

A Meta-analysis of the outcomes of various types of therapies on the specially-abled

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Abstract

The specially-abled population is unique. The constellation of factors surrounding each specially-abled individual is also distinct. Various therapies are in existence. Each therapy has its own advantages and disadvantages. In most cases, the specially challenged individuals require more than one form of therapy simultaneously. The therapies and their combinations have an effect on the individual. The efficacies of various therapies have been researched worldwide, showing several results.

The aim of this paper was to summarize the efficacies of various therapies on the relevant populations. But due to insufficient data, a quantitative report is submitted. The focus was on studies conducted on the specially-abled population across all ages, implementing various therapies. Results published in the past five years (2016 onwards) were considered.

The most applied therapies appear to be SLT, OT, PT and CT- together they constitute 74% of the therapies reported.

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I. INTRODUCTION

The Cambridge dictionary defines therapy as “causing someone to feel happier and more relaxed or to be more healthy”

If you visualize wellness systems as a tree, then therapy would be the trunk of that tree and the branches would be specific treatments. Treatment is done only when the body starts showing symptoms whereas therapy is done to maintain the health of the body. Treatment is the cure to a specific disease whereas therapy is the rehabilitation that comes afterwards.

Therapy is concerned with the overall health and wellbeing of a person. There are many different types of therapists. Some of these include:

- Addiction therapists
- Art therapists
- Child therapists
- Massage therapists
- Marriage and family therapists
- Music therapists
- Occupational therapists
- Physical therapists
- Psychotherapists
- Speech and Language therapists
- Yoga therapists

In this paper our focus is on Occupational, Physical, Speech and language therapy. Occupational therapists apply problem solving skills in contextual adaptation fostering client-centred engagement in valued activities for individuals and populations. Physical Therapists are known as movement experts and the health care providers of choice for neuromusculoskeletal deficits. In addition to the usual areas of practice, physical therapists also conduct musculoskeletal screenings and ergonomic evaluations in settings such as health clubs, gyms and occupational health centres. Increasing numbers work in emergency departments. Like Occupational therapists, Physical therapists determine the proper fit of assistive devices, splint injuries, treat wounds and burns, prescribe exercises to increase strength or endurance, and perform manual therapy to increase joint range of motion. Physical therapists also perform gait analysis, provide gait training and conduct wheelchair evaluations. Speech-language pathologists are professionals who engage in clinical services, prevention, advocacy, education, administration and research in the areas of communication and swallowing across the life span. The professional roles and activities in speech and language pathology encompass clinical and educational

services, prevention and advocacy, education, administration and research conducted in a variety of work settings. The primary objective of speech and language pathologists is to improve quality of life by optimizing individuals' ability to communicate and swallow.

Currently there is little scientific evidence quantifying positive and sustained effects of various types of therapies on impairments, activity limitations, participation restrictions, or quality of life in various populations. Hence this attempt has been made to compile the available data.

II. METHODOLOGY

Aim: To compile quantitative information regarding the application of OT, PT and SLP.

Method/ Sample

Data is collected from a random sampling of reports of Studies conducted, meta analytic reviews published in the previous five years (2015-2020). A total of 12 studies are collected- 2016(1), 2017(5), 2018(3), 2019(1) and 2020(2).

Tools and Techniques

A web search was conducted for publications reporting outcomes of Therapies which yielded a number of studies. Of these 12 publications were selected. Two are reviews and ten are results of studies conducted. The percentages of conditions and the therapies applied were calculated.

III. ANALYSIS OF RESULTS

Table 1: Summary of studies, the conditions and the therapies applied

Sl.no.	Year of Publication	Source	Condition	Therapy
1	2016	Progress in Rehabilitation Medicine	Stroke, Aphasia, Dysarthria	CT, OT, PT, ST, Aphasia Tx
2	2017	Res Dev Disabil	ADHD, LD, Motor delay, vision problem, CP, HL	OT, PT, SLT
3	2017	Developmental Medicine and Child Neurology	ASD, ADHD, CP	OT, PT, SLT
4	2017	J Dev Behav Pediatr	ASD, Aspergers, ID	ABA, Social Skills Training, Beh intervention, OT, ST, SIT, PT
5	2017	The Permanente Journal/ Perm J	ASD	IEP, OT, ST, Beh. Mgmt., Social skills training
6	2017	Developmental Medicine and Child Neurology	Congenital Heart Defect, CP, ADHD, LD	OT, PT, SLT, Psychological special education
7	2018	Early Human Development	Very preterm children at early school age	PT, OT, ST
8	2018	PM R.	Functional Movement Disorder	OT, PT, ST, Psychol Tx
9	2018	Pediatrics	ADD/ADHD, Autism, CP, Downs' syndrome, HL, TBI< Low vision, Premature, Seizures	OT, PT, ST
10	2019	J Autism Dev Disord	ASD	ST, OT, Beh Tx, Social Skills instruction
11	2020	Societa Editrice Universo	Apraxia, MS, Alzheimers	PT, ST
12	2020	Brain Sciences	Rett Syndrome, Scoliosis,	PT, ST, OT, Psychologists music Tx, Hydro Tx

Table 2: Showing the percentage of conditions reported in the studies

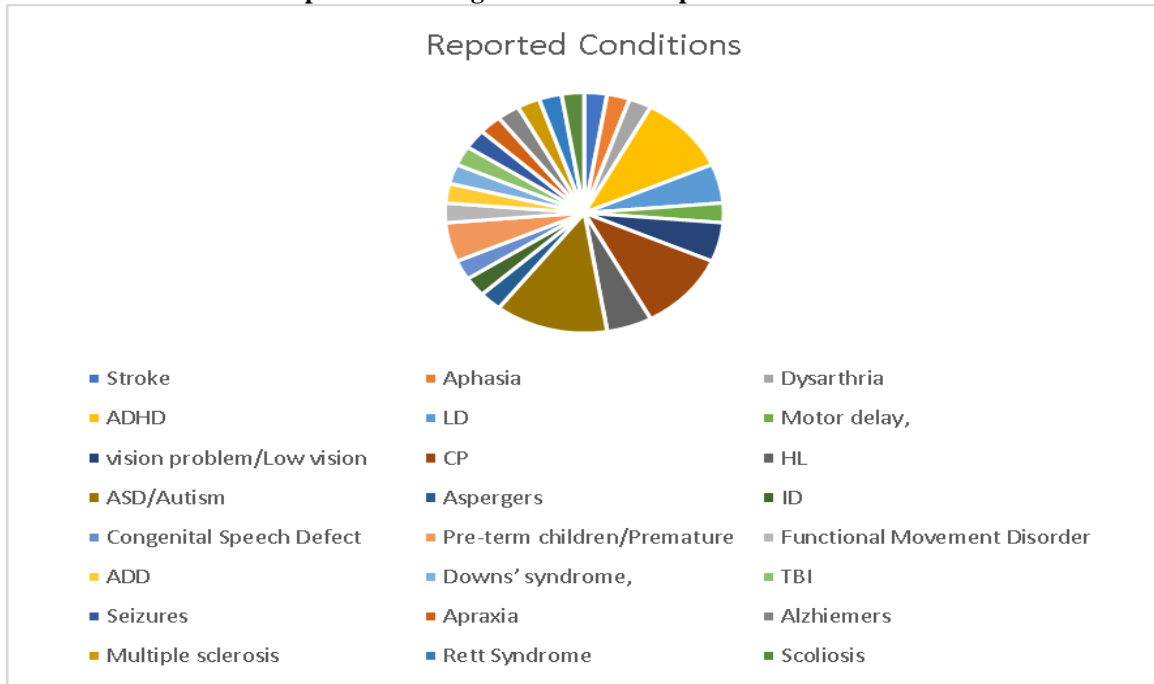
Sl. No.	Condition	Total	Percentage
1	Stroke	1	2.63
2	Aphasia	1	2.63
3	Dysarthria	1	2.63
4	ADHD	4	10.53
5	LD	2	5.26
6	Motor delay,	1	2.63
7	vision problem/Low vision	2	5.26
8	CP	4	10.53

Sl. No.	Condition	Total	Percentage
9	HL	2	5.26
10	ASD/Autism	5	13.16
11	Aspergers	1	2.63
12	ID	1	2.63
13	Congenital Speech Defect	1	2.63
14	Pre-term children/Premature	2	5.26
15	Functional Movement Disorder	1	2.63
16	ADD	1	2.63
17	Downs' syndrome,	1	2.63
18	TBI	1	2.63
19	Seizures	1	2.63
20	Apraxia	1	2.63
21	Alzhiemers	1	2.63
22	Multiple sclerosis	1	2.63
23	Rett Syndrome	1	2.63
24	Scoliosis	1	2.63
		38	100

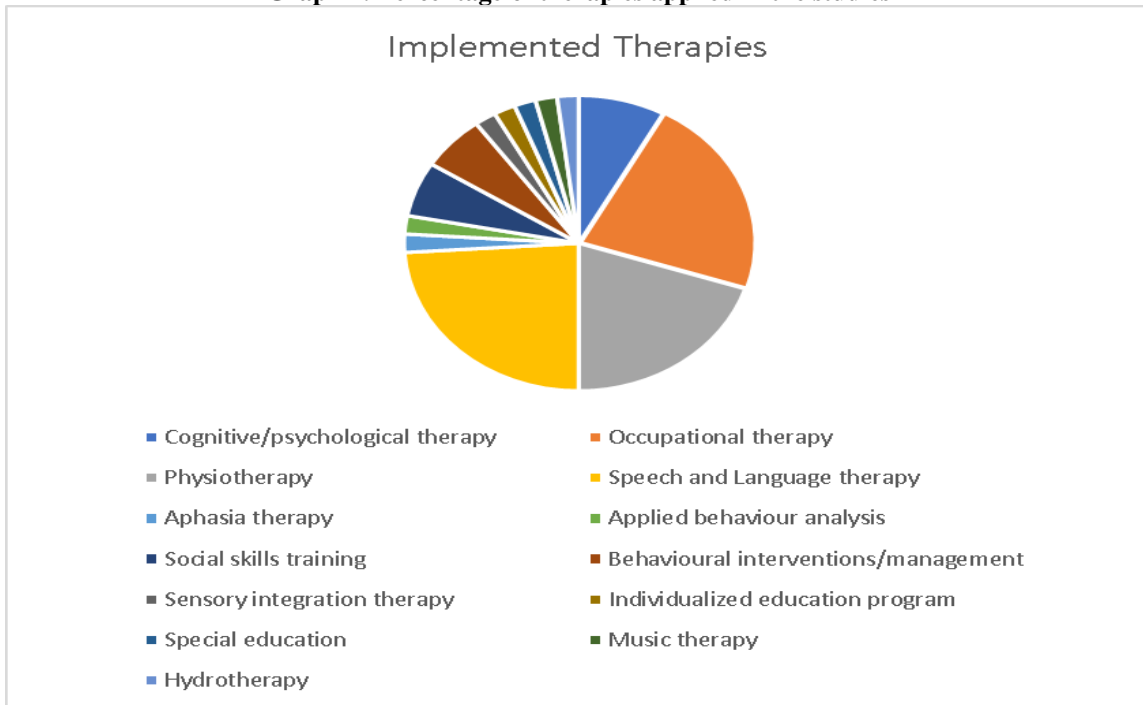
Table 3: Percentage of therapies applied in the studies

Sl.no.	Therapy	Total	Percentage
1	Cognitive/psychological therapy	4	8
2	Occupational therapy	11	22
3	Physiotherapy	10	20
4	Speech and Language therapy	12	24
5	Aphasia therapy	1	2
6	Applied behaviour analysis	1	2
7	Social skills training	3	6
8	Behavioural interventions/management	3	6
9	Sensory integration therapy	1	2
10	Individualized education program	1	2
11	Special education	1	2
12	Music therapy	1	2
13	Hydrotherapy	1	2
		50	100

Graph 1: Percentage of conditions reported in the studies



Graph 2: Percentage of therapies applied in the studies



IV. DISCUSSION

The aim of this paper was to summarize the efficacies of various therapies on the relevant populations. Among the studies selected the dependent variables ranged from service utilization, parent experiences, patterns of usage, effectiveness of therapies, combination of therapies and the outcomes of therapies. Since the data was insufficient to analyze for efficacies of therapies, this discussion focuses on a very basic quantitative approach. Table 2 depicts the total number of conditions which were reported i.e., 50 and Graph 1 displays the percentages of the various conditions. It is seen that of a total of 50, the highest number is 5-Autism, followed by 4-Attention Deficit Hyperactivity Disorder and Cerebral Palsy. This is graphically depicted in the Pie Graph in the form of Percentages

Table 3 summarizes the information gathered with respect to the therapies which were reported in the published studies. It can be seen that of a total of 50 therapies, the highest number is 12-Speech and Language Therapy, followed by 11-Occupational Therapy and 10-Physical Therapy. These are followed by 4- Cognitive/ Psychological Therapy and 3- Behavioural interventions/management, Social skills training. This is graphically depicted in the Pie Graph in the form of Percentages.

V. CONCLUSION

The most applied therapies appear to be SLT, OT, PT and CT- together they constitute 74% of the therapies reported.

Limitations

The number of studies included is very small to reveal any significant trends in the therapies applied or the combination of therapies and conditions addressed

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