EFFECT OF MEDITATION ON MENTAL TOUGHNESS AND SPORTS COMPETITIVE ANXIETY AMONG ARCHERY PLAYERS

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ABSTRACT

The Primary aim of the study was to investigate the effect of meditation on mental toughness andsports competitive anxiety among archery players of Dr. D.Y. Patil College, Pune. For the purpose of this study 20 male regular archery players of 18 to 25 years of age from Dr. D.Y. Patil College, Pune were randomly selected as subject. Mental Toughness (MTQ48) questionnaire developed by Dr. Alan Goldberg was used to measure mental toughness and the score was noted down in number. Sports Competitive Anxiety Questionnaire developed by Heinssen, Glass & Knight, 1987 was usedto assess anxiety and the scorewasrecorded in number. To determine the effect of meditation on mental toughness and sports competitive anxiety among archery players independent and dependent 't' test was employed for each selected variableseparately, the level ofsignificance was set at 0.05 for testing the hypothesis.The findings of the statistical analysis revealed thatsix weeks of meditation program showed significant improvement on Mental Toughness and Sports Competitive Anxiety among archery players.

Key Words- Meditation, Mental-Toughness, Sports Competitive Anxiety, Archery.

INTRODUCTION

Every athlete would agree that energy is a key ingredient to success in sports. Food, restful sleep, breath and meditation are the four sources of energy. The amount of energy gained from meditation is greater than that of sleep. Meditation is probably the most powerful technique known to relieve stress and anxiety and restore health. The fact is meditation improves concentration. The direct result of meditation improved concentration equals a higher level of performance. Once the mind becomes strengthened, it has better control over the body, enhancing overall performance. Therefore, the present studywas undertaken stated as "Effect of meditation on mental toughness and sports competitive anxiety among archery players."

Purpose of the Study

To determine the effect of six weeks meditation programme on mental toughness and sports competitive anxiety among archery players.

Hypothesis

It was hypothesized that there might be significant effect of meditation on mental toughness and sports competitive anxiety among archery players.

Delimitations

1. Male regular archery practitioners of Dr. D.Y. Patil College, Pune were selected as subjects.

2. The age of the subjects was ranging from 17 to 25 years.

3. Mental toughness and sports competitive anxiety were chosen as the dependent variables.

Limitations

Besides the Conditioning Programme the selected subjects were busy with their daily routine programmes which might have affected the result of the study but it was beyond the control of the scholar.

METHODOLOGY

Selection of the Subjects

Twenty (20) Archery practitioners of various courses of Dr. D.Y. Patil College were selected randomly for the present study.

Selection of Variables

Mental – Toughness and Sports Competitive Anxiety.

Tools& Criterion Measures

Mental Toughness - (MTQ48) questionnaire developed by Dr. Alan Goldberg was used to measure mental toughness and the score was noted down in number.

Sports Competitive Anxiety Questionnaire developed by Heinssen, Glass & Knight, 1987 was used to assess anxiety and the score was recorded in number.

Collection of data

Purpose of the study and procedure of tests were explicitly stated to the selected subjects for their hearty cooperation & active participation. The data pertaining to the study were collected by administering the above-mentioned questionnaires before and immediately after training programme on the selected groups.

Processing of Data

All the collected data were arranged systematically in the table for further statistical calculations.

Results and Interpretation

The analysis of data collected on mental toughness and sports competitive anxiety has been done by employing independent and dependent t-test statistical techniques for each variable separately to find out the mean difference between the Pre and Post-tests performance. To test the Hypothesis, the level of significance was set at 0.05

Findings

The results pertaining to the statistical analysis of the collected data have been presented in the following table.

Table – 1

Description of Mean, Standard Deviation and t-ratio for the Pre-Test Data on the Mental Toughness & Sports Competitive Anxiety of Experimental and Control Group

Variable	Mean of		S. Dev. of		Mean Diff.	S.E. of M.D.	t – ratio
	Expt. group	control group	Expt. group	control group			
Mental Toughness	20.2	19.4	1.23	2.01	0.8	2.04	1.075[@]
Sports Competitive Anxiety	69	69.1	4.29	3.381	0.1	1.727	0.057[@]

[@] Not significant at .05 level   Tabulated $t_{.05(18)} = 2.101$

It is evident from the above findings that the calculated t value of 1.075, 0.057, respectively are quite lesser than the tabulated t-value of 2.101 required to be significant at .05 level for the 18 degree of freedom, hence it can be stated that the difference between the pre-test mean values of both groups in both the variables are statistically insignificant.

Table - 2

Description of Mean, Standard Deviation and t-ratio for the Pre v/s Post Test Data analysis on the mental toughness & sports competitive anxiety of Control Group

Variable	Mean of		S. Dev. of		Mean Diff.	S.E. of M.D.	t – ratio
	Pre-test	Post-test	Pre-test	Post-test			
Mental toughness	19.4	19.8	2.01	2.29	0.4	0.963	$0.373^@$
Sports Competitive Anxiety	69.1	69.6	3.381	3.657	0.276	1.508	$1.048^@$

$^@$ Not significant at .05 level Tabulated t $_{.05(9)}$ = 1.833

It is evident from the above findings that there is no significant difference between pre- and post-test means of mental toughness (t=0.373), sports competitive anxiety (t=1.048) because all the obtained t-values are less than that of required tabulated t-values of 1.833 at .05 level for the 9 degree of freedom.

Table - 3

Description of Mean, Standard Deviation and t-ratio for the Pre v/s Post Test Data on mental toughness & sports competitive anxiety of Experimental Group

Variable	Mean of		S. Dev. Of		Mean Diff.	S.E. of M.D.	t – ratio
	Pre-test	Post-test	Pre-test	Post-test			
Mental toughness	20.2	22.1	1.23	2.51	1.9	0.883	3.298*
Sports Competitive Anxiety	69	71	4.29	5.05	2	1.046	4.243*

*Significant at .05 level Tabulated t $_{.05(9)}$ = 1.833

Findings of the above table indicate that there is significant improvement between the Pre and Post-test means of mental toughness (t=3.298), sports competitive anxiety (t=4.243) of experimental group, because all the above mentioned t-values are greater than the tabulated t-value of 1.88 at .05 level for the 9 (nine) degree of freedom. Comparison of means has been picturesquely presented in Fig.3.
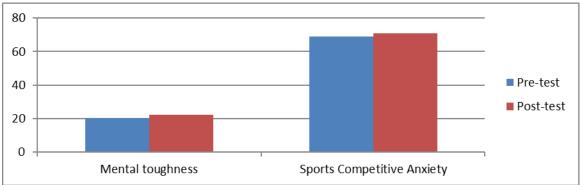

Fig.3 – Difference between the Pre and Post-test Means of selected Variables of Experimental group

Table – 4
Description of Mean, Standard Deviation and t-ratio for the Post Test Data Analysis on Mental Toughness & Sports Competitive Anxiety of Experimental & Control Group

Variable	Mean of		S. Dev. of		Mean Diff.	S.E. of M.D.	t – ratio
	Expt. group	Control group	Expt. group	Control group			
Mental Toughness	22.1	19.8	2.51	2.29	2.30	1.074	2.141*
Sports Competitive Anxiety	71.0	69.6	5.05	3.65	1.4	1.974	0.709@

*Significant at .05 level Tabulated t $_{.05(9)}$ = 1.833

It is evident from the above findings that the calculated t values of 2.141 for mental toughness are statistically significant. Analysis of the table-2 also reveals that the calculated t-values of 0.709 sports Competitive anxiety are smaller than the tabulated t-value of 2.101required to be significant at .05 level for the 18 degrees of freedom, hence difference between the post-test means of the above-mentioned variables are statistically insignificant. The comparison or means has been graphically depicted in fig.4
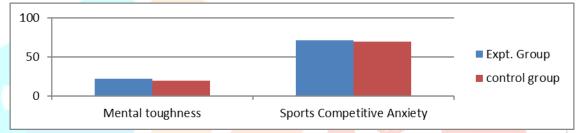

Fig. 4 – Difference between the Post-test Means of Selected Variables of Experimental and Control group

Discussion on findings

On the basis of findings from Table 3 it is understood that there was significant effect of Meditation program on Mental Toughness and Sports Competitive Anxiety of the experimental group. The significant improvement in the selected variable may be attributed to the fact that six weeks of Archery training cum meditation program might have brought necessary physiological and psychological changes hence experimental group has shown significant improvement compared to control group. Hence such result might have occurred in the study.

Conclusion

Recognizing the limitations and on the basis of statistical findings it may be fairly concluded that six weeks of meditation programme along with archery training significant improvement would be occurred in mental toughness and sports competitive anxiety of the archery players.

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