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Research Article

A Study of Activities of Daily Living of Elderly in an Urban Community of North India

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Abstract: In most of countries of the world, people who are 60 years of age or more are increasing. Although old age is not a disease in itself, the elderly are vulnerable to chronic diseases. This sequence of health related events has a significant effect on their daily routine, a measure of which is the activities of their daily living. This cross sectional descriptive study was carried out to make an assessment of activities of daily living amongst elderly in an urban community of North India. This study was conducted in an urban community in North India. The demographic data, including profile of the population was studied. Out of the total population of 11,387 individuals who were 60 years or older of age who met the inclusion criteria were included in the study. Out of the total of 2240 elderly population who met the inclusion criteria, 1074 were females while the remainder 1166 were men. There was no difference in activities of daily living found in the males and females. However, overall, the dependency increased with increasing age in both. In conclusion, ADL is an established and important measure of health of the elderly. It can, therefore be utilized to assess the services offered to the elderly and work out measures for improvement in the content of these services.
Keywords: Activities, Daily, Dependent, Elderly, Independent, Urban.

INTRODUCTION

In most of countries of the world, people who are 60 years of age or more are increasing [1]. This ageing population can be viewed as a success story for the public health policies and also for socioeconomic development. But at the same time, it challenges the society to adapt, so as to maximize the health as well as functional capacity of older people [1, 2]. Although old age is not a disease in itself, the elderly are vulnerable to chronic diseases. The importance of this stage of a human life cycle can be gauged from the fact that in 2012 the World Health Organisation (WHO) declared the world health day focusing on ageing [1, 3, 4]. The population of the world is ageing so rapidly that by 2050, the proportion of the world's population more than 60 years of age is estimated to double from approximately 11% to 22% [4, 5]. The absolute number of all people aged 60 years or more is expected to increase to two billion by that time [6].

In one study conducted, most of the study subjects from the elderly age group were found to be depressed as well as having other psychiatric co-morbidities [7].

The number of older people in the developing countries who are not able to look after themselves any longer is estimated to increase four fold by the year 2050. Many of those who are very old lose the ability to live life independently due to limited mobility, weakness or other physical as well as mental health problems. Most require some or the other form of long-term care [8, 9]. WHO has made a variety of recommendations that are age-friendly and can be implemented for the benefit of this vulnerable population [10]. These include the measures that can be introduced to enhance the independence of the elderly.

Activities of daily living (ADLs) is the term used to refer to the daily activities of self-care within the place of residence of an individual, the outdoor environments, or both. Health professionals refer to the ability or the inability to perform the ADLs as an important measurement of functional status of an individual, particularly with regard to the people with disabilities and the elderly [11]. It should be assessed as a routine while evaluating the mental status and the functional abilities of the older people [12]. It has been only in the last few years that health care planners and the governments have started taking measures to address age related issues. Despite the felt need of the aged data regarding the health of the elderly are still inadequate. This is more so in most developing countries like India.

This cross sectional descriptive study was carried out to make an assessment of activities of daily living amongst elderly in an urban community of North India.

MATERIALS AND METHODS

The present study was a cross sectional descriptive study that was conducted in an urban community in North India. The data was collected as part of a cross-sectional survey conducted amongst the elderly of this area. The demographic data and profile was studied after taking informed consent. A total of 2240 elderly people who met the inclusion criteria were included in the study. Out of these, 1074 were females while the remainder 1166 were male. The inclusion criteria were all the individuals who were 60 years of age or older, were permanent residents of this village and were physically residing there during the period of the study. Data was collected as per a pre-tested and validated questionnaire administered by the investigators. It consisted of two parts – personal particulars and the tool to assess the Activities of Daily Living (ADL). This questionnaire assessed the index of independence in ADL being directed towards the activities of bathing, dressing, feeding, transferring and toileting. The questionnaire was validated after translating it into vernacular, followed by back translation. Average time taken for completing one questionnaire was seven minutes. Data thus collected, was analysed using appropriate statistical software.

RESULTS AND DISCUSSION

Out of the total of 2240 elderly people studied, 1074 (47.95%) were females while the remainder 1166 (52.05%) were men. Further distribution as per the age groups is as given in table 1. The figures in parenthesis correspond to the respective percentages.

The distribution of the study population as per their independence or dependence for bathing purposes is given in table 2.

It was observed that almost seventy nine per cent of the individuals were able to manage having a bath independently while twenty one per cent of the overall study population was dependent on their family members or attendants for having a bath. This was due to the easy availability of assistive devices as well as provision of railings etc. for support in the bathing areas.

The distribution of the study population as per their independence or dependence for dressing up is as shown in table 3.

In the present study, it was observed that over eighty per cent of the study population were able to dress themselves up independently. Dependency increased with increasing age of the individuals. Similar results were found in another study conducted where most persons (83%) were independent in all activities at age 70 [14].

The distribution of the study population as per their independence or dependence for toilet activities is as shown in table 4.

It was observed in the present study that about seventy seven per cent of the total study subjects were able to manage their toilet activities independently. Dependence for the same increased with increase in the age of the individuals.

The distribution of the study population as per their independence or dependence for transferring themselves from one particular place to another is a shown in the table 5.

In the present study, it was observed that about eighty one per cent of the study subjects were able to move independently from one place to another, i.e., without the help of any other person to assist them. This figure also included those people who were able to move with the help of assistive devices.

Similar results were found in another study conducted to investigate the association of grip strength and activities of daily living independence in older adults, using a newly-developed grip strength measuring device [13].

In yet another study, physical impairments and the functional limitations were noticed to have a considerable impact on the dependence in daily life activities. This was seen because the persons dependent in ADL had a comparatively lower maximal walking speed, lower grip strength, lower knee extensor strength, besides a lower stair-climbing capacity and forward reach compared to those who were independent in their ADL. Speed of walking in both the women and men and the impairment of sight in men were observed to have the greatest influence on dependence in ADL. Men and women who stayed independently over the period (70-76) had a significantly higher maximal walking speed as well as knee extensor strength at 70 years of age than those who became dependent or else, were dependent on both occasions [14].

The distribution of the study population as per their independence or dependence for continence is as shown in table 6.

It was observed that about seventy five per cent of the study population was dependent on their attendants or relatives for basic physiological functions of continence. The dependence increased with the increase in age of the individuals.

Distribution of the study population as per their independence or dependence for feeding themselves is as shown in table 7.

It was observed in the present study that over seventy seven per cent of the individuals in the study population were able to feed themselves without assistance and independently. About twenty two per cent of them were dependent on their family members or attendants for feeding. In this case also, it was observed that the dependence increased with the increase in age of the individuals.

Table 1: Distribution of the study population as per their age

Age group	Male	Female	Total
≥60 to <70	667 (52.48)	604 (47.52)	1271 (100.00)
≥70 to <80	453 (52.01)	418 (47.99)	871 (100.00)
≥80 to <90	38 (46.34)	44 (53.66)	82 (100.00)
≥90 to <100	7 (53.85)	6 (46.15)	13 (100.00)
≥100	1 (33.33)	2 (66.67)	3 (100.00)
Total	1166 (52.05)	1074 (47.95)	2240 (100.00)

Table 2: Distribution of the study population as per their independence or dependence for bathing

Age group	Independence	Dependence	Total
≥60 to <70	1030 (81.04)	241 (18.96)	1271 (100.00)
≥70 to <80	698 (80.14)	173 (19.86)	871 (100.00)
≥80 to <90	39 (47.56)	43 (52.44)	82 (100.00)
≥90 to <100	2 (15.38)	11 (84.62)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1769 (78.97)	471 (21.03)	2240 (100.00)

Table 3: Distribution of the study population as per their independence or dependence for dressing

Age group	Independence	Dependence	Total
≥60 to <70	1110 (87.33)	161 (12.67)	1271 (100.00)
≥70 to <80	678 (77.84)	193 (22.16)	871 (100.00)
≥80 to <90	9 (10.98)	73 (89.02)	82 (100.00)
≥90 to <100	0	13 (100.00)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1797 (80.22)	443 (19.78)	2240 (100.00)

Table 4: Distribution of the study population as per their independence or dependence for toileting

Age group	Independence	Dependence	Total
≥60 to <70	1110 (87.33)	161 (12.67)	1271 (100.00)
≥70 to <80	617 (70.84)	254 (29.16)	871 (100.00)
≥80 to <90	11 (13.41)	71 (86.59)	82 (100.00)
≥90 to <100	0	13 (100.00)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1738 (77.59)	502 (22.41)	2240 (100.00)

Table: 5 Distribution of the study population as per their independence or dependence for transferring

Age group	Independence	Dependence	Total
≥60 to <70	1123 (88.36)	148 (11.64)	1271 (100.00)
≥70 to <80	679 (77.96)	192 (22.04)	871 (100.00)
≥80 to <90	14 (17.07)	68 (82.93)	82 (100.00)
≥90 to <100	0	13 (100.00)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1816 (81.07)	424 (18.93)	2240 (100.00)

Table: 6 Distribution of the study population as per their independence or dependence for continence

Age group	Independence	Dependence	Total
≥60 to <70	1234 (97.09)	37 (2.91)	1271 (100.00)
≥70 to <80	456 (52.35)	415 (47.65)	871 (100.00)
≥80 to <90	6 (7.32)	76 (92.68)	82 (100.00)
≥90 to <100	0	13 (100.00)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1696 (75.71)	544 (24.29)	2240 (100.00)

Table: 7 Distribution of the study population as per their independence or dependence for feeding

Age group	Independence	Dependence	Total
≥60 to <70	1002 (78.84)	269 (21.16)	1271 (100.00)
≥70 to <80	698 (80.14)	173 (19.86)	871 (100.00)
≥80 to <90	37 (45.12)	45 (54.88)	82 (100.00)
≥90 to <100	1 (7.69)	12 (92.31)	13 (100.00)
≥100	0	3 (100.00)	3 (100.00)
Total	1738 (77.59)	502 (22.41)	2240 (100.00)

CONCLUSION

Recording ADL is a well-established practice now for the measurement of functional status of a person, particularly in context with people with disabilities as well as the elderly [11]. These can serve as a baseline to help review the quality as well as the distribution of services offered to the elderly.

There is a toolkit developed by the WHO that assists the health care workers in making them well versed in the diagnosis as well as management of many chronic diseases, besides the so-called four giants of geriatrics, i.e., memory loss, depression, urinary incontinence and falls/immobility that often affect people as they age [15]. Appropriate management of older adults includes assessment of cognition and understanding its relationship to function [16, 17].

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