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ANALYSIS OF PROPULSIVE TASK RELATED PHYSICAL FITNESS IN OBESE AND NON OBESE SCHOOL BOYS

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ABSTRACT

The purpose of the study was to compare the propulsive task related physical fitness in obese and non obese school boys. To achieve the purpose 150 school boys from classes 11th and 12th were selected as subjects from JVP International School, Jaipur. The students were divided into 'obese' and 'non obese' group based on their skin fold measurements. Each group consists of so subjects. The ability to propel and lift the body mass is called propulsive task related physical fitness. The selected propulsive task related physical fitness variable were assessed by standing broad jump, 50-yard dash, shuttle run, sit-ups and 600 yards run and walk test. Other subjects had inferior performances on all tests requiring propulsion or lifting of the body mass compared with their non obese counterparts. Results of this study showed the obese subjects had poorer performances on weight-bearing tasks scoring lower scores on all fitness components. To encourage adherence to physical activity in obese youth, it is important that activities are tailored to their capabilities. .

KEYWORDS: task,physical fitness,boys and obese.



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INTRODUCTION

Obesity is a situation in which a person has an excess of adipose or fat tissue. Obesity may be classified according to either percent body fat or by the relationship of weight and height (BMI). Obesity leads to numerous negative health consequences. Obese adolescents seem to be less physically active than their leaner peers, but the total energy expenditure of obese adolescents may be equal or higher. Based on weight relative scores, most studies have found that obese children and adolescents are less fit than their normal-weight counterparts.

Physical fitness is generally considered to be “the ability to perform daily tasks without fatigue.” Physical fitness includes several components: cardio – respiratory fitness, muscular endurance, muscular strength, coordination, flexibility and speed. The ability to propel and lift the body mass is called propulsive task related physical fitness. Increasing physical activity is one of the key elements in the treatment of childhood obesity. Motivating obese subjects to adhere to an activity program is a major challenge. To improve adherence, one must develop an exercise program that is manageable for obese children and adolescents. Interventions that are not tailored to the fitness levels of obese participants may contribute to dissuasion of future participation in physical activity.

PURPOSE OF THE STUDY:-

The purpose of the study was to analyze the propulsive task related physical fitness in obese and non obese school boys.



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HYPOTHESIS:-

It was hypothesized that “non obese” school boys would have better propulsive task related fitness than “obese” school boys.

METHODOLOGY:-

To achieve the purpose 150 school boys from classes 11th and 12th were selected as subjects from JVP International School, Jaipur. The students were divided in to “obese” and “non obese” group based on their skin fold measurements. Each group consists of 75 subjects.

The selected propulsive task related physical fitness variables were assessed by standing- sit-ups (trunk strength and endurance), broad jump (explosive strength), pull ups (upper body strength and endurance). 50-yard dash (speed), shuttle run (agility) and 600 yard run and walk (endurance).

Table-I:-

Showing Variables, Groups, Mean, Standard Deviation, Mean Difference Standard Error of the Difference between Mean and obtained ‘T’

Variables	Group	Mean	SD	DM	SE	T
Speed	Obese	8.34	0.66	1.41	0.14	11.76
	Non obese	6.75	0.45			



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Ability	Obese	11.89	0.49	1.21	0.12	17.88
	Non obese	9.69	0.58			
Explosive Power	Obese	1.76	0.09	0.36	0.02	17.45
	Non obese	2.24	0.12			
Abdominal Strength	Obese	15.32	4.01	17.31	0.95	18.49
	Non obese	26.68	5.25			
Endurance	Obese	1.96	0.13	0.16	0.04	5.49
	Non obese	1.75	0.18			
Shoulder Strength	Obese	5.30	1.24	3.32	0.23	13.76
	Non obese	8.74	1.22			

Required table value -1.99 at 0.05 level. Df = (2.98)

Table-1 reveals that there was a significant difference between the “obese” and “non obese” groups in speed (obtained “t” value=11.76), ability (obtained “t” value=17.88), explosive power (obtained “t” value = 17.45), abdominal strength (obtained “t” value=18.49) endurance (obtained “t” value=5.49, and shoulder strength (obtained “t” value=13.76) as the obtained value were higher than the required “t”=1.99 at 05 level).



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DISCUSSION:-

In the present study, obese subjects had inferior performances on all tests requiring propulsion or lifting of the body mass (standing – broad jump, shuttle run, sit-ups, 50m dash) compared with their non obese counterparts. These poorer performances in obese individuals are probably due to the fact that their excess body fat is an extra weight to be moved during weight-bearing activities because of the greater energy cost compared with normal-weight children.

In this case, the poorer performance could also be a consequence of a lack of experience in weight-bearing tasks. Because obese school boys are limited in their ability to perform weight-bearing activities, such activities should be limited at the start of an intervention. Activities that are not tailored to the capabilities of bigger children may discourage the continued participation of obese individuals.

Most importantly, moving or lifting the excess bodyweight may also overload the joints of such individuals.

Once fatness levels have decreased or fitness levels have improved, weight-bearing tasks may be much less exhausting and should be progressively implemented into the program. Useful non-weight-bearing alternatives such as swimming, cycling or other aquatic activities should be the focus in the early stages of a program and then continued as an appropriate means of balancing various types of activity.



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RESULTS

Weight-bearing activities should be limited at the start of fitness program with alternative activities and obese participants that rely more on non weight bearing activities. Such as swimming, cycling or other aquatic activities may be incorporated. It was concluded that the non obese children were better than the obese children in selected propulsive task related physical fitness components

CONCLUSION:-

It was concluded that the “non obese” school boys were better than the “obese” school boys in the selected propulsive task related fitness variables. Activities must be tailored to the capabilities of obese individuals such as useful non-weight-bearing alternatives such as swimming, cycling or other aquatic activities should be the focus in the early stages of a fitness program.

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