

FITNESS CONTOURS OF TRAINED AND UNTRAINED STUDENTS WITH MENTAL RETARDATION A COMPARATIVE ANALYSIS

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Abstract:

Recreation and exercise are important for all children, regardless of their mental capacity. Since children who are mentally retarded frequently have poor coordination so in some communities, there is a tendency to exclude mentally retarded children from exercise programs. This sort of exclusion may be more difficult for them to be physically active in the “usual” programs which may contribute to their lassitude weight gain leading to some conditions of ill-health. So far research works in the field of children with special needs are concerned there is a real dearth. Based on available literature it is somehow clear that very few studies have been conducted to analyze the effects of fitness training on the children with mental retardation. The author being a professional in the field of physical Education and sport premeditated to accomplish a study entitled “Fitness contours of trained and untrained students with mental retardation a comparative analysis.” The key objective of the researcher was to locate the impact of exercise on fitness profile of mentally retarded children. For the very study the investigator selected fifteen trained and fifteen untrained students from Kolkata Monovikash Kendra and Howrah Vashabikash Kendra within the age range 14-20 years as subjects. The children of Kolkata Monovikash Kendra were involved in a regular programme of exercise in their curriculum while the other doesn't. With a view to compare their fitness standards the researcher incorporated a suitable fitness battery. From data analysis the author arrived at the conclusion that the children who got exposure in physical activity performed better in most of the fitness attributes but performed significantly better in 25 mt run and bent arm hang tests.

Keywords: Fitness, contour, mental retardation.

Introduction:

Disability or handicap is a curse for the human society. In the human society there are many people with some disability or handicap. They have to struggle hard to cope with the general population for daily living. Recreation and exercise are important for all children, regardless of their mental capacity. A physician's recommendation about athletic activity for a mentally retarded child, as with any child, must take into account the child's size, coordination, degree of physical fitness, physical maturity, physical health, and motivation. In some communities, there is a tendency to exclude mentally retarded children from exercise programs. Because children who are mentally retarded frequently have poor coordination, it may be more difficult for them to be physically active in the “usual” programs. This can contribute to lassitude and excessive weight gain. Reduced physical fitness among mentally retarded children is most probably due to voluntary hypo activity and lack of exercise. According to Nicholas (2003: 307) mental retardation is a label given to anyone who has been assessed to have an IQ score of 70 or less on a psychological test of intelligence. However, mental retardation not only affects performance on tests of general mental functioning, but places limitations on one's capacity for self-care, language and speech ability, social educability and vocational proficiency. Mental retardation can be caused by any condition that hinders or interferes with development before birth (prenatal), during birth (natal), or in the early childhood years (postnatal). Well over a hundred causes have already been identified, although these account for only about one fourth of all identified cases of mental retardation.

The mentally retarded, as a group are deficient in all of the components of physical fitness. To a great extent this poor performance is due to a lack of opportunity to participate in play activity. Therefore, if programs are well design and administered by physical education teacher, noticeable improvement in physical fitness can be achieved. The total amount of physical education time devoted to fitness activities for retarded student need not be extensive. However, a developmental program of from 20 to 30 minutes that contributes to strength, flexibility and endurance should be provided at least three times weekly. Included in the program may be such simple activities as bending, squatting, twisting the trunk, and rotating the arms. For all the physical activities, needs simple enough for the students to understand should be maintained to help teacher and students “see” progress.

Background of the study: In the human society most of the people are fit and able. They can perform their daily tasks of their own. On the other hand, there is a thin population in the human society bearing some disability or handicap they are unable to perform their daily tasks without assistance of others. The scholar being a part of the society as well an aspirant of the profession Physical education determined to endeavor on the topic “**Fitness status of trained and untrained student with mental retardation a comparative analysis.**”

Methodology: For the accomplishment of the study the investigator selected 15 trained and 15 untrained students having moderate levels of mental retardation within the age range 14-20 years from Kolkata Monovikash Kendra and Howrah Vashabikash Kendra as the subjects of the study. As personal data the following assessments were incorporated: Age of the subjects, Height of the subjects, and Body weight of the subjects. As a modified assessment of fitness status of the mentally retarded children the following Physical fitness components were included 25 yards pace running for assessment of speed, bent arm hang for assessment of strength of arms, Leg lift for assessment of strength of legs, thrust for assessment of explosive strength and Stork stand test for assessment of balance. Prior to conducting of the tests, the researcher took due permission of the organizations met with the students as well their guardians for ethical issues. For conducting all the tests, the author considered the safety issues as most important. The author devoted period of 2 weeks for each institution for conducting the fitness tests as well collecting information related to personal data.

Result and Discussion:

In this part of the study the author had depicted the results in tabular form and articulated related discussion.

Table 1. Mean and SD of age, height and weight of trained and untrained mentally retarded students

Students Category	Variables	Mean	SD
Trained	Age in years	16.47	±1.09
Untrained		16.87	±2.19
Trained	Height in cms	164.13	±8.81
Untrained		153.8	±11.14
Trained	Weight in kg	57.27	±11.09
Untrained		49.33	±8.68

From table no. 1 it is clear that the mean and SD of age of trained students was 16.47 and ±1.09 years and for untrained students it was 16.87 and ±2.19 years. Mean height of trained students was 164.13 and their SD ±8.81cm and for untrained students it was 153.8 and ±11.14 cm, mean weight of trained students was 57.27 and their SD ±11.09 K.G. and for untrained students it was 49.33 and (±8.68) K.G. respectively.

From the table it was clear that the body weight of the trained or active mentally retarded students was lower in comparison to those of the untrained or passive students.

To locate the difference between their performances in the fitness variables independent samples t test was computed the results are presented as follows:

Table 2. t test of fitness variables

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
AGE	Equal variances assumed	10.461	.002	-.882	58	.381
	Equal variances not assumed			-.882	42.512	.383
HEIGHT(c.m)	Equal variances assumed	.506	.480	3.919	58	.000
	Equal variances not assumed			3.919	55.077	.000
WEIGHT(k.g)	Equal variances assumed	2.207	.143	3.033	58	.004
	Equal variances not assumed			3.033	54.847	.004
25 YARDS RUN	Equal variances assumed	.438	.511	-10.535	58	.000
	Equal variances not assumed			-10.535	56.584	.000
BENT ARM HANG	Equal variances assumed	5.874	.019	3.185	58	.002
	Equal variances not assumed			3.185	42.750	.003
LEG LIFT	Equal variances assumed	2.575	.114	1.417	58	.162
	Equal variances not assumed			1.417	57.811	.162
THRUST	Equal variances assumed	.383	.538	2.840	58	.006
	Equal variances not assumed			2.840	56.900	.006
	Equal variances assumed	1.118	.295	2.858	58	.006

STORK TEST (sec)	STAND	Equal variances not assumed			2.858	57.292	.006
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Findings with respect to the variables:

25 Meter run

It is clear from the above table that there is a significant difference in 25 meters run between trained and untrained mentally retarded students. The table shows that there is significant difference between the performance of trained and untrained group respectively. The calculated T value was found to be significant at 0.01 level. Henceforth it is clear that the trained children performed significantly better than the untrained.

Bent arm hang:

It is seen from the above table that there is a significant difference in bent arm hang between trained and untrained mentally retarded students. The table shows that there is significant difference between the two groups. T-value was calculated and it was found to be significant at 0.05 level. Thus it is clear that the trained MR children performed considerably better than the untrained in bent arm hang performance.

Leg Lift

It is somehow clear from the above table that there is no significant difference in leg lift between trained and untrained mentally retarded students. T-value was calculated and found to be not significant. Thus it is clear that there is no significant difference between the two groups with respect to leg lift performance.

Thrust:

It is clear from the table that there is no significant difference in thrust performance between the trained and untrained mentally retarded students. The table shows that there was difference between two means. The calculated T-value is not significant at 0.5 level.

Thus it is clear that there does not exist any significant difference between the trained and the untrained groups with respect to thrust performance.

Stork stand test:

It is seen from the above table that there was no significant difference in Stroke stand test of trained and untrained mental retardation students.

This table shows that there was difference between the two means. But the T-value was calculated and found 1.98 which was not significant at 0.5 level. Thus, it is clear that there does not exist any significant difference between the trained and the untrained groups with respect to stork stand test performance.

Discussion on findings: Thus, from the overall statistical analysis it is clear that the trained students are significantly better than their untrained counterparts with respect to 25 mt run and bent arm hang performance but if we consider the means, they show differences in all the fitness variables considered though may not be significant. Henceforth it is somehow clear that in an average basis the trained Mentally Retarded students are better than the untrained students so far as fitness is concerned. Thus fitness training promotes fitness level of the mentally retarded children.

We can find similar types of conclusions deduced by many eminent researchers which are as follows:

Necmiye (2001) reported that competitive activities, sports tournament and recreational activities help develop a level of physical fitness of mentally and physically challenged children. Physical education provides a varied and systematic programme of physical activities, with educational values and a potential impact in the quality of life of all persons a tall ages, and should be included by law in the special education of all students with disability (Salgado and Canabal, 1990; Sherrill, 1988).

Oliver et al. (1958) reported that physical education programmes range from 2 to 3 hours a day for 10 weeks, lead to statistically significant gains in strength, fitness and athletic proficiency (Carmeli et al.,2002; Croce et al., 1992).

Funk (1969) reported that participation in physical education programme has led to improved shuttle run and sit-up performance of mentally challenged children.

According to Stein (1966) and Kulcinski (1945), movement education is vital as it serves as an aid for expression, which is often a difficult area for the mentally retarded. Brain-injured children also benefit as movement education helps regain lost sensory perceptions. The use of leisure time can be of a constructive nature from knowledge gained in a physical education and fitness programme. Thus it quite justified to utter that the findings of the present study are supported by the findings of many eminent researchers.

Take home message: Participation in regular systematic fitness or exercise program can play a significant role in development of fitness status of mentally retarded children and aid in the overall process of mainstreaming.

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