



EFFECT OF EXERCISE AND MUSIC ON SELECTED ANGER DIMENSIONS AMONG ADOLESCENT GIRLS

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ABSTRACT

The purpose of the study was to find out the influence of exercise and music on selected anger dimensions among adolescent girls. Forty five adolescent girls aged between 14 to 16 years were selected randomly. They were divided into three groups such as two experimental and one control group, exercise and music are the experimental groups. The two experimental groups were given training for twelve weeks and control group were not allowed to participate in any training programme. The subjects were tested on anger dimensions such as Trait Anger, State Anger and Anger control. At the beginning pre-test was taken and after the six weeks of training post-test was taken. The data were analyzed by applying dependent 't' test and ANCOVA. The results revealed that the exercise and music had significant control over the Trait Anger, State Anger and Anger control.

KEYWORDS: Adolescence, Trait Anger, State Anger and Anger control.

INTRODUCTION

Adolescence is the most important and critical period of individual's development. It is the period of rapid revolutionary changes in the individuals physical, mental, moral, spiritual sex and social outlook. Human personality develops new dimensions. It is the period to learn new things. It is the period of anxieties, worries, conflicts and complexity. This period emerges from childhood and merges into adulthood. Gender differences in emotional development may results in part from the qualitatively different exchanges made between parents or caretakers and boys verses girls. Girls receive generally more attention than boys in the area of their appearance both in terms of physical beauty and neatness of schoolwork (American Association of University Women 1991, Sadker and Sadker, 1994). Early work by Block (1973) suggests parents encourage sons toward aggression with nonemotionality and they encourage daughters toward emotionality with nonaggression. Birnbaum and Croll (1984) report that parents show more acceptance of anger in boys than in girls with greater acceptance of fear in girls than in boys. Likewise, school and other related professionals often advocate for the teaching and modeling of appropriate anger management skills to children of both sexes, introducing boys and girls to anger control methods at early ages. More recent writings emphasize the importance of recognizing some type of appropriate anger expression along with instruction in behavioral inhibition and control (marion, 1994 ; McClure, Miller and Russo, 1992).

TRAIT ANGER

Trait anger is described as a dispositional

characteristic where one experiences frequent anger, with varying intensity (e.g., mild irritability, intense rage), and is often accompanied by related negative emotions such as envy, resentment, hate, and disgust (Buss, 1961; Siegman & Smith, 1994). There is considerable construct overlap between hostile dispositions and trait anger, making it difficult to disentangle.

STATE ANGER

State anger which is defined as the psychobiological emotional state or condition marked by suggestive feelings that vary in intensity from mild irritation or annoyance to intense fury and rage.

ANGER CONTROL

Anger is a normal human emotion, but when it gets out of control it can become destructive, leading to serious problems at work and in personal relationships. It can undermine a person's quality of life. The State-Trait Anger Expression Inventory (STAXI; Spielberger, 1988) involves an integration of two previously developed inventories, the State-Trait Anger scale and the Anger Expression (AX) Scale. Five independent subscales comprise the STAXI, including State Anger, Trait Anger, Anger-in, Anger-out and Anger Control.

The STAXI-2 State Anger scale assesses the intensity of anger as an emotional state at a particular time. The Trait Anger scale measures how often angry feelings are experienced over time. The Anger Expression and Anger Control scales assess four relatively independent anger-related traits: expression of anger toward other persons or objects in the environment (Anger Expression-Out); holding in or suppressing angry feelings (Anger Expression-In); controlling angry

feelings by preventing the expression of anger toward other persons or objects in the environment (Anger Control-Out); and controlling suppressed angry feelings by calming down or cooling off (Anger Control-In).

HYPOTHESES

1. There would be significant improvement on the selected dependent variables such as Trait Anger, State Anger and Anger control due to the effects of exercise.
2. There would be significant improvement on the selected dependent variables such as Trait Anger, State Anger and Anger control due to the effects of music.

LIMITATIONS

The study was limited in the following aspects:

1. Regular activities pertaining to their day to day affairs were not controlled.
2. The factors such as climate, study hours and motivation of the subjects were not taken into consideration.
3. The subjects' diet and nutrition were not taken into consideration.
4. The parental influence and support towards participation in the study were not considered.
5. The growth and maturity factors were not controlled.
6. The influence of academic work on the performance variables and training could not be controlled.
7. Participation in various tournaments could not be controlled.

DELIMITATIONS

The study was delimited as follows:

1. The study is mainly delimited with 45 adolescent girls would be selected from different schools in Chennai.
2. The age groups of the subjects were between 14 and 16 years.

In this study, the following variables were selected:

CRITERION VARIABLES

Trait Anger, State Anger and Anger control

INDEPENDENT VARIABLES

1. 12 weeks of physical exercises
2. 12 weeks of music

METHODOLOGY

SELECTION OF THE SUBJECTS

The purpose of the study was to find out the effect of exercise and music on selected anger dimensions among adolescent girls. To achieve the purpose of the study 45 adolescent girls in the age group of 14 to 16 years were divided into three groups of fifteen each such as experimental – I(Exercise) experimental – II (Music) and group III as control group

The experimental groups were participated in the exercises and music training 60 minutes for five days a week only at morning session. The control group maintained their daily routine activities and no special training was given.

**TABLE I
TOOL AND TECHNIQUE**

Variable	Tests/ Equipment	Unit of measurement
Trait Anger	State Trait Anger Expression Inventory (Spielberger, 1983)	Score
State Anger	State Trait Anger Expression Inventory (Spielberger, 1983)	Score
Anger control	State Trait Anger Expression Inventory (Spielberger, 1983)	Score

RESULTS AND DISCUSSIONS

The data pertaining to the variables in this study were examined by using dependent 't' test to find out the significant improvement and analysis of covariance (ANCOVA) for each variables separately in order to determine the difference and tested at 0.05 level of

significance. The analysis of dependent 't' test on data obtained for Trait Anger, State Anger and Anger control of the pretest and posttest means of experimental and control group have been analyzed and presented in Table II.

TABLE II
MEAN AND DEPENDENT 'T' TEST OF EXPERIMENTAL AND CONTROL GROUPS ON
SELECTED VARIABLES

Variables	Mean	Exercise	Music	Control Group
Trait Anger	Pre Test	35.47	32.73	30.67
	Post Test	29.87	30.00	31.87
	't' test	20.55*	9.63*	1.10
State Anger	Pre Test	30.20	30.53	32.13
	Post Test	28.67	28.20	33.20
	't' test	12.95*	7.32*	1.24
Anger control	Pre Test	24.67	22.07	23.47
	Post Test	19.10	19.13	23.80
	't' test	15.33*	8.19*	1.32

*Significant at 0.05 level of confidence (14) is 1.761

The obtained 't' ratio value of 20.55, 9.63 on Trait Anger, 12.95, 7.32 on State Anger and 15.33, 8.19 Anger control of experimental group was higher than the table value, it is understood that the exercise and music had made significant improvement on Trait Anger, State Anger and Anger control. However, the control group has not made significant changes as the obtained 't' value

was lesser than the table value, because it was not subjected to any specific training. The analysis of covariance on the data obtained on Trait Anger, State Anger and Anger control due to the effect of exercise, music and control groups have been analyzed and presented in Table III.

TABLE III
ANALYSIS OF COVARIANCE OF EXPERIMENTAL AND CONTROL GROUPS ON ANGER
DIMENSIONS

		Sum of Square	df	Mean Square	F
Trait Anger	Between Group	351.244	2	175.622	44.98*
	Within Group	164.00	41	3.905	
State Anger	Between Group	218.133	2	109.067	28.87*
	Within Group	158.667	41	3.778	
Anger control	Between Group	290.800	2	145.400	66.38*
	Within Group	92.000	41	2.190	

*Significant: Table F-ratio at 0.05 level of confidence for 2 and 41 (df) = 3.22

Table III showed that the obtained 'F' ratio value of 44.98, 28.87 and 66.38 which were higher than the table value 3.22 with df 2 and 41 required to be significant at 0.05 level. Since the obtained value of 'F' ratio was higher than the table value, it indicated that there was significant difference among exercise, music

and control group on Trait Anger, State Anger and Anger control. Since significant differences were obtained, as suggested by Thirumalaisamy (1997), the Scheffe's post hoc test was used to find out the paired means significant difference. The obtained results are presented in Table IV.

TABLE IV
SCHEFFE’S POST HOC TEST INFLUENCE ON TRAIT ANGER, STATE ANGER AND ANGER CONTROL
AMONG ADOLESCENT GIRLS

Mean Difference of Trait Anger				
Groups	Exercise	Music	Control	Reqd. C.I
Exercise	-	2.733*	-	1.32
Music	-	-	4.066*	
Control	6.800*	-	-	
Mean Difference of State Anger				
Groups	Exercise	Music	Control	Reqd. C.I
Exercise	-	2.666*	-	1.30
Music	-	-	2.400*	
Control	5.066*	-	-	
Mean Difference of Anger Control				
Groups	Exercise	Music	Control	Reqd. C.I
Exercise	-	2.600*	-	0.99
Music	-	-	3.600*	
Control	6.200*	-	-	

Table IV showed that the mean difference of Trait Anger between Exercise and Music were 2.733, Exercise and Control group were 6.800, Music and Control group were 4.066. The mean difference of State Anger between Exercise and Music were 2.666, Exercise and Control group were 5.066, Music and Control were 2.400. The mean difference of Anger Control between

Exercise and Music were 2.600, Exercise and Control were 6.200, Music and Control were 3.600 which were higher than required Scheffe’s confidence interval value of 1.32 (Trait Anger), 1.30 (State Anger) and 0.99 (Anger Control). The mean values of Trait Anger, State Anger and Anger control were presented in fig.1 with the bar diagram for better understanding of the results of this study.



FIGURE I
SHOWING THE MEAN VALUES OF TRAIT ANGER, STATE ANGER AND ANGER CONTROL AMONG
ADOLESCENT GIRLS

CONCLUSIONS

1. The exercise and music had significant control over the Trait Anger, State Anger and Anger control.
2. There was no significant difference of control group on anger dimensions among adolescent girls.
3. Physical exercise group had better Trait Anger, State Anger and Anger Control than music and control group.

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