Journal of Advanced Research in Humanities and Social Science
Volume 5, Issue 1 - 2018, Pg. No. 1-4
Peer Reviewed Journal

Research Article

Activities of Daily Living among the Oldest-old People: A Rural Urban Study

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DOI: https://doi.org/10.24321/2349.2872.201801

Abstract

The functional status like activities of daily living (ADL) is the most important health problem of the aged population, which is related to their quality of life and the nursing burden of the family. Therefore, activities that are required to function independently in daily life, so-called activities of daily living (ADLs), have long been seen as essential measures of disability in ageing studies. The present paper aims to measure the activities of daily living (ADL) of some 'oldest-old' population living in both rural and urban areas of Paschim Medinipur district, West Bengal, India. The ADL functional statuses with respect to eating, dressing, getting in and out of a bed or a chair, using the toilet, bathing, and continence have been used to measure the elderly's degree of independence in daily living. Data on ADL assessments of the individual respondents have been collected by interview technique and observation method with the help of a structured questionnaire. The study demonstrates that, on an average, the oldest-old rural population of Medinipur district under study enjoys more degree of independence in daily living compared to their urban counterparts.

Keywords: Functional status, Aged, Oldest-old, ADL status, Degree of independence

Introduction

Aging of populations is a global trend. Therefore, definition of an aged person has not been universally agreed upon. It varies from society to society and in different periods of development in a given society. Therefore, in 1984, the word "oldest-old" was coined at the annual meeting of the American Association for the Advancement of Science (AAAS). The term oldest-old refers to the people who are aged 80 years and above.

Since the last decade, the Election Commission of India has started to publish separate voter list for the Indian citizens belonging to 80 years and above. In the year 2011, Department of Finance, Government of India, categorized the elderly people as Super Senior Citizens for the purpose of income tax assessment.

In the year 1980, UNO made recommendation that population aged 60 years and above shall be considered as the older population. Before that, the elderly population had been divided into two different categories for the purpose of gerontological studies. Thus we find that the terms 'Young Old' (age 65 to 74) and the 'Old-Old' (age 75 and over) appeared as early as mid-70s.15 Before that, gerontological studies used to consider all the elderly together, obscuring important differences and offering little insight into the social realities of the elderly of different ages (Hillier and Barrow, 2007).

The term *Activities of Daily Living* includes activities that are basic to daily life, such as bathing, dressing, feeding, continence, transfer and toileting. To living independent life for older person should be more or less able to manage these activities without assistance. Requirement on the situation in performance of some basic activities may be experienced as particularly disturbing. However, ADL was proposed by Katz in 1963, which is to measure the number

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How to cite this article: Activities of Daily Living among the Oldest-old People: A Rural Urban Study. *J Adv Res Humani Social Sci* 2018; 5(1): 1-4.

of limitations on activities of daily living. There are six ADL limitations in total, which consist of difficulties with: bathing, eating, grooming, dressing, getting up from a bed and using the toilet.

A healthy lifestyle is closely related to the ADL status of the elderly, while the lifestyle which is resulting in negative effects includes diet of high salt and high fat, smoking, drinking, mental strain and lack of physical exercise. Though, based on survey data, China studied on the aged people, urban and rural, gender, educational level and marital status are main influencing factors for the changes of activities of daily living of Chinese elderly in the ten years from 1992 to 2002. Therefore, Chinese longitudinal healthy longevity survey, Yin et al. analyzed the influencing factors of ADL of the Chinese oldest-old.

In case of India, Kaplan's study established that chronic disease is the most important factor affecting the ADL of elderly. Whereas, Diehl's research shows that the factors of living environment include family, neighborhood, community, policy, customs, fashion and other social and cultural factors have a certain influence on ADL.

Oldest-old persons aged 80 years and above are most likely to need help. Oldest-old persons consume amounts of services, benefits, and transfers far out of proportion to their numbers. For example, about a quarter of medicare payments to hospitals were on behalf of the oldest-old patients in 1988 in New York City.[16]

It is exposed from various studies that the perspective, socio-economic setting, health and socio-psychological aspects of Indian elderly population in general are closely interrelated and the oldest-old population is no exception to it. However, the present authors thought that it is wise to consider the situation of daily living activates of the oldest-old from the rural and urban settings. Therefore, in the present paper, as a matter of micro-level study, an attempt has been made to highlight condition of the activities of daily living (ADL) of oldest-old population at a rural and an urban location since such study is very limited or may be almost absent in the field of social gerontological studies in India.

Objectives of the Study

The researchers aim to measure the activities of daily living (ADL) of 'oldest-old' population from rural and urban settings of Paschim Medinipur district of West Bengal, India. Since ADL is an indicator of an individual's functional capacity, a reasonable proxy indicator (indirect measure or sign that approximates or represents a phenomenon in the absence of a direct measure or sign) of health status, and a key element in attempts to measure quality of life (e.g., Katz et al. 1983; Spitzer 1987; Wiener et al. 1990; Gillen et al. 1996; Muldoon et al. 1998). The ADL functional statuses with respect to eating, dressing, getting in and out of a bed or chair, using the toilet, bathing, and continence are used to measure the elderly's degree of independence in daily living.[19]

Materials and Methods

The present study was conducted among the oldest-old (80 years and above) populations across both the sexes distributed over rural and urban settings of Paschim Medinipur, West Bengal, India.

In rural settings, the oldest-old population was distributed over five Gram Panchayats of Sadar Block, Paschim Medinipur district, West Bengal, India. The Gram Panchayats are, namely, Dherua, Chaandra, Monidah, Kankaboti, and Shiromoni. For urban settings, ten Municipal wards under Midnapore Municipal Town in the district of Paschim Medinipur, West Bengal, India, were selected. The wards are, namely, Wards No. 1, 2, 4, 5, 8, 9, 11, 12, 13 and 18.

For the purpose of locating and sampling the oldest-old population residing in the above mentioned Gram Panchayats and municipal wards, the present researcher at the first stage downloaded the voter list of the Assembly Constituency No. 236 uploaded in their official website by the Election Commission of India in the year 2015. This list, under its different part numbers, bears the name, age, sex and address of the voters residing in both rural and urban areas of Paschim Medinipur district.

It appears from the said voter list that there are altogether 630 'oldest-old' people residing in the above-referred villages among whom 290 are male and 340 are female. However, the researchers selected 100 oldest-old (equal number of male and female) elderly from each of the five Gram Panchayats respectively using systematic random sampling table, which formed the sample size of 500 respondents. In urban settings, the said voter list shows that there are altogether 566 'oldest-old' people residing in the above-referred villages among whom 272 are male and 294 are female. The researchers selected 50 oldest-old across both the sexes from each of the ten Municipal wards under Midnapore Municipal Town using S+ random sampling table, which formed the sample size of 500 respondents.

In case of sampling of respondents, the provision was made for one substitute from both Gram Panchayats and Municipal Wards so as to replace the same in case the originally sampled respondent was not available, unwilling or physically unfit to respond during the field survey.

After the sampling of the respondents, a door-to-door survey was conducted to locate the specific address and/or resident of each sampled person. A few of our study participants expressed concern that their responses to our questions/interview may create misunderstanding within

ISSN: 2349-2872
DOI: https://doi.org/10.24321/2349.2872.201801

the family. However, such difficulties have been overcome.

Data on ADL assessment of individual respondents has been collected by interview technique and observation method with the help of a structured questionnaire. Based on the international standard of Katz's ADL index (e.g., Katz et al. 1970) and adoption to the cultural/social context of rural and urban Bengal and carefully tested by pilot studies/ interviews, six questions about ADL functional statuses namely 'eating', 'dressing', 'transferring', 'using the toilet', 'bathing' and 'continence' were addressed to the oldest-old or a close family member, if the elderly individual was not able to answer the questions. 'Eating' refers to feeding oneself; 'dressing' refers to getting clothes and getting dressed, including tying shoes; 'transferring' refers to getting in and out of bed and in and out of a chair; 'using the toilet' refers to going to the toilet and cleaning oneself afterward; 'bathing' refers to a sponge bath, shower, bath in the pond/river, or washing the body near domicile tube well with a wet towel, 'continence' refers to control of urination and bowel movement. The questions on each item were scheduled under three categories and they are namely: 'can do it', or 'can do it but need assistance', or 'cannot do it'.

In this study, if none of the six ADL activities is impaired, the individual is classified as 'active'; if one or two activities are impaired, he or she is classified as 'mildly disabled'; 'severely disabled' refers to elderly who have three or more activities impaired.

Results and Discussion

Table 1.Measurement of ADL wise Distribution of the Respondents

ADL Status	Rural			Urban			Total M+F	% against Total no. of respondents
	N	% against Total No. of Rural Respondents	% against Total No. of Respondents	N	% against Total No. of Urban Respondents	% against Total No. of Respondents		
Active	138	27.60	13.80	96	19.20	9.60	234	23.40
Mildly Disabled	170	34.00	17.00	138	27.60	13.80	308	30.80
Severely Disabled	192	38.40	19.20	266	53.20	26.60	458	45.80
Total	500	100.00	50.00	500	100.00	50.00	1000	100.00

Table 1 shows ADL measurement-wise distribution of the respondents. Among the total number of oldest-old respondents across both the rural and urban settings, 23.4% are *active*, 30.8% are *mildly disabled* and 45.8% are *severely disabled* as per the parameters mentioned in materials and methods in the present paper.

Table 1 further shows that among the total number of rural respondents, 27.6% are *active*, 34% are *mildly disabled* and 38.4% are *severely disabled*. Similarly, among the total number of urban respondents, 19.2% are *active*, 13.8% are *mildly disabled* and 53.2% are *severely disabled*.

Finally, it is revealed that among the total number 234 'active oldest-old persons,'13.8% are rural oldest-old population and 9.60% are urban oldest-old population. The table also revealed that among the total number of 308 'mildly disabled oldest-old persons,'17% are rural oldest-old population and 13.8% are urban oldest population. Similarly, it is observed that among the total number of 458 'severely disabled oldest-old persons,'19.20% are rural oldest-old population and 26.6% are urban oldest-old population.

Conclusion

The activities of daily living (ADLs) are one of the most common indicators to evaluate the health status of the elderly. The elders who need help from other people or utilizations in these basic daily activities will be treated as disabled. However, the term 'Disability' not only leads to decline in the living conditions of the elderly, but also raises the burden of care. Therefore, it has important practical significance to find out the influencing factors of the loss of activities of daily living of the elderly, and then to predict the disability in the future.

This study provides a health portrait among the rural and urban oldest-old population of West Bengal that is likely to need assistance from programs organized by the government as well as the NGOs. Our data demonstrates that, on an average, young oldest-old of the rural area under study enjoy more degree of independence in daily living compared to the urban areas oldest-old respondents. Therefore, the study illustrates that the three categories of ADL measurement indicate such as '*active*', '*mildly disabled',* '*severely disabled' oldest*-old people of the rural area under study enjoy more degree of independence in daily living compared to the urban area's oldest-old respondents. Any long-term-care service programs sponsored by the government and the NGOs should take into account the disadvantaged status of the oldest-old populations residing

ISSN: 2349-2872
DOI: https://doi.org/10.24321/2349.2872.201801

in the urban areas of West Bengal. On the other hand, financial support like various types of pension such as old-age pension, widow pension, and service pension and also health services deserves further careful studies for sound policy formulation of this growing population in India.

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Date of Submission: 2018-02-25
Date of Acceptance: 2018-04-06