



Research Article

A Quasi-Experimental Study to Assess the Effectiveness of Jacobson's Progressive Muscle Relaxation Technique on Social Anxiety among Adolescent Girls of Selected Schools of Kashipur, Uttarakhand

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DOI: <https://doi.org/10.24321/2455.9318.201914>

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How to cite this article:

Didacus HG, Bharadwaj U, Mancheri N. A Quasi-Experimental Study to Assess the Effectiveness of Jacobson's Progressive Muscle Relaxation Technique on Social Anxiety among Adolescent Girls of Selected Schools of Kashipur, Uttarakhand. *Int J Nurs Midwif Res* 2019; 6(2&3): 12-16.

Date of Submission: 2019-05-13

Date of Acceptance: 2019-10-29

A B S T R A C T

Introduction: Adolescence is a transitional phase of growth and development between childhood and adulthood. The unique nature and importance of adolescents mandates explicit and specific attention in Health.

Aim: This study was carried out to assess the level of social anxiety among the adolescent girls in selected schools of Kashipur.

Objectives: To demonstrate the Jacobson's Progressive Muscle Relaxation Technique to the adolescents. To compare the Post-test social anxiety scores in both the groups. To find out the association between the social anxiety Post-test scores with the demographic variables of both groups.

Methods: A Quantitative, Quasi-experimental, Non-equivalent and Pre and Post-test only design was used in the study. A total of 271 adolescent girls were screened for social anxiety, among them 68 adolescents were found to have social anxiety, which was categorized as Mild, Moderate and Severe on the basis of anxiety scores on the 1st day. Adolescent girls were divided into experimental (30) and control group (30), Jacobson's Progressive Muscle Relaxation Technique was administered for 10 days, twice a day and social anxiety was assessed on the 11th day.

Result: Difference in the mean scores was found in the Experimental group (213.3) and the Control group (140.1). There was significant decrease seen in the Post-test social anxiety scores of the adolescent girls after the administration of the Jacobson's Progressive Muscle Relaxation Technique as $p < 0.01$ at 0.05 level of significance. There was no association found between the Post-test social anxiety scores with the socio demographic variables in both the groups.

Conclusion: Based on the findings the following conclusion can be drawn that Jacobson's Progressive Muscle Relaxation Technique is effective in reducing social anxiety among adolescent girls.

Keywords: Social Anxiety, Jacobson's Progressive Muscle Relaxation Technique, Adolescent Girls



Introduction

Stress and anxiety are a part and parcel of every student's life. Adolescence is a key period in terms of the development of anxiety psychopathology.¹ The origin of anxiety and stress may be related to academic and social situations, environment and lifestyle. Teens with social anxiety disorder have an excessive and persistent fear of social and performance situations such as school, parties, athletic activities and more.² Academic stress is been considered as one of the major stressors to the adolescents and it may in turn subject them to low self-esteem. An equal number of girls and boys experience social anxiety and in any given school about 7% of adolescents will have a diagnosis of social anxiety.³

Social anxiety also known as social phobia, has prevalence of 3% to 13%, it may vary depending on criteria used to determine stress or number of times a situation precipitates distress, it estimates 6 months prevalence rates of social anxiety from epidemiological catchment area are 1.2% to 2.2%, distribution fairly across age span and more common in men and the onset is 15-20 years, the course tends to be chronic and unremitting.⁴ Recent data estimates that less than 20% of adolescents with anxiety disorders receive treatment and fewer than 20% of those who do seek services receive interventions supported by scientific evidence.⁵

Aim

- To assess the level of social anxiety among the adolescent girls in selected schools of Kashipur.
- To study the effectiveness of the Jacobson's Progressive Muscle Relaxation Technique on social anxiety.

Objectives

- To demonstrate the Jacobson's Progressive Muscle Relaxation Technique to the adolescents
- To compare the Post-test social anxiety scores in both the groups.
- To find out the association between the social anxiety Post-test scores with the demographic variables of both groups.

Materials and Methods

The present study was aimed to assess the social anxiety among the adolescent girls and to assess the effectiveness of the Jacobson's Progressive Muscle Relaxation Technique on social anxiety. Quantitative research approach design was used. The study was conducted in the selected schools (Maria Assumpta Senior Secondary School and St Mary's School) Kashipur, Uttarakhand. The samples size comprised of 60 adolescent girls by purposive sampling. Social Anxiety Scale was used as a tool for data collection.

Ethical clearance was taken from the Jamia Hamdard

Institutional Ethics committee and Formal administrative approval was obtained from the concerned authority of both the schools of Kashipur, Uttarakhand. A total of 60 samples were taken, Subjects were screened based on inclusion and exclusion criteria for the study, after establishing the rapport, Self-Introduction and purpose of the study was explained to the subjects. They were assured of confidentiality of their data. Written informed consent was obtained from the study subjects. Social anxiety scale (Structured tool) was administered to assess the social anxiety and semi structured questionnaire to collect the demographic data.

Result

Comparison of Demographic Variables of Subjects in Experimental and Control Group by their Age, Standard, No. of Children in the Family, Birth order, Socio-Economic Status of the Adolescent Girls

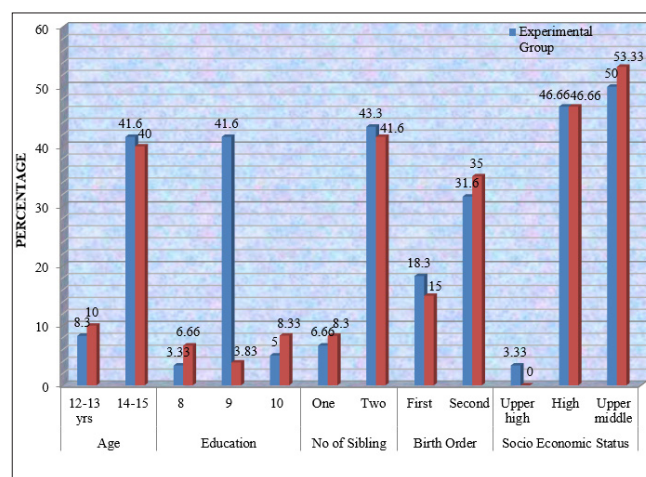


Figure 1

The data presented in the Figure describes the demographic characteristics (age, standard, no of sibling, Birth order, socio economic scale) of 60 adolescent girls.

- Age wise distribution data revealed that out of 30 adolescent girls in the experimental group 8.3% (5) belonged to the age group of 12-13 years and 41.66% (25) belonged to the age group of 14-15 years whereas in control group 10% (6) belonged to 12-13 years and 40% (24) belonged to the 14-15 years,

In the experimental group adolescents in standard 9 were 41.6% (25) and 3.33% (2) from standard 8 and only 5% (3) from the 10 standards whereas in control group 38.3% (23) were from the standard 9 and 6.66% (4) from standard 8 and 8.33% (3) from 10 standard. No of sibling in the experimental group were found more of having two, 43.33% (26) and only 6.66% (4) as one sibling where as in the control group 41.6% (25) has two sibling and 8.3% (5) have one sibling.

As in category of birth order 31.6% (19) were found to be second born in the experimental group and 18.3% (11) were found to be the first born, whereas in the control group 35% (21) were found to be second born and 15% (9). In the socio-economic scale 15 (50%) were found to be upper middle class (46.66%) 14 in the high class and 3.33% (1) in upper high whereas in the control group majority of the subjects were found in upper middle class 53.33% (16) and 46.66% (14) in high class.

It can be concluded from Figure 1, that 'p' values have been calculated for No of sibling and Standard or class using fishers exact test and are more than >0.001 at 0.05 level of significance, therefore are not significant, for Age, Birth order and Socio economic scale p values have been calculated using chi square test and are more than the tabulated values and henceforth are not significant.

Comparison of the Frequency and Percentage Distribution of Pre-test Social Anxiety Scores in Control and Experimental Group with Level of the Social Anxiety

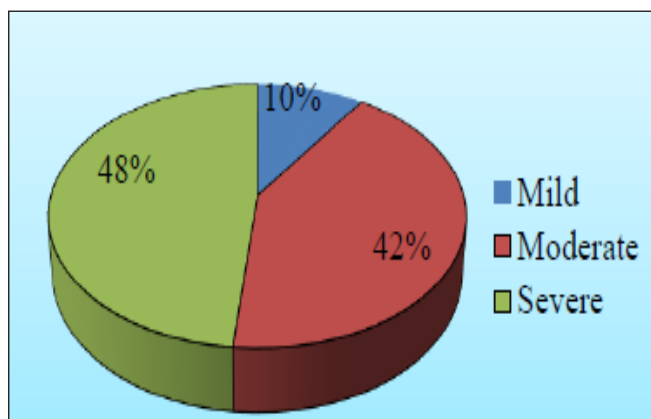


Figure 2. Experimental group social anxiety scores

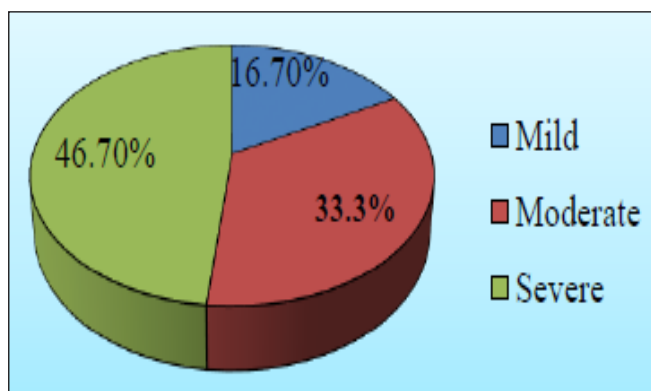


Figure 3. Control group social anxiety scores

The data presented from Figure 2 and 3, represents the comparison of the frequency and percentage of the Pre-test social anxiety scores of both the groups with level of social anxiety i.e. Mild, Moderate and Severe.

About 50% (15) out of 30 subjects were found to have severe level of social anxiety in the experimental group whereas 46.7% (14) in the control group. Majority of the adolescents were found to have moderate level of anxiety with 43.3% (13) in the experimental group and 33.3% (10) in the control group.

Only 10% (3) were in the mild category whereas 16.7% (5) found to be in the control group. From the data it was found that the $p > 0.001$ at 0.05 level of significance, therefore it was concluded that the two groups were homogenous and comparable.

Table 1. Mean, standard error, standard deviation and paired test values of pre-test and post scores of experimental group and control group

(ne+nc=60)

Group	Experimental group		Control group	
	Pre-test	Post-test	Pre-test	Post-test
Social Anxiety Mean Score (SD)*	213.3 (30.4)	140.1 (29.8)	156.1 (38.46)	150.3 (19.67)
Std error	8.204		7.887	
't' value	8.9227		0.7354	
p-value	<0.001		0.4651	

*t' = (2.05), $p \leq 0.05$. *Significant at 0.05 level.

The data presented in the Table 1, indicates that the computed 't' value (8.9227) is greater than the 't' value of (2.05) this shows that difference obtained in the mean Pre-test and the Post-test social anxiety score was a true difference. Hence, we fail to reject the null hypotheses. This indicated that the demonstration of Jacobson's Progressive Muscle Relaxation Technique was effective in reducing the social anxiety among adolescents.

It is evident from Table 2, that the calculated value of χ^2 (0.040), (2.022), (5.757) in the variable age, birth order, socio economic status is lesser than the table value at df (29). This indicates that there is no significant association between the Post-test anxiety scores and demographic variables. Also the 'p' value is greater than the calculated value at 0.05 level of significance of the variables education level and no of sibling hence the null hypothesis is accepted.

It is evident from Table 3, that the calculated value of χ^2 (0.240), (2.011), (2.858) is lesser than the table value at df (29). This indicates that there is no significant association between the post anxiety scores and demographic variables in the control group.

Table 2. Association between the post-test anxiety scores of the experimental group with the demographic variable (n=60)

Variables	Social anxiety scores						Test used	values	df	p-value
	Mild		Moderate		Severe					
	f	%	f	%	f	%				
Age							Chi-square test with yates' correction	0.040	2	0.980
12-13	1	16.7	3	17.6	1	14.3				
14-15	5	83.3	14	82.4	6	85.7				
Education level							Fischer exact's test	1.639	3	0.650
8	0	0	2	11.8	0	0				
9	6	100	15	88.2	7	100				
No of sibling							Fischer exact's test	2.366	2	0.306
One sibling	0	0	2	11.8	2	28.6				
Two siblings	6	100	15	88.2	5	71.4				
Birth order							Chi-square test with yates' correction	2.022	2	0.369
First born	1	16.7	8	47.1	2	28.6				
Second born	5	83.3	9	52.9	5	71.4				
Socio economic status							Chi-square test with yates' correction	5.757	6	0.451
Upper-middle	4	66.7	7	36.80	5	16.6				
Upper-High	2	33.3	12	63.20	5	16.6				

p≤0.05. *Significant at 0.05 level.

Table 3. Association of social anxiety scores of Post-test anxiety scores of Control group with the demographic variable (n_c=30)

Variables	Social anxiety scores						Test used	values	df	p value
	Mild		Moderate		Severe					
	f	%	f	%	f	%				
Age							Chi-square test with yates' correction	0.240	2	0.980
12-13	0	0	5	17.6	1	16.7				
14-15	1	100	18	78.30	5	83.3				
Education level							Fischer exact's test	1.648	3	0.650
8	0	0	4	17.4	0	0				
9	1	100	19	82.60	6	100				
No of sibling							Fischer exact's test	2.302	2	0.306
One	0	0	5	21.7	0	0				
Two	1	100	18	78.3	6	100				
Birth order							Chi-square test with yates' correction	2.011	2	0.369
First	0	0	8	34.80	1	16.7				
Second	1	100	15	65.20	5	83.30				
Socio economic status							Chi-square test with yates' correction	2.858	2	0.240
Upper high	4	66.7	14	53.80	4	13.33				
High	2	33.3	2	33.33	4	13.33				

p≤0.05; *Significant at 0.05 level.

Discussion

The researcher in the present study tested the effectiveness of the Jacobson's Progressive Muscle Relaxation Technique.

The present study assesses the level of social anxiety and the effectiveness of Jacobson's Progressive Muscle Relaxation technique to the adolescent. A similar study to assess the social anxiety and to know the effectiveness of Jacobson's progressive muscle relaxation technique on social anxiety was conducted by Joy E F et al. A total of 193 high school adolescent girls were assessed for their social anxiety using the demographic tool and using a social anxiety scale and Jacobson's Progressive muscle relaxation technique was administered and it was found that Jacobson's progressive muscle relaxation was effective with ($t=10.646$) ($df=39$) ($p<0.001$).⁶

The findings of the present study were similar to Johnson, C. M., Larson et. al who conducted an experimental study at Midwestern public school among third grade students to determine the effect of relaxation technique on test anxiety level. Sample size was 104 students - 58 males and 46 females - with ages ranging from eight to ten years. Westside Test Anxiety scale was used. A random matched paired strategy was used. Results showed there was significant difference between the Pre and Post-mean score of social anxiety in the experimental group [$t_{49} = 2.39$, $P<0.05$]. Hence the researcher concluded that there was a significant decrease in the mean anxiety score due to relaxation training.⁷

The present study is also similar to the findings of the study of Ramani U who conducted a Quasi experimental study with Pre and Post-test design ,took 50 samples with the purposive sampling, the social anxiety was assessed with Leibowitz social anxiety scale for children and adolescent, the anxiety was categorized in mild, moderate, severe category and, was found that the Jacobson's Progressive Muscle Relaxation technique was effective in reduction of social anxiety.⁸

Conclusion

The administration of the Jacobson's Progressive Muscle Relaxation Technique on social anxiety was found to be effective in reducing the social anxiety as there was significant difference found in the post-test anxiety scores of the two groups. The level of social anxiety was found to be reduced and demonstration helped the adolescent to improve their practice and relieved their anxiety.

Acknowledgement

I express my deep sense of gratitude to my Guide Prof. Urmila D. Bhardwaj, Principal Rufaida College of Nursing for the constant encouragement and guidance and Mr. Naseem Mancheri, Tutor, Rufaida college of Nursing for critical

evaluation throughout the study. It was a great privilege to work under them. I extend my immense gratitude to my guide and co guide for their precious guidance throughout the study.

Conflict of Interest: None

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