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Effects of sand training on physiological variables among intellectually challenged persons

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Abstract

Purpose of the study was to facilitate the Effects of sand training on Physiological variables among intellectually challenged persons for this study twenty (N=20) male mild intellectually challenged persons were randomly selected as a subject from Paradise special school, Muttukadu in Chennai. Their Age ranged between 14-18 years. They were randomly divided in to two equal groups of ten (n=10) subjects each namely experimental group and Control group. Experimental group underwent to sand training for the period of twelve weeks and no training are given to the control group. Physiological variables such as BMI and percentage body fat were selected as dependant variables and independent variables were only sand training. The data was collected before and after the experimental treatment period. Analysis of Covariance (ANCOVA) statistical technique was used in this study. It was concluded that BMI and percent body fat level of experimental group were significantly altered due to the influence of twelve weeks practices of sand training when compare with control group of mild intellectually challenged persons.

Keywords: Mild intellectually challenged persons, physiological variables, bmi, and percentage body fat

Introduction

Physical activity is very importance for the entire human being not only normal population and also the special population especially intellectually challenged persons, to make them fit and to prevent them from disease like heart problem, kidney, lung disorder and liver problems, I have carryout this topic, through my training we can prevent them in all kind of disease and we can be extent life span of Intellectually challenged persons.

Intellectually Challenged Persons

Mental retardation (MR), learning disability or intellectually challenged is a common disorder among the children, characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviours. It has been historically defined as an intelligence quotient score under 70. Once focused almost entirely on cognition, the definition now includes both a component relating to mental functioning and one relating to individual's functional skills in their environment. As a result, a person with a below average an intelligence quotient may not be considered mentally retarded. Syndrome mental retardation is intellectual deficits associated with other medical and behavioural signs. Non syndrome mental retardation refers to intellectual deficits that appear without other abnormalities.

Persons diagnosed as having significantly lower than average intelligence and considerable problem in adapting to everyday life or lacking independence in regard to activities of daily living (Medical Dictionary-2-dec-1998).

Sand Training

Sand training is kind of training tool which is performed by in beach sand. Sand is a great training tool for improving speed and agility. It provides resistance that challenges your muscles, helping to make you faster and more explosive. The constant shifting under your feet engages small stabilizer muscles that improve balance and reduce the risk of injury. Plus, sand training gives us an excuse to work out in the great outdoors.

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Statement of the Problem

The objective of study will find out to Effects of Sand Training on Physiological variables among mild intellectually challenged persons.

Hypothesis

1. It was hypothesis that there would be significant changes in Physiological variable such as BMI among Mild intellectually challenged persons due to the influence of Sand Training.
2. It was hypothesis that there would be a significant changes in Physiological Variable such as percentage of body fat among Mild intellectually challenged persons due to the influence of Sand Training

Methodology

Purpose of the study was to facilitate the Effects of sand training on Physiological variables among intellectually challenged persons for this study twenty (N=20) male mild

intellectually challenged persons were randomly selected as a subject from Paradise special school, Muttukadu in Chennai. Their Age ranged between 14-18 years. They were randomly divided in to two equal groups of ten (n=10) subjects each namely experimental group and Control group. Experimental group underwent to sand training for the period of twelve weeks and no training are given to the control group for the period of twelve weeks. Physiological variables such as BMI and percentage body fat were selected as dependant variables and independent variables were only sand training. The data was collected before and after the experimental treatment period. Analysis of Covariance (ANCOVA) statistical technique was used in this study.

Result and Discussions of Body Mass Index (BMI)

The statistical analysis of comparing the initial and final means of Body Mass Index (BMI) due to Effects of sand training on Physiological variables among mild intellectually challenged persons is presented in Table-I.

Table I: Computation of Analysis of Covariance of Body Mass Index (BMI)

Test	Sand. T. Gr	Control. Group	SV	SS	Df	MS	F
Pre Test	23.627	23.49	Between	0.09	1	0.088	0.01
			Within	146.86	18	8.16	
Post Test	20.958	23.15	Between	24.11	1	24.11	8.29*
			Within	52.33	18	2.91	
Adjusted	20.93	23.19	Between	25.52	1	25.52	23.76*
			Within	18.261	17	1.07	

*significant at 0.05 of, for 1 and 18 (df) =3.1, 1 and 17 (df) =3.1

As shown in table I the obtained F value on the scores of the pre-test means 0.01 was lesser then the required value of 3.1, which proved that the random assignment of the subject was successful and their scores in body mass index (BMI) before the training were equal and there were no significant differences. The analysis of post-test means proud that the obtained F value 8.29 was greater than the required value of 3.1 be significant at 0.05 level. Taking in to consideration of the pre-test means adjusted post-test means were done and the obtained F value 23.76 was greater than the required value of 3.1 and hence it was accepted that the sand training significantly lesser the Body Mass Index (BMI).

BMI was measured by using BMI formula which is weight/height in meters (2), the result presented in Table-I showed significant differences in the adjusted means, as the obtained F value was greater than the required F value. It was also proved that there was a Significance difference between experimental and control group. The pre, post and adjusted posttest mean values of sand training and Control group of intellectually challenged person's Body mass index (BMI) are graphically represented in the Figure-I

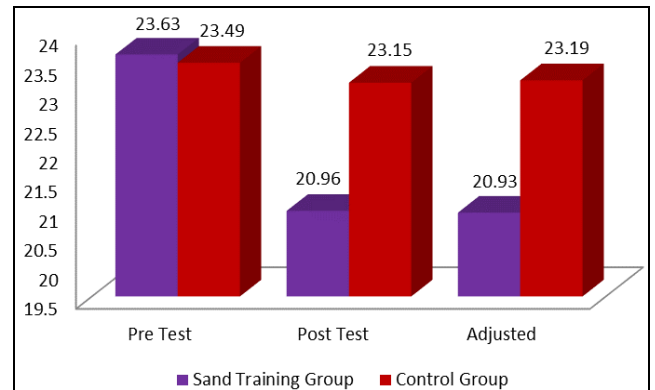


Fig 1: Bar Diagram Showing the Mean Differences among the Groups on Body Mass Index (BMI)

Results on Percentage of Body Fat

The statistical analysis of comparing the initial and final means of Percentage of Body Fat. Due to Effects of sand training on Physiological variables among mild intellectually challenged persons is presented in Table-II.

Table 2: Computation of Analysis of Covariance of Percentage of Body Fat

Test	Sand. T. Gr	Control. Group	SV	SS	Df	MS	F
Pre Test	30	30.20	Between	0.20	1	0.200	0.02
			Within	191.60	18	10.64	
Post Test	27.4	30.90	Between	61.25	1	61.25	6.67*
			Within	165.30	18	9.18	
Adjusted	27.48	30.82	Between	55.48	1	55.48	30.08*
			Within	31.354	17	1.84	

*significant at 0.05 of, for 1 and 18 (df) =3.1, 1 and 17 (df) =3.1

As shown in Table-II the obtained F value on the scores of the pre-test means 0.02 was lesser then the required table value of 3.1, which proved that the random assignment of the subject

was successful and their scores in percentage of body fat before the training were equal and there were no significant differences. The analysis of post-test means proud that the

obtained F value 6.67 was greater than the required value of 3.1 is significant at 0.05 level. Taking in to consideration of the pre-test means adjusted post-test means were done and the obtained F value 30.08 was greater than the required value of 3.1 and hence it was accepted that the sand training significantly lesser the percentage of body fat.

Percentage of body fat was measured by using skin fold caliper and measuring tape of around 7 points of subject body, the result presented in Table-II showed significant differences in the adjusted means, as the obtained F value was greater than the required F value. It was also proved that there was a Significance difference between experimental and control group. The pre, post and adjusted posttest mean values of sand training and Control group of intellectually challenged person's Percentage of body fat (%) are graphically represented in the Figure-2

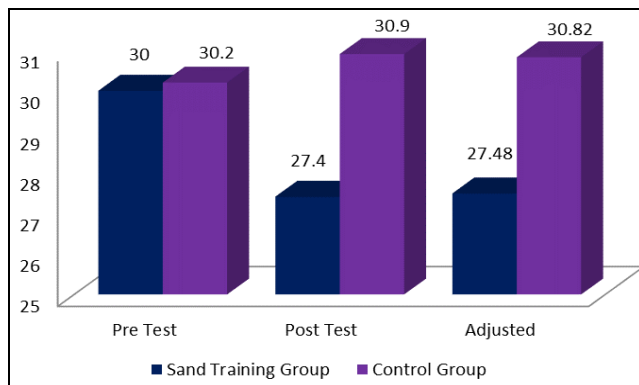


Fig 2: Bar Diagram Showing the Mean Differences among the Groups on Percentage of Body Fat (%)

Discussion on Hypotheses

1. For the purpose of the study the investigator formulated two hypotheses number first hypotheses stating that It was hypothesis that there would be a significant changes in Physiological variable such as BMI among Mild intellectually challenged persons due to the influence of Sand Training.

The result presented in Table-I proved that there were significant differences among the sand training and control group on the selected criterion variables such as BMI the results proved that sand training has significantly altered than the control group.

2. It was hypothesis that there would be a significant changes in Physiological Variable such as percentage of body fat among Mild intellectually challenged persons due to the influence of Sand Training

The result presented in Table-II proved that there were significant differences among the sand training and control group on the selected criterion variables such as percentage of body fat (%) the results proved that sand training has significantly altered than the control group.

Conclusion

The following conclusions were drawn within the limitations and delimitations of this study,

1. The obtained result shows that there was a significant change in Body Mass Index (BMI) among mild intellectually challenged persons; this was due to six weeks of Sand training.
2. The obtained result shows that there was a significant change in percentage of body fat (%) among mild intellectually challenged persons; this was due to six weeks of Sand training.

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