

A Study on Community Based Physiotherapy Programme to Improve the Quality of Life in Persons with Disabilities

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Abstract: *Disability is an important health problem in India, a majority of the disabled resides in rural area where accessibility, availability and utilization of rehabilitation and its cost effectiveness are the major issues. This study was to prove the effect of community based physiotherapy programme to improve the quality of life in persons with Disabilities. 50 participants were recruited from this study. Persons having locomotor disability were described all the instructions and asked to fill the questionnaire and submit it to concerned physiotherapist at camp. Physical Rehabilitation was mainly emphasized for every patient. Approximately after 3 months following initial therapy programme at camp. The study encompasses all locomotor disabled, whom age is above 18 years old, who received CBP Services. Experimental study was done by Saveetha Medical college hospital, Department of Physiotherapy, Chennai. The data obtained was tabulated and statistically analyzed. Outcome measures FIM Score in pre and post intervention, parametric statistical tests and dependent t sample test were used. The two-tailed P value equals 0.0001 by conventional criteria; this difference is considered to be very statistically significant. Community based physiotherapy plays a highly significant role in improving the quality of life among disability persons and should be highly encouraged.*

Keywords: *Community, Physiotherapy, Quality of life, Disability,*

I. Introduction

Disability is an important health problem in India, a majority of the disabled resides in rural area where accessibility, availability and utilization of rehabilitation and its cost effectiveness are the major issues. Physiotherapists play an integral role in the planning and management of transition for people with a disability moving between services. Co-ordinated and planned transitions are essential to provision of quality care. These transitions may occur in a range of circumstances, for example from early intervention through to adult health services, from disability to aged care services, from acute hospital services to longer-term management in the community or from home residence to supported accommodation when, for instance, ageing carers are no longer able to care for a person with a disability. Physiotherapists work with people with a disability across their lifespan. During the critical stages of a child's development, physiotherapists contribute significantly to the provision of initial and ongoing assessment, appropriate therapy, advice and support. For example, facilitation of mobility needs by a physiotherapist can encourage a young person with a disability to participate in the activities of a school based setting. Physiotherapists have an important role in the management of impairments associated with disability, including pain. In recent years, many physiotherapists have also been working in advanced scope roles including in acute care and in 'late effects of disability' clinics and have developed expertise in managing and reducing the impact of accelerated ageing for people with a long standing disability. Physiotherapists have long been acknowledged as important providers of services for people with a disability. An appropriate level of physiotherapy can promote social inclusion through optimizing a person's function and encouraging participation in the economic and social life of the community. A global estimate of moderate and severe disability has been given as 5.5% Based on population and survey data it is estimated that 70% of these 5.5% live in the developing countries In the developing countries it has been cautiously estimated that there were about 234 million moderately or severely disabled people in 2000 and that this will grow to about 525 million in 2035 (Helander 1999, 2000). Physiotherapy provides an important contribution to the successful delivery of community services, preventing ill health, providing intervention and rehabilitation when injury or ill health occurs, promoting independence and supporting those who live with chronic conditions. Physiotherapists deliver health care across the whole patient journey, in every community setting and from the cradle to end of life. Services work with partner organizations in social care and education to achieve optimum outcomes for each individual. The community based physiotherapy programme has long been regarded as an important provider of services for people with disability. Fundamental to the role of a physiotherapist is to work closely in partnership with people with disability and their families, carers to address their needs and improve outcome. Community Physiotherapy Services (CPS) offers community based rehabilitation, incorporating physical activity and education programs for people with chronic conditions. Programs are designed to

maximize functional ability and minimize the impact of chronic disease and related secondary complications. Programs have been developed for chronic conditions that have been identified in research as benefiting from physical activity and or specific rehabilitation programs. All programs incorporate evidence-based best practice, targeting physical activity and education to empower the client to better manage their own health and maximize their functional independence.

Aim of the Study:

This study was to prove the effect of community based physiotherapy programme to improve the quality of life in persons with Disabilities.

II. Methodology

50 participants with age group of 5 to 70 years, both males and females are participated in this study were recruited from this study. The patients were described all the instructions and asked to fill the questionnaire and submit it to concerned physiotherapist at home visits. Physical Rehabilitation was mainly emphasized on health education, hygiene and ergonomic advises besides life style modification for every patient. Approximately after 3 months following initial therapy programme at camp.. Persons having locomotor disability included in the study were those with or without loss or absence or inactivity of whole or part of hand or leg or both due to amputation, paralysis, deformity or dysfunction of joints which affected his/her “normal ability to move self or objects” and (b) those with physical deformities in the body. Permanent nature who generally did not have difficulty in the normal movement of body and limbs were also treated as disabled. After collecting the socioeconomic data, the FIM questionnaire translated in Tamil were distributed to all locomotor disabled patients or care giver .This was at pre intervention. Those identified with locomotor disability, were subjected to the questionnaire of FIM to assess the ability to perform day to day activities. The FIM, an assessment instrument of functional status, is part of the Uniform Data Set for Medical Rehabilitation (UDS). The FIM is an 18-item,7-level functional assessment designed to evaluate the amount of assistance required by a person with a disability to perform basic life activities safely and effectively

III. Procedure

Physical Rehabilitation intervention was mainly emphasized on health education, hygiene and ergonomic advises besides life style modification for every patient. Interventions in physio therapy including muscle strengthening / stretching exercises, relaxation exercise, bladder and bowel training, transfer training with planning and specific instructions demonstrated to patients at home visits. The exercises were selected according to s subject’s base line assessment and onsite observation supplemented with physical activities and ergonomics advices. Simple home modifications with low cost materials were also implemented as additional measures. Approximately after 3months following initial therapy programme at camp, we conducted a follow up visit at same places in Chennai dist. Physiotherapists again distributed Questionnaire, termed as post treatment questionnaire. Some of patients who attended the initial first camp missed the second follow up camp and thus questionnaire. The data was calculated by SPSS Version 16.0 . Total of certified 50 patients from rural areas of Chennai district had availed an advantage of the home visits. The large number of patients with physical and functional disability (FD) from musculoskeletal (mainly degenerative joint disorders) and neuromuscular disease & disorders were participated in the camp and availed the free physiotherapy consultation, diagnosis, and treatment. Patients with moderate to severe disability were provided free orthosis to improve activities of daily livings.(ADLs).

Research Population:

The study encompasses all locomotor disabled clients, whom age is 5 to 70 years of age both males and females who received Community Based Physiotherapy Services.

Research Design: Experimental study

Setting: Saveetha Medical college hospital, Department of Physiotherapy, Chennai.

Materials: FIM score.

Eligibility Criteria:

Inclusion Criteria:

All locomotor disabled patients

Above 5 years.

Exclusion Criteria:

1. People with co morbid psychiatric conditions other than depression.
1. Not less than 5years.
2. No General patients of musculoskeletal/ Neurological disorders.
3. Presence of unstable angina, arrhythmia,
4. Severe hypertension . Evidence of exercise-induced ischemia
5. Evidence of exercise-induced arrhythmias.
6. Multiple disabilities such as visual, hearing or mental along with locomotor disability
7. Severe deformity and medically ill patients.

Data Analysis:

The purpose of this study has been to draw the attention of WHO to the existing situation of physiotherapy in developing countries in general. Along with this, it attempted to highlight the innovations in community physiotherapy in enhancing easy and equitable access.

Table.1 Demographic Data:

GENDER	FREQUENCY	PERCENTAGE
Male	27	54.0
Female	23	46.0
Total	50	100

Table: 2 Types of Locomotor Disability

TYPES	FREQUENCY	PERCENTAGE
Cerebral palsy	12	24.0
Fracture/contracture/deformity	7	14.0
Amputee	4	8.0
Stroke	6	12.0
Paralysis (SCI, Head injury)	4	8.0
Congenital Deformities	6	12.0
Chronic illness	5	10.0
others	6	12.0

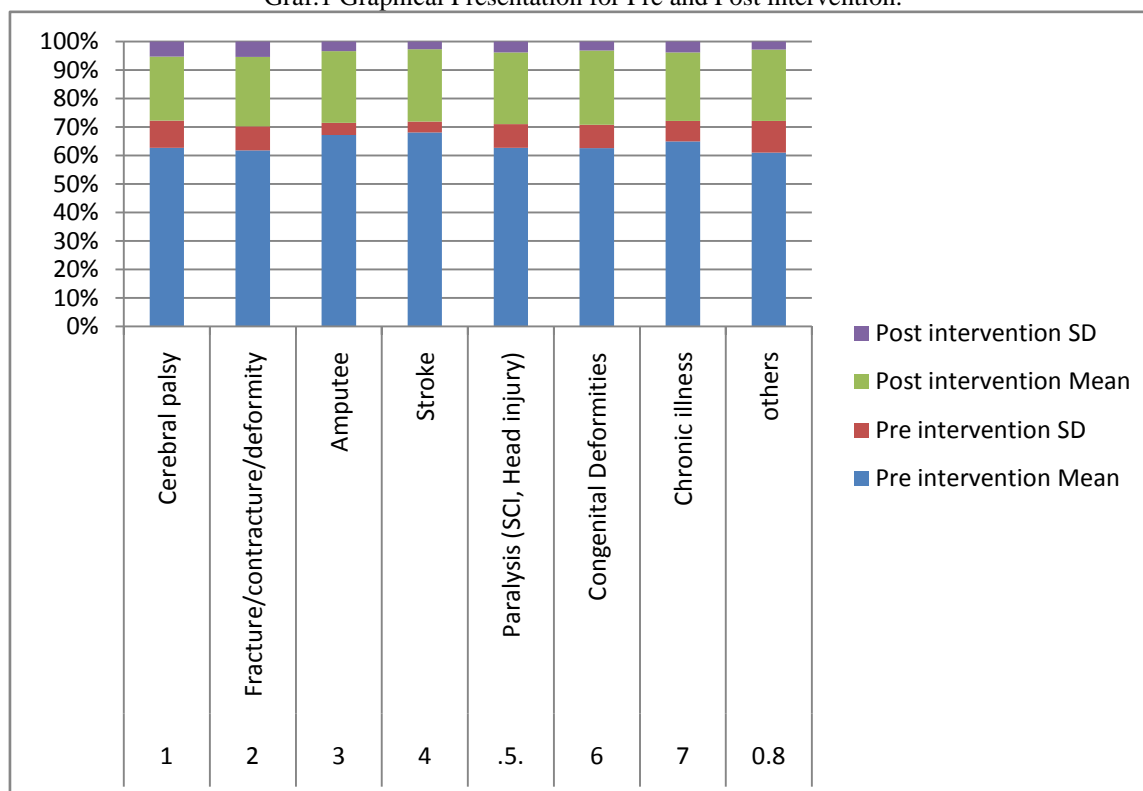
Table.3 Pre and Post intervention for FIM score.

s.no	Types of Disability	Pre intervention		Post intervention		t score	P value
		Mean	SD	Mean	SD		
1.	Cerebral palsy	18.4	2.81	6.58	1.56	3.677	0.0013
2.	Fracture/contracture/deformity	18.7	2.55	7.37	1.62	4.183	0.0013
3.	Amputee	20.5	1.29	7.67	1.04	7.742	0.0002
4	Stroke	20.8	1.16	7.78	0.82	9.166	0.0001
.5.	Paralysis (SCI, Head injury)	19.7	2.62	7.90	1.19	4.100	0.0064
6.	Congenital Deformities	19.1	2.52	7.95	0.96	4.134	0.0020
7	Chronic illness	19.8	2.20	7.34	1.17	5.000	0.0011
.8	others	18.6	3.41	7.61	0.87	11.76	0.0001

IV. Discussion

This study presents the demographic details of various types of disability 24% of people affected cerebral palsy,14% of people affected post fracture and contracture and deformity, amputee patients 8%, then 12% of people affected stroke, paralysis of spinal cord and head injuries are 8%,congenital deformities patients12%, 10% of people were affected chronic illness and other disability 12%. This results show that the pre and post FIM (Functional Independence Measure) score was measured and calculated by SPSS Package 16version.

Graf.1 Graphical Presentation for Pre and Post intervention:



The results of the mean change in FIM score in all the conditions .The mean change in score of FIM in case of cerebral palsy (6.58+1.56),fracture and contracture (7.37+1.62), amputee (7.67+1.04), stroke (7.78+0.82) paralysis(7.90+1.19), congenital deformities (7.95+0.96) chronic illness (7.34+1.17) and others disabilities(7.61+0.87).

The results of paired t –test for FIM in all conditions. The data obtained was tabulated and statistically analyzed. Due to nature of outcome measures FIM Score in pre and post intervention, parametric statistical tests, dependent t sample test and unpaired t test were used. The two-tailed P value equals 0.0001 by conventional criteria; this difference is considered to be very statistically significant. The results indicating highly significant difference between pre and post readings of FIM score indicating that community physiotherapy advice has produced significant effect in patients of various conditions.

This study demonstrated that majority of the disabled especially SCI, Stroke and C.P Patients were able to do their ADL and around one-fourth of the disabled required special care with aids & appliances. Availability and awareness of physiotherapy services/ facilities in community will go a long way in improving the quality of life of individuals with locomotor disabilities. Accordingly, the prevalence of disability in basic, self-care activities of daily living is also rising, posing a great challenge to the health care and social systems that are already experiencing financial constraints. We need to absorb people with disability in the mainstream socially as well economically. Physiotherapists should be made aware of the growing need for physiotherapy in rural areas for locomotor disabled. Also quite a number of the health workers completely had no knowledge of Physiotherapy therefore may not refer patients appropriately.

Limitations of the study

1. This study concentrates only locomotor disability.
2. General orthopaedic and neurological and cardio respiratory diseases are excluded from this study.
3. Small sample study
4. The present study is conducted in only one district.

V. Conclusion

Community based physiotherapy plays a highly significant role in improving the quality of life in Locomotor disabled persons and should be highly encouraged. Thus timely diagnosis and effective community physiotherapy services will go a long way to restrict the deterioration of individuals with locomotor disability. Lastly, rehabilitative services including physiotherapy need to be developed at grass root level and awareness

needs to be created regarding their availability. This will increase the number of people seeking treatment, limit the disability and will eventually improve the employment rate and financial status of people with locomotor disability.

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