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A Study the Effect of Stress Reduction Model, Sex, Residential Background and their Various Interactions on Examination Stress and Anxiety

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Abstract

Many researchers have been conducted related to various Relaxation Therapies. Various researches show that different Relaxation Techniques are effective in reducing Stress, Anxiety, Hyperactivity and Inattentiveness and enhance Self-esteem, Self-awareness and Self-actualization. In present study researcher was tried to find out the effect of Treatment through stress reduction model, Sex, Residential Background and their various interactions on Examination Stress and anxiety

Keywords: Stress Reduction Model, Anxiety

Introduction

Examination Stress and anxiety is the result of many causes. Students emotions combined with their thought and several other factors can create high level of Examination Stress and anxiety. The most common factors are competitions, Negative Thinking and low Self-confidence.

The simplest way of Coping with Stress is to modify or remove its sources. But this is not always possible. There are other Techniques to reduce the Stress level successful. Coping with Stress depends upon many factors. Person's perception of control of the Situation, his or her personality makeup, availability of support from family and social network are some factors which play important role in moderation of Stress. Some persons are Stress tolerant and optimistic when some are less Stress tolerant and pessimistic. Because of individual differences the level of tolerance varies. Various researches show that different Relaxation Techniques are effective in reducing Stress, Anxiety, Hyperactivity and Inattentiveness and enhance Self-esteem, Self-awareness and Self-actualization.

In present study researcher was tried to find out the effect of Treatment through stress reduction model, Sex, Residential Background and their various interactions on Examination Stress.

Statement of Problem

Study the effect of Treatment through stress reduction model, Sex, Residential Background and their various interactions on Examination Stress and anxiety by considering Pre-Examination Stress and anxiety as covariate respectively.

Objective of the Study

1- To study the effect of Stress reduction model, Sex, Residential Background and their various interactions on Examination Stress by considering Pre-Examination Stress as covariate.
2- To study the effect of Stress reduction model, Sex, Residential Background and their various interactions on Anxiety by taking Pre-Anxiety as covariate.

Hypotheses

1. There is no significant effect of Stress reduction model, Sex, Residential Background and their various interactions on Examination Stress by considering Pre-Examination Stress as covariate.
2. There is no significant effect of Stress reduction model, Sex, Residential Background and their various interactions on Anxiety by considering Pre-Anxiety as covariate

Delimitations

While conducting the study some of the specific restrictions with respect to sample, duration, variables etc. were made. Thus, the delimitations were:

1. The study was confined to class X students.
2. The Treatment continued for three months before the Board Examination at the rate of 35 min per day.

Review of Related Literature

Gender-wise Relaxation Therapies have been studied by Wolpe (1958), Cautela (1966), Hosford (1969), Jain (1990), Border (2004), Camoor (2004), and Leo (2004).

Wolpe (1958) described three cases successfully treated with Assertive Training. The first case involved a socially insecure salesman who received treatment relevant to business and social contacts, as well as his wife's infidelity. The second dealt with female who was overly dependent and submissive, especially with lovers (who ultimately rejected her). The third case was a male stutterer who typically withheld anger until he experienced an emotional outburst. For the second and third cases, follow-ups of 2 and 2 ½ years are reported.

Cautela (1966) described treatment with three cases of pervasive Anxiety. The first case involved a young girl fearful of people; the second, a female doctoral candidate who reported having difficulties with her parents, and who had problems related to criticism and sex. The third case was a middle-aged man dominated by his wife and sexually impotent. Each of the three clients received Assertive Training, as well as other modes of Treatment, and all showed marked and lasting improvement.

Hosford (1969) treated a sixth-grade girl fearful of speaking in a classroom situation. Treatment consisted of her practicing successive approximations to classroom, speaking within the therapist's office as well as in the classroom itself. By the end of the school year, the client volunteered to give an oral classroom presentation. Varenhorst (1999) reported a rather similar case involving a school girl who was able to achieve her primary goal of participating in an art seminar which had been especially threatening because students regularly criticized each other's work.

Jain (1990) compared study of Progressive Muscle Relaxation and the Cognitive Method in the treatment of dysmenorrheal and found that all methods (CM and CM+ PMR) produced a significant effect. However Progressive Muscle Relaxation was most effective in reducing the symptoms, and led to the lowest change.

Border (2004) reported the positive effect a Meditation on Pregnant females and Leo (2004) also reported positive effect of Meditation & Sahaj Yoga on Pregnant woman and relief in pregnancy pain. Camoor (2004) reported positive relationship between Meditation, Yoga and normal delivery.

Methodology

Sample

The schools from Sultanpur District of Uttar Pradesh having secondary classes were selected through the use of Stratified Random Sampling Technique. The stratification was done on the basis of Gender and intelligence. The sample consisted of 277 students of class X. out of 277, 182 were Males and 95 Females. Thus the Gender was represented in the sample.

Experimental Design

The present study was Experimental in nature. The Non-equivalent Control Group Design was followed. According to Campbell and Stenly (1963), the layout of Non – equivalent Control Group Design is as follows:

$$\begin{array}{ccc} 0 & \times & 0 \\ \text{----------} & & \\ 0 & & 0 \end{array}$$

There were two groups. One Group was designated as Experimental Group and the other as Control Group. The students in both the groups were as existed in the field. Both the groups were pre-tested by administering Examination Stress Scale developed and standardized by researcher and Sinha's Comprehensive Anxiety Test. The Treatment was given to the Experimental Group for 35 minutes per day. The total Treatment duration was four months at the rate of 35 minutes per working day before the Board Examination. On the other hand, the Control Group continued with routine activities. During experimentation Intelligence was assessed with the help of Verbal Intelligence test.

Tools

In this study variables related to which data collected were Examination Stress, Anxiety Intelligence. The tools used in respect of each one of them are described in separate captions in the following.

Examination Stress

For assessing Examination Stress, there is no tool available. So Examination Stress Scale was developed and standardized by researcher.

Anxiety

In the present study the age of students ranged from 13-16 years. For this age group the tool available for assessing Anxiety was Sinha's Comprehensive Anxiety Scale developed by Sinha and Sinha. By keeping in mind the reliability, the age and the availability of the tool, Sinha Comprehensive Anxiety Scale was selected.

Procedure of Data Collection

The present study was Experimental in nature. There were two groups. One was designated as Experimental Group and the other as control Group. The data were collected from both the groups in respect of Examination Stress, Anxiety and Intelligence. The data in respect of above mentioned variables were collected on different days. To start with, Examination Stress Scale developed by Investigator was administered. Students were asked to read the instructions given in the scale and in case of doubt, they were allowed to ask questions. Further,

they were also requested not to leave any statement unanswered. On the second day, Sinha's

Comprehensive Anxiety Scale developed by Sinha and Sinha was administered. After this, Experimental Group was treated through Stress Reduction Model. The Hindi translation of transcript of Stress Reduction Model was presented in the form of audio taped instructions. The treatment continued for four months at the rate of 35 min. per working day-before Board Examination. On the other hand, the Control Group continued with routine activities. During Experimentation. At the end of the treatment both the groups were post-tested on the same variables using same tools as did at pre-testing stage.

Data Analysis

1-In order to study the effect of Treatment, Sex, Residential Background and their various interactions on Examination Stress by considering Pre-Examination Stress as covariate. The data were analyzed with the help of Three way ANCOVA.

2- In order to study the effect of Treatment, Sex, Residential Background and their various interactions on Anxiety by considering Pre-Anxiety as covariate the data were analyzed with the help of three ways ANCOVA.

Results and Interpretation

1- Effect of Treatment, Sex, Residentail Background And Their Interaction On Examination Stress By Taking Pre-Examination Stress As Covariate

The first objective was to study the effect of Treatment, sex, Residential Background and their various interactions on Examination Stress by considering Pre-Examination Stress as covariate. Examination Stress was assessed before and after the Treatment of students belonging to Stress Reduction Model and Traditional Method Group. Males and Females were the two levels of Gender. Students belonged to Urban and Rural area. The data were analyzed through 2x2x2 Factorial Design ANCOVA by considering Pre-Examination Stress as covariate. The results are given in Table 1.

Table 1: Summary of 2x2x2 Factorial Design ANCOVA for Examination Stress of students considering Pre- Examination Stress as covariate

Source of Variation	df	SSy.x	MSS y.x	Fy.x
Treatment (A)	1	34067.72	34067.72	356.21**
Gender (B)	1	7.68	7.68	0.08
Residential Background (C)	1	445.03	445.03	4.65*
A x B	1	22.75	22.75	0.24
A x C	1	33.11	33.11	0.35
B x C	1	760.60	760.60	7.95**
A x B x C	1	197.28	197.28	2.06
Error	268	25631.07	95.64	
Total	276			

** Significant at 0.01 level

* Significant at 0.05 level

A -Effect of Treatment on Examination Stress by Taking Pre-Examination Stress as Covariate

From Table1 it is evident that the adjusted F-value is significant at 0.01 level. It indicates that the Stress Reduction Model was found to be significantly superior to Traditional Method Group in reducing Examination Stress when Pre-Examination Stress taken as Covariate

B - Effect of Gender on Examination Stress by Taking Pre-Examination Stress as Covariate

From Table 1 it can be observed that the adjusted F-value for Gender is not significant. It shows that the adjusted mean scores of Examination. Stress of Males and Females do not differ significantly when Pre-Examination Stress was taken as Covariate. So Gender did not affect differentially Examination Stress of students when Pre-Examination Stress was taken as Covariate. Thus the null hypothesis that there is no significant effect of Gender on Examination Stress of students by taking Pre- Examination Stress as covariate is not rejected. It may, therefore, be said that Examination Stress was found to be independent of Gender when Pre-Examination Stress was taken as Covariate.

C- Effect of Residential Background on Examination Stress By Taking Pre-Examination Stress as Covariate

From Table 1 it can be observed that the adjusted F-Value for residential background is 4.65 which is significant at 0.05 level with df=1/268. It indicates that the adjusted mean scores of Examination Stress of Urban and Rural students differ significantly. So there is significant effect of Residential Background on Examination Stress of students when Pre-Examination Stress was taken as covariate. In this context, the null hypothesis that there is no significant effect of Residential Background on Examination Stress of students when Pre-Examination Stress was taken as covariate is rejected. Further the adjusted mean score of Examination Stress of Urban students is significantly higher than those of Rural students. Thus Rural Students were found to have significantly lower Examination Stress in comparison to Urban Students when Pre-Examination Stress was considered as covariate.

D- Effect of interaction between Treatment and Gender on Examination Stress by taking Pre-Examination Stress as Covariate

From Table 1 it may be observed that the adjusted F-value for interaction between Treatment and Gender is not significant. It indicates that the interaction between Treatment and Gender did not affect significantly Examination Stress of students when Pre-Examination Stress was taken as Covariate. Therefore, the null hypothesis that there is no significant effect of interaction between Treatment and Gender on Examination Stress of students by taking Pre-Examination Stress as Covariate is not rejected. It may, therefore, be said that Examination Stress was found to be independent of interaction between Treatment and Gender when Pre-Examination Stress was taken as covariate.

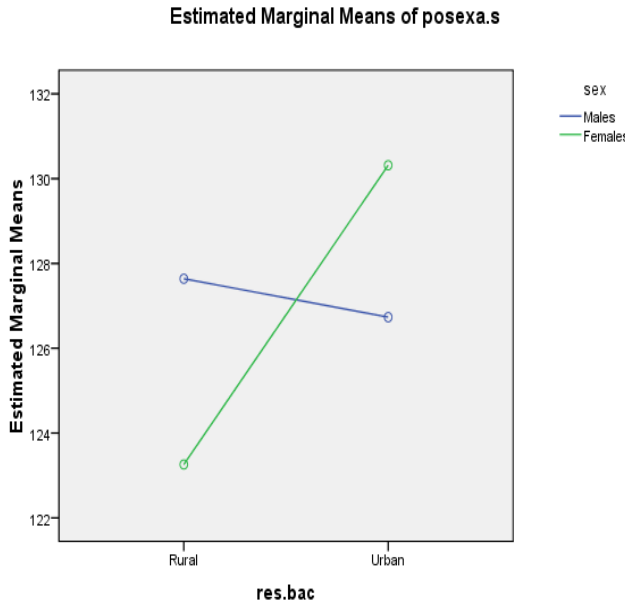
E- Effect of interaction between Treatment and Residential Background on Examination Stress by Taking Pre-Examination Stress as Covariate

The adjusted F-Value for the interaction between Treatment and Residential Background is 0.35 which is not significant (Vide Table 1). It shows that there was no significant effect of interaction between Treatment and Residential Background on Examination Stress by taking Pre-Examination Stress as covariate. In this context the null hypothesis that there is no significant effect of interaction between Treatment and Residential Background on Examination Stress by taking Pre-Examination Stress as covariate is not rejected. It may, therefore, be said that Examination Stress was found to be independent of interaction between Treatment and Residential Background when Pre-Examination Stress was taken as covariate.

F- Effect of interaction between Gender and Residential Background on Examination Stress by Taking Pre-Examination Stress as Covariate

The adjusted F-Value for interaction between Gender and Residential Background is 7.95 which is significant at 0.01 level with df=1/268 (Vide Table 5.17). It shows that adjusted mean score of Examination Stress of Males and Females belonging to Rural and Urban areas differ significantly.

Graph 1: Effect of interaction between Residential Background and Gender on Examination Stress by tanking Pre-Examination Stress as covariate



So there was a significant effect of interaction between Gender and Residential Background on Examination Stress of students when Pre-Examination Stress was taken as covariate. In this context the null hypothesis that there is no significant effect of interaction between Gender and Residential Background on Examination Stress of students when Pre-Examination Stress was taken as covariate is rejected. In order to know that trend of effect of interaction between Treatment and Residential Background on Examination Stress when Pre-Examination Stress was taken as covariate, Graph 1 has been plotted. From Graph 1 it is evident that Females belonging to Rural area have lower Examination Stress in comparison to those of Urban area when Pre-Examination Stress was taken as covariate. This trend is not visible in case of Males. Males from Urban area had lower Examination Stress in comparison to those of Rural area when Pre-Examination Stress was taken as covariate. Further in case of Rural area Females had lower Examination Stress in comparison to Males while in Urban area, Males had lower Examination Stress in comparison to Females when Pre-Examination Stress was taken as covariate.

G- Effect of interaction between Treatment, Gender &Residential Background on Examination Stress by Taking Pre-Examination Stress as Covariate

From Table 1 it is evident that the adjusted F-Value is 2.06 which is not significant. It shows that there was no significant effect of interaction among Treatment, Gender and Residential Background on Examination Stress when Pre-Examination Stress was taken as covariate. Thus the null hypothesis that there is no significant effect of interaction among Treatment, Gender and Residential Background on Examination Stress when Pre-Examination Stress was taken as covariate is not rejected. It may, therefore, be said that Examination Stress was found to be independent of interaction among Treatment, Gender and Residential Background when Pre-Examination Stress was taken as covariate.

Effect of Treatment, Sex, Residentail Background And Their Interaction on Anxiety by Taking Pre-Anxiety as Covariate

The second objective was to study the effect of Treatment, Gender, Residential Background and their various interactions on Anxiety by considering Pre-Anxiety as covariate. Anxiety was assessed before and after the Treatment of students belonging to Stress Reduction Model and Traditional Method Group. Males and Females were the two levels of Gender. Students belonged to Urban and Rural area. The data were analyzed through 2x2x2 Factorial Design ANCOVA by considering Pre-Anxiety as covariate. The results are given in Table 2.

Table 2

Summary of 2x2x2 Factorial Design ANCOVA for Anxiety of students considering Pre- Anxiety as covariate

Source of Variation	df	SSy.x	MSS y.x	Fy.x
Treatment (A)	1	18207.36	18207.36	344.28**
Gender (B)	1	56.95	56.95	1.08
Residential Background (C)	1	635.84	635.84	12.02**
A x B	1	10.73	10.73	0.20
A x C	1	1.48	1.48	0.03
B x C	1	168.57	168.57	3.19
A x B x C	1	0.35	0.35	0.01
Error	268	14173.17	52.89	
Total	276			

** Significant at 0.01 level

A- Effect of Treatment on Anxiety by taking Pre-Anxiety as Covariate

From Table1 it is evident that the adjusted F-value is significant at 0.01 level. It indicates that the Stress Reduction Model was found to be significantly superior to Traditional Method Group in reducing anxiety when pre anxiety was taken as Covariate

B -Effect of Gender on Anxiety by Taking Pre-Anxiety as Covariate

From Table 2 it can be observed that the adjusted F-value for Gender is not significant. It shows that the adjusted mean scores of anxiety of Males and Females do not differ significantly when pre anxiety was taken as Covariate. So Gender did not affect differentially anxiety of students when Pre-anxiety was taken as Covariate. It may, therefore, be said that anxiety was found to be independent of Gender when Pre- anxiety was taken as Covariate.

C -Effect of Residential Background on Anxiety By Taking Pre- Anxiety as Covariate

The adjusted F-Value for Residential Background is 12.02 which is significant at 0.01 level with df=1/268 (Vide Table 2). It indicates that the adjusted mean scores of Anxiety of Rural and Urban students differ significantly when Pre-Anxiety was taken as covariate. That is there was a significant effect of Residential Background on Anxiety by considering Pre-Anxiety as covariate. Thus the null hypothesis that there is no significant effect of Residential Background on Anxiety of students when Pre-Anxiety was taken as covariate is rejected. Further the adjusted mean score of Anxiety of students belonging to urban area is 41.56 which is significantly higher than those of Rural students whose adjusted mean score of Anxiety is 37.77 when Pre-Anxiety was taken as covariate. It may, therefore, be said that Rural students possessed lower Anxiety in comparison to Urban students when Pre-Anxiety was taken as covariate.

D -Effect of interaction between Treatment and Gender on Anxiety by taking Pre- Anxiety as Covariate

From Table 2 it may be observed that the adjusted F-value for interaction between Treatment and Gender is not significant. It indicates that the interaction between Treatment and Gender did not affect significantly anxiety of students when Pre-anxiety was taken as Covariate.. It may, therefore, be said that anxiety was found to be independent of interaction between Treatment and Gender when Pre-anxiety was taken as covariate.

E- Effect of interaction between Treatment and Residential Background on Anxiety by Taking Pre-Anxiety as Covariate

The adjusted F-Value for the interaction between Treatment and Residential Background is 0.03 which is not significant (Vide Table 5.18). It shows that there was no significant effect of interaction between Treatment and Residential Background on Anxiety by taking Pre-Anxiety as covariate. In this context the null hypothesis that there is no significant effect of interaction between Treatment and Residential Background on Anxiety by taking Pre-Anxiety as covariate is not rejected. It may, therefore, be said that Anxiety was found to be independent of interaction between Treatment and Residential Background when Pre-Anxiety was taken as covariate.

F -Effect of interaction between Gender and Residential Background on Anxiety by Taking Pre-Anxiety as Covariate

The adjusted F-Value for the interaction between Gender and Residential Background is 3.19 which is not significant (Vide Table 2). It shows that there was no significant effect of interaction between Gender and Residential Background on Anxiety by taking Pre-Anxiety as covariate. In this context the null hypothesis that there is no significant effect of interaction between Gender and Residential Background on Anxiety by taking Pre-Anxiety as covariate is not rejected. It may, therefore, be said that Anxiety was found to be independent of interaction between Gender and Residential Background when Pre-Anxiety was taken as covariate.

G- Effect of interaction among Treatment, Gender And Residential Background on Anxiety by Taking Pre- Anxiety as Covariate

The adjusted F-Value for the interaction among Treatment, Gender and Residential Background is 0.01 which is not significant (Vide Table 2). It shows that there was no significant effect of interaction among Treatment, Gender and Residential Background on Anxiety by taking Pre-Anxiety as covariate. In this context the null hypothesis that there is no significant effect of interaction among Treatment, Gender and Residential Background on Anxiety by taking Pre-Anxiety as covariate is not rejected. It may, therefore, be said that Anxiety was found to be independent of interaction among Treatment, Gender and Residential Background when Pre-Anxiety was taken as covariate.

Findings and Conclusions

The following were the findings and conclusions of this study.

1. Rural Students were found to have significantly lower Examination Stress and Anxiety in comparison to Urban Students when Pre-Examination Stress, Anxiety separately were considered as covariate. Examination Stress and Anxiety were found to be independent of interaction between Treatment and Residential Background when Pre-Examination Stress and Anxiety separately were taken as covariate. Females from Rural area had lower Examination Stress in comparison to Males while Males from Urban area had lower Examination Stress in comparison to Females when Pre-Examination Stress was taken as covariate. Anxiety was found to be independent of interaction between Gender and Residential Background when Pre-Anxiety was taken as covariate.
2. Examination Stress, Anxiety was found to be independent of interaction between Treatment, Gender and Residential Background when Pre-Examination Stress and Anxiety separately were

taken as covariate. Both Males and Females belonging to Urban and Rural area benefited more from Stress Reduction Model than Traditional Method.

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