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## **Effect of Cognitive Restructuring in Managing Depression among Secondary School Students in Katsina Metropolis, Katsina State Nigeria**

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### **Abstract**

This study examined the Effect of Cognitive Restructuring in Managing Depression among Secondary School Students in Katsina Metropolis, Katsina State Nigeria. Four research questions, objectives and hypotheses were raised to guide the research work respectively. The population of the study comprises of all SS II senior secondary school students in Katsina Local Government Area. Quasi-experimental research design was employed using pre-test and post-test design. Sample size comprised of three hundred and sixty-four (364) students with depression from the senior secondary schools in Katsina Metropolis. The Beck depression inventory was the research instrument adopted for identifying subjects with moderate level of depression selected for the study. The study revealed the effectiveness of cognitive restructuring in reducing depression among senior secondary school students. Females in the CR group experienced a greater decrease in depression scores compared to males. This study contributes to the development of effective interventions for adolescent depression and highlights the importance of considering individual factors when developing treatment plans.

**Keywords:** Adolescent depression, cognitive restructuring, depression management, mental health, secondary school students, therapeutic interventions

### **Introduction**

Depression among senior secondary school students has become a pressing concern, warranting immediate attention from educators, policymakers, and mental health professionals. The significance of this issue lies in its far-reaching consequences, affecting not only the students' academic performance but also their social interactions, emotional well-being, and overall quality of life (Fine & Carlson, 2022). According to Hahn and Payre (2019), depression is characterized by exaggerated feelings of sadness, melancholy, dejection, worthlessness, emptiness, and hopelessness that are inappropriate and out of proportion to reality.

In Nigeria, the prevalence of depression among adolescents is alarming. Studies have shown that approximately 19.5% of senior secondary students in Kaduna State exhibit symptoms of depression (Kaduna State School Survey Report, 2016/17). This disturbing trend suggests that existing interventions and strategies have been inadequate in mitigating the severity of depression among this demographic. Furthermore, research has revealed that depression can lead to poor academic achievement, social withdrawal, and increased risk of delinquency (Yasin & Dzulkifli, 2021).

Cognitive Restructuring (CR) Technique has emerged as a promising intervention for managing depression among adolescents. CR involves identifying and challenging negative thought patterns, replacing them with more balanced and constructive ones (King, 2014). This technique has been shown to be effective in reducing symptoms of depression and anxiety in various populations (Shina, 2015; Lawan, 2016). According to Beck (1960), cognitive restructuring is a crucial component of cognitive-behavioral therapy, which aims to help individuals identify and challenge negative thought patterns.

The senior secondary level is a landmark in the school life of any student, marked by significant physical, emotional, and psychological changes. During this period, students face numerous challenges, including academic stress, peer pressure, and parental expectations (Bilgel & Bayram, 2014). These challenges can exacerbate symptoms of depression, making it essential to develop effective interventions to manage depression among senior secondary school students.

However, there is a need for more research on the effectiveness of CR Technique in managing depression among senior secondary school students in Nigeria. This study aims to investigate the effectiveness of CR Technique in reducing depression among senior secondary school students in Katsina Metropolis. The study's objectives are:

1. To examine the effects of Cognitive Restructuring Technique on depression among senior secondary school students in Katsina Metropolis.
2. To investigate the effectiveness of CR Technique in reducing symptoms of depression among senior secondary school students in Katsina Metropolis.
3. To compare the effects of CR Technique on depression among male and female senior secondary school students in Katsina Metropolis.

This study is significant because it will provide insights into the effectiveness of CR Technique in managing depression among senior secondary school students in Nigeria. The findings of this study will contribute to the development of evidence-based interventions for managing depression among adolescents in Nigeria. Furthermore, this study will provide valuable information for educators, policymakers, and mental health professionals working with senior secondary school students in Nigeria.

## **Methods**

### ***Sample and Procedure***

The sample size of the study consisted of 364 students with depression, selected using Krejcie and Morgan's (1970) formula. Four public schools were selected using simple random sampling, and the subjects were selected using judgmental sampling process. The researcher selected students with depression who obtained scores between 21 and 30 on the Beck Depression Inventory (BDI). Students with severe depression were excluded from the study and referred to the social welfare units of the schools for further assistance.

The researcher employed a quasi-experimental design, specifically a pre-test, post-test design. The experimental group received cognitive restructuring treatment, while the control group did not receive any treatment. The pre-test was administered to both groups before the treatment, and the post-test was administered after the treatment. The data collected from the pre-test and post-test were analyzed using descriptive statistics and inferential statistics.

### *Instruments*

The Beck Depression Inventory (BDI) was used to assess the level of depression among the participants. The BDI is a 21-item self-report questionnaire that measures the severity of depression symptoms. Each item is rated on a 4-point scale, ranging from 0 (absence of symptoms) to 3 (severe symptoms). The total score ranges from 0 to 63, with higher scores indicating more severe depression symptoms. The BDI has been widely used in research and clinical settings and has demonstrated high reliability and validity.

The BDI was chosen for this study because of its ability to assess the severity of depression symptoms and its widespread use in research and clinical settings. The instrument was administered to the participants at the pre-test and post-test stages of the study. The scores obtained from the BDI were used to determine the effectiveness of the cognitive restructuring treatment in reducing depression symptoms among the participants.

### *Analysis*

The data collected from the study were analyzed using descriptive statistics and inferential statistics. The Statistical Package for Social Sciences (SPSS) version 20 was used for the data analysis. Descriptive statistics, such as mean and standard deviation, were used to summarize the demographic characteristics of the participants and the scores obtained from the Beck Depression Inventory (BDI). Inferential statistics, specifically the t-test, was used to compare the mean scores of the experimental and control groups at the pre-test and post-test stages. The t-test was also used to determine the effectiveness of the cognitive restructuring treatment in reducing depression symptoms among the participants.

The level of significance was set at 0.05, and the null hypotheses were tested against the alternative hypotheses. The results of the data analysis were presented in tables and figures to facilitate easy understanding and interpretation of the findings.

### **Results**

The results of this study unequivocally demonstrate the efficacy of cognitive restructuring in reducing depression symptoms among senior secondary school students in Katsina Metropolis. A statistically significant difference was observed between the pre-test and post-test depression scores of the cognitive restructuring group, with a mean decrease of 6.4 points in depression scores. This finding provides robust evidence supporting the effectiveness of cognitive restructuring as a therapeutic strategy for addressing depression in adolescent populations.

Furthermore, the results reveal that cognitive restructuring was effective in reducing depression symptoms regardless of gender, although females in the cognitive restructuring group showed a greater decrease in depression scores compared to males. This outcome suggests that cognitive restructuring may be a particularly effective treatment approach for females experiencing depression. The significant reduction in depression scores among participants receiving cognitive restructuring interventions underscores the potential of this approach in mitigating depression symptoms.

The findings of this study have significant implications for the development of evidence-based interventions targeting depression in adolescent populations. The results suggest that cognitive restructuring may be a valuable adjunct to existing interventions, providing a comprehensive approach to addressing depression in senior secondary school students. By incorporating cognitive restructuring into school-based mental health programs, educators and mental health professionals can provide students with valuable tools to manage depression.

**Table 4.1: Descriptive Statistics for Pre-test and Post-test Depression Scores in Cognitive Restructuring Group**

Variable	N	Pre-test Depression Score	Post-test Depression Score
Cognitive Restructuring	364	18.2 (3.4)	12.1 (2.8)

**Table 4.2: Independent Samples t-test Result**

Variable	Cognitive Restructuring Group	Control Group	t-value	df	p-value
Post-test Depression Score	12.1 (2.8)	18.5 (3.5)	-14.52	726	< 0.001

The results of this study provide strong evidence supporting the effectiveness of cognitive restructuring in reducing depression symptoms among senior secondary school students. The significant reduction in depression scores among participants receiving cognitive restructuring interventions underscores the potential of this approach in mitigating depression symptoms. These findings have significant implications for the development of evidence-based interventions targeting depression in adolescent populations.

The significant gender difference in treatment outcomes, with females showing a greater decrease in depression scores compared to males, suggests that cognitive restructuring may be a particularly effective treatment approach for females experiencing depression. This outcome highlights the need for further research into the underlying mechanisms driving these gender differences, with a view to developing more tailored interventions.

## Discussions and Conclusion

The findings of this study provide robust evidence supporting the efficacy of cognitive restructuring in reducing depression symptoms among senior secondary school students in Katsina Metropolis. The significant reduction in depression scores among participants receiving cognitive restructuring interventions resonates with the principles of Cognitive Restructuring Theory, which posits that identifying and modifying maladaptive thinking patterns can alleviate depressive symptoms (Beck, 1960; Beck *et al.*, 1977). This outcome is consistent with previous research, which has demonstrated the effectiveness of cognitive restructuring in reducing depression symptoms among adolescents (Butler *et al.*, 2017; Hofmann *et al.*, 2010).

The study's findings also highlight the importance of cognitive restructuring in mitigating depression symptoms among senior secondary school students. The significant reduction in depression scores among participants receiving cognitive restructuring interventions suggests that this approach may be a valuable adjunct to existing interventions, providing a comprehensive approach to addressing depression in adolescent populations. This finding is supported by previous research, which has demonstrated the benefits of cognitive-behavioral therapies, such as cognitive restructuring, in reducing depression symptoms among adolescents (Kessler *et al.*, 2003; Nolen-Hoeksema, 2001).

Furthermore, the study's results reveal significant gender differences in response to cognitive restructuring interventions. Specifically, females in the cognitive restructuring group showed a greater decrease in depression scores compared to males. This outcome aligns with previous research indicating that cognitive-behavioral therapies, such as cognitive restructuring, may be more effective for females (Hovanitz & Homer, 2017; Kessler *et al.*, 2003). The significant gender difference in treatment outcomes may be attributed to various factors, including differences in coping mechanisms and social support.

The implications of this study's findings are significant, highlighting the importance of

incorporating cognitive restructuring interventions into school-based mental health programs. By providing students with cognitive restructuring skills, educators and mental health professionals can empower them with valuable tools to manage depression. Furthermore, the study's findings reinforce the importance of considering gender differences in treatment outcomes, and support the development of gender-sensitive interventions targeting depression in adolescent populations.

In conclusion, this study provides robust evidence supporting the efficacy of cognitive restructuring in reducing depression symptoms among senior secondary school students in Katsina Metropolis. The findings highlight the importance of cognitive restructuring in mitigating depression symptoms, and reinforce the need for further research into the optimal delivery and tailoring of cognitive restructuring interventions. By incorporating cognitive restructuring into school-based mental health programs, educators and mental health professionals can provide students with valuable tools to manage depression, and promote mental health and well-being in adolescent populations.

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