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Effects of Cognitive Behavioural Intervention on Delinquent Behaviours of Secondary School Students in Mangu Local Government Area, Plateau State, Nigeria

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ABSTRACT

This study examined the Effects of Cognitive Behavioural Intervention (CBI) on Delinquent Behaviours of Senior Secondary School Students in Mangu Local Government Area, Plateau State, Nigeria. The study adopted a quasi-experimental pre-test and post-test control group design. A total of 63 Senior Secondary School II (SSS II) students identified with varying levels of delinquent behaviours—such as truancy, substance abuse, bullying, vandalism, and academic dishonesty—were purposively selected and assigned to experimental (n = 32) and control (n = 31) groups. The experimental group received Cognitive Behavioural Intervention for eight weeks, while the control group received no intervention. A validated instrument titled Students' Delinquent Behaviour Questionnaire (SDBQ) was used to collect data. Mean and standard deviation were employed to answer the research questions. The results showed that students exposed to CBI recorded a significant reduction in delinquent behaviours compared to their counterparts in the control group. Specifically, mean scores on bullying, vandalism, and aggressive behaviour reduced considerably among the experimental group after the intervention. The findings suggest that CBI is effective in modifying maladaptive behaviours and promoting positive behavioural outcomes among adolescents. Based on the results, the paper recommends that schools incorporate CBI into their counselling services, provide training for counsellors and teachers, establish behavioural screening systems, and involve parents in intervention efforts. The study concludes that Cognitive Behavioural Intervention is a viable tool for addressing delinquency among secondary school students and should be integrated into school-based behavioural support programs.

INTRODUCTION

Secondary education serves as a pivotal stage in Nigeria's educational system, bridging the gap between primary and tertiary education while shaping the character and future aspirations of young learners. Unfortunately, the rise of delinquent behaviours among secondary school students continues to undermine this developmental phase by threatening both academic attainment and social stability. Delinquent behaviours such as truancy, substance abuse, vandalism, and bullying disrupt learning environments, diminish academic performance, and creates antisocial tendencies among students. These behaviours, though prevalent among adolescents due to their developmental stage, must be urgently addressed as they compromise the foundational objectives of secondary education (Bartol & Bartol, 2017). Addressing these issues requires a multidimensional approach that not only considers disciplinary actions but also integrates psychological and educational interventions tailored towards adolescent development.

The widespread nature of delinquent behaviours in Nigerian schools has become a growing concern for education stakeholders, given its far-reaching consequences for students, families, schools, and the wider society. These behaviours can lead to emotional distress, academic failure, peer rejection, legal troubles, and poor future prospects. While not every adolescent exposed to risk factors such as poverty, dysfunctional families, peer pressure, and crime engages in delinquency, these factors significantly increase the likelihood of such behaviours manifesting (Gauffin, Vinnerljung & Hjern, 2015). The societal burden includes increased spending on juvenile justice and reduced human capital development, which impacts national growth and development.

Historically, the Nigerian school system has leaned heavily on punitive disciplinary measures like corporal punishment to manage delinquent behaviours, yet these methods have proven largely ineffective in addressing the root causes. Psychologists and educators are increasingly advocating for proactive and therapeutic approaches like Cognitive Behavioural Intervention (CBI), which target the psychological origins of misbehaviour. CBI focuses on helping students identify and restructure irrational thoughts that lead to problematic actions, equipping them with healthier coping mechanisms and pro-social behaviours (Sawyer, Borduin & Dopp, 2015). Its practical application in schools has yielded promising results in tackling aggression, truancy, substance abuse, and academic dishonesty.

Though studies have affirmed the efficacy of CBI in school settings across various parts of Nigeria, its specific impact within localized settings such as Mangu Local Government Area remains under-researched. Given the unique socio-cultural dynamics and educational challenges in Mangu, an investigation into how CBI can be adapted to suit local realities is both timely and necessary. Evidence suggests that when appropriately contextualized, CBI not only improves students' behaviour but also enhances their academic performance and emotional well-being (Eze & Obinna, 2017). This study therefore seeks to evaluate the effectiveness of Cognitive Behavioural Intervention on delinquent behaviours among secondary school students in Mangu, Plateau State,

with the broader aim of contributing to sustainable educational development.

Statement of the Problem

Delinquent behaviours among Nigerian secondary school students—such as bullying, vandalism and aggressive behaviour among others have become increasingly prevalent, raising significant concerns among educators, parents, psychologists, and school counsellors. Studies, such as David (2021), reveal alarmingly high rates of student involvement in such behaviours, with both male and female students equally affected. Despite traditional efforts like counselling and disciplinary actions, these measures have largely failed to curb the rising tide of delinquency, primarily because they address symptoms rather than root causes. As a result, the school environment continues to suffer, affecting academic performance, student morale, and overall school safety.

The persistence of these behaviours not only undermines educational objectives but also threatens broader societal stability by contributing to crime, addiction, and social disintegration. Delinquency places economic burdens on communities due to heightened security needs and legal interventions, while also impeding students' future development. Cognitive Behavioural Intervention (CBI), particularly Cognitive Behavioural Therapy (CBT), offers a more effective alternative by addressing the cognitive and emotional underpinnings of deviant behaviour. Given the lack of research on the application of such interventions within Nigerian secondary schools—especially in Mangu Local Government Area—this study aims to fill that gap by evaluating the impact of Cognitive Behavioural Intervention on the delinquent behaviours of secondary school students in the area.

Aim and Objectives of the Study

The aim of the study is to investigate the effects of Cognitive Behavioural Intervention on delinquent behaviours of secondary school students in Mangu Local Government Area of Plateau State. The following are the specific objectives of the study:

1. Ascertain the pre–test and post–test bullying behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State.
2. Find out the pre–test and post–test vandalism behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State.
3. Determine the pre–test and post–test aggressive behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State.

Research Questions

The following research questions have been raised to guide the study:

1. What are the pre–test and post–test bullying behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?
2. What are the pre–test and post–test vandalism behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?
3. What are the pre–test and post–test aggressive behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?

Hypotheses

The following null hypotheses were formulated and will be tested at 0.05 level of significance:

1. There is no significant difference between the post–test bullying behaviour mean scores of SSS II students in the experimental and control groups in Mangu LGA, Plateau State.
2. There is no significant difference between the post–test vandalism behaviour mean scores of SSS II students in the experimental and control groups in Mangu LGA, Plateau State.
3. There is no significant difference between the post–test aggressive behaviour mean scores of SSS II students in the experimental and control groups in Mangu LGA, Plateau State.

METHODOLOGY

This study employed a quasi–experimental research design of non–equivalent pre–test and post–test control group design. The use of a pre-test post-test design allows for the measurement of changes in behaviour attributable to the intervention. This design enables researchers to assess participants' baseline levels of delinquent behaviours (pre-test) and compare them to behaviours exhibited after the intervention (post-test), thereby establishing the effectiveness of the intervention.

The population of this study consists of all SSS II students with delinquent behaviours in the twenty-five (25) public secondary schools in Mangu Local Government Area. The population of SSS II students with delinquent behaviours in the 25 schools is four hundred and eighteen (418). The population consists of two hundred and six (206) females and two hundred and twelve (212) male students (Field Survey, 2024). SSS II students were selected because many students in SSS II are in the adolescent stage hence prone to delinquent behaviours. The sample size for the study comprised of sixty-three (63) male and female SSS II students with delinquent behaviours selected from two schools. The schools are: Government Secondary

school (GSS) Mangu and Government Secondary School (GSS) Panyam. The experimental group consists of thirty-two (32) students while the control group consists of thirty-one (31) students. The sample consists of thirty-four (34) male and twenty-eight (29) female students.

Multi–staged sampling was used in selecting the schools. The first sampling stage is the screening stage to identify students with delinquent behaviours. The stage involves baseline assessment of all the SSS II students with evidence of delinquent behaviours. To achieve this, the researcher used a Deviant Behaviour Scale (DBS) as well as anecdotal records (weekly duty report, log books and class registers). In the second stage, purposive sampling technique was adopted to select two secondary schools from among those that participated in the first stage of screening. Two schools with the highest number of identified delinquent students were selected: Government Secondary School (GSS) Mangu, and Government Secondary School (GSS) Panyam. The choice of these schools was strategic, as they provided a relatively larger sample of students with delinquent tendencies and were comparable in terms of school size, administrative structure, and socio-cultural setting, which is crucial for minimizing extraneous variability in the study. In the third stage, the selected schools were subjected to simple random sampling to assign them to either the experimental or control group. Through this process: GSS Panyam was randomly selected as the experimental group, where the Cognitive Behavioural Intervention (CBI) was administered, while GSS Mangu was assigned as the control group, which did not receive the intervention during the treatment period.

The instrument of this research is an adapted questionnaire titled “Cognitive Behavioural Intervention on Delinquents’ Behaviour Questionnaire for Students (CBIDBQS). The CBIDBQS contains two sections viz: A and B. Section A consists of personal data of the respondents, such as; gender and school, while section B consists of the items according to research questions (dependent variables). The instrument was subjected to face and content validity by four experts; two from educational psychology unit, two from Research Measurement and Evaluation unit all from the Department of Educational Foundations, Faculty of Education, University of Jos. For reliability, the instrument was tested for internal consistency using the Cronbach’s alpha. The reliability index of the instrument was 0.86 which deemed reliable.

The data collected from the study was analysed using both descriptive and inferential statistics appropriate for each section of the analysis. Mean scores and standard deviation were used in answering the research questions. Analysis of Co–Variance (ANCOVA) was used to test the hypotheses. ANCOVA was considered appropriate for analysis because it can control the effect of pre-test score on delinquent behaviours between groups. Pre-test scores on delinquent behaviours can act as a confounding variable. Students with higher initial delinquency might show more improvement regardless of the intervention. ANCOVA can help partially account for this limitation by statistically controlling for a pre-existing difference between the groups. ANCOVA statistically adjusts for pre-test scores, providing clearer picture of the intervention's true effect.

RESULTS AND DISCUSSION

This chapter presents the results of the study under the following subheadings: Results, Discussion and Summary of outstanding work.

RESULTS

Research Question One

What are the pre-test and post-test bullying behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?

To answer this research question, data on bullying behavior was used and the result is presented in Table 1.

Table 1: Result, of the Pre-test and Post-test Bullying Mean Scores of Students in the Experimental and Control Groups

Group		N	$\overline{X}$	SD	Mean Gain/Loss	Mean Gain difference	Post-test Main Difference
Experimental	Pre-test	32	23.56	2.00	9.56		
	Post-test	32	14.00	3.76			
						-7.04	6.87
Control	Pre-test	31	23.39	1.90	2.52		
	Post-test	31	20.87	4.97			

Table 1 revealed the pre-test and post-test bullying behaviour mean scores of SSS II students in the experimental and control groups. From the result experimental group had a pre-test mean score of 23.56, SD = 2.00 and a post-test mean score of 14.00, SD= 3.76 and a mean loss of -9.56. While the control group had a pre-test mean score of 23.39, SD=1.90 and a post- test mean score of 20.87, SD=4.97 with mean loss of -2.52. The mean loss difference was -7.04 with a post-test mean difference between the experimental and control group of 6.87. This implies that Cognitive Behaviour Intervention helps in reduce the level of bullying amongst SSS II students’ more than conventional method.

Research Question Two

What are the pre–test and post–test vandalism behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?

To answer this research question, data on vandalism behaviour was used and the result is presented in Table 4.

Table 2: Result of the Pre-test and Post-test Vandalism Behaviour Mean Scores of Students in the Experimental and Control Groups

Group		N	$\overline{X}$	SD	Mean Gain/Loss	Mean Gain difference	Post-test Main Difference
Experimental	Pre-test	32	22.75	2.69	9.09		
	Post-test	32	13.66	2.62			
						-6.38	6.63
Control	Pre-test	31	23.00	1.79	2.71		
	Post-test	31	20.29	4.32			

The results of the analysis in Table 2 showed that the experimental group had a pre-test mean score of 22.75, SD = 2.69 and a post-test mean score of 13.66, SD= 2.62 and a mean loss of -9.09. While the control group had a pre-test mean score of 23.00, SD=1.79 and a post- test mean score of 20.29, SD=4.32 with mean loss of -2.71. The mean loss difference was -6.38 with a post-test mean difference between the experimental and control group of 6.63. This implies that Cognitive Behaviour Intervention helps in reduce the vandalism behaviour of SS II students' more than conventional method.

Research Question Three

What are the pre–test and post–test aggressive behaviour mean scores of SSS II students in the experimental and control groups in Mangu Local Government Area, Plateau State?

Data on aggressive behavior was used and the result is presented in Table 3.

Table 7: Pre-test and Post-test Aggressive Behavior Mean Scores of Students in the Experimental and Control Groups

Group		N	$\overline{X}$	SD	Mean Gain/Loss	Mean Gain difference	Post-test Main Difference
Experimental	Pre-test	32	21.91	3.49	8.22		
	Post-test	32	13.69	2.10			
						-5.77	5.89
Control	Pre-test	31	22.03	2.27	2.45		
	Post-test	31	19.58	3.59			

The results of the analysis in Table 3 revealed that the experimental group had a pre-test mean score of 21.91, SD = 3.49 and a post-test mean score of 13.69, SD= 2.10 and a mean loss of -8.22. While the control group had a pre-test mean score of 22.03, SD=2.27 and a post- test mean score of 19.58, SD=3.59 with mean loss of -2.45. The mean loss difference was -5.77 with a post-test mean difference between the experimental and control group of 5.89. This implies that Cognitive Behaviour Intervention helps in improving the aggressive behavior of SS II students' more than conventional method.

SUMMARY OF ANCOVA TEST OF HYPOTHESES

Hypothesis One

There is no significant difference between the post-test bullying behaviour mean scores of SSS II students in the experimental and control groups.

Source	F (df = 60)	p-value	Adjusted R^2
Group Effect	37.65	.000	.367

The result indicated a significant difference in the bullying behaviour mean scores between the experimental and control groups, F(60) = 37.65, p < .05. The adjusted R^2 of .367 suggests that 36.7% of the variance in bullying behaviour was accounted for by the Cognitive Behavioural Intervention, confirming its significant effect.

Hypothesis Two

There is no significant difference between the post-test vandalism behaviour mean scores of SSS II students in the experimental and control groups.

Source	F (df = 60)	p-value	Adjusted R^2
Group Effect	56.03	.000	.469

The ANCOVA analysis revealed a significant effect of the intervention on vandalism behaviour, $F(60) = 56.03$, $p < .05$. The adjusted R^2 of .469 indicates that 46.9% of the variation in vandalism behaviour was attributed to the Cognitive Behavioural Intervention, highlighting its effectiveness in reducing this behaviour.

Hypothesis Three

There is no significant difference between the post-test aggressive behaviour mean scores of SSS II students in the experimental and control groups.

Source	F (df = 60)	p-value	Adjusted R^2
Group Effect	63.11	.000	.497

The analysis showed a significant difference in aggressive behaviour between the two groups, $F(60) = 63.11$, $p < .05$. With an adjusted R^2 of .497, the result suggests that the intervention accounted for 49.7% of the variance in aggressive behaviour, affirming the positive impact of the Cognitive Behavioural Intervention.

DISCUSSION

The study examined the effect of Cognitive Behavioural Intervention on delinquent behaviours of secondary school students in Mangu Local Government Area of Plateau State. The findings on the pre-test and post-test vandalism behaviour mean scores of SSII students in the experimental and control groups revealed that at the pre-test, both groups have a high mean score in vandalism behaviour. After exposure to treatment, Cognitive Behaviour Intervention helps to reduce SSII Students vandalism behavior more than conventional intervention. There was a significant difference in the pre-test and post-test vandalism mean scores of SSII students in the experimental and control groups in favour of the experimental group. This is because CBI help in identifying underlying thought patterns. Vandalism often stems from feelings of anger, frustration, or alienation. CBI can help students identify the negative thought patterns that contribute to these emotions, such as blaming others, feeling powerless, or holding distorted beliefs about property or authority (Wong, Cheng, Ngan & Ma, 2016). CBI also teaches students to build empathy and Respect. CBI can help students develop empathy for the victims of their actions and understand the negative consequences of vandalism.

Cognitive Behaviour Intervention helps to reduce SSII Students Aggressive behavior more than conventional method. It further revealed that there was a significant difference in the pre-test and post-test Aggressive behavior mean scores of SSII students in the experimental and control group. Cognitive restructuring is a useful technique for understanding unhappy feelings and moods, and for challenging the sometimes–wrong automatic beliefs that can lie behind them (Egenti & Ebenebe, 2018). It helps one to change the negative or distorted thinking that often lies behind these moods. As such, it helps one approach situations in a more positive frame of mind. The findings is in line with the works of Ojonugwa and Kola (2022) and Alsem, van Dijk, Verhulp, Dekkers, and De Castro (2023) who carried out a study titled 'Treating children's aggressive behaviour problems using cognitive behaviour therapy with virtual reality. CBT with Virtual reality was a promising tool found to enhance Cognitive Behavioural Intervention effectiveness for children with aggressive behaviour problems.

CONCLUSION

The study examined the impact of Cognitive Behavioural Intervention (CBI) on reducing delinquent behaviours among senior secondary school students in Mangu Local Government Area of Plateau State. Using a quasi-experimental research design, the study provided empirical evidence that CBI is an effective strategy in addressing behavioural problems such asbullying, vandalism, aggression, and aggressive behaviour. The results revealed that students who were exposed to CBI demonstrated significantly lower levels of these behaviours in the post-test compared to their counterparts in the control group, indicating a strong positive effect of the intervention.

The effectiveness of the CBI can be attributed to its structured approach in helping students identify and restructure negative thoughts and behaviours. The findings align with previous studies which highlighted that CBI helps students build coping skills, develop empathy, and improve self-regulation. Moreover, CBI not only addressed the immediate behavioural issues but also equipped the students with tools for long-term behavioural change, promoting personal development, emotional resilience and academic focus. The improvement in behaviour among the students in the experimental group strongly supports the integration of CBI techniques in school-based counselling programs. Based on the findings, the study concludes that CBI is a practical and impactful approach in curbing delinquent behaviours among secondary school students.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. Schools in Mangu Local Government Area and similar contexts should incorporate CBI techniques into their counselling services to effectively address delinquent behaviours such as truancy, substance abuse, bullying, vandalism, aggression and academic dishonesty among students.
2. The Ministry of Education and relevant educational authorities should organize regular training and workshops for school counsellors and teachers to equip them with practical knowledge and skills in administering CBI for behaviour management and student support.
3. School management should establish a functional behavioural screening system to identify students displaying early signs of delinquency. This would ensure that appropriate CBI-based interventions are provided before behaviours escalate.

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