

School - base Occupational Therapy Services on Activity Limitation and Participation Restriction in Students with Disabilities

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Abstract: Occupational science is a valuable research area that can contribute to the disability strategy and the strategy towards social cohesion and inclusion of occupational deprived and excluded groups in India. Occupational therapists demonstrate advocacy for people with disabilities who are occupational deprived and their participation in all sectors of social life including schooling in an accessible environment and being part of an inclusive society. The scope of the study is for a better understand of problems experienced and record information of activity limitation and participation restriction in students with disability in educational setting on clinical and social policy contexts. The importance for the proposed study is to find out the need of Occupational therapy services in educational setting to enhance activity participation of student with disabilities. **Methodology:** ICF checklist is administered to record information on the functioning and disability of the students. It was identified the problems experienced by students with disability and was used as a case record for future reference. Informed consent on sample of 110 subjects was taken through sampling method. The subjects were allocated into two groups through randomization. Patients in experimental group received school based occupational therapy services along with the conventional therapy in clinics/departments & the patients in the control group received conventional therapy alone. Pre - test evaluations of subjects of both the control and experimental groups were recorded on the parameter of activity limitation and participation restriction with outcome measures SALSA Scale (Screening Activity Limitation and Safety Awareness, Users Manual Version 1.1) and Participation Scale User Manual Version 6. Post - intervention all subjects were evaluated for all the outcome measures on 90th day. The data was recorded before training at (T0) and at 90 (T90) days after the training program. **Result:** The subjective data analysis results shows that in experimental group 48 students with disabilities in compare to 34 in control group were benefitted from severe limitation to mild limitation and independent participation in school environment. The SALSA score recorded improvement in all 20 - items of daily activities related to the three domains of mobility, self - care and schooling and related perceptiveness of students at his/her functional level more in experimental group in compare to control group. The pretest and posttest ratio of mean SALSA score in control group is 52.7/41.8 whereas in experimental group it stands at 54.2 / 28.4. The score suggested severe activity limitation reduces to moderate activity limitation in control group but in experimental group it progressively reduces further to come under mild limitation. **Conclusion:** The study concluded that to make any treatment effective the occupational therapist and the skilled teacher need to work hand in hand. The study focusing on the introduction of the barrier free environment in school and use of assistive/adaptive devices and technology for better participation of students with disabilities in their curricular activities.

Keywords: Occupational therapy, Inclusive education Activity limitation, Participation restriction, Students with disabilities

1. Introduction

The core of the Occupational Therapy in Education is to promote the centrality of occupation and the recognition that humans are occupational beings, not merely that occupation is an important part of human life. This fits with the general aim of occupational therapy, which is to facilitate participation of people in all occupations of daily life in order to promote people's identity, health and well - being [1].

Activity is the execution of a task or action by an individual whereas participation is involvement in a life situation. Activity limitations are difficulties an individual may have in executing activities. Participation restrictions are problems an individual may have in involvement in life situations [2].

Inclusion and participation of persons with disabilities in society (especially students with disabilities) is still not common throughout India. The occupational therapy education and practice is in line with the idea of participation of the WHO, the National Policy for Disable Action Plan and the RPWD Act 2016: towards an equal opportunity, protection of rights and full participation.

Opportunities and Access in Education for student with disabilities:

- In the age group of 0 - 6 years 1 in every 100 children (total 20.42 lakhs) suffered from some type of disability [3].
- 61percent of the disabled children aged 5 - 19 years (total 65.8 lakhs) attending educational institution. The rate of school attendance of disabled children is higher in urban areas 65 percent compared to rural areas 60 percent.12% attended educational institutions earlier whereas 27% never attended educational institution [3].
- Increase in stress level at school in students. Nine out of ten children with disability has never participated in leisure or sport activities in India [4].

Strategies for inclusive education, like adapting the educational environment (including working on attitude change of peers, teachers and parents) as well adapting the teaching and learning methods to the individual students as adapting the curricula should be applied by policy makers as by multidisciplinary teams [4].

Occupational therapists in particular demonstrate competences in assessing the occupational needs, the environment and the occupational performance as well in guiding and training the students with disabilities in school settings making in transition from school towards work as in

taking safety and risk measures in the working environment in order to prevent work related disabilities [5].

The purpose of this study is to evaluate the effect of school based occupational therapy services on activity limitation and participation restriction on students with disabilities in India.

2. Scope of the study

A better understand of problems experienced and record information of activity limitation and participation restriction in students with disability in educational setting on clinical and social policy contexts.

The study also addresses the disabled student performance areas and components like handwriting; activities of daily living; psychosocial performance components: attention span, self - control, managing transitions, interpersonal skills, and social conduct; educational areas: school work tasks, environmental modification, play skills, social skills, and arts and crafts. It able to state the scope of school-based intervention on sensory integration, visual motor skills training, visual perception and behavior modification.

To explore support and interest in the provision of school based occupational therapy services to effectively serve the students with disabilities.

3. Objective of the study

- 1) To identify whether there are activity limitation and participation restriction among the students with disabilities.
- 2) To explore the perceived appropriateness, extent, and types of services provided to students with disabilities in schools.
- 3) To find out the effect of School - based Occupational Therapy in school settings in compare to conventional therapy alone in clinics and departments on activity participation in students with disability.

Hypothesis:

- **Null Hypothesis-** There is no significant effect of School - based Occupational Therapy services on activity limitation and participation restriction in students with disabilities.
- **Experimental Hypothesis-** There is significant difference in effect of School - based Occupational Therapy services on activity limitation and participation restriction in students with disabilities.

4. Research Methodology

Study Area: Occupational Therapy department/ clinics and School settings.

Study Population: Students with disability (Age range – 3 to 19 years, n = 110)

Study Period: Study duration is 18 - months.

Type of Sampling: ICF Checklist administered on students having disabilities and study population of 110 selected out

of which 55 are taken each in the Control and the Experimental group.

Sample Design: Convenient Sampling design (Simple Random Sampling).

Study Type/ Design: Comparative study/ Pre and post - test experimental design.

Inclusion Criteria:

- Students with disabilities presently continuing their education in school.
- Age group of 3 to 19 years (both male and female).
- Having no impairment to moderate impairment (less than 50 percent) in body function as administered in ICF checklist.

Exclusion Criteria:

- Students having severe to complete impairment (50 to 100 percent as in ICF Checklist) in all category of disabilities.
- Student with disabilities having history of cardio respiratory problems.
- Students with disabilities to be undergone any surgical intervention or correction of deformity.

5. Outcome Measures

- 1) The SALSA Scale (Screening Activity Limitation and Safety Awareness, Users Manual Version 1.1)
- 2) Participation Scale User Manual Version 6

Independent Variable: School based Occupational Therapy services

Dependent Variables: 1) Activity limitation 2) Participation restriction 3) Performance qualifier/ Capacity qualifier, Facilitator/ Barrier of functioning in school setting.

Methods of Study Technique: ICF checklist is a practical tool to elicit and record information on the functioning and disability of an individual. It will identify the problems experienced by students with disability and to be used as a case record for future reference.

Prior to participation in the study, informed consent (Annexure 1) was taken from all the students or from their parents/guardians. After taking the informed consent, sample of 110 subjects were taken through sampling method. The subjects were allocated into two groups through randomization. Patients in experimental group received school based occupational therapy services along with the conventional therapy in clinics/departments & the patients in the control group received conventional therapy alone.

Pre - test evaluations of subjects of both the control and experimental groups were recorded on the parameter of activity limitation and participation restriction with outcome measures.

Post - intervention by providing school - based occupational therapy services with conventional therapy in experimental group and only conventional therapy in control group, all subjects were evaluated for all the outcome measures on

90th day. The data was recorded before training at (T0) and at 90 (T90) days after the training program.

Intervention

CONTROL GROUP (Conventional Therapy intervention plan in department/clinic setting): 12 - session in 3 - months, 1 - session / week of 1 - hour duration each session.

In each session students performance components to be addressed on neuro - muscular and movement related function, sensory function, pain and mental function and possible intervention activities may include therapeutic exercise for extremities, trunk and hand, treatment of oral function/oral motor techniques, sensory activities, splinting/orthotics, visual perceptual training, cognitive training, assistive/ adaptive equipment in ADL training and as need arise [6, 7, 8].

Experimental Group (School - based occupational therapy intervention plan in school setting along with Conventional therapy): 06 - session each on school - based occupational therapy and conventional therapy in 3 - months, 1 - session / week of 1 - hour duration each session.

In each session student participation areas to be addressed on -

- **Personal Care** (feeding, toileting, dressing, hygiene, managing personal belongings, personal organization, mobility)
- **Student role/ Interaction skills** (following classroom/bus/cafeteria, safety awareness, respecting the

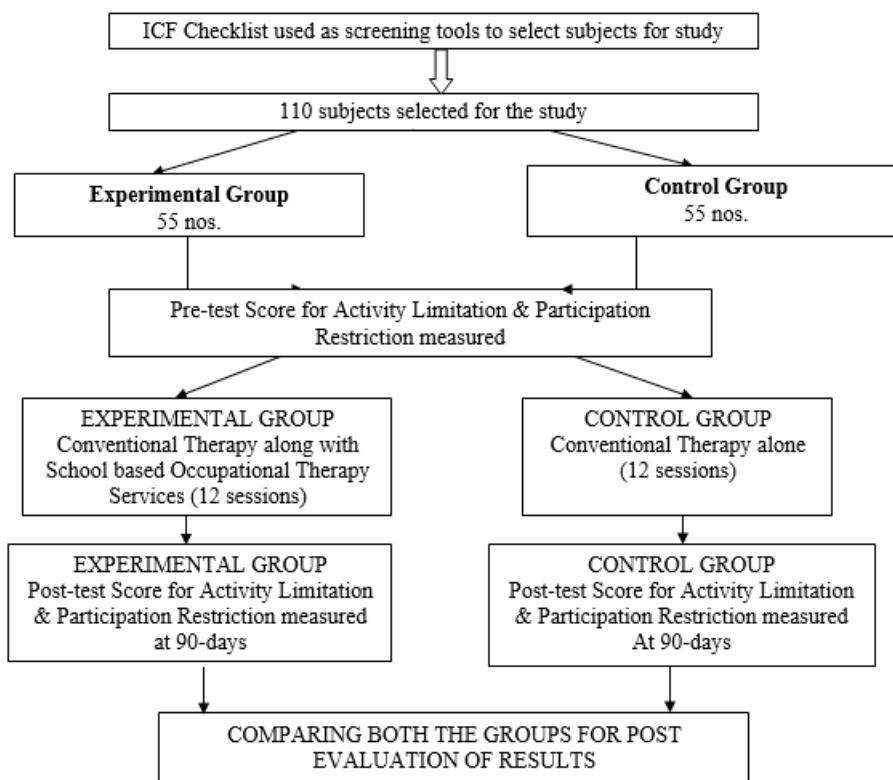
space/time/materials of others, requesting help, social awareness, building/ maintaining relationship)

- **Learning academics/ Process skills** (following demonstration, copying models, carry out verbal direction, attending to instruction, completing assignments)
- **Functional Academics** (using classroom tools, managing and using materials, building models, using objects to express concepts, using technology)
- **Play** (turn - taking, imaginative play, sharing materials, exploring new play ideas/opportunities)
- **Community Integration/Work** (fieldtrips, school - related vocational training)
- **Graphic communication** (handwriting, keyboarding, drawing, coloring, art).

The possible intervention activities are to - [6, 7, 8]

- Create/Promote (e. g., health promotion)
- Establish/Restore (e. g., skill acquisition or remediation)
- Modify/Adapt (e. g., environmental modification)
- Prevent (e. g., early intervening support; avoiding secondary complications)
- Occupation - based interventions (training embedded in actual activity e. g., personal care, using classroom tools)
- Purposeful activities (individual activities/components of activity that develop skills)
- Program/routine development
- Consultation with team members (e. g., problem solving)
- Education of the team members (e. g., training)

Flow Chart of Methodology



Data Analysis:

Using survey research methods, descriptive numeric data from the completed questionnaires were compiled and summarized (frequencies, means) and differences in outcome parameters among the two groups control and

experimental were analyzed. The numeric data analysis with the help of SPSS will be used to compare both the groups after completion of study on 200 - students with disabilities.

6. Result & Discussion

The subjective data analysis results shows that in experimental group 48 students with disabilities in compare to 34 in control group were benefitted from severe limitation to mild limitation and independent participation in school environment. The SALSA score recorded improvement in all 20 - items of daily activities related to the three domains of mobility, self - care and schooling and related perceiveness of students at his/her functional level more in experimental group in compare to control group. The pretest and posttest ratio of mean SALSA score in control group is 52.7/41.8 whereas in experimental group it stands at 54.2 / 28.4. The score suggested severe activity limitation reduces to moderate activity limitation in control group but in experimental group it progressively reduces further to come under mild limitation. The age group of students between (12 - 19) years had shown better result with mean SALSA score 21.6 (no significant limitation) in compare to (3 - 11) years having mean SALSA score 34.2 (mild limitation) in experimental group. In the next six months a better comparative review and systematic statistical data analysis is to be implemented.

In this article we report on the path followed to introduce the school - base occupational therapy services in addition to conventional occupational therapy in clinics and institutes to reduce activity limitation and participation restriction in students with disabilities in a scientific manner.

7. Conclusion

In summary, the study suggested that to make any treatment effective the occupational therapist and the skilled teacher need to work hand in hand. The study focusing on the introduction of the barrier free environment in school and use of assistive/adaptive devices and technology for better participation of students with disabilities in their curricular activities. The signals of critique and of appreciation should be incorporated in the implementation plan, and may guide further application by school and disability service in the life project of student with disability.

References

- [1] WFOT, Position statement on Inclusive Occupational Therapy Education, 2008, www.wfot.org.
- [2] International Classification of Functioning, Disability and Health (ICF) Manual, 2005.
- [3] Disabled person in India - A statistical profile 2016, GOI (Census 2011)
- [4] A manual for planning and implementation of inclusive education under SSA, documentation of good NGO practice under SSA, documentation of good home - based practice in special needs education, and a regular newsletter on inclusion, 2005.
- [5] Roger Liddle and Frédéric Lerais, Contribution of the European Network of Occupational Therapy in Higher Education to the Debate around the Consultation Paper "Europe's Social Reality", www.ec.europa.eu.
- [6] Sample school based occupational therapy plan of care, www.studylib.net/doc/17899025

- [7] Position paper on Occupational therapy in the school system, The Israeli society of OT, www.isot.org.il.
- [8] Frolek Clark, G. & Chandler, B. (2014). Best practices for Occupational Therapy in schools, AOTA press, www.aota.org