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EFFECT OF TASK SPECIFIC AND OCCUPATIONAL GADGET TRAINING ON SELECTED GENERAL FITNESS COMPONENTS OF INTELLECTUALLY DISABLED STUDENTS

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ABSTRACT

The present study was designed to find out the effect of task specific and occupational gadget training on selected general fitness components of intellectually disabled students. A sample of 45 male intellectual disability students was chosen randomly from Sivagangai District. The subjects were assigned at random into 3 equal groups of 15 each. Experimental Group-I underwent Task Specific Training, Experimental Group-II underwent Occupational Gadget Training and Experimental Group III acted as control. The duration of the training period for all the two Experimental groups was restricted to twelve weeks and the number of session per week was confined to four in a week. Task Specific and Occupational Gadget Training is treated as Independent variable. Agility was assessed by t-test and Balance was assessed by Stork Balance Stand test were selected as General fitness components. All the subjects were tested prior and too immediately after the training for all selected variables. Data was analyzed by using ANCOVA and Scheffe's Post Hoc Test. Results found that there was significant difference among all the experimental groups namely Task Specific and Occupational gadget Training had significantly increased in the General fitness components. Findings also indicated that occupational gadget training group was found to be better than the task specific training group in selected General fitness components.

KEY WORD: *Task Specific Training, Occupational Gadget Training, General Fitness Components, Intellectual Disability, ANCOVA.*

INTRODUCTION:-

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, cognitive impairment, intellectual impairment, mental illness, and various types of chronic diseases. People with intellectual disabilities are those who develop at a below average rate and experience difficulty in learning and social adjustments. The regulations for the Individuals with Disabilities Education Act (IDEA) provide the technical definition for intellectual disabilities. Medical Model of Disability (MMD), it is the traditional view and it means. Disability is caused by mental or physical impairment.

INTELLECTUAL DISABILITY

Intellectual disability is a generalized disorder. It is characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviors that onset before the age of 18. Generally such a person has an intelligence quotient (IQ) score of under 70. Once focused almost entirely on cognition, the definition of the intellectual disability now includes both a component relating to

mental functioning and one relating to individual's function skills in his/her environment.

TASK SPECIFIC TRAINING

Task specific training is based on recent studies into impairments and adaptation associated with brain lesions and research findings in the fields of motor learning, motor control, biomechanics and exercise science. The focus is on the training of motor control with skill and flexibility of performance as goals, on the soft tissue adaptations and on increased strength and endurance. Several studies on children show evidence in favor of task training approach. Task specific training for upper and lower parts has demonstrated an increase in strength and function in intellectual disability with normal or abnormal movements.

OCCUPATIONAL GADGET TRAINING

A gadget is a small tool such as a machine that has a particular function, but is often thought of as a novelty. Gadgets are sometimes referred to as gizmos. Gizmos in particular are a bit different than gadgets. Gadgets in particular are small tools powered by electronic principles (a circuit board).

MOTOR FITNESS VARIABLES

Motor fitness, or general physical fitness, refers to how an athlete can perform at his or her sport, and involves a mixture of agility, coordination, balance, power, and reaction time. Improving this form of fitness is an indirect result of training in any of these attributes. All five components of fitness are essential for competing at high levels, which is why the concept is seen as an essential part of any athlete's training regime.

METHODOLOGY

The study was conducted on 45 male intellectual disability students and their IQ level 55%-69% (Mild Category) aged between 14 to 21 from Alagappa University Resource School (Karaikudi), Nambikai Special School (Sivagangai) and Nirmal Special School (Devakottai) from Sivagangai District during the year 2017-18. The subjects were assigned at random into 3 equal groups of 15 each. Group-I underwent Task Specific Training, Group-II underwent Occupational Gadget Training and Group III acted as control. The duration of the training period for all the two Experimental groups was restricted to twelve weeks and the number of session per week was confined to four in a week. Task Specific and Occupational Gadget Training is treated as Independent variable. Agility and Balance were selected as dependent variable and Agility was assessed by t-test, Balance was assessed by stork balance stand test. All the three groups were tested on selected general fitness components was analyzed before and after the training period. Data was analyzed by using ANCOVA and Scheffe's Post Hoc Test. In all the cases 0.05 level of significance was fixed.

DATA ANALYSIS

Table 1: Computation of Analysis of Covariance on Agility (Number of Errors in One Minute)

Certain Variables	Adjusted Post Test Means			Source of Variance	Sum of Squares	df	Means Squares	F
	Task Specific Training Group	Occupational Gadget Training Group	Control Group					
Pre test	20.87	20.80	20.86	B	.048	2	.28	.019
SD	.74	1.27	1.30	W	54.42	42	6.20	
Post test	19.87	19.31	21.01	B	22.42	2	23.02	6.29*
SD	.95	1.18	1.74	W	74.85	42	3.66	
Adjusted	19.85	19.36	20.99	B	21.17	2	10.58	17.31*

Post Test Mean				W	25.06	41	.611	

**Significant at 0.05 level for df 2 & 42 = 3.21.*

Table-1 shows that the pre-test means of agility were 20.87 experimental group I, 20.80 for experimental group II and 20.86 for control group. As the obtained F-ratio .019 was lesser than the table F-ratio 3.21, at 0.05 level of confidence for degrees of freedom 2 and 42. The post-test means of agility were 19.87 experimental group I, 19.31 for experimental group II and 21.01 for control group. As the obtained F-ratio 6.29 was greater than the table F-ratio 3.21, the post-test was significant at 0.05 level of confidence for degrees of freedom 2 and 42. The adjusted post-test means of agility were 19.85 experimental group I, 19.36 for experimental group II and 20.99 for control group. As the obtained F-ratio 17.31 was greater than the table F-ratio 3.21, the post-test was significant at 0.05 level of confidence for degrees of freedom 2 and 41.

Table 2: Scheffes's Test for the Difference between the Adjusted Post Test Paired Means of Agility

Adjusted Post Test Means			**Mean Difference**	**Confidence Level**
Exp. Group I	**Exp. Group II**	**Control Group**		
19.85	19.36		0.49	0.68
19.85		20.99	1.14*	
	19.36	20.99	1.63*	

Table-2 depicts that the adjusted post test mean differences on experimental group I and experimental Group II, Experimental Group I and control Group, Experimental Group II and Control Group are 0.49, 1.14 and 1.63 respectively and they are greater than the confidence interval value 0.68 which shows significant differences at 0.05 level of confidence. However, the decrease in agilityis significant for experimental groups II than Experimental groups I and control group. It may be concluded that the Experimental Group II has established than the experimental group I in reducing seconds in agility t-test. **Golubovic *et al.* (2012)** conducted a study on the effects of exercise on adapted physical fitness in children with intellectual disability. This study examined the effects of carefully designed physical exercise programs on the development of physical fitness in children with Intellectual Disability. All the participants were assessed using Eurofit Test Battery. The results were analyzed in terms of participation in the exercise program and level of intellectual functioning. While Intellectual Disability children scored significantly lower on fitness tests when compared with typically developing children, the study revealed an association between degree of Intellectual Disability and physical fitness.

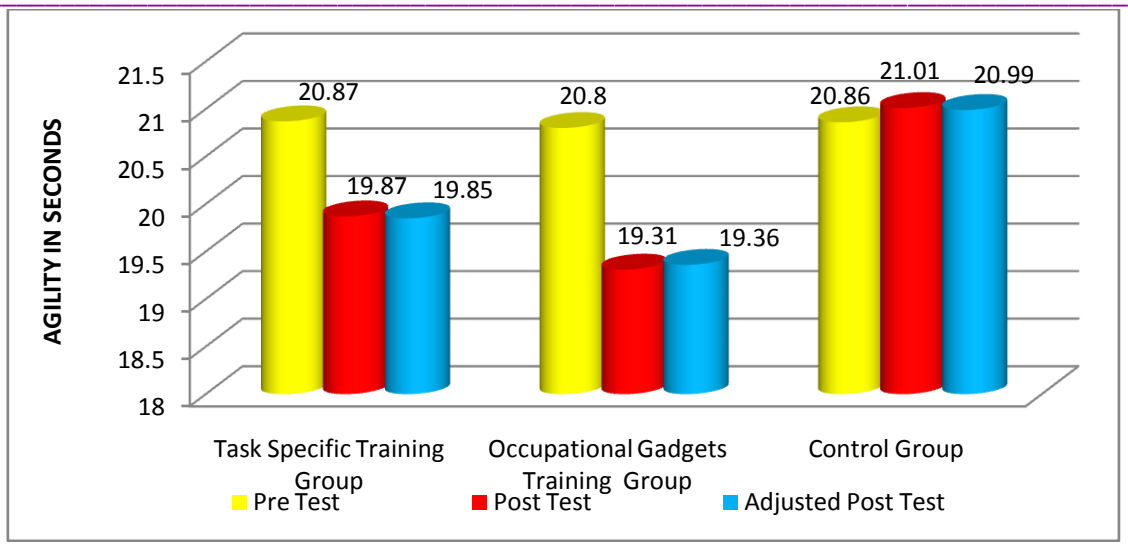

Figure-1 shows Computation of Analysis of Covariance on Agility

Table 3: Computation of Analysis of Covariance on Balance

Certain Variables	Adjusted Post Test Means			Source of Variance	Sum of Squares	df	Means Squares	F
	Task Specific Training Group	Occupational Gadget Training Group	Control Group					
Pre test	27.44	27.99	27.56	B	2.48	2	1.24	.056
SD	4.80	4.65	4.64	W	929.50	42	22.13	
Post test	30.69	35.00	27.14	B	464.50	2	232.25	10.57*
SD	3.98	5.09	4.89	W	922.02	42	21.95	
Adjusted Post Test Mean	30.90	34.69	27.24	B	416.08	2	208.04	85.45*
				W	99.81	41	2.434	

**Significant at 0.05 level for df 2 & 42 = 3.21.*

From Table-3, the pre test means of balance were 27.44 experimental group I, 27.99 for experimental group II and 27.56 for control group. As the obtained F ratio .056 was lesser than the table F ratio 3.21, at 0.05 level of confidence for degrees of freedom 2 and42. The post test means of balance were 30.69 experimental group I, 35.00 for experimental group II and 27.14 for control group. As the obtained F ratio 10.57 was greater than the table F ratio 3.21, the post test was significant at 0.05 level of confidence for degrees of freedom 2 and 42. The adjusted post test means of balance were 30.90 experimental group I, 34.69 for experimental group II and 27.24 for control group. As the obtained F ratio 85.45 was greater than the table F ratio 3.21, the post test was significant at 0.05 level of confidence for degrees of freedom 2 and 41.

Table 4: Scheffes's Test for the Difference between the Adjusted Post Test Paired Means of Balance

Adjusted Post Test Means			Mean Difference	Confidence Level
Exp. Group I	Exp. Group II	Control Group		
30.90	34.69		3.79*	1.36
30.90		27.24	3.66*	
	34.69	27.24	7.45*	

Table-4 shows that the adjusted post test mean differences on experimental group I and experimental group II, experimental group I and control group, experimental group I and control group are 3.79,3.66 and 7.45 respectively and they are greater than the confidence interval value 1.36 which shows significant differences at 0.05 level of confidence. However, the increase in balance is significant for experimental groups II than Experimental group I and control group. It may be concluded that the Experimental Group II has established than the experimental group I in increasing seconds in balance.

Agnieszka Jankowicz-Szymańska **Jul (2018)** conducted a study on The effect of Kinesio Taping on balance and foot arching in children with intellectual disability Methods: Thirty young people with intellectual disability (ID) and flat feet were randomly assigned to experimental (E) and control (C) groups. Group E had KT applied to the sole of their feet and both groups participated in a 12-week task-oriented training conducted three times a week. Balance and foot arches were tested on a baroresistive platform before and after the study. Enhanced balance was found in both groups. Group E had more balanced posture in the medio-lateral center of pressure displacement on eyes closed and in the anterior-posterior center of pressure displacement on eyes open tests than group C. Higher foot arches were discovered in both groups. In two participants in group E, the left foot arch changed from flat to normal. KT may valuably supplement therapeutic programs improving the sense of stability and creating proper foot structure in children with ID.

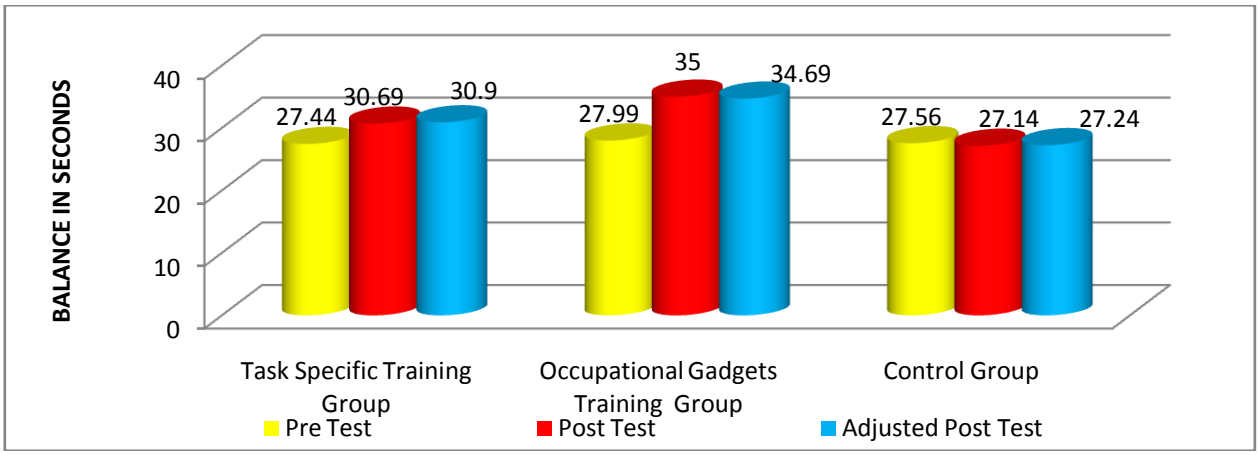

Figure-2 shows Computation of Analysis of Covariance on Balance

CONCLUSION

In Agility and Balance the experimental group II (Occupational Gadget Training) exhibited significantly reduction than experimental group I (Task specific Training). Hence Experimental group II was significantly better than experimental group I.

REFERENCES

1. **Agnieszka Jankowicz-Szymańska** Jul. (2018). The effect of Kinesio Taping on balance and foot arching in children with intellectual disability. Journal on Intellectual and Developmental Disability.
2. Golubovic, S., Maksimovic, J., Golubovic, B., & Glumbic, N. (2012). Effects of exercise on physical fitness in children with intellectual disability. Research in Developmental Disability, 33(2), 608-614.
3. Carmeli, E., Kesse,l S., Coleman, R., & Ayalon, M. (2002). Effects of a treadmill walking program on muscle strength and balance in elderly people with Down syndrome. Journal of Gerontology. Series A Biological Sciences and Medical Sciences.