



ASSESSMENT OF PHYSICAL MOBILITY AND USAGE OF ASSISTIVE DEVICES IN INSTITUTIONALIZED ELDERLY POPULATION.

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ABSTRACT

Introduction: -Many individuals need a mobility Assistive device as they age. When it is used to assist in functional performance of activities, improve better quality of life, Reduce risk of fall, prevent injuries, improve balance and gait pattern during the ageing .hence purpose of our study is to assess usage of assistive devices in an institutionalised elderly. **Methods:-** Physical mobility scale and Self-made questionnaire were used by direct interview method on 60 institutionalized elderly population to assess usages as well as various factors affecting it. **Results:** - In our study 25% of institutionalized elderly people are having Assistive devices & 75% people are not having assistive devices. 78% people are Highly independent while 10% people are with mild Physical activity level . **Conclusion:** - The usage of assistive devices are extremely less and amount of physical mobility is higher in our study.

KEYWORDS : Institutionalized elderly population, Assistive devices, Quality of life

INTRODUCTION

Assistive devices are those whose primary purpose is to maintain or improve an individual's functioning & independence to facilitate participation and to enhance overall well - being^[1,2] Different types of assistive devices used in locomotor disability such as – wheelchairs; canes; crutches; walker or walking frames ; walking stick ; prosthetics ; tricycle ; orthosis.^[1,2] Older adults rarely use crutches because of the amount of upper body strength that is needed. Walkers provide a large base of support for patients who have poor balance and it improves their gait pattern & for those people who have bilateral weakness of the lower limb and cannot able to bear full weight on their legs. Wheelchairs should be considered for patients who lack the lower body strength, balance, or endurance for ambulation.^[1]

The use of assistive devices allows the elders to develop functional activities of daily living safely; increase their independence ; Prevent co- morbidities and thereby contribute to improve the Quality of life. It increases a patient's Base of support ; improve balance and walking pattern; Protect your joints and prevent injuries.^[2,3]

Strategies for Providing Assistive Devices

As per UNICEF assistive devices are considered with 5 principles – Availability; Accessibility; Affordability; Adaptability; Acceptability and quality.^[2]

Assistive devices are external devices that are designed, made or adapted to assist a person to perform a particular task. People with disabilities depend on Assistive devices to enable them to carry out daily activities and participate actively and productively in community life.^[3]

Ageing Process and Physiological Changes

Ageing is characterised by a decrease in bone and muscle mass and an increase in adiposity. A decline in muscle mass & reduction in muscle strength leads to a risk of fracture, reduction in quality of life. And a loss of independence. These changes in musculoskeletal system reflect the ageing process as well as the consequences of a reduced physical activity.^[3]

Methodology

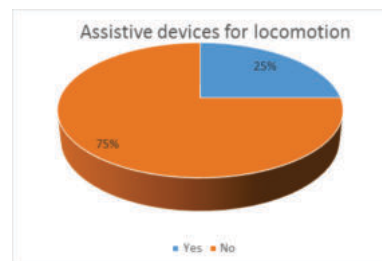
The Study was conducted after approval by Institutional ethics committee. Institutionalized elderly with the age more than 60 years were considered in a study were as those with major Musculoskeletal and Neurological disorders , Psychological impairments & not willing to participate were excluded from the study .Research procedure was explained to them after that consent form was filled & an information sheet was given to them. A Physical mobility scale was used to take an assessment of physical mobility and pre-validated Self-made questionnaire was used to determine the usage of assistive devices. The 'Physical Mobility Scale (PMS) was developed by physiotherapists working in residential aged care to specifically show resident functional mobility and to provide information regarding each

resident's need for supervision or assistance from 1 or 2 staff members and equipment during position changes , transfers, mobilizing and personal care'.^[1] A pre-validated Self-Made Questionnaire form with the consideration of 5 factors :- Assistive devices , Availability , Cost effectiveness, Various resources ,Level of satisfaction^[2,3]. Physical mobility scale was filled by a therapist using the observation method and self-made questionnaires were collected by direct interview method. The study population was collected from Navi Mumbai and Parel area . The data was analysed by using Microsoft Excel 365 and Descriptive statistics was done.

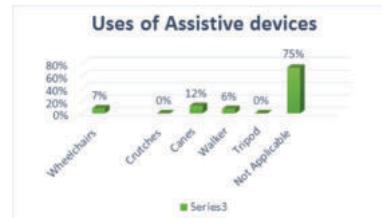
RESULTS & OBSERVATION

Table 1: Demographic Data Of Study Population.

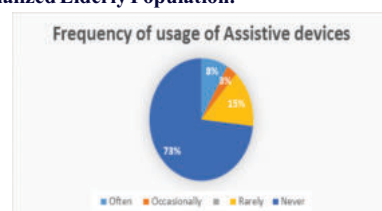
Ratio of Male:Female	13:17
Mean age of study population	72.6 ± 9.39



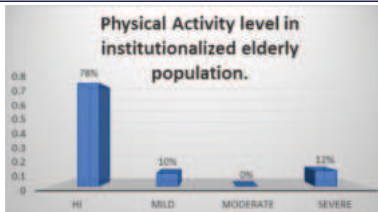
Graph 1):- Graph Showing Institutionalized Elderly Population Having Assistive Devices For Locomotion.



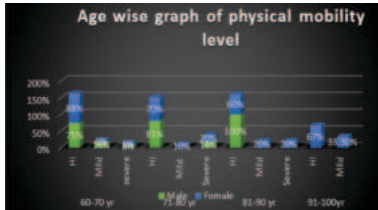
Graph 2):- Graph Showing Types Of Assistive Devices Used In Institutionalized Elderly Population.



Graph 3):- Graph Showing Frequency Of Usages Of Assistive Devices In Institutionalized Elderly Population



Graph 4) :- Graph Showing Physical Activity Level In Institutionalized Elderly Population.



Graph5):- Graph Showing Age Wise Distribution Of Physical Mobility Level In Institutionalized Elderly Population.

DISCUSSION

India is having large number of elderly population ; it is the second largest country in the world and the elderly aged 60 and above it is considered. There is a substantial reduction in mortality in the society. These factors together have resulted in increasing number of elderly person's in the population. This phenomenon is called population ageing^[3,5]. Reduction in muscle strength causes problems in physical mobility and activity of daily living. wear and tear or wasting of protective cartilage of joints occurs. There are stiffening and fibrosis of connective tissue elements that reduce the range of motion and affect the movements by making it less efficient^[2,3]. Physical activity also decreases with age due to lifestyle changes. The advantages of assistive devices are to maintain or improve the individual's functioning independently; reduce pain ; increase the confidence and self –esteem; reduce the risk of falls^[3,5]. They enable people to live healthy and productive lives.

In our study maximum no of population are Highest independence; rest of them are in Severe & Mild level of Physical activity (Graph 4)

As per the report of Help age India, Over 90% of people with disabilities lack of access to assistive devices in India; The report notes that the global population requiring assistive devices would touch 3.5 billion by 2050. As per National Policy on older persons (NPOP) was announced in Jan 1999 to ensure the well being of the older persons. The International Day for older persons (IDOP) is on 1st Oct since 2005. People living in institutions are not aware of these policies and are not able to benefit from them.^[6]

75 % of the population are not having Assistive devices for locomotion where 25% of population are having assistive devices.(Graph 1) Due to Highest independence 73% are not using Assistive devices even though they have it. The another cause of frequency usage of assistive devices rarely (15%) is that ,older people are not aware of how to use Assistive devices and their importance in mobility.(Graph 3) 50% of people are comfortable for using of Assistive devices. As the study set-up area is smaller study participants are using bed railings, walls and to ambulate themselves hence this is a cause for the rare usage of Assistive devices.

90% population agreed that they can afford devices but they reported a lack of resources services and products that are affordable to everyone who needs them. Many institutions operate on limited budgets. Allocating funds for assistive devices might not be prioritized over other essential expenses, leading to a shortage of resources for such devices.

CONCLUSION:-

The usage of assistive devices is extremely less and the amount of physical mobility is higher in our study. Need for awareness regarding the usage of assistive devices is necessary to increase physical mobility level

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