# Study of Morbidity Pattern, Activities of Daily Living and Health Seeking Behavior among Rural Elderly in Jammu District

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## ABSTRACT

**Introduction:** Elderly are the fastest growing segment of population due to demographic transition. This study was conducted to assess the morbidity pattern, health seeking behaviour and functional status of geriatric age group using Katz index.

**Methodology**: Community based cross sectional study was conducted among elderly residing permanently in two villages. Personal interview, general & clinical examinations were carried out. ADL scale was used to measure the functional status of elderly.

**Results:** Out of 200 study subjects, 51.5% were males and 48.5% were females, 53.5% males and females were young old followed by middle old 35.5% and oldest old 11%. The prevalence of hypertension, diabetes and cataract was 56.5%, 52.0% and 40.0% respectively and significant association with gender was found for diabetes, hypertension and CVD with gender. Dependency assessed by ADL, showed that 16.0% were partially/ totally dependent and total dependency increased with age.

**Conclusion:** Secondary prevention of health problems of elderly and screening of functional disabilities by primary care physicians should be prioritized.

**Keywords**: Morbidity pattern, health seeking behavior, elderly, geriatric

## INTRODUCTION

Aging is a normal, inevitable, biological phenomenon. In the last 2 decades significant changes have occurred in the demography and with few exceptions, the elderly are the fastest growing segment of the population in the developing world. The numbers of elderly worldwide currently constitute 11.5% of total population which is projected to double by 2050. In our country this would increase to 19% by the middle and 34% by the end of this century from current levels of 8%. [1]

To define old age is not an easy task as there is nouniform definition but adopting the criteria defined in National Policy on Older Persons' in India a person of 60 years of age is called senior citizen and it also coincides with retirement age of Government employees[2]. Elderly are also classified on the basis of their age that is young old 60-69 years, middle old 70-79 years and oldest old 80 years and above. [3] A distinguishing feature of ageing in India is the significant interstate disparity in terms of both levels and growth of the elderly population depending upon the pace of demographic transition in these states.

The current challenge is to delay the onset of disability and ensure optimal quality of life for older people. Common conditions associated with senility in older age include hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic obstructive pulmonary disease in the backdrop of non communicable diseases like diabetes, hypertension and mental illnesses.

Health seeking behavior in geriatric population is important to know their attitude towards health

care facilities taking into consideration the influence of respective socio-cultural, economic and demographic circumstances. The functional status is an important component both in health seeking behaviour and health status of geriatrics. There are number of methods to assess the ability of elders in terms of performing tasks of daily living. Katz index or ADL[4] is one of the most commonly used methods. Limited work has been done in this area. Therefore the current study was designed to assess the health seeking behaviour, morbidity pattern and functional status of the rural elderly.

## METHODS

A cross sectional study of morbidity pattern of geriatric population was conducted in R.S. Pura block which is the Rural health and training centre and field practice area of Post graduate Department of Community Medicine, Govt. Medical College Jammu. Total population of R.S. Pura block is 1, 90,000 spread over 198 villages. The block is divided into 8 health zones for the purpose of administration. Two villages of Miran Sahib Zone with approximate population of 3200 were chosen by simple random sampling technique. Ethical approval was obtained from the institutional ethics committee, before initiation of the study. Convenience sampling was used to select the houses. All elderly persons in age group of 60 years and above who were permanent residents and who gave their verbal consent were included in the study. Those who do not give their consent for participation and who were not available even after two contacts at their respective homes and elderly suffering from acute illnesses were excluded from the study. Total of 200 subjects, both male and female were studied.

Each individual in the study was subjected to a personal interview, general & clinical examination. A pre-tested Performa was used for recording the personal details and socio-demographic data like age, sex, occupation, marital status and type of family. The study subjects were examined for referable complaints and conditions already diagnosed by physician by scrutinizing their records. The current health problems were also recorded and patients were referred to physician for further management. A person taking ttreatment of diabetes were recorded as diabetics. A person already diagnosed with hypertension or taking antihypertensive drugs was regarded as hypertensive. New patients were labelled as hypertensive if on two different occasions their blood pressure readings were high according to the JNC-VIII blood pressure classification.[5] Visual examinations were done with torch light and finger counting. Hearing impairment was assessed by using tuning fork. The

Performa also sought opinion of the respondents about their health seeking behaviour.

Katz Activities of Daily Living (ADL) scale [4] was used to measure the functional status of elderly. The scale consists of six functions of basic activities including bathing, dressing, toileting, transferring, continence, and feeding. Elderly were scored yes/no for independence in each of the six functions. The maximum possible score was 6 which mean the person was able to perform all activities without any assistance. Score of less than 2 means person was totally dependent on others for performing basic activities. Score ranging from 2-6 means partial dependence in doing daily activities.

Data was entered in Window Microsoft Excel sheet 2016, and was analyzed using Open Epi ver 3.01. Results were presented as frequencies and percentages. Chi-square test was used for finding out significance of association. A p value of less than <0.05 was considered as statistically significant.

## RESULTS

out of the 200 study subjects half of the male and female were in the age group of 60–69 years that is young old followed by middle old and oldest old. Overall literacy rate was 69.5% for both the sexes but males were comparatively more educated than females. More women were living with spouse than men. 68.5% were Hindus and 55.5% of elderly were living in joint families (Table 1).

**Table 1: Distribution of Socio demographic characteristics among Study subjects with Gender**

| Characteristics | Male (n-103)(%) | Female (n-97) (%) | Total |
|---|---|---|---|
| **Age (Years)** | | | |
| 60-69 | 57 (53.2) | 50 (46.8) | 107 |
| 70-79 | 39 (54.9) | 32 (45.1) | 71 |
| >80 | 07 (31.8) | 15 (68.2) | 22 |
| **Education** | | | |
| Literate | 78 (56.1) | 61 (43.9) | 139 |
| Illiterate | 25 (40.9) | 36 (59.1) | 61 |
| **Caste** | | | |
| Upper | 84 (48.0) | 91 (52.0) | 175 |
| Lower | 19 (76.0) | 06 (24.0) | 25 |
| **Type of family** | | | |
| Nuclear | 25 (32.5) | (52 (67.5) | 77 |
| Joint | 69 (62.7) | (41 (37.3) | 110 |
| 3generation family | 09 (69.2) | 04 (30.8) | 13 |
| **Religion** | | | |
| Hindu | 61 (44.5) | 76 (55.5) | 137 |
| Muslim | 13 (65.0) | 07 (35.0) | 20 |
| Sikh | 29 (67.4) | 14 (32.6) | 43 |
| **Marital status** | | | |
| Living with spouse | 68 (45.6) | (81 (54.4) | 149 |
| Living without spouse | 35 (68.7) | (16 (31.3) | 51 |

**Table 2: Distribution of Morbidities among Study subjects with Gender**

| Disease# | Male (n=103) | Female (n=97) | Total (n=200) | p value |
|---|---|---|---|---|
| Hypertension | 70 (61.9) | 43 (38.1) | 113 (56.5) | 0.0007 |
| Cataract | 54 (67.5) | 26 (32.5) | 80 (40) | 0.0002 |
| Deafness | 13 (65.0) | 07 (35.0) | 20 (10) | 0.2 |
| Osteoarthritis | 21 (28.0) | 54 (72.0) | 75 (37.5) | 0.0002 |
| Diabetes | 26 (25.0) | 78 (75.0) | 104 (52) | 0.0001 |
| Genitourinary | 04 (57.1) | 03 (42.9) | 07 (3.5) | 0.7 |
| Obesity | 08 (61.5) | 05 (38.5) | 13 (6.5) | 0.4 |
| CVD* | 43 (66.1) | 22 (33.9) | 65 (32.5) | 0.004 |

P value <0.05 indicate statistical significance; *Excluding hypertension; 3Multiple answer possible

**Table 3: Distribution of Subjects According to Health Care Facility Availed**

| Source of Health Care Facility | Frequency (%) |
|---|---|
| Dispensary | 82 (41.0) |
| Urban Health Centre | 49 (24.5) |
| Govt. Hospital | 12 (6.0) |
| Private hospital | 09 (4.5) |
| Traditional Healer | 42 (21.0) |
| Quack | 06 (3.0) |
| Total | 200 (100) |

The most common morbidity was hypertension (56.5%) followed by diabetes (52%). Equal proportion of study subjects suffered from cataract and osteoarthritis. Only 3.5% were suffering from genitourinary conditions as evident from Table 2.

Diseases like Hypertension, Cataract and CVD were more among males while Osteoarthritis and Diabetes were more among females and theses results were statistically significant (Table 2).

Table 3 shows that three fourth of study subjects availed health care from public sector and only one fourth of the elderly relied on traditional healers and quacks during episode of illnesses.

On assessing functional status of study population using Katz index, it is evident from the Table5 that majority of study participants 168 (84.0%) were found to be independent in performing their daily activities. No association of dependency was found with gender but with advancing age there was reduced capacity to perform daily living activities. The results were highly significant (p 0.0001).

## DISCUSSION

In the present study out of total 200 subjects in our study, approximately half were between 60and 69 years of age. 51.5% study subjects were males and 48.5% were females. The socio demographic findings were similar to studies conducted by Anupama et al and Cythra Rao et al. [6, 7] 69.5% of the participants in our study were literate. This is well in concordance with the Jammu and Kashmir census findings of 2011. [8]

In the current study, most of the study subjects had multiple system involvement and many had more than one disease in a particular system. Most common morbid condition found was hypertension followed by diabetes, cataract and osteoarthritis respectively. Bhatia et al. in his study also found hypertension as the most common morbidity[9]. Among women, Osteoarthritis and diabetes were predominant morbidities whereas in men hypertension, cataract, CVD and deafness were common morbidities. Presence of these morbidities in the elderly further reflects the increasing life-style associated diseases in the community. In our study, the overall prevalence of osteoarthritis was 37.5% whereas various authors [10, 11, 12] have reported wide variation in prevalence of osteoarthritis in different studies conducted in different settings. Half of elderly were diabetics and it was three times more prevalent in females as compared to males and the findings were in accordance with study conducted by Barman et al and Anupama et al. [13, 6]

In our study half of elderly were found to be hypertensive and it was more among men. This is much higher than 16.34% prevalence as described by Gurav RB, Kartikeyan S [14] however our finding were corroborative with studies conducted by other authors by Parray et al and Swami et al. [15,16]) who reported a prevalence of 58 %.Hypertension is already an established risk factor of cardiovascular diseases. Our study also shows high prevalence of CVD in males. Chadha et al reported a prevalence rate of 52.2% and 58.4% among males and females respectively. [17] The leading cause of diminished vision in developing countries is cataract, which was found 40% in present study. Cataract was about 61.5% in study conducted by Barman. [13]

**Table 4: Association of ADL with Age (years) and Sex**

| Variable | ADL score | | | Significance |
|---|---|---|---|---|
| | Independent (6) (%) | Partially Dependent (2-6) (%) | Totally Dependent (<2) (%) | p value |
| **Sex** | | | | |
| Male | 57 (55.3) | 39 (37.9) | 07 (6.8 | 0.14 NS |
| Female | 50 (51.6) | 32 (32.9) | 15 (15.5) | |
| **Age (years)** | | | | |
| 60-69 | 100 (93.5) | 04 (3.7) | 03 (2.8) | 0.001 HS |
| 70-79 | 64 (90.1) | 04 (5.6) | 03 (4.3) | |
| >80 | 04 (18.2) | 11 (50.0) | 07 (31.8) | |

In our study, majority of the elderly availed health care services from public sector, this finding is in tune with the findings of Ramesh Chand et al who also reported that the majority (65.5%) of the participants visited a public health facility.[18] This may be because our state is under EAG GROUP & has a good network of outreach health centres which provide services that are accessible and affordable to people, especially in rural areas. Only 6% of the elderly had impairment in physical activity of daily living which corroborated with the findings from a study conducted in our neighbouring state Shimla.[19] Majority of elderly (93%) were totally independent which is similar to finding of a study in a rural area of Punjab (97%)[20]. ADL dependency was found significantly higher in elderly above 80 years which is similar to study carried out in Sweden by SonnU et al[21].

## CONCLUSION & RECOMMENDATIONS

Our study gives an overview of morbidity pattern among rural elderly, but due to its small sample size and cross sectional design it has limited extrapolative value and moreover it was not possible to verify certain responses to queries on age, literacy levels, economic status and health problems. More studies on this subject with large sample size should be done to validate the current findings.

The study reiterated that majority of the elderly were suffering from one or more morbidities and functional disabilities at any given time and periodic health examinations coupled with home to home visits can play a pivotal role for providing preventive and curative health care for elderly. As we all know that ageing is also associated with other life transitions such as retirement, relocation and the death of friends and partners, preventive health care strategies that reinforce recovery, adaptation and psychosocial and spiritual wellness should be formulated and tested. It is beyond doubt that there is an imperative need to sensitize the primary health care workers towards old age problems and to improvise the existing health care facilities by setting up geriatric wards and geriatric OPD's having specialized professionals with psychiatric and medical social workers along with subsidized health care services so as to ensure the overall well being of the elderly.

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