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COMPARATIVE EFFECTS OF YOGIC AND PHYSICAL EXERCISES ON ANXIETY LEVEL AND MENTAL FATIGUE OF CHILDREN

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Abstract

The purpose of this study was to compare the effects of yogic and physical exercises on anxiety level and mental fatigue of children. The subjects were 60 randomly selected male students of 7th& 8th classes of Swami Sharnan and Vidya Mandir Magarpur, Jhansi (U.P.). The data was collected before and after six week of experimental period. The subjects were given anxiety level and mental fatigue test before and after the six weeks of experimental period. The subjects were divided randomly in to three groups namely A, B and C each group consisted of 20 subjects. Group A underwent a programme of selected yogic exercises whereas Group A was administered programme of selected physical exercise Group C was the control Group. Both A and B Groups followed their respected programme of instruction for a period of six weeks. Training was carried out on alternate days for each Group. For Group A training was carried out on Mondays. Wednesdays and Fridays and for Group B training was carried out on Thursdays, Thursdays and Saturdays. Mean difference all the three Groups A, B and C were tested for significance of difference by 't' test. In Group A and B the mean gains in both variables were found statistically significant at 0.05 level of significance. In order to determine the effectiveness of two different methods i.e., yogic and physical exercises on anxiety level and mental fatigue the difference of initial and final scores were taken into account and 'F' test was applied and further to find out the significant difference that any training method at .05 level the LSD's test was applied.

Keywords: Anxiety level, Mental Fatigue, Yogic Exercises, Asana and Physical Exercise

Introduction

An anxious person is one who tends to worry and has an abnormal amount of undefined fears. The over-anxious individual has a high level of cerebral and emotional activity coupled with nervous muscular tension that may eventually lead the individual to the exhaustion stage and perhaps to psychosomatic disorders. It is desirable for all individuals to be able to consciously control this tension levels. Most people would agree that the body senses a reduction in tension after any physically fatiguing activity. Fast changes in scientific knowledge, cultural conflicts, economic problems, industrialization, all add to the problem of man, thus increasing the anxiety level. Anxiety refers to that "emotional state of mind where a fear of danger or loss of suffering is prominent feature. It generally arises as a result of fear of something unknown which creates tension and disturbance". Mental and physical fatigues are

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closely associated. The former is related to the nervous system and the latter to the muscles. Dandekar writes that fatigue is the state in which the organism is exhausted and requires rest. It is the condition of lowered efficiency due to expenditure of energy on work or as a decreased capacity for work. It is impossible to experience either of them in pure form. Especially does muscular fatigue, through its waste products tend to pass over in to mental fatigue. All muscular activity involves nerve centers and all mental activity causes contraction or tension in various group or bodily muscles.

Methodology

The purpose of this study was to compare the effects of yogic and physical exercises on anxiety level and mental fatigue of children. The subjects were 60 randomly selected male students of 7th & 8th classes of Swami Sharnan and Vidya Mandir Magarpur, Jhansi (U.P.). The data was collected before and after six week of experimental period. The subjects were given anxiety level and mental fatigue test before and after the six weeks of experimental period. The subjects were divided randomly in to three groups namely A, B and C each group consisted of 20 subjects.

Collection of Data

The subjects were 60 randomly selected male students of 7th& 8th classes of Swami Sharnan and Vidya Mandir Magarpur, Jhansi (U.P.). The data was collected before and after six week of experimental period.

Statistical Analysis

The difference in the mean gain each group for selected variable was tested for the significance of difference by 't' test. The difference of initial and final score was taken into account and the difference in the mean gain amounts the groups for selected variable was tested for the significance of difference by 'F' test. The level of significance was sat at 0.05 level significance, and further to find out the significant difference that any training method at 0.05 level the LSD test was applied.

TABLE 1
GROUP MEAN INCREASE IN MENTAL FATIGUE SCORE AFTER TRAINING

Group	M1	M2	D	S.E.	't' ratio
A	110.35	131.12	20.77	4.97	4.17
B	110.65	122.75	12.1	5.076	2.38
C	114.6	115.35	0.75	5.458	0.137

*Significant at 0.05 level of significance

In order to determine the differential effects of two different training methods i.e. yogic and physical exercises on Anxiety level and mental fatigue, an analysis of variance was made taking into account the difference of initial and final scores.

TABLE 2
ANALYSIS OF VARIANCE OF THE MEAN DIFFRENCES OF THE EXPERIMENTAL GROUPS (A AND B) AND CONTROL GROUP (C) IN ANXIETY LEVEL AND MENTAL FATIGUE

Variable	Source of Variation	MD	SS	MSS	'F' Value
Anxiety level	Between Means Within Groups	2 57	858.3 979.95	429.15 17.19	24.96*
Mental Fatigue	Between Means Within Groups	2 57	2254 3320	1127 145.99	7.71*

*Significant at 0.05 level of significance.

Table -1 show that there is variability among the experimental group (A and B) and control group (C) which means that the training effects produced on the three groups using different training methods are not equal.

LSD test was applied to find out which of the differences of paired means were significant.

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The data relating to this is presented in Table-3. the criterion against which the 't' value for difference between any of the two groups means was to be judged, according to LSD which is to be 2.52. The "t" ratio equal and exceeding this value is indicated by alphabet 'a' in Table-3.

TABIE-3
SIGNIFICANCE OF DIFFRENCES OF MEANS OF EXPERIMENTAL GROUPS (A AND B) AND CONTROL GROUP (C) IN ANXIETY LEVEL AND MENTAL FATIGUEAFTER TRAINING

Variable	Group compared	Difference of Means	SE	't' value
Anxiety Level	A.B.	2.4	1.31	1.33
	A.C.	11.4	1.31	8.702*
	B.C.	9	1.31	6.87*
Mental Level	A.B.	6.95	3.82	1.81
	A.C.	15	3.82	3.92*
	B.C.	8.05	3.82	2.10

*Significant at 0.05 level of significance.

Table -3 shows there is no difference in Yogic and physical exercises in effecting in Anxiety level and mental fatigue. Even though mean gains are higher in the case of group trained by Yogic Exercises but they are not statistically significant.

Discussion of Findings

From the analysis that of data it was evident that means of both the groups A and B showed decrease in anxiety level and improvement in the duration of mental fatigue time as a result of administration of the programme of instruction yogic exercise and physical exercises. All these changes in variables was found to be statistically significant at .05 level of significance and this became clear as the initial and final test score of Group A and B were computed by 't' ratio. To determine the effectiveness of two different methods i.e. yogic and physical exercise of anxiety level and mental fatigue, the difference of initial and final score was taken into account and 'F' test was applied. The difference was found statically significant at 0.05 level significance in both the cases i.e. anxiety level mental fatigue. To determine which of these groups are different from others the LSD's test was applied I both the cases the yogic exercises was found to be superior then the physical exercises. Though the difference was not statistically significant this may be due to the more relaxive and pleasant effect of asanas.

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