



Efficacy of Selected Physical Activities on Selected Physical Fitness Variables among Mild and Moderate Intellectual Disability Children

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Abstract

The purpose of the study was to determine the influence of physical activities on selected physical fitness variables among Mild and Moderate Intellectual disability children. To achieve the purpose of this study, fifty male Mild and Moderate Intellectual disability children were selected from YMCA College Special School and Pathway special school Chennai, India. The subjects selected for the study did not undergo any special training or coaching programme other than the regular activities as per the curriculum. They were divided into two groups of twenty five each as Mild and moderate Intellectual disability children group on the basis of medical report. They were at the age group of six to twelve years. The investigator had to depend upon the specialists who are qualified in handling the special children to choose the subjects and classify them into two groups. All the subjects of the Mild and Moderate Intellectual disability children were tested on the selected criterion variables such as Arm Explosive, prior to and after twentyfive weeks of experimental period as pre and post tests respectively by using standardized tests. The data collected from both the groups prior to and post experimentation were statistically analysed by using two way (2 x 2) factorial ANOVA with last factor repeated measures. The simple effect test was used as a follow up test. Since, only two groups and two testing conditions were compared, there is no need to apply the post hoc test to determine the paired mean differences. In all cases, the level of confidence was fixed at 0.05 for significance. The result of the study showed that the training program has resulted in a significant improvement in arm explosive power between Mild and Moderate Intellectual disability children, where as it, resulted in a significant increase in arm explosive power among mild Intellectual disability children.

Keywords: Physical Activities, Disabled Children.

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Introduction

Adapted physical education is viewed as a sub discipline of physical education that provides for safe, personally satisfying, and successful experiences for students of differing abilities. According to IDEA, a child with a disability means a child having mental retardation, deafness or other hearing impairment, speech or language impairment, blindness or other visual impairment, serious emotional disturbance, orthopedic impairment, autism, traumatic brain injury, a learning disability, deaf blindness, or multiple disabilities or other health impairments that require special education and related services. The term "child with a disability" for a child aged three to nine years may, at the discretion of the state and the local educational agency, include a child experiencing developmental delays as defined by the state and as measured by appropriate diagnostic instruments and procedures in one or more of the

Disability

Disability is a condition or function judged to be significantly impaired relative to the usual standard of an individual or group. The term is used to refer to individual functioning including physical impairment, sensory impairment, intellectual impairment, mental illness and various types of chronic disease. Disability is conceptualized as being a multidimensional experience for the person involved. There may be effects on organs or body parts and there may be effects on a person's participation in areas of life.

Methodology

The purpose of the study was to determine the influence of physical activities on selected physical fitness variables among Mild and moderate Intellectual disability children. This study was designed to determine the Influence of physical activities and yoga on selected physical fitness variable among Mild and moderate Intellectual disability Children. For this purpose, fifty male autistic children were selected from YMCA College Special School and Pathway special school, Chennai, India. The subjects selected for the study did not undergo any special training or coaching programme

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other than the regular activities as per the curriculum. They were divided into two groups of twenty five each as Mild and moderate Intellectual disability group on the basis of medical report. They were at the age group of six to twelve years. The investigator had to depend upon the specialists who are qualified in handling the special children to choose the subjects and classify them into two groups.

Analysis and interpretation of the data

The data collected from both the groups prior to and post experimentation were statistically analysed by using two way (2 x 2) factorial ANOVA with last factor repeated measures. The simple effect test was used as a follow up test. Since, only two groups and two testing conditions were compared, there is no need to apply the post hoc test to determine the paired mean differences. In all cases, the level of confidence was fixed at 0.05 for significance.

Table 1
Mean and Standard Deviation scores on Arm explosive power of pre test and post test of Mild and moderate Intellectual disability children

	Groups	Mean	Std. Deviation
Pretest	Mild	5.361	0.994
	Moderate	5.299	0.957
Posttest	Mild	5.828	0.996
	Moderate	5.554	0.973

Table 2
Two-way analysis of variance with repeated measures on last factor on Arm explosive power

Sources	Sum of Squares	df	Mean Squares	F ratio
Groups	0.711	1	0.711	0.372
Error	91.664	48	1.910	
Training Effect	3.258	1	3.258	279.527
Training Effect * Groups	0.282	1	0.282	24.191
Error (Training Effect)	0.559	48	0.0117	

significant at 0.05 level of confidence

Discussion on findings

Table II reveals that there is significant difference on Arm explosive power between Mild and Moderate Intellectual disability children irrespective of testing conditions as the obtained F ratio of 0.372 is lesser than the required table value of 4.042 for the df of 1 and 48. However, the findings reveals that there is a significant difference on Arm explosive power between

pretest and posttest irrespective of groups, since the obtained F ratio of 279.527 is greater than the required table value of 4.042 for the df of 1 and 48. Further, the findings shows that there is a significant difference on Arm explosive power among the interaction of groups and testing conditions as the obtained F ratio of 24.191 is greater than the required table value of 4.042 for the df of 1 and 48.

Table 3
Simple effect test on Arm explosive power during pretest and posttest of Mild and moderate Intellectual disability children

Groups	Tests	Mean	Sum of Squares	df	Mean Squares	F ratio
Mild	Pretest	5.361	0.049	1	0.049	4.160
Moderate		5.299				
Mild	Posttest	5.828	0.944	1	0.944	80.678
Moderate		5.554				
Mild	Pretest	5.361	2.728	1	2.728	233.201
	Posttest	5.828				
Moderate	Pretest	5.299	0.812	1	0.812	69.362
	Posttest	5.554				
Error			0.559	48	0.0117	

significant at 0.05 level of confidence

The pre-test means on on Arm explosive power of Mild and Moderate Intellectual disabilitygroups were 5.361 and 5.299 respectively. The obtained F ratio was 4.160 and it is significant at 0.05 level of confidence. It indicates that there was a significant difference in on Arm explosive power among these groups before the commencement of training program itself in favour of Mild active group.

The pos-ttest means on of Arm explosive power Mild and Moderate Intellectual disabilitygroups were 5828 and 5.554 respectively. The obtained F ratio of 80.678 is greater than table value of 4.042 for df 1 and 48, indicating that there was a significant difference in Arm explosive power after completion of training program.

The pretest mean on of the data on Arm explosive power for Mild active group was 5.361 and after the completion of training program amplification in Arm explosive power was observed, as the posttest mean was 5828. The obtained F ratio was 233.201 and it was significant at 0.05 level of confidence. It is inferred that the training program has resulted in a significant increase in Arm explosive power for Mild group. Similarly, the

Arm explosive power of the Moderate active group before the commencement of training program was 5.299. After completion of training program increase in Arm explosive power o was noticed and the post test mean on Arm explosive power was 5.554 and it was statistically significant as the obtained F ratio of 69.362 was significant at 0.05 level of confidence. It is inferred that the training program has resulted in a significant improvement in Arm explosive power for Moderate active group.

Thus, it is concluded that the training program has resulted in a significant improvement in Arm explosive power for Mild andModerate active groups.

Discussion on Hypothesis

It was hypothesised that there would be no significant influence of physical activity and yogic exercises on Arm explosive power amongMild and Moderate Intellectual disability groups. As the results indicated that there was significant improvement in Arm explosive power among Mild andModerate groups, the null hypotheses was rejected at 0.05 level of confidence.

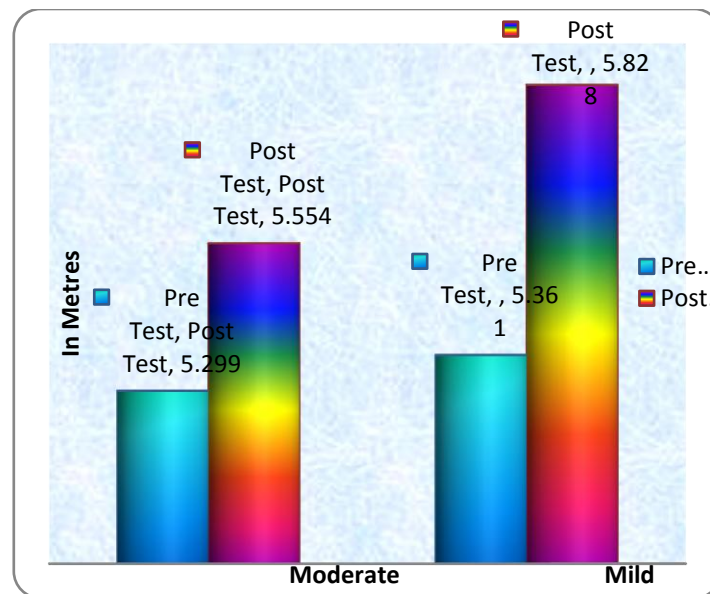


Figure 1 Graphical Illustration of data on Arm Explosive power

Conclusions

From the analysis and interpretation of the data, the following conclusions were drawn.

1. The explosive power among Mild and Moderate Intellectual disability groups children indicated great arm explosive power in their pretest and post test data than Moderateintellectual group.
2. Physical activities such as minor games, calisthenics and had increased arm explosive power among Mild and Moderate Intellectual disability groups

Recommendation

Based on the conclusion of the study the following recommendation have been made.

1. Physical education teacher and special educators of such special school should plan regular programme for Mild and Moderate Intellectual disability children.
2. Since the experimental treatment have produced on such variables , it is recommended that this could be practiced regularly.

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