ARTICLES

A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON SOCIAL ANXIETY AMONG ADOLESCENT GIRLS IN SELECTED SCHOOLS OF DISTRICT OF HOSHIARPUR IN PUNJAB

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ABSTRACT

Childhood and adolescence is the core risk phase for the development of symptoms and syndromes of anxiety that may range from transient mild symptoms to full-blown anxiety disorders. Social anxiety disorder is one of the most challenging disorders in adolescence. Three types of self-induced relaxation techniques that have been the most researched and proven effective in their use of reducing anxiety in children and adolescents are progressive muscle relaxation (PMR), deep breathing exercises, and positive self-talk. A quasi-experimental non-equivalent control group design was adopted. 300 adolescent girls between the age group of 14-16 years were selected through purposive sampling technique i.e. 150 for experimental and 150 for control group. Collected data was analyzed by calculating frequency, percentage, mean, standard deviation, chi-square, t-test & F-test.

Keywords: Social anxiety, Jacobson's progressive muscle relaxation technique, adolescent girls.

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INTRODUCTION

Adolescence can be a stressful time for children. Children are dealing with the challenges of going through puberty, meeting changing expectations and coping with new feelings. Childhood and adolescence is the core risk phase for the development of symptoms and syndromes of anxiety that may range from transient mild symptoms to full-blown anxiety disorders. Social anxiety disorder is one of the most challenging disorders in adolescence. During this age, the incidence of social anxiety increases notably.

Three types of self-induced relaxation techniques that have been the most researched and proven effective in their use of reducing anxiety in children and adolescents are progressive muscle relaxation (PMR), deep breathing exercises, and positive self-talk. It decreases physiological aspects of anxiety while at the same time, distracting the client from thinking about their anxious feelings (Nassau, 2007).

OBJECTIVES

1. To assess the pre-interventional level of social anxiety among adolescent girls in experimental and control group.

2. To demonstrate and implement the progressive muscle relaxation technique among adolescent girls in selected experimental group.

3. To determine the post-interventional level of social anxiety among adolescent girls in experimental and control group.

4. To compare the pre-interventional and post-interventional level of social anxiety among adolescent girls in experimental and control group.

HYPOTHESIS

H0: There will be no statistical significant difference in the post-test score of social anxiety among adolescent girls between experimental and control group as measured by social interaction anxiety scale (SIAS) at $p < 0.05$ level of significance.

H1: There will be statistical significant reduction in the level of social anxiety among adolescent girls after receiving Jacobson's progressive muscle relaxation technique in the experimental group as compared to control group at $p < 0.05$ level of significance.

CONCEPTUAL FRAMEWORK

Conceptual framework adopted in this study was based on W. K. Kellogg Foundation Logic Model.

RESEARCH METHODOLOGY

Research approach: A quantitative research approach was considered.

Research Design: A quasi-experimental non-equivalent control group design was used.

Research Setting: Government Girls Senior Secondary School, Railway Mandi, Hoshiarpur and P.D Arya Girls Sen. Sec. School, Hoshiarpur, Punjab were selected.

Variables —

Independent variable: Jacobson progressive muscle relaxation technique.

Dependent variable: Social anxiety.

Extraneous variables: Age, religion, area of residence, birth order, number of siblings, present living status, Qualification of parents, family income (Rs./ month), type of family and parental occupation.

Target Population The target population of the study was the adolescent girls fulfilling the inclusion and exclusion criteria from selected schools of Hoshiarpur district of Punjab.

Sample and Sampling Technique

Sample of the study was 300 adolescent girls and non-probability purposive sampling technique was used.

Criteria for Sample Selection —

Inclusion criteria

Adolescent girls:

- who were in age group of 14-16 years with varying levels of social anxiety.

- who were willing to participate in the study.

Exclusion criteria

- Adolescent girls who had undergone the treatment with psychotropic drugs.

- Adolescent girls who were not available at the time of data collection.

- Adolescent girls who had no social anxiety identified using social interaction anxiety scale (SIAS).

Development and Description of Tool —

Section I: Socio-demographic Profile.

It comprised of items for obtaining personal information of the adolescent girls i.e. Age, religion, area of residence, birth order, number of siblings, present living status, Qualification of parents, family income (Rs./ month), type of family and parental occupation.

Section II: Social interaction anxiety scale (SIAS)

It is to assess social anxiety among adolescent girls. It is a 5 point self-reporting rating scale to assess social anxiety. It includes total 20 items, out of which 17 are negative and 3 are positive items.

Positive items' rating: Not at all (4), Slightly (3), Moderately (2), Very (1), Extremely (0)

Negative items' rating: Not at all (0), Slightly (1), Moderately (2), Very (3), Extremely (4).

Criterion measure:

Maximum score: 80   Minimum score: 0

No social anxiety	0-25%	0-20
Mild social anxiety	26-50%	21-40
Moderate social anxiety	51-75%	41-60
Severe social anxiety	>75%	61-80

Reliability of Tool

The social interaction anxiety scale (SIAS) has an internal consistency (Cronbach's alpha) ranging from 0.88- 0.94 and test-retest reliability of 0.92. Hence, the tool was highly reliable.

RESULTS

TABLE - 1

Frequency and percentage distribution of adolescent girls in experimental and control groups according to PRE-INTERVENTIONAL LEVEL of social anxiety

N = 300

Level of social anxiety	Criteria measure	Experimental Group (n = 150)		Control Group (n = 150)	
		n	%	n	%

No social anxiety	≤ 20	0	0	0	0
Mild	21- 40	115	76.6	110	73.3
Moderate	41- 60	35	23.3	40	26.6
Severe	61- 80	0	0	0	0

Table - 1 states that in experimental group, most of the adolescent girls i.e. (115) 76.6% were having mild social anxiety whereas (35) 23.3% were having moderate social anxiety and no one experienced severe social anxiety. On the other hand, in control group majority of the adolescent girls i.e. (110) 73.3% were having mild social anxiety; followed by (40) 26.6% having moderate social anxiety.

TABLE - 2

Frequency and percentage distribution of adolescent girls in experimental and control groups according to POST-INTERVENTIONAL LEVEL of social anxiety

N = 300

Level of social anxiety	Criteria measure	Experimental Group (n = 150)		Control Group (n = 150)	
		n	%	n	%
No social anxiety	≤ 20	93	62	0	0
Mild	21- 40	53	35.3	108	72
Moderate	41- 60	4	2.6	42	28
Severe	61- 80	0	0	0	0

Table – 2 depicts that after Jacobson's progressive muscle relaxation technique intervention in experimental group, most of the adolescent girls i.e. (93) 62% relieved their social anxiety whereas (53) 35.3% were having mild, only (4) 2.6% were having moderate social anxiety and no adolescent girl was having severe social anxiety. Whereas in control group most of the adolescent girls i.e. (108) 72% were having mild social anxiety whereas (42) 28% were having moderate social anxiety.

TABLE - 3

Comparison of pre- and post-interventional mean social anxiety scores of adolescent girls in experimental and control groups

N = 300

Groups	Pre-interventional Score			Post-interventional Score				
	n	Mean	SD	n	Mean	SD	df	't'
Experimental	150_a	24.95	10.99	150	18.25	10.15	298	5.50*
Control	150_b	26.80	10.63	150	26.72	08.98	298	0.85[NS]
a + b	df 298	't' 1.5[NS]		df 298	't' 7.7[*]			

Maximum Score = 80   NS= Non Significant at P<0.05 level

Minimum Score = 0   * = Significant at p<0.05 level

Table – 3 depicts the comparison of pre-interventional and post-interventional mean score of social anxiety among adolescent girls in experimental group and control group. In experimental group, mean pre interventional score was 24.95 and mean post interventional score was 18.25. The difference between pre-interventional and post interventional mean scores was tested by paired "t" test and found statistically significant (5.5) at p< 0.05 level of significance. In control group, mean pre-interventional score was 26.80 and mean post-interventional score was 26.72. The difference between mean pre interventional and post interventional mean score was tested by paired "t" test and was found statistically non-significant (0.85) at p< 0.05 level of significance.

The difference between mean pre-interventional and post-interventional level of social anxiety in experimental group (5.5) compared to control group (0.85) was considered much. Thus, the Jacobson's progressive muscle relaxation technique intervention is an effective method for reducing social anxiety.
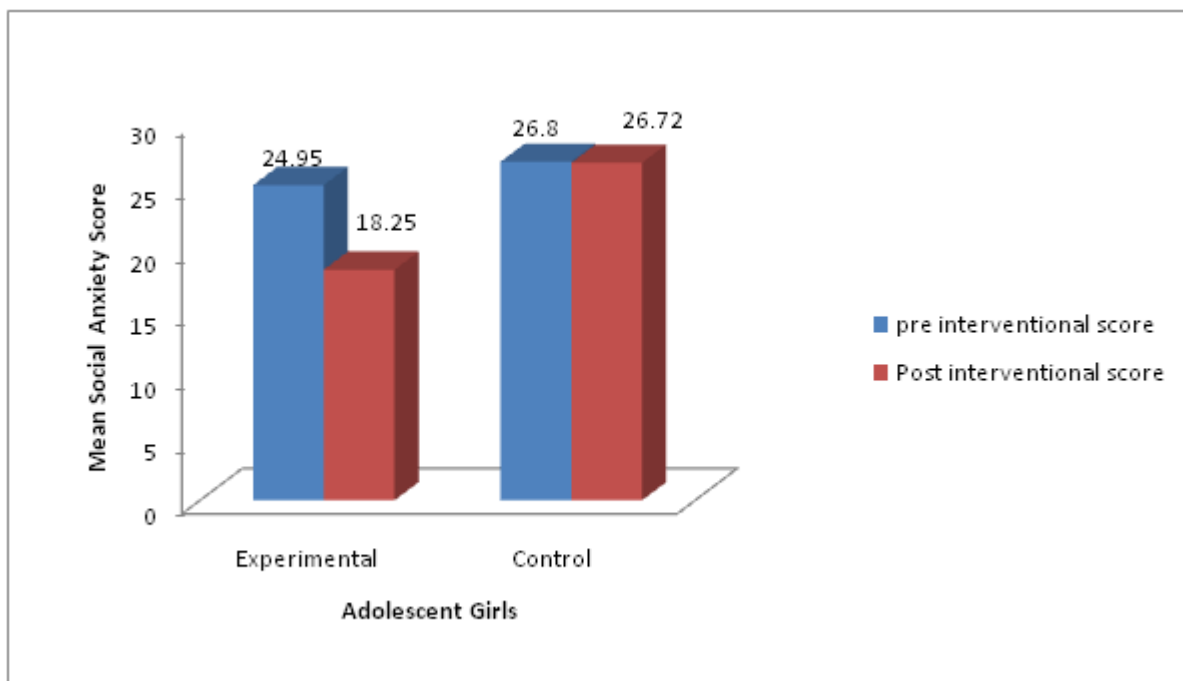
MAJOR FINDINGS

In the **pre-test of experimental group**, most of the adolescent girls i.e. (115) 76.6% were having mild social anxiety and (35) 23.3% were having moderate social anxiety**. In control group,** most of the adolescent girls i.e. (110) 73.3% were having mild social anxiety and (40) 26.6% were having moderate social anxiety. No adolescent girls were having severe anxiety.

In the **post test of experimental group**, most of the adolescent girls i.e. (93) 62% were having no social anxiety, (53) 35.3% were having mild social anxiety and only (4) 2.6% were having moderate social anxiety after receiving Jacobson's progressive muscle relaxation technique intervention. **In control group,** most of the adolescent girls i.e. (108) 72% were having mild social anxiety and (42) 28% were having moderate social anxiety.

The **difference between pre-interventional and post-interventional mean scores** in experimental group was tested by "t" test and found statistically significant (5.5) at $p< 0.05$ level of significance as compared to control group (0.85) found statistically non-significant at $p< 0.05$ level of significance. Hence, research hypothesis (H1) is accepted, as there is highly significant effect of Jacobson's progressive muscle relaxation technique intervention on social anxiety among adolescent girls.

IMPLICATIONS

Nursing education: The findings of the present research can be used in seminars, workshops, conferences organised in nursing institutions to improve knowledge of nursing students regarding progressive muscle relaxation technique in reducing social anxiety.

Nursing practice: The study helps to obtain necessary information about important risk factors and to develop the required competencies, skills for accurate administration of progressive muscle relaxation technique and their evaluation.

Nursing research

The information contained in the present study can be valuable source of data for future researchers. It can help them in conducting research with large sample sizes in respect of other different mental and psychological problems. This will help to bring the problem of increase in social anxiety into light for further investigation by critically analysing the various aspects of increase in social anxiety and progressive muscle relaxation technique.

LIMITATIONS

1.   Study lacks randomisation as non-probability purposive sampling technique was used.

2.   The size of the sample was 300 adolescent girls; hence it was difficult to make broad generalisations.

RECOMMENDATIONS

The following recommendations are made on the basis of the findings of the present study: -

➤   A similar study may be replicated on a large sample to validate and generalise the findings.

➤   A similar study with structured interview method can be conducted for data collection rather than self-reporting method.

➤   A similar study can be conducted by administering video assisted module to students for better understanding.

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