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Effect of adapted physical activities on blood glucose status among person with special needs

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Abstract

Purpose of the study was to facilitate the Effect of adapted physical activities on Blood glucose status among person with special needs, for this study twenty ($N=20$) person with special needs were randomly selected from Deepam and AGAPAE special school in Chennai and their Age ranged between 18-25 years male. They were randomly divided in to two equal groups of ten ($n=10$) subjects each. Those two groups have named as group-I and group-II, group-I named as experimental group-I and underwent adapted physical activities for the period of twelve weeks and group-II named as control group no training was given to them. Selected biochemical variables such as Blood Glucose were selected as dependant variable and independent variable was adapted physical activities. The data was collected before and after the experimental treatment period. Analysis of Covariance (ANCOVA) test was used in this study as statistical technique. It was concluded that Blood Glucose level was significantly altered to person with special needs due to the influence of twelve weeks practices of adapted physical activities to comparing the control group.

Keywords: Adapted physical activities, person with special needs and blood glucose

Introduction

Consistent physical activity is a method to maintaining personal health. Currently, less than half of all adults meet the physical activity guidelines, making it increasingly important to provide knowledge of the benefits of physical activity (Center for Disease Control and Prevention [CDC], 2014) [4]. Some broad categories of the benefits of regular physical activity are well documented, including physical, social, psychological and cognitive. Besides helping with the improvement of daily activities, evidence also exists proving physical activity can reduce the risk of dying early (CDC, 2014) [4]. Physical activity is very important for both normal being and person with special needs, to make person with special needs physically as well as mentally strong, I have carefully designed physical activity for the person with special need in the term of adapted physical activity.

Adapted physical education and activities

Adapted physical Education (APE) and Activities is the art and science of developing, implementing, and monitoring a carefully designed physical education Instructional program for a learner with a disability, based on a comprehensive assessment, to give the learner the skills necessary for a life time of rich leisure, recreation, and sport experiences to enhance physical fitness and wellness. Adapted physical education generally refers to school based programs for students ages with varies age category but Adapted physical activity is common for all disabled peoples.

Person with special needs

Person with special needs may have been born with a syndrome, terminal illness, profound cognitive impairment, or serious psychiatric problems. other children may have special needs that involve struggling with learning disabilities, food allergies, developmental delays, or panic attacks. These children will need extra support, and additional services. They will have distinct goals, and will need added guidance and help meeting academic, social, emotional, and sometimes medical milestones. Persons with special needs may need lifetime guidance

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and support while dealing with everyday issues such as housing, employment, social involvement, and finances. Typically, families with special needs are on a lifetime journey that is both emotionally and financially challenging. Families of children with special needs may experience a myriad of emotions upon diagnosis, including anger, grief, loss, and denial. It is important to remember to be patient with yourself, as these emotions are a natural part of the process.

Introduction to blood glucose

Our body's primary source of energy takes the form of glucose. This type of sugar comes from digesting carbohydrates into a chemical that we can easily convert to energy. Glucose is stored in mainly the liver and muscles as glycogen. Glucose C₆H₁₂O₆, also known as D-Glucose, dextrose, or grape sugar is a simple sugar (Monosaccharide) and an import carbohydrates in biology. Cells use it as a source of energy and a metabolic intermediate. Glucose is one of the main products of photosynthesis and starts cellular respiration. Glucose is a primary source of energy for the brain, and hence its availability influences psychological processes. when glucose is low, psychological processes requiring mental effort (e.g., self-control, effortful decision-making) are impaired.

Statement of the problem

The purpose of study was find out to effect adapted physical activities on blood glucose status among person with special needs.

Table 1: Computation of analysis of covariance of blood glucose (Scores in mg/dl)

Means	APA	CG	SV	SS	DF	MS	OF
Pre Test Mean	109.2	116.80	B	288.80	1	288.800	1.02
			W	5097.20	18	283.18	
Post Test Mean	88.2	111.20	B	2645.00	1	2645.00	18.59*
			W	2561.20	18	142.29	

*Significant-Table F-ratio at 0.05 level of confidence for 1 and 18 (DF) =3.1.

Taking into consideration of the pretest means and posttest means were determined and analysis of covariance was done and the obtained posttest F value 18.59 was grated then the required value of 3.1 and hence it was accepted that the adapted physical activity significantly altered the blood glucose level among person with special needs at 0.05 level.

Hypothesis

It was hypothesized that there would be a significant differences in Blood glucose status due to the influence of twelve weeks of adapted physical activities among person with special needs of experimental group and control group.

Methodology

Purpose of the study was to facilitate the Effect of adapted physical activities on Blood glucose status among person with special needs, for this study twenty (n=20) person with special needs were randomly selected from Deepam and AGAPE special school in Chennai and their Age ranged between 18-25 years male. They were randomly divided in to two equal groups of ten (n=10) subjects each. Those two groups have named as group-I and group-II, group-I named as experimental group-I and underwent adapted physical activities for the period of twelve weeks and group-II named as control group no training was given to them. Selected biochemical variables such as Blood Glucose were selected as dependant variable and independent variable was adapted physical activities. The data was collected before and after the experimental treatment period. Analysis of covariance (ANCOVA) test was used in this study as statistical technique.

Result on Blood Glucose

The following table-I illustrated the statistical results of the Effects of adapted physical activities on blood Glucose status of person with special needs

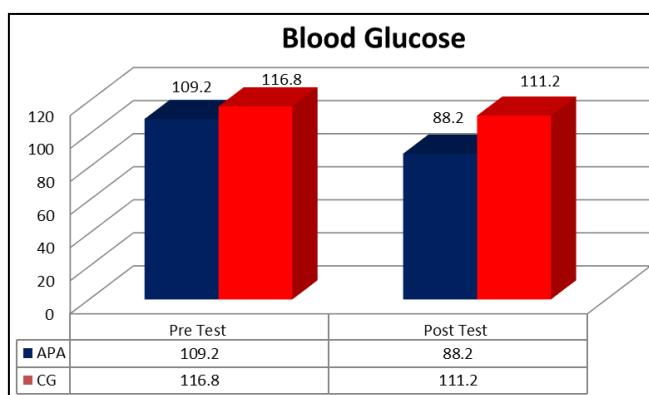


Fig 1: Bar diagram on pre and posttest means of blood glucose

Discussion on the findings of blood glucose

The analysis of co-variance of blood glucose indicated that experimental group I (adapted Physical Activity) was significantly decreased than the control group on blood glucose status. It is due to the effects of adapted physical

activity. So that we can use Adapted physical Activity not only as part of a programme to decrease blood glucose, but also as a way to assist in attending other goals Agte VV, *et al*, (2012), and Davis JN *et al*, (2011).

Conclusions

Within the limitation of this study, the following conclusions were drawn. It was concluded that person with special needs Blood Glucose status was significantly altered from higher normal level to lower normal level it is due to the influence of twelve weeks practices of adapted physical activities when comparing to the control group.

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