations from the Diabetic Clinic of a Medical College in Kolkata, India. J Clin Diagn Res. 2013 Apr; Vol-7(4): 661-5.
11. Rwegerera GM. Adherence to anti-diabetic drugs among patients with Type 2 diabetes mellitus at Muhimbili National Hospital, Dar es Salaam, Tanzania-A cross-sectional study. Pan Afr Med J. 2014;17:252.