

Functional Status among Rural Geriatric Population

Dr. Shubha Dube¹, Kirti Sharma²

¹Ph.D, Associate Professor, Department of Home Science, Human Development, University of Rajasthan, Jaipur, India

²Ph.D Scholar, Department of Home Science, Human Development, University of Rajasthan, Jaipur, India

Abstract: Health is the most important prerequisite for people to enjoy life especially in the ageing years. It seems to be one of the most significant factors effecting adjustment, well being and happiness during ageing years. It affects almost every single aspect of the ageing life, including determining successful involvement in activities and tasks. The major elements of ageing health status are perceived health, psychological well-being, chronic illnesses and functional status. Normal age related changes and health problems frequently show declines in the functional status of older adults. Functional capacity refers to the possibility and ability to carry out the daily activities in a normal or accepted way. Activities of daily living (ADL) is the ability to conduct routine activities of daily living, which included Physical Activities of daily Living (PADL) and Instrumental Activities of Daily Living(IADL). The main purpose of this study was to assess the functional status (PADL and IADL) of geriatric population in the age range of 65-75 years both male and female residing in the rural areas of Jaipur city. The sample comprised of 200 ageing adults both males and females, in the age range of 65 to 75years belonging to rural setting of Jaipur district (n = 100 male and n = 100 female). To evaluate the functional status, the ADL assessment was done with the help of Katz's scale (1963) and Lawton & Brody (1969). The result reflected that 82 percent of the female respondents and 70 percent of the male respondents were able to perform Physical Activities of Daily Living (PADL), although no significant difference was found between the two groups on PADL. While assessing IADL it was clear that majority of the respondents were partially to fully dependent on others. There is increasing interest with researchers and policy makers in, how to age healthy or successfully. A good understanding of the concept of successful ageing and its determinants might contribute to the creation of opportunities for developing intervention programmes.

Keywords: Geriatric Population, Rural Area, Activities of daily living (ADL), Physical Activities of Daily Living (PADL), Instrumental Activities of Daily Living (IADL)

1. Introduction

Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. (WHO 2002) Normal age related changes and health problems frequently show declines in the functional status of older adults. Functional capacity refers to the possibility and ability to carry out the daily activities in a normal or accepted way (Millan-Calenti, 2006). Activities of daily living (ADL) is the ability to conduct routine activities of daily living, which included Physical Activities of daily Living (PADL) and Instrumental Activities of Daily Living(IADL).

Physical activities of daily living (PADL) are defined as those activities essential for an independent life i.e. self care, self feeding, transferring, dressing, continence, care of self at toilet, bathing, etc. Instrumental activities (IADL) are not essential for fundamental functioning, but they allow an individual to live independently in the community. They are more complex, requires a higher level of personal autonomy and enough capacity to make decisions as well as greater interaction with the environment as handling money, using telephones, shopping, mode of transportation, etc. (WHO, 2001)

The Instrumental activities of daily living (IADL) are not essential for fundamental functioning, they are more complex, requires a higher level of personal autonomy and greater interaction with the environment.

Maintenance of functional capacity is an important indicator of health in the elderly; the loss of this capacity leads to a rise in morbidity and mortality. Decline of functional ability with age leads to stress, isolation and other harmful effects (Mohanty et.al 2012). Because of an

inability to execute these ADL, an elderly is required to depend upon other human being or mechanical devices (Altmants, 2008). The main pathway in the disablement process, proceed from the acquisition of pathological like disease or injuries, to impairments mainly anatomical, physiological or mental abnormalities, which generate functional limitations in the basic physical and mental action, ultimately leading to disability in carrying out activities of daily living and other social roles (Freedman et al. 2002). Men and women have different health and disability outcomes; because they are not same in hormonal changes, physiological changes, work, family and life style (Zhang et. al 2005).Due to the clear impact of disability on the socio-sanitary system, it is essential to study the prevalence, reasons and effects of disability in order to draw up a plan for a suitable public health policy (Chalise et al.2008). The main purpose of this study was to assess the functional status (PADL and IADL) of geriatric population in the age range of 65-75 years both male and female.

2. Material and Methods

A cross-sectional study of performance of daily living activities in the geriatric population was planned in Jaipur district. The sample comprised of 200 ageing adults both males and females (n=100, Male n=100, Female) in the age range of 65-75 years. In rural areas for the sample selection firstly, panchayat samitis were selected by using „simple random sampling without replacement (SRSWOR)“. Out of 13 panchayat samiti of Jaipur rural 2 panchayat samitis were selected randomly through chit system. From each panchayat samiti, approximately 100 participants were selected by employing „simple random sampling with replacement (SRSWR). Participants were

selected on the basis of willingness to be part of the study and criteria for the sample selection.

One of the best ways to evaluate the health status of ageing adults is through functional assessment which provides objective data that may indicate future decline or improvement in health status. The Katz Index of Independence in Activities of Daily Living, commonly referred to as the Katz ADL, is the most appropriate instrument to assess functional status as a measurement of the physical ability to perform activities of daily living independently. It assesses independence in six functions: bathing, dressing, toileting, transfer from bed to chair, continence and feeding. The Instrumental Activities of daily living Scale (Lawton & Brody 1969) assesses the person's ability to perform tasks such as using telephone, doing laundry, and handling finances. (Cromwell et al., 2003) Each item relies on either cognitive or physical function, though all require some degree of both. So with the help of self made inventory which was based on Katz's scale (1963) and Lawton & Brody (1969) the functional status was evaluated in the present study. Pilot study was also done.

3. Results

In Figure 1, the level of Physical Activities of Daily Living (PADL) of rural males and females has been estimated. The data indicates that majority of the participant that is 70 percent of rural males and 82 percent of rural females were able to perform daily activities like bathing, dressing, toileting, transferring, continence and feeding independently.

It was clear from the data that 10 percent of rural male participant and 4 percent of female participants were fully dependent for bathing, transferring and toileting. 30 percent of male and 14 percent of female participants were partially dependent and they needed some assistance for ADL. No significant difference was found between the two groups on PADL. Disability increases the risk for home help, hospitalization, nursing home admission, economic burden and premature death (Ebrahim 2002).

Being physically healthy is a very important point. As long as aging adults are physically healthy they are able to manage their course of the day independently. From the onset of disability persons are mostly dependent on the help of other people (Dobhamme et.al, 2007). The dependence on others, recognition of one's own deficits and lack of effective support may be the reasons for negative affective reactions and reduction in wellbeing among elderly persons (Mohanty et.al, 2012).

The data representation in tables 1, 2, 3 and figures 2, 3, 4, 5 elucidate the differences found among rural male and female respondents in the activities related to the Instrumental Activities of Daily Living (IADL).

It was observed from the figure 2 that 76 percent of rural males and 56 percent of females participants were able to operate telephone. 16 percent of males and 34 percent of females participants were not able to dial numbers and

could only answer the incoming phone calls. We also observed that a very small percentage could not use telephone at all. Ishaizaki et al. (2000) in a longitudinal study of elderly persons of 70 years or older also observed that being engaged in work was strongly associated with remaining independent in instrumental activities of daily living.

The percent profile of ability to take care of shopping needs among the sampled geriatric population is shown in Figure 3. Considering their ability about shopping it is evident that 67 percent of male and 65 percent of female respondents were absolutely independent for their shopping needs. 23 percent of males and 20 percent of females respondents were needed a company on any shopping trip. 10 percent of male and 15 percent of females were completely unable to shop.

Regarding the capability and strength to prepare food we can view from the Figure 4 that majority of the female respondents that is 74 percent were plan, prepare and serve meals independently, it was though good to observe that 30 percent of male respondents could also do the same activity independently. For most of men i.e. 60 percent it was more convenient to just heat and serve the food themselves. The figure also shows that males (20%) and female (60%) were completely dependent on other for their food requirement. Hence the above figure shows that the small chores were performed conveniently by aging adults which helps in their general well being. A decline in functional capacity of the older elderly persons is associated with reduction in subjective well-being (Liberleso, 2002).

Table 1 unfolds that 73 percent female and 30 percent male respondents were maintained and look after their home (housekeeping) independently, whereas male (36%) and female (21%) were doing the same domestic chores with helps of others. 10 percent of male and 1 percent of female respondents did not take part in any housekeeping activities. Fujiwara (2008) observed that advanced age was a significant predictor of decline in IDAL.

Table 2 shows that 56 percent of male and 70 percent female participants washed all their cloths independently. 34 percent males and 30 percent females washed small items themselves whereas, 10 percent males and females were unable to wash their cloths.

Table 3 elucidates that rural male (64%) and female (10%) could travel independently on public transportation and/or derive their own vehicle; also 6 percent of male and 24 percent of female respondents did not prefer to travel at all. Majority of female (84%) respondents most of the time travelled with the assistance of others, which may be associated with dependence of aging females on family members and care takers for non routine activities. Deng (2010) reported that social support from family members and cognitive function were key factors associated with quality of life among aging adults.

In the figure 5 we can see that 30 percent of male and 10 percent of female respondents managed their financial

matters independently. They could make budgets, write checks, pay rent bills, could go to the bank, collect and keep track of income. 60 percent males and 86 percent of female respondents were able to manage day to day purchases and banking. 4 percent of male and 10 percent of female respondents were incapable of handling money.

Summing the study leads towards assumptions that women were more independent than men in activities such as laundry, housekeeping and cooking, whereas men were better in managing traveling and financial matters independently. Traditionally, women have been more bounded to domestic activities while men have been bounded to the administration of money (Lazaro Alquezar et al., 2007). And IADL are complex activities of daily living which require a minimum amount of intact physical capacity and cognitive efforts on the part of an individual (Mohanty et al. 2012).

4. Conclusion

Disability in old age is regarded as a dynamic social phenomenon that relates to individual's physiological, psychological and medical condition as well as socio-economic position, cultural norms and environment. The big challenge of disability tend to increase with increasing morbidity and vulnerability in advanced age sometimes to the extent that a portion of the elderly fails to undertake even basic and/or Activities of daily living (ADL) and instrumental activities of daily living(IADL). Disability in ageing adult should be a focus of all public health policy and programs and cover the whole continuum of services aimed at both preventing disability and restoring functional capacity through rehabilitative measures.

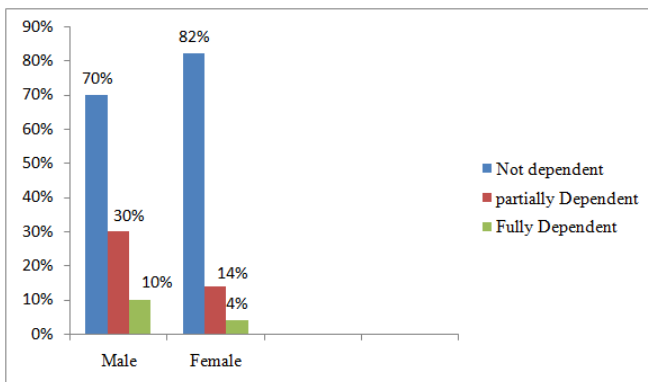


Figure 1: Ability to Perform Physical Activities of daily living

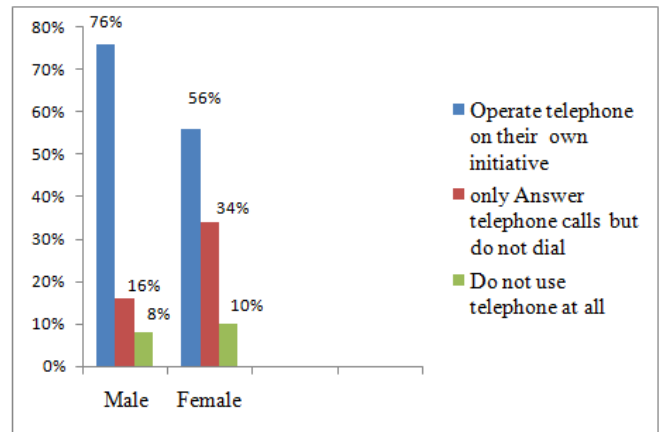


Figure 2: Ability to use telephone

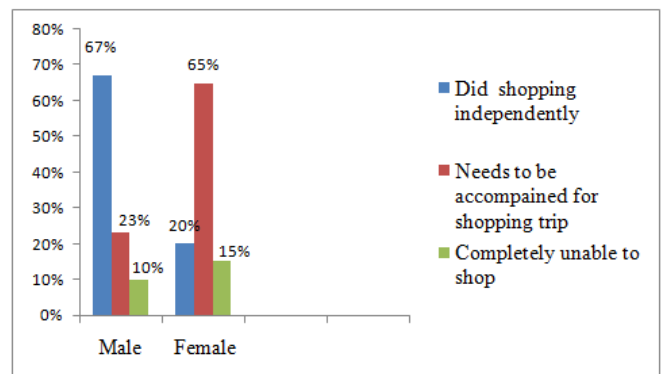


Figure 3: Ability to take care of shopping needs

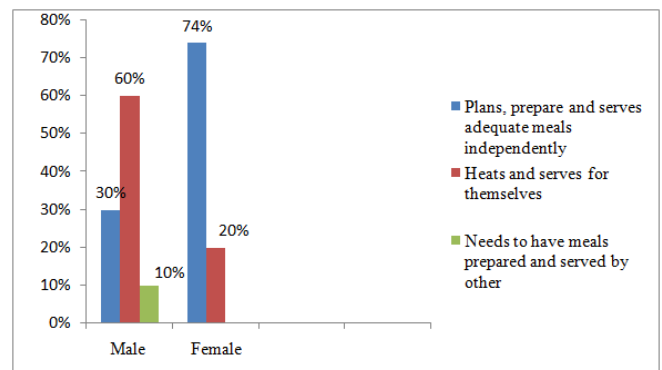


Figure 4: Ability to Prepare Food

Table 1: Ability to Maintain House

Housekeeping	Rural Male=100	Rural Female=100	Chi-Square (p-value)
Maintains house alone	30%	73%	38.782 (0.000)**
Perform light daily tasks such as dish washing, bed making	24%	5%	12.705 (0.000)**
Needs helps with all home maintenance tasks	36%	21%	4.759 (0.029)*
Does not participate in any housekeeping tasks	10%	1%	7.792 (0.005)**

**significant at 1% level; *significant at 5% level

Table 2: Ability to Wash Cloths

Laundry	Rural Male=100	Rural Female=100	
All laundry done by self	56%	70%	4.204 (0.040)*
Partial laundry done by self	34%	30%	0.367 (0.544)
No laundry done by self	10%	10%	-

**significant at 1% level; *significant at 5% level

Table 3: Ability to Travel

Mode of transportation	Rural Male=100	Rural Female=100	
Travels independently on public transportation or drives own car	64%	10%	62.548 (0.000)**
Travels limited to taxi or automobile with assistance of another	12%	84%	103.846 (0.500)
Does not travel at all	6%	24%	12.705 (0.000)**

**significant at 1% level; *significant at 5% level

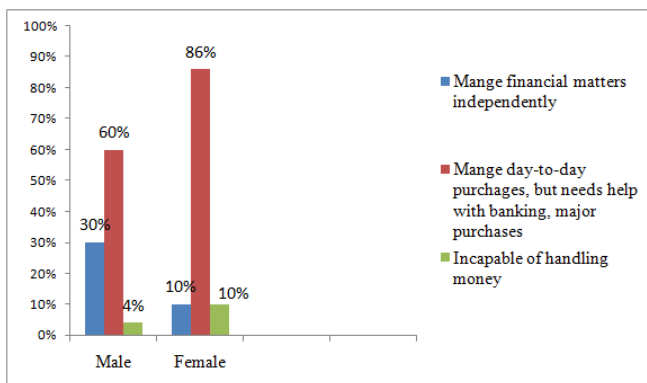


Figure 5: Ability to Handle Finance

References

- [1] Altmets K., Puur A., Uusküla A., Saava A., Sakkeus L and Katus K., (2008): "Self-reported activity limitations among the population aged 20–79 in Estonia: a cross-sectional study", *The European Journal of Public Health*, 1, 49-55
- [2] Chalise, N.H., Saito, T., Kai, I., (2008): "Functional disability in activities of daily living and instrumental activities of daily living among Nepalese elderly", *Public Health* 122, 394–396.
- [3] Cromwell, Devide A., Kathy, E. and Roslyn, G.P., (2003): "The performance of instrumental activities of daily living scale in screening for cognitive impairment in elderly community residents", *Journals of Clinical Epidemiology*, 56:131-7
- [4] Deng j., (2010): "Subjective well-being, social support, and age related functioning among the very old in China", *International Journal of Geriatric Psychiatry*, 25, 697-703
- [5] Doblhammer, G., R. Hoffmann, E. Muth and W. Nusselder., (2007): "The effect of sex, obesity, and

- smoking on health transitions: A statistical meta-analysis based on a systematic literature review. *Rostock Center - Discussion Paper* 7, 1-26.
- [6] Ebrahim S., (2002): "Ageing, health and society", *Int J Epidemiol*: 31(4), 715-8.
- [7] Freedman VA, Martin LG, Schoeni RF., (2002): "Recent trends in disability and functioning among older adults in the United States: a systematic review", *JAMA*: 288(24), 3137-46.
- [8] Fujiwara y., (2008): "Predictors of improvement or decline in instrumental activities of daily living among community-dwelling older Japanese", *Gerontology* 373-80
- [9] Grundy, E. and A. Sloggett., (2003): "Health inequality in the older population: the role of personal capital, social resources and socio-economic circumstances", *Social Science and Medicine* 56, 935-947.
- [10] Ishizaki T, Kobayashi Y, Kai I., (2000): "Functional transition in instrumental activities of daily living among older Japanese", *Journal of Epidemiology*, 10: 249-54
- [11] Katz, S., Ford, A.B., Moskowitz, R.W., Jackson, B.A., Jaffe, M.W., (1963): "Studies of illness in the age. The index of ADL: a standardized measure of biological and psychological function", *J. Am. Med. Assoc.* 185, 914–919.
- [12] Lawton, M.P., Brody, E.M., (1969): "Assessment of older people: self-maintaining and instrumental activities of daily living". *Gerontologist* 9, 179–186.
- [13] Lazaro Alquezar, A., Rubio Aranda, E., Sanchez Sanchez, A., Garcia Herrero, J.C., (2007): "Functional capacity for daily living activities among senior citizens attending community centers in the city of Zaragoza, Spain", *Rev. Esp. Salud Publica* 81, 625–636 (in Spanish).
- [14] Liberaslesso A., (2002): "Bienestar subjetivo en la vida adulta y en la vejez: hacia una psicología positive en America Latina". *Rev Latinoam de Psicol.* 34:55-74.
- [15] Millan-Calenti, J.C., (2006): "Principles of Geriatrics Medicine and Gerontology", McGraw-Hill Interamericana, Madrid (in Spanish).
- [16] Mohanty Sandhyarani, Gangil Om Prakash and Kumar Sudhir., (2012): "Instrumental Activities of Daily Living and Subjective Wellbeing in Elderly Persons Living in Community", *Indian journal of gerontology*, Vol.26, No.2. pp.193-206
- [17] WHO (World Health Organization), (2001): "International Classification of Functioning, Disability and Health (ICF)", WHO (World Health Organization), Geneva.
- [18] WHO (World Health Organization), (2002): "Active Ageing – A Policy Framework, WHO, Geneva". http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf.
- [19] Zhang Wenjuan, Li Shuzhuo, Feldman W. Marcus., (2005): "Gender differences in activity of daily living of elderly in rural china: evidence from chaohu", *Journal of Women & Aging*, Vol. 17 (3)