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A STUDY ON DISABILITIES AMONGST THE ELDERLY IN THE URBAN AND RURAL AREAS IN THE KAMRUP DISTRICT, ASSAM BASED ON THE ACTIVITIES OF DAILY LIVING (ADL) AND FUNCTIONAL LIMITATIONS

Jhankar Hazarika¹, Preetee Das²

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ABSTRACT: INTRODUCTION: Health problems are a major concern for the elderly and they are prone to diseases and disabilities more than the younger age groups which can make them physically and economically dependent. The increasing number of elderly in the country means that they are going to make contributions to the economy. Elderly persons, being one of the most vulnerable groups of the society have more chances of chronic disease, infections, as well as disabilities. Disability has been defined as a restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being.^[1] It reflects how well an individual is able to function in general areas of life. Disability in elderly can be grouped in three large groups. First - who can manage in their daily activities with the help of mechanical devices. Second - who have multiple health problems and severe limitations in mental and/or physical functioning who require very intensive levels of care. Third-in between above two groups, they are functionally disabled in one or two ADLs, or have mild cognitive impairments.^[2] **OBJECTIVE OF THE STUDY:** 1. To assess disability related to Activities of Daily Living(ADL) amongst the elderly in the urban and rural area. 2. To determine the use of physical aids by the elderly in both the urban and rural areas. **MATERIAL AND METHODS:** This community-based cross-sectional study was conducted among persons aged 60 years and above, in urban and rural areas in the Kamrup district, Assam. In the study, 400 no.s of elderly are under study of which 200 are from the urban area and 200 from the rural areas. The urban area is from the Guwahati city which consists of 60 municipality blocks. Out of the sixty municipality blocks, 10 no.s of blocks are randomly selected and 20 elderly are chosen from each block totaling a mark of 200. The kamrup rural area of Rani Community Development block is chosen from where 20 no.s of villages are randomly selected out of the 78 no.s of voillages. From each village, 10 no.s of elderly respondent are taken for the study. The study was conducted in June 2005 to June 2006. During the study, informed consent has been taken from the respondents and household visits are conducted for completing the study. For measuring the activities of daily living, the Katz index of ADL is used. Activities of daily living are tasks of self maintenance, mobility, communication, home management and community living that enables an individual to achieve personal independence. In the study, the main six basic items of ADL viz. bathing, dressing, going to toilet, transferring, continence and feeding. **STATISTICAL ANALYSIS:** MS excel, Chi-square tests. **RESULTS:** In the study, it was found that visual disability is the most common disability in both urban and rural area which account for 22.5% and 21.5% respectively. While the hearing disability is more amongst the respondents of the urban area than the rural area. The disability in ADL is increasing with age in both the urban and the rural areas. 22.5% of the elderly are using physical aids compared to 11% in the rural areas. **CONCLUSION:** The association between the use of physical aids by the respondents in urban and the rural areas is highly significant ($p < 0.001$).

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KEYWORDS: Elderly-Urban –Rural- Disability-physical aids.

INTRODUCTION: Health problems are major concern for the elderly people and they are prone to diseases and disabilities more than the younger age groups which can make them physically and economically dependent. The increasing number of elderly people in the country means that they are going to make contributions to the economy. If this has to happen then they have to be healthy physically and mentally. Active and healthy ageing is possible only if the health aspects of the old people are tackled.

Elderly persons, being one of the most vulnerable groups of the society have more chances of chronic disease, infections as well as disabilities. Disability has been defined as a restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human-being.^[1] It reflects how well an individual is able to function in general areas of life. Disability in elderly can be grouped in three large groups. First - who can manage in their daily activities with the help of mechanical devices. Second - who have multiple health problems and severe limitations in mental and/or physical functioning that require very intensive levels of care. Third-in between above two groups, they are functionally disabled in one or two ADLs, or have mild cognitive impairments.^[2]

Studies in the economically advanced countries (as in the US) have also shown an association between gender, marital status, health and disability. However, there is very little information about gender differentials in disability among the elderly in developing countries, like India. Also, little is known about the association between gender, marital status, living arrangements and disability among older adults in these countries.^[3] The objective of the study is to assess disability related to Activities of Daily Living (ADL) amongst the elderly in the urban and rural area and to determine the use of physical aids by the elderly in both the urban and rural areas.

MATERIAL AND METHODS: This community-based cross-sectional study was conducted among persons aged 60years and above, in urban and rural areas in the Kamrup district, Assam. In the study, 400 numbers of elderly are under study of which 200 are from the urban area and 200 from the rural areas. The urban area is from the Guwahati city which consists of 60 municipality blocks. Out of the sixty municipality blocks, 10 numbers of blocks are randomly selected and 20 elderly are chosen from each block totaling a mark of 200. The kamrup rural area of Rani Community Development block is chosen from where 20 numbers of villages are randomly selected out of the 96 number of villages. From each village, 10 number of elderly respondent are taken for the study.

In the selected village, one side (North, South, East or West) from a central place is chosen by lottery and search were made for the elderly living in the village. During the study, informed consent has been taken from the respondents and household visits are conducted for completing the study. The elderly respondents with severe illness excluded from the study. If there were more than one elderly in the household, then both are included. Some participants were unable to understand /answer the questions due to illness. In such cases, help was sought from the relatives. Elderly people who had been residing in the area for at least last 6 months were included. The study was conducted in June 2005 to June 2006.

For measuring the activities of daily living, the Katz index of ADL is used. Activities of daily living are tasks of self-maintenance, mobility, communication, home management and community living that enables an individual to achieve personal independence. In the study, the main six basic

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items of ADL viz. bathing, dressing, going to toilet, transferring, continence and feeding are considered. The functional dependence has been defined as the need for assistance in one or more of the six basic activities of daily living. The functional independence defined under the study as performing ADL without any assistance.

The visual acuity was assessed by using torch light. The participant who either had no perception of light in both eyes or had perception of light but could not count fingers of a hand (with or without glasses) at distance of 3 meters in good day light is considered as visually disabled. For hearing assessment, all participants were first administered the whisper test.

Those participants who failed the whisper test were examined with Rinne's test and Weber's test for hearing status, using a 512 Hz tuning fork. Based on these tests it was determined, if bilateral hearing impairment was present or not. ABC (absolute bone conduction) test was performed for detecting Sensory Neural Hearing Loss (SNHL).

The speech disability amongst the participants is considered if the participant's speech is not understood by the researcher or drew attention to the manner in which neither he spoke nor aesthetically unpleasant.

The socioeconomic status of the individual was calculated by using Prasad's method for social classification based on per capita income of the family. The classification using an updated version as per value of the rupee as per price index of rupee for 2nd march 2003.

The interview schedule was developed in English and also translated into local language assamese. Information on age, marital status, education, occupation and economic dependence was recorded. A participant was considered economically independent, if his/her source of personal income (pension, rent from house, etc) or any monetary benefit from social scheme was perceived to be sufficient to maintain himself/herself.

The participant was considered partially dependent if he/she had some personal income or any monetary benefit from social scheme, but which was not perceived to be sufficient to maintain himself/ herself.

In case of medically diagnosed conditions medical records like OPD tickets, prescription papers, discharged cards and medicines used were checked. A proper history of the participants was taken and all the past medical records were also asked and enquired about the continuity of the treatment. The morbid conditions like diabetes mellitus, tuberculosis, musculoskeletal disorders, hypertension, chest diseases, stroke etc were identified from medical records and recorded.

RESULTS: Out of the 200 total respondents in the urban area, 46% of the elders are males and 54% are females where as in the rural areas, 46.5% are males and 53.5% are females. In the urban areas, the majority of the respondent 50% belongs to 60-69years, 34% are in the 70-79years group and 16% belongs to the 80 and above age group which contribute 47.5%. Next in the 70-79years age group contribute 37.5% and in the 80 and above age group respondents were 15%.

In the study, it was found that visual disability is the most common disability in both urban and rural area which account for 22.5% and 21.5% respectively while the hearing disability is more amongst the respondents of the urban area than the rural area. The disability in ADL is increasing with age in both the urban and the rural areas.

22.5% of the elderly are using physical aids compared to 11% in the rural areas.

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In the urban area out of the 200 respondents, 8.5% the elders are illiterate where in the rural areas 5% are illiterate. In the urban area, 12% have completed higher secondary compared to 0.5% in the rural area. None of the respondents was educated above the 12th standard in the rural area.

In the urban area, it is seen that majority of the respondents 37% belongs to the socio economic class I and 8% of the respondents belongs to the socio economic class V. Where as in the annual areas majority of the respondents 32% belong to the socio economic class V and only 11% belong to the socio economic class I.

The disability in ADL is increasing with age in both urban and rural areas. In the urban area, disabilities with ADL is 4.6% in the 60-69 yrs age group, 6.5% in the 70-79 years age group and 8.5% in the 80 yrs and above age group. In the rural area, disability with ADL is 2.5% in the 60-69 years age group 4% in the 70-79 yrs age group and 5% in the 80 yrs and above age group. 22.5% of the elderly in the urban area are using physical aids compared to 11% of the rural elders. The association between use of physical aids by the respondents in urban and rural area is highly significant (X^2 value =9.48, df=1)

Visual disability is the most common among the disabilities in both the urban and the rural areas which accounts for 12.5% respectively. The hearing disability is more among the respondents in the urban (13%) than the rural area (10.5%)

In the urban area, majority of the respondents 74.5% suffered from cataract followed by hypertension (65.5%), joint pains (37%), chewing problems (34%) and cough (26.5%). In the rural areas, majority of the respondents suffered from cataract (69.5%) followed by hypertension (63.5%), joint pains (45%) chewing problems (43.5%) and cough (35%).

Out of 200 respondents in the urban area, majority of respondents (35%) have 1-3 morbidities where as in the rural area, out of the total of 200 respondents (31.5%) have 4-6 morbidities. None of the respondents in the urban area as well as in the rural area were found to have no morbidity.

The association between the use of physical aids by the respondents in urban and the rural areas is highly significant ($p < 0.001$)

DISCUSSION: This study describes the prevalence of functional disability among elderly persons in the urban and rural area and its association with socio-demographic variables. The prevalence of functional disability was higher among elderly men than women. Functional disability was found to be positively and significantly associated with increasing age, literacy, hypertension, diabetes and chronic obstructive airway disease.

The prevalence of ADL disability in present study was less than the other countries such as Nigeria (28.3%), Brazil (40%), Malacca (24%).^[4]

Self-reported chronic conditions were used in the present study. This may have led to an under-estimation of these conditions. However, it is difficult to comment on the effect this may have on the results. A limitation regarding the sample size estimation needs to be mentioned here.

However, this study had not included mental disability.

India has launched the National Program for the Health Care for the Elderly. One of the objectives of this program is to provide an easy access to promotive, preventive, curative and rehabilitative services to the elderly through a community-based primary health care approach. ^[5] At the sub-center level, the package of services includes domiciliary visits by trained health workers for

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attention and care to elderly persons and provision of training to the family care providers in looking after the disabled elderly persons.

This step shall go a long way in addressing the serious issue of functional disability among the elderly persons in our rural areas. The Urban PHC and the hospital should be provided with adequate health care provisions for treatment and management of cases of disabilities amongst elderly.

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AUTHORS:

1. Jhankar Hazarika
2. Preetee Das

PARTICULARS OF CONTRIBUTORS:

1. Demonstrator, Department of Community Medicine, Gauhati Medical College and Hospital, Guwahati, Assam.
2. Assistant Professor, Department of Social Work, Down Town University, Guwahati, Assam.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Jhankar Hazarika,
Demonstrator,
Department of Community Medicine,
Gauhati Medical College and Hospital,
Guwahati-781032, Assam.
E-mail: jhankarhazarika2007@rediffmail.com

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