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Influence of Physical Training on Selected Psychological Variables among Obese Children

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Abstract

The purpose of the present study was to find out the influence of physical training on selected psychological variables among obese children. To achieve the purpose of the present study, thirty obese children from Tiruchirappalli, Tamilnadu, India were selected as subjects at random and their ages ranged from 9 to 12 years. The selected subjects are divided in to two groups. Group I acted as physical training group and Group II acted as control group. The experimental group participated physical training programme for twelve weeks duration. The control group was not undergone any training other than their daily routine. The data was analyzed by applying dependent 't test. The level of significance was set at 0.05. The physical training had positive impact on aggression and anxiety among obese children.

Keywords: Yogic Training, Anxiety, Aggression.

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Introduction

Physical training is any bodily activity that enhances or maintains physical fitness and overall health. Physical fitness is the functioning of the heart, blood vessels, lungs, and muscles to function at optimum efficiency. In previous years, fitness was defined as the capacity to carry out the day's activities without undue fatigue. It is performed for many different reasons. These include: strengthening muscles and the cardiovascular system, honing athletic skills, and weight loss or maintenance. Frequent and regular physical exercise boosts the immune system, and helps prevent diseases. A moderate to high level of fitness reduces the incidence of "hypo kinetic" diseases. Hypo kinetic basically means a lack of movement or too little movement. When the body doesn't move enough, it slowly deteriorates and becomes vulnerable to disease. In essence, a sedentary lifestyle can contribute to or increase the severity of such problems as hypertension (high blood pressure), obesity (excess fat), adult-onset diabetes, osteoporosis (brittle bones), depression, and low back pain. Individuals who are poorly fit often end up with one or more of these conditions, which impairs the individual's quality of life. Today, there is a growing emphasis on looking good, feeling good and living longer. Increasingly, scientific evidence tells us that one of the keys to achieving these ideals is fitness and exercise. But if you spend your days

at a sedentary job and pass your evenings as a "couch potato," it may require some determination and commitment to make regular activity a part of your daily routine. Exercise is not just for Olympic hopefuls or supermodels. In fact, you are never too unfit, too young or too old to get started. Regardless of your age, gender or role in life, you can benefit from regular physical activity. If you are committed, exercise in combination with a sensible diet can help provide an overall sense of well-being and can even help prevent chronic illness, disability and premature death. A general physical deterioration which is also with our present day patterns of living and neglect of basic fitness habits (Singh, 1991).

Review of Literature

Senthil Kumar (2013) conducted a study to find out the effect of physical combined physical cum yogic practices on selected physical, physiological, psychological and performance factors of kabaddi players. To achieve the purpose of the present study, forty five inter-collegiate level players were selected as subjects at random and their ages ranged from 18 to 24 years. The selected variables were explosive power, muscular endurance, speed, agility, heart rate, systolic blood pressure, diastolic blood pressure, breath holding time, cognitive anxiety, somatic anxiety, self confidence, hand touch, leg touch, ankle hold and blocking. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=45) were randomly assigned to three equal groups of fifteen men students each. The groups were assigned as

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Physical Exercises Group (PEG), Combined Physical cum Yogic Practices Group (PCYPG) and Control Group (CG) in an equivalent manner. The subjects belong to combined physical and yogic practices training and physical exercises was treated on them for about 12 weeks in their respective training programme. The collected data on criterion measures were treated by analysis of covariance to test the significance of mean difference among the three groups on performance and performance related factors. Further if its significance was observed, as post-hoc test, scheffe test was applied. The results reveal that the physical exercises group influences more than the combined physical cum yogic practices group on physical variables (explosive power, muscular strength, speed and agility). combined physical cum yogic practices more than that of physical exercises and control group on physiological (heart rate, systolic blood pressure, diastolic blood pressure and breath holding time), psychological (cognitive anxiety, somatic anxiety and self confidence) and performance variables (hand touch, leg touch, ankle hold and blocking).

Rydwik et al. (20014) the positive effect of physical training in healthy elderly people is well documented. The aim of this systematic review was to describe the effect of physical training on physical performance in institutionalised elderly patients with multiple diagnoses. systematic literature review of randomised controlled trials regarding effects of physical training of elderly (70+) subjects. the randomised controlled trials were evaluated using a modified version of an evaluation form originally developed by the Cochrane Collaboration. It is based on a weighted scale of 0-100 points, and ranks the studies as high, moderate or low methodological quality. A total of 16 randomised controlled trials were included in the review. six studies scored as high quality, eight as moderate and two as low. There was a large heterogeneity in the studies concerning sample size, types of interventions and types of assessments. There is strong evidence for a positive effect of physical training on muscle strength and

mobility; moderate evidence for an effect on range of motion; and contradictory evidence regarding gait, activities of daily living, balance and endurance. more studies are required, with larger sample sizes, higher specificity as to the types of interventions and assessments, greater focus on clinically relevant outcomes such as endurance and activities of daily living, and also, for example, quality of life and mortality.

Methodology

The purpose of the present study was to find out the influence of physical training on selected psychological variables among obese children. To achieve the purpose of the present study, thirty obese children from Tiruchirappalli, Tamilnadu, India were selected as subjects at random and their ages ranged from 9 to 12 years. The selected subjects are divided in to two groups. Group I acted as physical training group and Group II acted as control group. The experimental group participated physical training programme for twelve weeks duration. The control group was not undergone any training other than their daily routine. The data was analyzed by applying dependent 't' test. The level of significance was set at 0.05.

Table I. Variables and Test

S.No	Variables	Tests
1	Aggression	Smith Aggression Scale
2	Anxiety	Spielbergers trait anxiety questionnaire

Results

The findings pertaining to analysis of dependent 't' test between experimental group and control group on selected psychological variables among obese children for pre-post test respectively have been presented in table II to III.

Table II. Significance of Mean Gains & Losses between Pre and Post Test Scores on Selected Variables of Physical training Group (PTG)

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Aggression	17.10	11.20	5.90	0.84	0.36	7.82*
2	Anxiety	73.10	63.21	9.89	2.47	1.12	16.11*

* Significant at 0.05 level

Table II shows the obtained 't' ratios for pre and post test mean difference in the selected variable of

aggression(7.82) and anxiety (16.11). The obtained ratios when compared with the table value of 2.14 of the

degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test

were significantly improved in skill performances namely aggression (5.90 $p < 0.05$) and anxiety (9.89 $p < 0.05$) thus the formulated hypothesis is accepted.

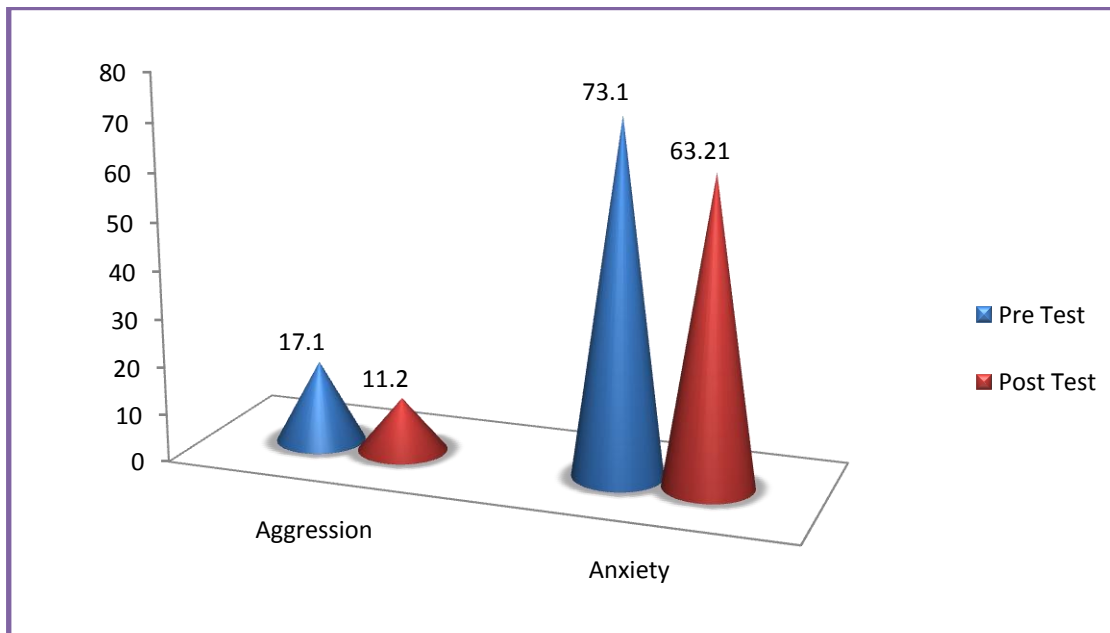


Figure I. Comparisons of Pre – Test Means and Post – Test Means for Experimental Group in Relation to Psychological variables

Table III. Significance of Mean Gains & Losses between Pre and Post Test Scores on Selected Variables of Control Group (CG)

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	‘t’ Ratio
1	Self esteem	16.88	16.53	0.35	0.28	0.11	0.71
2	Anxiety	73.43	72.31	1.12	1.35	0.39	0.20

* Significant at 0.05 level

Table III shows the obtained ‘t’ ratios for pre and post test mean difference in the selected variable of aggression (0.78) and anxiety (0.22). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically

significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were not significantly improved in psychological variables aggression (0.71 $p > 0.05$) and anxiety (0.20 $p > 0.05$).

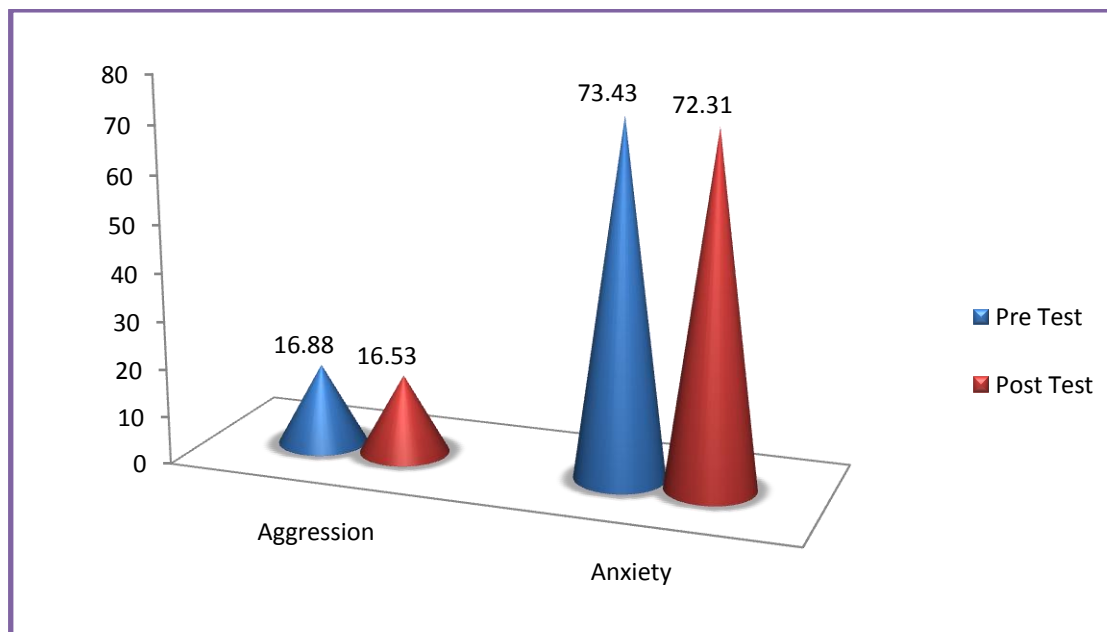


Figure II. Comparisons of Pre – Test Means and Post – Test Means for Control Group in Relation to Psychological variables

Discussions on Findings

In case of psychological variables i.e. aggression and anxiety power the results between pre and post test has been found significantly higher in experimental group in comparison to control group. This is possible because due to regular physical training which may also bring sudden spurt in psychological variables in obese children. The findings of the present study have strongly indicates that physical training of six weeks have significant effect on selected psychological variables i.e., aggression and anxiety of obese children. Hence the hypothesis earlier set that physical training programme would have been significant effect on selected psychological variables in light of the same the hypothesis was accepted.

Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn:

1. The physical training had positive impact on aggression and anxiety among obese children.
2. The experimental group showed better improvement on aggression and anxiety among obese children than the control group.

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