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SOCIAL ANXIETY DISORDER REDUCTION AMONG ADOLESCENTS IN DELTA STATE: HOW EFFECTIVE IS THE APPLICATION OF COGNITIVE RESTRUCTURING THERAPY?

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Abstract

The study evaluated the effectiveness of CRT in reducing social anxiety among adolescents in Delta State. Two research questions and hypotheses guided the study. A 2 x 2 factorial, quasi-experimental, control research design was used in the study. 29,409 senior secondary school II (SS 2) students make up the population. The sample for this research is made up of 100 SS2 students who were selected via many stages from two secondary schools in Delta State. The Social Anxiety Scale (SAS), a validated questionnaire, served as the study's tool. The Social Anxiety Scale (SAS) yielded reliability coefficient values of 0.94 when the instrument's reliability was assessed using Cronbach's alpha. After giving the responders in the cognitive restructuring therapy group and the control group a pretest, the researcher gave the students in the experimental group an 8-week cognitive restructuring therapy treatment package. Students in the experimental and control groups were given a post-test using the Social Anxiety Scale (SAS) at the conclusion of the therapy. To address the research topic, the study utilised a descriptive statistical analysis. To test hypotheses at a significance level of 0.05, an analysis of covariance, or ANCOVA, was calculated. The findings show a significant difference between the social anxiety mean scores on the pretest and posttest for students receiving cognitive restructuring treatment and those in the control group. The mean social anxiety levels of male and female teenagers receiving cognitive restructuring treatment differed significantly. Thus, it was shown that social anxiety mean scores among students are considerably impacted by cognitive restructuring treatment, with different genders experiencing different effects. It is therefore recommended among others that school authorities provide professional development and training for counselors and psychologists on the principles and application of CRT.

Keywords: Social anxiety, Adolescents, Cognitive Restructuring Therapy.

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INTRODUCTION

Adolescence is a critical developmental stage in identity formation and social skills development, dominated by concerns about peer acceptance and body image. Major physical, emotional, and social changes mark early adolescence. During this stage, adolescents become more self-aware, need social acceptance, and are more sensitive to others' opinions. Ollendick & Hurrell (2016) explain that secondary school places greater emphasis on adolescents' social assessment, both academically and in extracurricular activities. Situations involving public speaking, group presentations, and social comparisons often expose adolescents. This heightened social consciousness can cause anxiety and a fear of negative judgments. According to Remes et al. (2016), people start to compare themselves to others and experience increased self-consciousness, resulting in increased social anxiety, which influences their social contact to a large extent and, in most cases, goes beyond social isolation. Social interaction issues among adolescents have been linked to several conditions throughout the years, including anxiety, depression, and social anxiety disorder. The focus of this investigation, however, will be social anxiety disorder (SAD). Social anxiety disorder affects millions of individuals worldwide, often leading to avoidance of social interactions, diminished self-esteem, and increased vulnerability to other mental health issues such as depression. Social anxiety disorder (SAD) is a common mental health disorder among adolescents. It affects approximately 6.8% of teenagers worldwide, hindering their ability to navigate social interactions, perform tasks, and improve their overall quality of life (World Health Organization, 2018). The core of SAD lies in the overwhelming anxiety provoked by social or performance situations, where individuals fear negative evaluation, embarrassment, or humiliation. Many techniques have been advocated for the management of social anxiety disorder (SAD) among adolescents. However, effort was made in this study to determine the effectiveness of cognitive restructuring therapy.

Cognitive restructuring is a collection of therapies that could assist individuals in identifying and altering harmful thought patterns. Cognitive restructuring focuses on helping young people understand and assess their fears, change negative thoughts, and find ways to overcome them. This technique is based on the premise that negative self-talk is reflected in our behavior. It is enough to change our inner dialogue and stop talking to ourselves negatively to change our behavior. The use of cognitive restructuring in people with a social anxiety disorder is based on the idea that it is not the situation that creates anxiety but the individual's way of thinking about the problem (Volkan & Seher, 2022). Clients are typically presented with this model and examples to support it. The client and therapist then work together to identify automatic thoughts, defined as negative and often inaccurate thoughts that cause stress.

Cognitive restructuring therapy models how the client struggles with automatic thoughts, and the client practices identifying and countering automatic thoughts inside and outside the session. When incorporated into treatment packages, cognitive restructuring is most commonly used before, during, and after exposure to enhance its effectiveness. In this framework, exposure is seen as a way of challenging automatic thoughts and beliefs rather than simply as a habituation process (Volkan & Seher, 2022)

Statement of the problem

It is a known fact that the adolescent stage is a stage of human development full of many challenges, and if an individual at this stage is not well guided, their future could be jeopardized. One such challenge is the increased level of social anxiety that is associated with the stage of development. Adolescents are particularly vulnerable to developing SAD, which

can severely impact their social, academic, and personal development. If not properly managed, it could lead to the development of other mental disorders, such as depression and substance abuse. Furthermore, social anxiety can hinder adolescents' academic progress. It may prevent them from actively participating in class discussions, seeking help from teachers, or forming study groups with their peers, thereby hindering their learning experience and academic achievement. Influences resulting in low academic progress do not favor national development and, therefore, ought to be minimized.

In an attempt to reduce SAD, most therapists rely on the use of traditional approaches, such as pharmacotherapy, which often come with side effects and may not address the underlying cognitive patterns that contribute to social anxiety. This underscores the need for the use of effective, accessible, and non-pharmacological interventions. As a result, different approaches have been suggested; while some have been tested and proven to be effective, others have not been fully examined to prove their effectiveness. CRT has been shown theoretically to be effective in reducing symptoms of social anxiety by helping individuals challenge irrational fears and develop healthier cognitive frameworks. To the best of the researcher's knowledge, whether cognitive restructuring therapy could effectively reduce social anxiety disorder compared to the traditional method and among secondary school adolescents in Delta State is yet to be empirically established. Hence, the problem of this study is to determine the effectiveness of cognitive restructuring therapy in reducing social anxiety symptoms among adolescents in Delta State. The researcher also looked at the moderating effect of gender.

Research Questions

The following research questions guide the study:

1. What is the difference between the pretest and post-test social anxiety mean scores of students treated with the Cognitive Restructuring therapy and those in the control group?
2. What is the difference in the interaction effect of social anxiety mean scores of male and female students treated with cognitive restructuring therapy?

Hypotheses

These null hypotheses were formulated for the study and were tested at a 0.05 level of significance.

1. There is no significant difference in the effect of the cognitive restructuring therapy in reducing students; social anxiety when compared with those in the control group using their mean scores.
2. There is no significant difference in social anxiety scores of male and female students treated with cognitive restructuring Techniques.

Purpose of the Study

The purpose of this study is to investigate the effectiveness of Cognitive Restructuring Therapy in reducing social anxiety symptoms among adolescents in Delta State. Specifically, the study was designed to:

1. determine the difference between the pretest and post-test social anxiety mean scores of students treated with the Cognitive Restructuring therapy and those in the control group; and
2. evaluate the difference in the social anxiety sore of male and female students treated with cognitive restructuring Technique.

Theoretical framework of the study

Heimberg et al.'s learning theory served as the model for the theoretical framework (1995). According to this paradigm, social anxiety starts with the perspective of the audience, which includes anyone who has the ability to judge a person, whether they want to or not. As we frequently say, "your image of my image of you," the perception of an audience triggers a mental representation as perceived by the audience, that is, a picture in the mind's eye of the person with social anxiety of the audience's picture of him or her. The individual with social anxiety believes that the audience has a low view of them because of skewed self-perception and/or unfavourable self-imagery that stems from past unpleasant social experiences. But at the same time, he or she can think that the audience has very high expectations for their performance, which are often unachievable, leading to what is really an arithmetic problem: A person is fundamentally in negative numbers when their assessment of what the audience expects is compared to their mental image of themselves as viewed by the audience. There is a real danger of assessment, and there seems to be a strong chance that the individual will be judged to be inadequate. Evaluative danger always leads to anxiety. But it also reinforces the vicious cycle by feeding back into the audience's mental image of themselves in a way that weakens it even more. Attention bias towards threat almost guarantees that the audience's mental representation of the self is negatively impacted by visible or perceived displeasure on their part, visible signs of anxiety (such as blushing or reduced eye contact or fidgety behaviour), and aspects of anxiety that are only known by the individual (such as elevated heart rate or the feeling that one's mind is going blank, which may signal an impending loss of control of behaviour). As long as the individual stays in the situation, this vicious cycle will continue, and it will continue over time as long as the person expects similar circumstances in the future. Since social anxiety is a learnt behaviour that may be unlearnt, the dependent variable will arise if the moderating factors and independent variables are related. Gender (male and female) is the moderating variable in this model, whereas cognitive restructuring is the independent variable. The researcher believes that among Delta State senior secondary school pupils, social anxiety would be influenced by the independent variable of cognitive restructuring.

Research Method

A quasi-experimental design, non-equivalent pre-test, post-test, and control group design using a 2 x 2 factorial design were adopted for the study. The design has interventions at two levels of cognitive restructuring therapy and a control group across genders at two levels (male and female) of adolescents. The population consists of 29,409 adolescents aged 14–18 years. This study's sample consists of 100 adolescents. A multi-stage sampling technique was used to select the sample for the study. First, the researcher wrote out the senatorial districts in Delta State, put them in a box, and selected one of them. Furthermore, the researcher wrote down the names of all local governments in Delta Central. Hence, two local governments were picked. Finally, all the schools in the various local governments were written differently on paper, put in a box, and one school was picked from each local government. making a total of two (2) secondary schools from the entire public secondary schools across Delta State. SS Two students in their intact class were assigned to the two treatment groups and the control group. One hundred (100) students were used for the study. fifty (50) students were in the experimental group using cognitive restructuring at Jeremi Secondary School, and fifty (50) students were in the control group using sex. Education is provided at Ugborikoko Secondary School, Effurun.

The instrument for this study was a questionnaire titled the Social Anxiety Scale (SAS). The Social Anxiety Scale (SAS) was adapted from Bartholomay & Houlihan (2016). The instrument consists of two parts. Part A measures student biodata, and Part B consists of 32 items on social anxiety. The respondents were asked to indicate their opinion on a points scale with close-ended items as: strongly agree (4), agree (3), disagree (2), and strongly disagree (1) points. The face validity of the instrument was established by three (3) experts in the Guidance and Counseling Department. These experts assessed the instrument for appropriateness and suitability for the study, and their suggestions were affected. The content and construct validation of the instrument were done using factor analysis. Using the varimax with the Kaiser normalization method, these items were loaded on seven components. The Eigenvalues that were above one were used for the selection of each component in the instrument.

Overall, the rotated sum of squared loads accounted for 58.8% of the total items. This is an indication that the instrument's content is valid. Furthermore, evidence of construct validity was shown by the rotated component matrix for each of the fifty (50) items that ranged between 51 and 84. These results indicate that the instrument has evidence of adequate content and construct validity. The result suggests that the measures are excellent indicators of their respective factors or construct validity. A pilot test of the instrument was carried out on 50 students in a different secondary school, a school outside the selected schools for the study. The result of the test was used to compute the reliability of the instrument. The Cronbach alpha was applied for the computation of the reliability coefficient of the instrument, and a reliability coefficient of 0.94 was obtained for the entire instrument. The reliability study was carried out to establish the internal consistency of the instrument.

Intervention Procedures

To obtain permission, the researcher met with the head teachers of two of the sampled schools. The researcher described how she would be working with the SS2 students on an experimental project for eight weeks, requiring forty minutes a week for training sessions. Students in the experimental and control groups took the Social Anxiety Scale (SAS) pretest before the therapy. Following that, the experimental group's pupils received eight weeks of treatment using a cognitive restructuring therapy treatment package. Students in the experimental and control groups were given a post-test using the Social Anxiety Scale (SAS) at the conclusion of the therapy.

Method of Data Analysis

A descriptive statistic such as the mean and standard deviation was used to answer the research questions. Hypotheses were tested using a t-test and analysis of covariance (ANCOVA). All hypotheses were tested at the 0.05 level of significance.

Results and Discussion

Research Question 1: What is the difference between the pretest and post-test social anxiety mean scores of students treated with the Cognitive Restructuring Technique and those in the control group?

Table 1: Mean and Standard Deviation showing the Pre-test and post-test Scores of Students taught with Cognitive Restructuring and those in the control group.

Treatment group	N	Pretest $\bar{X}$	Pretest SD	Post Test $\bar{X}$	Post Test SD	Mean Gain	Decision
Cognitive Restructuring Technique group	50	97.78	2.67	76.18	13.12	-21.6	There is a difference
Control Group	50	102.22	8.37	101.22	11.62	-1.0	Very low deference
Total	100						

The above table shows the changes in mean scores of students in the control group (102.2200) as against 101.2200 with a deference of -1.0 and students in the cognitive restructuring group (76.1800) as against 97.7800 with a deference of -21.6, which indicates that, on average, both groups experienced a decrease in social anxiety from the pretest to the posttest. However, the decrease was much more pronounced in the cognitive restructuring group. This suggests that the cognitive restructuring technique has a more significant impact on reducing social anxiety than the control group. The result indicates that the Cognitive Restructuring Technique appears to have a substantial impact on reducing social anxiety when compared to the control group, as evidenced by the significant difference in mean scores between the pretest and post-test conditions.

Research Question 2

What is the difference in the reduction of social anxiety mean scores of male and female students treated with the cognitive restructuring technique?

Table 2: Mean and Standard Deviation of Male and Female Students Treated with Cognitive Restructuring Technique.

Sex	N	Mean	Std. Deviation	Mean difference
Male	14	79.36	13.41	4.42
Female	36	74.94	12.99	

Table 2 shows the changes in mean scores of male and female students in the cognitive restructuring technique. Male students had a mean of 79.36 as against 74.94 with a difference of 4.42 in favour of male. This suggests that, on average, male students treated with Cognitive Restructuring Technique experienced a greater reduction in social anxiety scores compared to female students.

Testing of Hypotheses

Hypotheses 1: There is no significant difference in the effect of the cognitive restructuring therapy in reducing students; social anxiety when compared with those in the control group using their mean scores.

Table 3: ANCOVA Summary on the effectiveness of the cognitive restructuring therapy in reducing students' social anxiety and control group

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	17611.559[a]	2	8805.779	85.080	.000	Hypothesis rejected
Intercept	7.753	1	7.753	.075	.785	
Pretest	9668.884	1	9668.884	93.420	.000	
Treatment Group	1936.519	1	1936.519	18.710	.000	
Error	10039.441	97	103.499			
Total	814420.000	100				
Corrected Total	27651.000	99				

a. R Squared = .637 (Adjusted R Squared = .629)

The provided table above presents the analysis for hypothesis 1, which seeks to determine whether there is a significant difference in the effectiveness of the cognitive restructuring technique in reducing students' social anxiety when compared to those in the control group, as reflected in their mean scores. The statistical analysis produced the following outcomes: F(1, 97) = 18.710, with a p-value less than 0.001. When evaluating Hypothesis 2 at an alpha level of 0.05, it becomes evident that the calculated p-value is less than the predetermined significance level, which is 0.05. Consequently, based on these results, it can be concluded that the post-test outcome was indeed statistically significant, given that the p-value falls below the 0.05 significance level. Therefore, the null hypothesis, which posits that there is no significant difference in the effectiveness of the cognitive restructuring technique in reducing students' social anxiety when compared to those in the control group using their mean scores, is rejected. Instead, the alternative hypothesis is upheld, indicating that there is indeed a significant difference in the effectiveness of the cognitive restructuring technique in reducing students' social anxiety when compared to those in the control group using their mean scores. This conclusion is supported by the p-value, which is less than the 0.05 significance level.

Hypotheses 2: There is no significant difference insocial anxiety sore of male and female students treated with cognitive restructuring Technique.

Table 4: Summary of independent t-test comparing social anxiety sore of male and female students treated with cognitive restructuring Technique.

	Sex	N	Mean	Std. Deviation	df	t-cal.	Sig. (2-tailed)	Remark
Posttest	Males	14	79.36	13.41	48	1.07	0.291	Null hypothesis accepted
	females	36	74.94	12.99				

Level of significance=0.05

Table 11 is a summary of the t-test comparing the social anxiety scores of male and female students treated with cognitive restructuring Technique. The table reveals that the p-value (0.291) of the calculated t-value (1.07) is greaterthan 0.05. With this result, Ho_4 was accepted. Thus, there is no significant difference in the social anxiety score of male and female students treated with the cognitive restructuring Technique.

Discussion of Findings

The results of the first hypothesis reveal a significant difference in the effectiveness of the cognitive restructuring technique in reducing students' social anxiety when compared to a control group, based on mean scores. Students who underwent cognitive restructuring exhibited lower post-test mean scores than their pre-test scores, indicating a reduction in social anxiety. A cognitive-behavioral method called cognitive restructuring seeks to identify and alter unhelpful thinking processes linked to anxiety. It attempts to establish a more realistic and adaptable viewpoint by challenging cognitive distortions such as overgeneralization, negative self-talk, and catastrophizing. By giving them the tools to control and alter their cognitive patterns, this method increases people's sense of empowerment and reduces their social anxiety. It may help maintain long-term decreases in social anxiety and is useful in promoting long-term improvements in cognitive habits. The behavioural and cognitive aspects of social anxiety may be treated using this strategy in conjunction with behavioural treatments. The effectiveness of the strategy is determined by the level of participant participation and the quality of the therapeutic connection between the participants and the intervention providers. This result supports the ideas of Arlin (2020) and Shikatani, Antony, Kuo, and Cassin (2014), which emphasise the adaptability and effectiveness of cognitive reorganisation. According to them, cognitive restructuring is a method rather than a specific approach. It uses a variety of techniques, including thought recording, arguing, and guided questioning, to replace these false beliefs with more logical and uplifting ideas in an effort to lessen anxiety. They also suggest that thinking in black and white, or just seeing things in absolutes, is a common distortion that people with social anxiety disorder encounter. They go on to say that the use of cognitive restructuring for individuals suffering from social anxiety disorder is predicated on the idea that an individual's thoughts about a situation, rather than the situation itself, is what causes anxiety, and that an individual who is able to think positively about the situation will experience a complete recovery.

The second hypothesis of the study revealed that there is no significant difference in social anxiety between male and female students treated with the cognitive restructuring technique. This implies that the cognitive restructuring technique is equally potent in addressing social anxiety for both male and female students. Because the cognitive restructuring technique focuses on addressing cognitive triggers that are prevalent and similar across genders, it is more likely to be effective for both male and female students. Shared cognitive patterns could contribute to the observed lack of significant interaction differences. The cognitive restructuring technique may have been developed based on the understanding that the cognitive responses to anxiety are similar for both males and females. Addressing these common cognitive responses contributes to the intervention's equal effectiveness. The cognitive restructuring technique may employ strategies that are inclusive and sensitive to the diverse experiences and cognitive patterns of both male and female students. A well-crafted intervention that resonates with a broad range of individuals is more likely to yield consistent results across genders. The cognitive restructuring technique may have successfully overcome any potential barriers that could hinder its effectiveness based on gender differences. Factors such as gender stereotypes or biases may be addressed or neutralized in the design and implementation of the intervention. If both male and female participants report similar positive experiences with the cognitive restructuring technique, it suggests that the intervention is well-received and effective across different gender groups. Consistency in the treatment experience supports the conclusion that equal effectiveness exists. The cognitive restructuring technique may teach coping mechanisms that are universally applicable,

regardless of gender. If these coping strategies are effective in managing social anxiety for both males and females, it supports the hypothesis of no significant interaction difference. This finding aligns with the notion that social anxiety is not necessarily influenced by gender. It echoes the research conducted by Kachel and Steffens (2017), as well as Razidi, Umarudin, Yusuf & Anuar, 2021), which suggests that an individual's social anxiety can be shaped by a variety of factors, regardless of their gender. In other words, as individuals grow and develop, various elements can contribute to the manifestation of social anxiety. These factors can range from personal experiences and environmental influences to genetic predispositions and psychological traits. Importantly, these factors do not discriminate based on gender, suggesting that both males and females are equally susceptible to social anxiety. Therefore, the effectiveness of the cognitive restructuring technique in reducing social anxiety does not differ significantly between male and female students. This is a crucial finding as it underscores the universal applicability of the cognitive restructuring technique in managing social anxiety among adolescents, regardless of their gender.

Conclusion

The study found a significant difference in the effectiveness of cognitive restructuring therapy in reducing students' social anxiety compared to the control group. Thus, it was concluded that the cognitive restructuring technique is an effective approach to reducing students' social anxiety. It was also found that there is no significant difference in social anxiety between male and female students treated with the cognitive restructuring technique. It was also concluded that the effectiveness of cognitive restructuring techniques is not gender-dependent.

Recommendations

Based on the findings, the following recommendations were made.

1. School counselors and psychologists should consider using cognitive restructuring therapies as interventions for students who struggle with social anxiety, as they have been proven to be effective and beneficial
2. Schoolauthoritiesshould provide professional development and training for counselors and psychologists on the principles and application of CRT.
3. School counselors and psychologists should ensure that both male and female students have equal opportunities and access to CRT and other mental health services. This can involve creating safe and supportive environments where students of all genders feel comfortable seeking help.
4. School authority should develop community and support outreach programs that include workshops and seminars on CRT techniques for parents, guardians, and community leaders. This will help extend support to adolescents outside school environments and foster a community-wide understanding of social anxiety and its management.

Contribution to Knowledge

1. The study has established that the cognitive restructuring technique is an effective approach to reducing students' social anxiety.
2. The study has established that the effectiveness of cognitive restructuring techniques is not gender-dependent.

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