



Effectiveness of Training Programme on Motor Skills among Intellectually Challenged Children in Selected Rehabilitation Centers in Coimbatore

S.P. Blessly Pramila

Ph.D (NSG Scholar), Vinayaga Mission Research Foundation- Deemed to be University, Salem, Tamil Nadu, India

Dr. S. Lakshmi Prabha

Ph.D (NSG), Prof. & HOD in Department of MSN, Vinayaka Mission Annapoorna College of Nursing, Vinayaga Mission Research Foundation- Deemed to be University, Salem, Tamil Nadu, India

ABSTRACT

A study to assess the effectiveness of training programme on motor skills among intellectually challenged children in selected rehabilitation centers in Coimbatore. The objectives are to assess level of motor skills among intellectually challenged children in experimental group and control group, to provide training on motor skills among intellectually challenged children in experimental group, to assess the effectiveness on level of motor skills among intellectually challenged children in experimental group, to compare the level of motor skills in experimental group and control group, to find out association between the level of motor skills among intellectually challenged children with their selected demographic variables. The study was quasi-experimental study with an evaluative approach. The study was conducted in Ashwin and Bethel rehabilitation. Data collection period was two months. Population was intellectually challenged children. Purposive sampling technique was used. Sample size was 20 (10 children in each experimental and control group). The tools used for data collection were demographic variables and NIMH motor skill checklist. The effectiveness and comparison of motor skill score t- test value 2.05* was statistically significant in experimental group, in control group t test value was 0.18 not statistically significant. Hence HI hypotheses was accepted, shows that there is an effectiveness of training on motor skills among intellectually challenged children. The study shows there is a significant improvement in level of motor skills in experimental group after training

Key words: *motor skills, training programme, intellectually challenged children.*

Introduction

Some children's have delayed or poor development of mental functions, including control over their body movements, their intelligence, social interaction and language, from birth to childhood. They are called as Mentally challenged children. (National Institute of Mentally Challenged, 2010). The prevalence of mental retardation (IQ less than 50) in the rate is between 3 and 4/ 1000 persons. (IQ of 50- 70) is usually estimated to occur in 2-3/100 persons in developing countries. The prevalence was higher among females (3.1%) than males (1.5%) in India based on Indian psychiatric association statistics. It classified into mild, moderate, severe and profound. They need to develop their skills very important especially motor development. The title of the study was a study to assess the effectiveness of training on motor skills among intellectually challenged children in selected rehabilitation centers in Coimbatore. The study objectives are **a)** To assess level of motor skills among intellectually challenged children in experimental group and control group, **b)** To provide training programme on motor skills among intellectually challenged children in experimental group) To assess the effectiveness on level of motor skills among intellectually challenged children in experimental group, **d)** To compare the level of motor skills in experimental group and control group.

Review of literature

1. Literature related to prevalence of intellectually challenged children

Sinan Li et al., (2021), An etiological study of intellectually disabled children under 14 years old in Anhui Province, China. A total of 200 children aged 0 to 14 years in Anhui Province who were diagnosed with intellectual disabilities were recruited as the study cohort. Results: Among the 528 children, 270 (51.14%) had severe intellectual disabilities and 258 (48.86%) had mild intellectual disabilities. It was found that various perinatal factors (premature birth, asphyxia, ischemic hypoxic encephalopathy, etc.), severe cerebral palsy, and psychosocial factors were the main etiological factors, accounting for 27.42%, 22.29%, and 17.16% respectively. There was a significant difference in the distribution of the etiologies between the rural and urban areas ($P < 0.01$). The educational levels of most of the parents in the rural areas were lower than the parents' educational levels in the cities. The study conclude that the Correlation analyses are helpful for the early diagnosis of children suspected of having intellectual disabilities and they provide a scientific basis for improving the children's quality of life and their early rehabilitation treatment.

2. Literature related to selected training for intellectually challenged children

Mohammed Ali (2016), conducted a study on Children with Special Educational Needs, this study outlines the literature relevant to the Cross-cultural issues and the politics of SEN and the different perspectives arising from the literature on this widely debated issue are addressed. In addition, the origin of the term 'special educational needs' (SEN), its definitions and the types of

special education needs are presented. Appropriate pedagogy for children with SEN is also discussed. The results from the literature review indicated a number of gaps in the present frameworks. As a result, this has led the scholar to work additional on these frameworks for the aim of this study.

Hiba Kachouri et al., (2021), Using a dual-task paradigm to investigate motor and cognitive performance in children with intellectual disability. Fifteen children with intellectual disability and fifteen age-matched typically developed children were asked to walk at a preferred speed: along a path (baseline condition), while carrying a glass of water and while quoting animal names. The present study findings showed that DTs affect walking performance of both typically developed children and those with intellectual disability. In children with intellectual disability, DT walking decrements were significantly higher when performing a concurrent motor task than cognitive one. The study conclude that DT constraints with a secondary motor or cognitive tasks seemed challenging for children with intellectual disability suggesting that future treatments or assessments should consider using DT constraints to manipulate the difficulty of tasks.

Materials and methods

The quantitative approach was used, a quasi-experimental with pre and post test control group design was adopted. The target population for this study were intellectually challenged children. The accessible population for this study includes intellectually challenged children in Ashwin and Bethal rehabilitation centers. In this present study the non-Probability purposive sampling technique adopted. Based on the inclusion and exclusion criteria the samples were selected. The ethical clearance was obtained from IRB of vinayaka mission annapoorna college of nursing ,Vinayaka mission research foundation- Deemed to be university,Salem.

After getting a written permission, the investigator conducted a study among 20 children in both experimental and control group in Ashwin and bethel rehabilitation centers at Coimbatore. Consent received from parents and assent was got from child. The samples were selected based on inclusion and exclusion criteria and screening was done. Then purposive sampling technique was followed to select the samples. Then groups are made, each group contain 5 children's. The pretest was done to the both experimental and control group. The control group is receiving routine training. The experimental group is receiving training package on basic skill along with routine intervention. The total duration of training for a single group of 5 students about 15 sessions for 15 days. Next, the post test assessment is done on next day of last intervention.

Statistical analysis

Demographic variables in categorical/dichotomous were given in frequencies with their percentages. The Quantitative variables difference between Experiment and Control was assessed using student independent t-test. Quantitative differences between Pretest, posttest was assessed using paired t-test. A p-value of ≤ 0.05 was considered statistically significant, and

Statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS, version 22) and STATA (version 10) and Epi info (Version 3.5.1) statistical software's.

Results and discussion

Finding of the study- Tables

Section-I

Section I-Frequency and Percentage Distribution of level of basic skills among intellectually challenged children with their selected demographic variables.

Table: I

N=20

Demographic variables		Group (n=10)	
		n	%
Age	6-9 years	3	30.00%
	9-12 years	6	60.00%
	12-16 years	1	10.00%
Sex	Male	7	70.00%
	Female	3	30.00%
Type of MR	Mild mental retardation	7	70.00%
	Moderate mental retardation	3	30.00%
	Severe mental retardation	0	0.00%
Birth order	First	8	80.00%
	Second	2	20.00%
	Third	0	0.00%

Table: 2 Data on pretest motor skill score N=20

Skill	Maximum score	Group			
		Experimental		Control	
		Mean	% of mean score	Mean	% of mean score
Motor	21	12.90	61.43%	12.60	60.00%

Table: 3 Data on posttest motor skill score

Skill	Maximum score	Group			
		Experimental		Control	
		Mean	% of mean score	Mean	% of mean score
Motor	21	14.20	67.62%	12.70	60.48%

Section-II

Table: 4 Data on comparison of pretest mean motor skill score

Skill	Group				Mean difference	Student independent t-test
	Experimental		Control			
	Mean	SD	Mean	SD		
Motor	12.90	1.66	12.60	1.51	0.30	t=0.42 p=0.68(NS)

Table: 5 Data on comparison of post test mean motor skill score

Skills on	Group				Mean difference	Student independent t-test
	Experimental		Control			
	Mean	SD	Mean	SD		
Motor	14.20	.92	12.70	1.64	1.5	t=2.52 p=0.02*(S)

Section-III

Table: 6 Data on Effectiveness and Comparison of motor skill score in Experimental Group

Skills on	Group				Mean difference	Student Paired t-test
	Pretest		Posttest			
	Mean	SD	Mean	SD		
Motor	12.90	1.66	14.20	.92	1.30	t=2.05 p=0.05*(S)

Table: 7 Data on Effectiveness and Comparison of motor skill score in Control Group

Skills on	Group				Mean difference	Student paired t-test
	Pretest		Posttest			
	Mean	SD	Mean	SD		
Motor	12.60	1.51	12.70	1.64	0.10	t=0.18 p=0.85(NS)

The pre test mean value was 12.90 in control group and pre test mean value was 14.20 in experimental group. The comparison of pre test score 0.42 was not statistically significant in both control and experimental group. The comparison of post test score 2.52* was statistically significant in both control and experimental group. The effectiveness and comparison of motor skill score t- test value 2.05* was statistically significant in experimental group, In control group t test value was 0.18 not statistically significant. Hence H₀ hypotheses was accepted.

The present study was supported by Princy monikam(2015) conducted a study on to Evaluate the Effectiveness of Sensory Integration Therapy on Motor activity among mentally challenged children at Selected Schools, Salem. A quantitative research approach with quasi-experimental (pre test post test with control group) design was adopted. 60 mentally challenged children with motor activity impairment in the age group of 6 -16 years were selected by purposive sampling technique. Data was collected from 04.09.2014 to 02.10.2014. Level of Motor activity was assessed by using structured observatory checklist. Sensory integration therapy was carried out in three stages 30 minutes a day by 6 groups consisting of 5 children in each for 21 consecutive days. Followed with 21 days of practice of the sensory integration therapy, post test was conducted on day 27th and 28th both in experimental and control group respectively. The data gathered were analyzed by descriptive and inferential statistical method. The findings revealed that during pre test, in experimental group, 9(30%) samples had mild motor impairment, 16(53.33%) had moderate motor impairment and 5(16.67%) had severe motor impairment. In control group, 5(16.67%) had mild motor impairment, 19(63.33%) had moderate motor impairment and 5(16.67%) had severe motor impairment. During post test, in experimental group 3(10%) had no impairment, 11(36.67%) of them had mild motor impairment, 11(36.67%) had moderate motor impairment and 5(16.67%) had severe motor impairment. In control group, 5(16.67%) had mild motor impairment, 19(63.33%) had moderate motor impairment and 6(20%) had severe motor impairment. In pre test, the mean score of motor activity was 6.4 ± 4.32 , where as in post test, the mean score of motor activity was 8.6 ± 3.89 . The calculated 't' value was 5.60 which is greater than the table value of 2.05 at $p < 0.05$ level which shows that the sensory integration therapy was effective in improving the level of motor activity.

Conclusion

Based on the findings, training program was effective in improving the motor skills of intellectually challenged children. Similar studies we can conduct to improve other skills and same study we can done with large samples. Its very useful for the intellectually challenged children to lead a life independently without anybody help.

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Declaration of interest:

The authors declare no conflicts of interest to publish this paper.

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