International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

Morbidity Pattern among Geriatric Population in a Rural Setting: A Community Based Study

Shilpa K[1*], Amit R Ugargol[2*], Harshal Kawanpure[1*], Praveen Kumar BA[3*@], Vandhana Khanolkar[1**], Jeffy Binu[1#]

[*]Assistant Professor, [**]Professor, [#]Statistician
[1]Department of Community Medicine, Azeezia Institute of Medical Sciences, Kerala, India.
[2]Department of Microbiology, Azeezia Institute of Medical Sciences, Kerala, India.
[3]Department of Community Medicine, PESIMSR, Kuppam, AP, India.

[@]Correspondence Email: drpraveenba@gmail.com

Received: 29/08//2013 *Revised: 25/09/2013* *Accepted: 27/09/2013*

ABSTRACT

Background: Ageing is a universal and inevitable phenomenon, beginning at birth which should be regarded as a normal biological process leading to functional deterioration, vulnerability to illnesses & ultimately culminating in extinction of life. Proportion of geriatric population is increasing worldwide and majority of them are expected to live in developing countries.
Aims: To find out the prevalence of morbidities and major morbid conditions among the geriatric population of a rural area.
Methods and Material: This was a cross sectional community based study conducted in a rural field practice area of Azeezia Institute of Medical Sciences, Kerala from January 2012 to June 2012. Data was collected using predesigned and pretested questionnaire by random sampling. Persons aged 60 and above were included in the study. Proportions, Percentage and Chi-square test were used for analyzing the data.
Results: Out of 211 participants, majority were females 55 %. Majority of female participants were cashew factory workers by occupation while many male participants were farmers. More than half of participants were below poverty line and were receiving pension. All the participants had one or the other morbidity with the mean morbidity being 3. The most common morbid conditions were visual, musculoskeletal, diabetes, hypertension, respiratory ailments, hearing and dermatological problems. Morbidities were higher among female participants and in below poverty line group which was found to be statistically significant.
Conclusions: This study showed a high prevalence of morbidity and identified the common morbid conditions. Comprehensive geriatric assessment and integrated geriatric services can reduce the prevalence of diseases to a great extent.
Key words: Elderly, community based, rural area, morbidity.

INTRODUCTION

Ageing is a universal and inevitable phenomenon, beginning at birth which should be regarded as a normal biological process leading to functional deterioration, vulnerability to illnesses & ultimately culminating in extinction of life. Proportion of geriatric population is increasing

worldwide and majority of them are expected to live in developing countries.

Globally, the number of persons aged 60 years or over is expected to nearly triple, increasing from 673 million in 2005 to two billion by 2050.[1] India had 71 million elderly persons above 60 years of age as of 2001. According to projections, the elderly in the age group of 60 and above is expected to increase from 71 million in 2001 to 179 million in 2031, and further to 301 million in 2051, and 21% of the Indian Population will be 60+ by 2050 as compared to 6.8% in 1991.[2,3]

The key features of aging are increased inter-individual variability, complexity, and co-morbidity, which is why indicators of quality of care, based on single disease models, work less well among the older than younger people, and the care of the elderly is a major social and health problems in developed countries. In developing countries like India where majority of population live in rural areas, aging is also associated with poverty, reduction in family support, social isolation, inadequate housing, mental illnesses, widowhood, bereavement, impairment of cognitive functioning, and limited options for living arrangement and dependency towards the end of life.[4]

The geriatric population is defined as population aged 60 years and above.[5] Old age can be broadly characterized by time altered changes in an individual's biological, psychological and health related capabilities and its implications for the consequent changes in the individual's role in the economy and the society.[6] Degenerative diseases and long term illnesses also called age dependent diseases affect the elderly. The most common diseases in this category are ischemic heart disease, hypertension, diabetes, cancer, respiratory diseases.[7]

The grim situation of the elderly calls for some desperate measures, in this regard the present study was conducted to assess the current morbidity patterns of older persons in a rural community and to plan for in-depth study and geriatric health care services in the area.

MATERIALS AND METHODS

This is a community based cross sectional study conducted between January 2012 to June 2012 in Meyannoor, which is a rural field practice area of Azeezia Institute of Medical Sciences, Kollam district, Kerala. Based on previous studies, 88.7% prevalence was considered with 5% error and with confidence interval of 95, sample size was calculated as 211. A total of 211 elderly persons in the age group of 60 and above residing in this area were included in the study by simple random sampling. Participants were personally interviewed using predesigned and pretested questionnare. Morbidity was assesed based on self reported history, use of medication and clinical examination.The information collected was computerised and analysed by using Statistical Package for Social Science (SPSS 17th version) software. Informed consent was obtained and confidentiality of the information was assured.

RESULTS

Out of 211 participants, more than half of the participants were females 116 (55.0%). Majority of female participants were cashew factory workers previously by occupation while many male participants were farmers. More than half of participants were below poverty line and were receiving pension.

Table 1: Socio-demographic profile.

Socio-demographic variables		Male N=95	Female N=116	Total N=211
Occupation	No occupation	0 (0.0%)	13(100.0%)	13
	Cashew factory worker	0 (0.0%)	86(100.0%)	86
	Farmer	40(100.0%)	0 (0.0%)	40
	Labourer	23(100.0%)	0 (0.0%)	23
	Others	32 (65.0%)	17 (34.0%)	49
Income	Below poverty line	55 (41.4%)	78 (58.6%)	133
	Above poverty line	40 (51.3%)	38 (48.7%)	78
Pension	No	24 (36.9%)	41 (63.1%)	65
	Yes	71 (48.6%)	75 (51.4%)	146
Living arrangements	Alone	0 (0.0%)	4 (100.0%)	4
	Spouse	30 (50.8%)	29 (49.2%)	59
	Children	28 (37.8%)	46 (62.2%)	74
	Family	37 (50.0%)	37 (50.0%)	74

In our study, all the participants had one or the other morbidity with the mean morbidity. Morbidity profile of the study participants as per sex distribution. (Table 2)

Visual problems were the most common problem 195 (92.4%) among study subjects. The common visual problems were refractive errors, cataract and blindness. Among them refractive errors was reported by 87 (41.2%) of subjects. Senile cataract was found to be the second most common eye problem 64 (30.3%). In 40 (19.0%) participants both cataract and refractive errors were noted. Majority of visual problems were seen in female participants 73 (62.9%) which was found to be statistically significant (P=0.012).

Table 2: Morbidity profile of the study participants as per sex distribution.

Systems wise morbidity	Males (N=95)	Females (N=116)	Total (N=211)
Eye problems	83(87.4%)	112(96.6%)	195(92.4%)
Musculoskeletal	63(66.3%)	96(82.8%)	159(75.4%)
Diabetes	34(35.8%)	73(62.9%)	107(50.7%)
Hypertension	33(34.7%)	33(28.4%)	66(31.3%)
Respiratory	29(30.5%)	40(34.5%)	69(32.7%)
Hearing	12(12.6%)	41(35.3%)	53(25.1%)
Dermatological	12(12.6%)	26(22.4%)	38(18.0%)
No morbidity (Healthy)	0	0	0
Total morbidity			687

The total is more than N=211 as one person may have more than one morbidity.

Musculoskeletal morbidities were the second most common health problem seen in 159 (75.4%) of subjects.The problems included backache in 57(27.0%) and joint pain in 46(21.8%). Musculoskeletal problems were higher among females 159(75.4%) when compared to male participants, which was statistically significant (P=0.006).

Almost half of the participants 107(50.7%) had diabetes in which majority were females 73(62.9%) which was statistically significant (P=0.00). Hypertention was found among one third of the participants 66 (31.3%). Among all 211 participants only 64 (30.3%) were normotensives while 81(38.4%) were prehypertensives and remaining 58 (27.5%) were in stage I and 8(3.8%) in stage II of hypertension.

Respiratory symptoms were seen in 69(32.7%) subjects.One fourth of the study participants 53(25.1%) had hearing prolems. Hearing problems were seen more in females 41(35.3%) which was again statistically significant (P=0.00). Very few

participants about 38(18.0%) had dermatological problems.

In our study, musculoskeletal and visual problems were more among those who worked in cashew factories previously, which was statistically significant (P<0.05). Musculoskeletal, dermatological, hypertension and respiratory symptoms were seen more in below poverty line participants, which was also statistically significant (P<0.05).

DISCUSSION

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 the old age, you protect it; you promote it." The modern philosophy is that the old must continue to make their share in the responsibilities and in the enjoyment of the privileges, which are essential features of remaining an active member of the community.[7]

According to a community based study on the geriatric population of Kasurdi village, Maharastra by Agarwal et al. revealed that, 190 out of 214 subjects studied, 88.7% of the respondent were suffering from one or the other health problems.[8] In the present study almost all participants had one or the other health problem. This might be because of the less awareness of people about their health as well as the health care services available in the area. In the same study done by Agarwal et al[8] on geriatric population, the major morbidities include visual (56.0%), musculoskeletal (38.3%), respiratory (32.7%) and hypertension (28%), while in our study we found that the morbidities are more or less the same, but the percentages show a wide difference i.e visual (92.4%), musculoskeletal(75.4%),respiratory (32.7%) and hypertension (31.3%). Other morbidities like diabetes (50.7%), hearing difficulties (25.1%) and dermatological problems (18.0%) were also seen in the present study. Visual and musculoskeletal problems were more common in the present study because most of the study subjects were either cashew factory workers or laborers/farmers and their jobs involve prolonged exposure to smoke and dust, and also demanded more labour which may involve wear and tear.

Similar to finding of SPS Bhatia et. al.[9] almost all had one or more health problems. Co morbidities were common among participants which is coherent with findings of the National sample survey carried out by Government of India in 1986-87.[10]

In a study conducted in Kerala by Kalavathi et al[11] on geriatric population, prevalence of hypertension was 51.8%, which is the most important cause of cardiovascular mortality and morbidity in elderly age group. Whereas, the prevalence of hypertension was only 31.3% in our study. Another study was conducted on geriatric population of Brahmapur,[12] on those who attended the preventive geriatric clinic revealed that majority 51% live with hypertension when compared to diabetes, which was 36%. While in our study, diabetes was seen in 50.7% and hypertension in 31.3% which was opposite. The reason for diabetes being more prevalent may be because of consumption of high glycemic index food items like tapioca, rice, and coconut oil which are cultural staple food items in this region. Low prevalence of hypertension may be due to physical activity, better awareness and utilization of the available health care facilities.

In brief, problems faced by the geriatric population are more or less the same everywhere. The differences in prevalence rates are mainly due to the differences in cultural factors, awareness, availability and utilization of health care

services. Limitation of our study was, we focused only on physical dimension of geriatric population where as geriatric evaluation needs multidimensional approach and also we included fewer sample size.

CONCLUSION

This study among the geriatric population in the rural area has showed a high prevalence of morbidity and identified the common morbid conditions. The common morbities were visual, musculoskeletal, diabetes, hypertension, respiratory, hearing and dermatological problems. This study also reflects that, most of these morbidites can be prevented or delayed by early intervention.

This study warrants us to carry out a large community based studies to evaluate the risk factors for various morbidities, psychosocial and cultural factors influencing the morbidity of geriatric population in various geographical settings. Present health need is to develop an integrated approach for managing geriatric health problems and to improve the quality of life. It is imperative to integrate geriatric health services at primary care centres in addition to increasing awareness among the people about health, diseases and health care facilities in order to improve the quality of life.

ACKNOWLEDGEMENT

We would like to thank Dr. Ananthu. S, Dr. Jyolsna Nelson and Dr. Kadheeja Farhath for helping us in data collection.

REFERENCES

1. UN. The World Population Prospects: The 2006 Revision Executive Summary. United Nations, New York: Dept of Economic and Social Affairs; 2007.
2. Rajan SI, Sarma PS, Mishra US. Demography of Indian aging, 2001-2051. J Aging Soc Policy 2003; 15:11-30.
3. UN. The Sex and Age Distribution of Population. United Nations, New York; 1990.
4. Chandwani H, Jivarajani P, Jivarajani H. Health and social problems of geriatric population in an urban setting of Gujarat, India. Internet J Health 2009;9:2.
5. Elango S. A study of health and health related social problems in the geriatricpopulation in a rural area of Tamil Nadu. Indian J of Public Health 1998; 42:7-8.
6. Irudaya Rajan S, Misra US, Sharma PS. India's Elderly: Burden or Challenge?. New Delhi: Sage Publications; 1999.
7. Park K. Preventive medicine in obstetrics, pediatrics and geriatrics. In: Park K, editor. Park's text book of preventive and social medicine, 22 nd edn. Jabalpur: Banarsidas Bhanot; 2013. p. 549-51.
8. Agrawal S, Deo J, Kotwal AS, Verma AK. Geriatric health: Need to make it an essential element of primary health care. Indian J Public Health 2011; 55:25-9.
9. Bhatia SPS, Swami HM, Thakur JS, Bhatia V. A study on health problems and loneliness among the elderly in Chandigarh. Indian J Community Med 2007; 32:255-7.
10. National Sample Survey Organisation (NSSO), Govt. of India, Socio-economic profile of aged persons, Sarvekshana, 1991:15; 49.p.1-2.
11. Kalavathy MC, Thankappan KR, Sarma PS, Vasan RS. Prevalance, awareness, treatment and control of hypertension in an elderly community based sample in

Kerala, India. Nati Med J India. 2000; 13:9-15.
12. Moharana PR, Sahani NC, Sahu T. Health status of geriatric population attending the preventive geriatrics clinic of a tertiary health facility. Indian J Community Med 2008; 2.

How to cite this article: Shilpa K, Ugargol AR, Kawanpure H et. al. Morbidity pattern among geriatric population in a rural setting: a community based study. Int J Health Sci Res. 2013;3(11):67-72.

****