



## STUDY ON IMPACT OF AIDS AND APPLIANCES IN IMPROVING THE QUALITY OF LIFE FOR PERSONS WITH DISABILITIES

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### Abstract

Disability is an important public health problem especially in developing countries like India. The problem will increase in future because of increase in trend of non-communicable diseases and change in age structure with an increase in life expectancy. The issues are different in developed and developing countries, as part of extending rehabilitation measures, provision of aids and appliances should be targeted according to the needs of the disabled with community participation. In India, a majority of the disabled resides in rural areas where accessibility, availability, and utilization of aids and appliances services and its cost-effectiveness are the major issues to be considered. Research on impact of aids and appliances, appropriate intervention strategies and their implementation to the present context in India is a big challenge. Hence this paper discusses various issues related to disability and impact of the aids and appliances in improving the quality of life of persons with disabilities who under gone Institutional Based Rehabilitation (IBR) and Community Based Rehabilitation (CBR) in the two aspects of functional skill development and quality of life. The present study attempts to find out and compare the benefits of Community Based Rehabilitation (CBR) and Institutional Based Rehabilitation (IBR). The study shows no statistically significant differences between these two groups in terms of Quality of Life (QOL) as well as Functional Independence Skills (FIS), which in turn show that both mode of rehabilitation is more or less equally effective in rehabilitating persons with loco motor disabilities.

### Introduction

Mobility aids and devices such as prostheses, orthoses, crutches, sticks, walking frames, wheelchairs, and tricycles are among the common types of assistive technologies used to improve personal mobility for people with disabilities. Mobility devices are a matter of equity for people with disabilities as they facilitate their access to education, work and social life, increase their independence and enhance their participation in their communities. Besides people with disabilities, many older people also rely on such devices. Despite their importance, surveys report considerable unmet needs for these devices, often due to a lack of financial resources.

The following aids and appliances may be allowed for each type of disabled individual.

#### For orthopedically Handicapped

- ❖ Lower limb (Callipers)
- ❖ Lower limb prosthetic (Artificial legs)
- ❖ Upper limb prosthetic (Artificial hands)
- ❖ Spinal orthotic (Braces for neck & back)

#### Mobility aids

- ❖ Wheel Chairs (Manual & Motorised)
- ❖ Tricycles (Manual & Battery Operated)
- ❖ Axilla & Elbow crutches
- ❖ Walking Stick

#### For Visually Handicapped

- ❖ Braille Short hand machine
- ❖ Braille Slate
- ❖ Walking cane & stick

#### For Hearing Impaired

- ❖ Pocket type Hearing Aid
- ❖ Digital type Behind the Ear (BTE) Hearing Aid

### Objectives

- ❖ To find out the impact of Aids and Appliance in improving functional skill development and quality of life of persons with loco motor disabilities undergoing Community Based Rehabilitation and Institutional Based Rehabilitation.



## Methodology

Present Research work constitutes **Descriptive Design** and data were collected from 33 persons with disabilities those who diagnosed by medical authority of state government of them 15 persons with disabilities underwent Institutional Based Rehabilitation and 18 persons with disabilities underwent Community Based Rehabilitation were selected as respondents by using **Convenient Sampling Method** and data were collected through **Interview Method** as a tool of Data Collection. After collecting data from respondent, data were analyzed by using SPSS to achieve the objective of the study.

## Data analysis and Interpretation

The majority of 78.8 percent of the respondents were male and rest of 21.1 percent were female respondents. 48.5 percent of the respondents have completed secondary level of education, 24.2 percent were with higher secondary qualification, and 18.2 percent of the respondents with their degree / diploma in their hand, 6.1% of the respondents have completed primary level education, only a notable 3.0% of the respondents were illiterate. 66.7 % of the respondents are earning Rs. 5000 and below, 21.2 % of the respondents are not earning as they are pursuing their studies and unemployed, 12.1% of the respondents are getting Rs 5001- 10,000 as their monthly income. Majority of 72.7% of the respondents were travelling 1-10 kilometres from their house to the work /Educational spot and the most 18.2% of the respondents travel for about 11-20 kilometres. It also states that only a 3% of respondents travel for about 21-30 kms, 31-40 kms and did not go to any work/pursue education respectively. Regarding mode of transportation of respondents, 39.45 of the respondents were using tricycle for their mobility, 18.2 percent were using Government buses, 18.2% respondents mobility were depending on the other people and another 18.2% travelled by walk, only a notable 6.1% of the respondents were using modified other bikes for their mobility. Regards to condition of vehicle, the majority of 67.7% of the respondents answered with Yes for the good condition of vehicle and the rest 30.3 % of the respondents had said that the condition of the vehicle is not good. Thus it clearly states that the condition of the Motorized retrofitted scooters were in good condition even after using it for a year by the respondents. As far as ability to maintain the vehicle locally, there were 51.5% of the respondents able to maintain their vehicle at their locality and the rest 48.5% of the respondents had said that they find difficulty to maintain the Motorized retrofitted Scooters in their locality.

The first hypothesis tested to find out significance of difference between persons who undergo IBR & CBR in functional skill development. The result show that there is no significant difference between persons who undergo Community Based Rehabilitation (CBR) and Institutional Based Rehabilitation (IBR) in functional skill development ( $t=-1.810$ )

The second hypothesis tested to find out significance of difference between persons who undergo IBR & CBR in quality of life. From the result it is concluded that there is no significant difference between persons who undergo Community Based Rehabilitation (CBR) and Institutional Based Rehabilitation (IBR) in terms of quality of life ( $t=0.468$ )

Third hypothesis tested to find out the relationship between functional skill development and quality of life in persons who undergo Institutional Based Rehabilitation (IBR). From the result it is evident that there is no co-relation between functional skill development and quality of life in persons who undergo Institutional Based Rehabilitation (IBR). Through there is no statistically significant relationship between functional skill development and quality of life, the value shows slight negative co-relation ( $r=-.395$ ) which means there is a tendency to decrease in functional Independence whenever there is an increase in QOL or vice versa, in turn show that whenever more help is accepted form the care takers (functionally dependent) by the disabled persons the quality of life is reported to be simultaneously boosted in IBR.

The final hypothesis tested in the study was to find out the co-relation between functional skill development and quality of life in persons who undergo community Based Rehabilitation (CBR). The result indicated that there is no statistically significant co-relation ( $r=0.060$ ) between functional skill development and quality of life in persons who undergo Community Based Rehabilitation (CBR)

In general, comparing both modes of rehabilitation, IBR approach is of more skilled and use of advanced technologies than when compared with CBR approach which is of utilization of the available resources for therapy. Practically, advanced techniques of IBR approach should give a more functional skill development but the scores of CBR also found to be high may be because of the concept like.

1. Generalized awareness of importance of rehabilitation in CBRs
2. Therapy with more practical functional skills of ADL oriented rather than goal oriented in IBR approaches.
3. More quality of time being employed rather than a specific time of getting therapy in IBR.
4. More concentration on individualized therapy services by grass root level workers in CBR, rather than group therapy or multitasks handled by professionals in IBR set ups through which they were not able to concentrate individually.



When considering functional skills, the IBR approaches would be mainly of concentrating on improving the muscle strength and power, increasing or in attaining the exact range of motion, on in balance and coordination. The focus here is correcting physiological aspects through which the exact functional skills can be accomplished. But in CBR approach, since the grass root level workers simply assist the patient to do all the ADL skills like eating, grooming, dressing, toileting etc., through which the patient becomes more accustomed with the repeated training at community level which can be the reason for good functional skill development in CBR as well.

### **Summary & Conclusion**

The present study was carried out to find out ton usage of aids and appliances and quality of life for persons with loco motor disabilities. The following conclusions were drawn from this study.

- There is much improvement in pre and post study on usage of aids and appliances from good to excellent by 80% of population of the total sampling.
- There is no significant difference between persons who undergo Community Based Rehabilitation (CBR) and Institutional Based Rehabilitation (IBR) in quality of life.
- There is no statistically significant co-relation between functional skill development and equality of life in persons who undergo Institutional Based Rehabilitation (IBR)
- There is no statistically significant co-relation between functional skill development and quality of life in persons who undergo Community Based Rehabilitation (CBR)

### **Recommendations**

Larger samples of loco motor disabilities can studied for the generalization of the results. In specific all the clinical conditions of loco motor disabilities like Polio, Spinal Cord injury, Parkinson's diseases, head injury, stroke can be studied separately or can be compared with each clinical conditions in a larger scale.

Different types of disabilities like visually, hearing impaired, mental retardation and multiple disabilities can also be studied with the comparative aspects.

A long term & large scale study with gender differences of persons with disabilities has to be made since the researcher had male subjects for the study.

### **Reference**

1. Arora, R., (2007) National Programme for rehabilitation of persons with disabilities- a blend of CBR and IBR. Japan Japan International Cooperation Agency
2. Austalian Physiotherapy Association (2009) Functional Independence measure, Australian Journal of Physiotherapy
3. Brinkman, G. (2005) Unpaid CBR work force: between incentives and exploration. Asia Pacific Disability Rehabilitation Journal; 15 (1); 90-94.
4. Bury,T., (2005) primary health Care and Community Based Rehabilitation: implications for physical therapy. Asia Pacific disability Rehabilitation Journal; 16(2):33.