ORIGINAL RESEARCH PAPER
Volume-9 | Issue-4 | April-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

EFFECTIVENESS OF FUNCTIONAL TASK EXERCISE ON MOBILITY AND ACTIVITIES OF DAILY LIVING AMONG ELDERLY

Nursing

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ABSTRACT

Ageing is strongly associated with impaired mobility and decreased physical functional performance.Thepresent study investigates the effectiveness of functional task exercise on mobility and activities of daily living (ADL) among elderly residing in selected wards of ArpookaraPanchayat. The objectives of the study were to assess the mobility and ADL among elderly, evaluate the effectiveness of functional task exercises on mobility among elderly, determine the effectiveness of functional task exercises on ADL among elderlyand to find out the correlation between the mobility and activities of daily living among elderly. A quantitative approach was used for the study. The research design selected for the study was pre experimental one group pre testpost test design. The study was theoretically supported by Betty Neuman's system model. A total of 30 elderly residing in ward 12 and 13 of ArpookaraPanchayat were selected for the study using non probability purposive sampling technique. The data were collected using socio personal data sheet, Timed Up and Go(TUG) test for assessing the mobility and Groningen Activity Restriction Scale(GARS) for assessing the activities of daily living. Pre test was conducted on the first day of the study. Functional task exercise was scheduled for four weeks that included four levels of activities; walking, stepping, lifting and switching (position change). The post test was done after four weeks. The results of the study revealed that functional task exercise had a statistically significant effect on mobility and activities of daily living among elderly.

KEYWORDS

elderly; mobility; activities of daily living; functional task exercise

1.INTRODUCTION

According to World Population Prospects 2017 Revision, the number of older persons aged 60 years and above, is expected to be more than double by 2050 and more than triple by 2100.[1]

India is the second largest country in the world with 72 million elderly persons above 60 years as of 2001 compared to China's 127 million. In India, while theelderly constituted only 24 million in 1961, it increased to 43 million in 1981, 57 million in 1991, 77 million in 2001, 94.8 million in 2011 and by 2050, this proportion is expected to increase 324 million.[2]

Total population in Kerala as per the 2011 census is around 3.36 crore, of which 12.6 % are aged above 60 years. Kerala is aging faster than the rest of India. Its 60 plus population 5.15 % of the total in 1961 was just below the national 5.6%. Since 1980 Kerala has overtaken the rest and the 2001 comparison was 10.5 % to 7.5 %, by 2011 almost 13 % of the population was already past 60 years.[3]

Mobility is broadly defined as the ability to move oneself by walking, by using assistive devices or by using transportation within community environments that expand from one's home to the neighbourhood and to the regions beyond.[4]

Ageing is strongly associated with impaired mobility and decreased physical functional performance. As a consequence, there is loss of independence and quality of life and the risk of falls and fractures increases. In the elderly, falls and their consequences constitute a serious public health issue.[4]

Approximately 20% of people between 65 and 75 years of age need assistance in performing activities of daily living (ADL) and this increases to 48% in people older than 85.[5]Impaired mobility in elderly person is almost always a multi-factorial problem. Mobility declines with increasing age and the most complex and demanding tasks are affected first. [6]

In elderly mobility and ADL were compromised. Increasing physical activity and mobility in the elderly is therefore relevant and important issue.[7] Regular physical activity is recommended and generally considered to be an important strategy for the reduction or prevention of functional decline with aging .In addition, physical activity reduces the risk of disease and has a beneficial effect on the impact of a large number of chronic diseases and the functional consequences and multi morbidity.[8]

2. OBJECTIVES

1. To assess the mobility and activities of daily living among elderly.
2. To evaluate the effectiveness of functional task exercise on mobility among elderly.
3. To determine the effectiveness of functional task exercise on activities of daily living among elderly.
4. To find out the correlation between the mobility and activities of daily living among elderly.

3. MATERIALS AND METHODS

A quantitative research approach was used for the study. The study design selected was pre experimental one group pre testpost test design. Non probability purposive sampling technique was employed to select 30 elderly. All elderly in the study were able to comprehend Malayalam and their TUG test score is >10 seconds and GARS score is >18. Those excluded from the study were elderly with recent fractures and chronic illness that might limit exercise. Baseline information was collected using socio personal data sheet. Their mobility were measured by using Timed Up and Go (TUG) test. Activities of daily living were measured by using the Groningen Activity Restriction Scale(GARS). Pre test was conducted on the first day of the study. Intervention was given on the first day. Functional task exercise was scheduled for four weeks that included four levels of activities; walking, stepping, lifting and switching (position change). The duration of each level of activity was 20 minutes with a frequency of five times on alternate days. Post test was done to assess the effectiveness of functional task exercise on mobility and activities of daily living among elderly using the same tool after four weeks.The data collected from 30 elderly would be organized, tabulated andanalysed by using descriptive and inferential statistics based on the objectives of the study.

4. RESULTS

4.1 Findings related to sample characteristics

Among the elderly selected for the study 53.3% belonged to the age group of 66-70 years and 10% belonged to the age group of 76-80 years and 73.3% were females. Most of the elderly (66.67 %) got married and only 6.6 % were unmarried.Regarding the educational qualification 46.7 % of the elderly had primary education and only 3.3% had degree and above education.Most of the elderly (76.6%) belonged to joint family.Among the subjects 43.3% had family monthly income more than 6000/- and 6.7% had monthly income of <2000 rupees.

4.2 Findings related toMobility among elderly

Mobility among elderly were categorized into good, average and poor based on the score ≤10 seconds,11-20 seconds, 21-30 seconds and above respectively. In this study majority(63.3%) of the elderly were having average mobility and 36.7 % were having poor mobility.

4.3 Findings related toActivities of daily living among elderly

Activities of daily living was categorized into independent, independent with some difficulty,independent with great difficulty, partially dependent and completely dependent based on the scores 18, 19-36, 37-54, 55-72 and 73-90 respectively.

Most of the elderly (56.7%)were independent with some difficulty 30% were independent with great difficulty and only 13.3% were partially dependent.

4.4 Findings related toeffectiveness of functional task exercise on mobility and activities of daily living among elderly

n=30

	Mobility		
Group	**Mean rank**	**Sum of ranks**	**Z**
Pre test	15	435	4.18*
Post test			

*Significant at 0.05 level

The obtained Z value was significant at 0.05 level. It shows that there was a significant difference in mobility scores among elderly before and after the functional task exercise. This revealed that FTE was effective on improving mobility of elderly with decreased mobility

4.5 Findings related toeffectiveness of functional task exercise on activities of daily living among elderly

n=30

Group	Activities of daily living		
	Mean rank	**Sum of ranks**	**Z**
Pre test Post test	15.5	465	4.79*

*Significant at 0.05 level

The obtained Z value was significant at 0.05 level. It showed that there was a significant difference in activities of daily living among elderly before and after the functional task exercise. It could be concluded that the FTE had sustained effect in improving ADL of elderly with decreased ADL

4.6 Findings related toCorrelation between the mobility and activities of daily living among elderly

n=30

Variables	**p**
Mobility Activities of daily living	0.71**

**Significant at 0.01 level

The obtained value 0.71 is significant at 0.01 level which shows that there was strong positive correlation between mobility and activities of daily living among elderly

5. DISCUSSION

In the present study 63.3 % of the elderly were having average mobility and only 36.7 % were having poor mobility. A parallel study revealed that 37% of the elderly were having mobility impairment.[9]

Regarding the activities of daily living 56.7 % elderly were independent with some difficulty, 30 % were independent with great difficulty and only 13.3 % were partially dependent. A study carried out in the urban community of North India found that almost 79 %of the individuals were independentand 21 % were dependent.

The study observed that there was a significant difference in the mobility scores among elderly before and after the functional task exercise. The functional task exercise improved their mobility and reduced their risk of fall. The findings are congruent with the results of prospective interventional study done in Spain showed that significant improvements were shown by the group in reducing the time to perform the task that assessed functional mobility.[10]

The study found that there was a significant difference in the activities of daily living scores among elderly before and after the functional task exercise.It was supported by a studyconducted among the 24 community dwelling, medically stable women were held at a local leisure center in the Utrecht showed that the functional tasks exercise program was feasible and shows promise of being more effective for functional performance.[11]

6. CONCLUSION

Based on the findings it can be concluded that the intervention could be used as an effective exercise programme in improving the mobility and activities of daily living among elderly.

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