

Influence of Physical Exercises on Physiological & Physical Variable on Physically Challenged Children

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ABSTRACT

Physical exercises are called as the mother of all the illness. It's the exercise which can make one stay away from the different infirmities and cure the deformities as well. In this research total 20 children from "Home for Aged and Handicapped, Nagpur" were selected at a random basis. Two groups were formed viz. control and experimental consisting of 10 children in each group. Two physiological and three physical variables were selected for the study, viz. Vital capacity, Blood pressure, Muscular strength, Flexibility and Cardio-vascular endurance. Both the group was tested on these aforesaid variables and the pre test data were recorded. Experimental group was given different exercises for a period of 10 weeks and control group was not undergone any physical training programme. After 10 weeks training same test was conducted on both the groups and significant differences were seen in the experimental group and no significant difference was found amongst the children of control group.

Key words: Physical Exercises, Physically Challenged and Physiological & Physical Variable

Introduction

A disability may or may not be a handicap. It becomes a handicap if interferes with the person's expectation, job performance, or relationships with his or her family, and society in general. People with a similar disability may not be equally handicapped. For example, a history professor may not be handicapped by the loss of a finger. But the same disability would be a terrible handicap to a concert pianist. To understand the meaning of disability fully one must know the sequence of events leading to disability and handicap, which have stated as under and also shown in Figure 'A'. Physical challenged pupil are those who take their life as challenge due to the lackness or lackness of one part of the body or disintegration of systems of the organ. They struggle with nature for day to day life.



Sequence of Events Leading to Disability and Handicap

The researcher consider the selected physiological and physical variables of the fitness like, vital capacity, blood pressure, speed, flexibility and cardio-vascular endurance on the basis of literature. So the researcher is interested to know the influence of physical exercises on these physiological and physical variables.

Objective of The Study

Objective of the study is to analyze the influence of physical exercises on physiological and physical variables.

Subjects The male subjects were selected after of the

entire center for physically challenged Children in Nagpur. The center which identified for the subjects was Home for Aged and Handicapped, Nagpur.

Twenty subjects were randomly chosen from fifty physically challenged Children who were between the ages of 13 to 15 years. The age was recorded from their center records. Only male was included in the subjects but no blind deaf and dumb subject were allowed for this study.

Method

After selecting the subjects the investigator assesses the present level of all the two groups. Then one group is treated as control group and the second group is treated as physical exercises group. The physical exercises program is designed for second group with the help of physical educationists. These exercises applied to the subjects for ten weeks then results are derived by applying the same test.

Selection of The Variables

Physiological variables -

- Vital capacity
- Blood pressure
- Physical variables -
- Muscular strength
- Flexibility
- Cardio-vascular endurance

Criterion Measures

The criterion measures of selected physiological variables are as follows:

VARIABLES	TESTS	UNITS
Vital capacity	Wet Spirometer	Millilitres or Litres
Blood pressure	Sphygmomanome	Millimeter of mercury(mm of Hg)

The criterion measures of selected physical variables are as follows:

Table -A Critical Difference between Mean of Pre & Post test of Experimental and Control Group

Group		Vital Capacity		Blood Pressure				Speed		Flexibility		CVE	
		Pre	Post	Systolic		Diastolic		Pre	Post	Pre	Post	Pre	Post
				Pre	Post	Pre	Post						
Control	Mean	267.5	270.8	123	121.6	78.6	78.1	26.49	25.32	7.52	7.7	60.2	61.1
	SD	26.29	26.04	7.14	5.37	3.10	2.74	5.25	5.27	1.37	1.44	2.21	1.82
	MD	3.3		1.4		0.5		1.165		0.18		0.86	
	Calculated 't'	0.28 [@]		0.5 [@]		0.38 [@]		0.5 [@]		0.29 [@]		0.95 [@]	
	Tabulated 't'	2.26											
Experimental	Mean	293.5	320.5	124.6	110.5	82.5	75.7	23.41	17.97	6.6	8.25	58.91	61.54
	SD	26.56	28.24	7.62	8.21	5.1	3.95	5.38	3.59	2.48	2.34	5.14	4.1
	MD	27		14.1		6.8		5.44		1.65		2.6	
	Calculated 't'	2.20*		3.98*		3.37*		2.66*		1.53 [@]		1.27 [@]	
	Tabulated 't'	2.26											

VARIABLES TESTS UNITS
 Speed 50 meter dash second
 Flexibility Sit and Reach Test inch
 Cardio - vascular endurance Modified Harvard step test seconds

Sampling Procedures

While leading this study random and purposive sampling method were adopted in selection of the subjects.

Design of The Study :- After selecting twenty subjects randomly from fifty physically challenged Children pre test subject were arranged in ascending order. Then alternate subjects were assigned in control group and other as an experimental group. Thus the equated group design was employed in the study by equalizing the total mean of control group and experimental group.

Physical Exercise Training Was Consisting Of Following Items:

- Left the leg from supine lying position
- Bent knee sit-up • Straight sit-up • Touch the floor from standing position without bending the knee • Lift the upper back from prone lying position

Statistical Techniques :- The obtained data were classified, tabulated and analyzed statistically by require methods viz. mean, SD, mean difference and critical ratio techniques for the purpose of interpretation.

Results of The Study :- To determine the influence of physical exercises on selected physiological and physical variables the data was statistically analyzed by applying two sample 't' test and it is presented in table-A. After interpreting the Table- A it is found that there was no significant difference in all the physical and

physiological variables of Control Groups as the Calculated 't' values 0.28, 0.5, 0.38, 0.5, 0.29 and 0.95 for Vital Capacity, Blood Pressure (Systolic & Diastolic), Speed, Flexibility and Cardio Vascular Endurance respectively were below the Tabulated 't' value of 2.10 required for 't' ratio to be significant at 0.05 level of significance with the degree of freedom 18.

But in case of experimental group significant differences were found in respect of Vital Capacity, Blood Pressure (Systolic & Diastolic) and Speed as the calculated 't' values viz. 2.20*, 3.98*, 3.37* and 2.66* respectively were higher than the Tabulated 't' value of 2.10 required for 't' ratio to be significant at 0.05 level of significance with the degree of freedom 18. No significant differences were found in case of Flexibility and Cardio vascular endurance as the calculated 't' values viz. 1.53@ and 1.27 respectively were lower than the Tabulated 't' value of 2.10 required for 't' ratio to be significant at 0.05 level of significance with the degree of freedom 18.

Conclusion

In this article it was concluded that physical exercises have great potential to eradicate various physical and physiological challenges of life. It can also suggest that motto of "Sports for all" may be achieved through characteristics of physical exercises because it is cost effectiveness and have ethical and moral aspect of our culture. Different aspect of physical and physiological challenges of life can be overcome through the physical exercises at one's own effort.

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