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BULLYING AND COGNITIVE DEVELOPMENT OF PRIMARY SCHOOL CHILDREN IN RIVERS STATE.

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ABSTRACT

The study examined bullying and cognitive development of primary school children in Rivers State. Three research questions and three hypotheses guided the study. A cross sectional research design was used for the study. A sample of 350 study participants was purposively selected for the study. An instrument titled: Bullying and Cognitive Development Questionnaire (BCDQ) was self-developed and used for data collection. The response options include: Strongly Agree, Agree, Disagree and Strongly Disagree. The instrument was face and content validated. The reliability coefficient was 0.861, this was obtained using Cronbach alpha statistics. The data obtained from the research questions were analyzed using mean and standard deviation while the hypotheses were tested using Spearman's rank order correlation coefficient at 0.05 level of significance. Major findings of the study revealed that bullying impacts significantly on cognitive development of primary school children in Rivers State as it develops anxiety and stress which affects their emotional well-being and lowers their cognitive ability. The study recommends that, school heads should regularly monitor and supervise the activities of children in their schools to avoid bullying.

INTRODUCTION

Bullying in schools is a serious and widespread problem that can deeply affect a child's emotional health and even how they learn and think. In simpler terms, when children are repeatedly targeted with hurtful behavior, it doesn't just make them feel bad in the moment—it can also interfere with important brain functions like paying attention, remembering things, and planning. This is especially true for primary school children in Rivers State, Nigeria, where early experiences shape their overall development.

Research in Nigeria shows that bullying is not rare. For example, one study of 1,080 students found that about half of both boys and girls have experienced bullying, and nearly as many have even engaged in bullying behavior themselves. Many children have also witnessed bullying, highlighting just how common the issue is in schools (Oluwatosin, 2021).

In Rivers State specifically—and even in areas like the Obio Akpor Local Government Area—bullying remains a major challenge among older students too. A study with 1,860 participants aged 10-19 revealed that more than half of these students were bullied, nearly one-third were bullies, and a smaller group found themselves in the middle. Common forms of bullying included physical attacks and forcibly taking belongings, with factors like being older than 14, being male, and coming from a low-income background increasing the risk (Gabriel-Job & Azubogu, 2022).

Beyond the immediate physical or emotional pain, bullying can impair essential cognitive skills. Children who are bullied often experience stress and anxiety that makes it hard for them to focus, absorb new information, and succeed in their studies. Over time, this can lead to lasting difficulties in learning and overall cognitive growth (Oluwatosin, 2021).

Recognizing these serious effects, it's clear that schools must take proactive steps to combat bullying. Effective anti-bullying programs should create a safe and supportive atmosphere where children feel secure. This includes teaching social and emotional skills and encouraging empathy. When parents, teachers, and community members work together, they can help protect the

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cognitive and emotional development of young students in Rivers State and set them on a path to healthier, more successful futures.

Statement of the Problem

Bullying in educational settings has long been recognized as a serious issue that adversely affects the emotional and psychosocial well-being of children. However, less attention has been paid to its impact on cognitive development—an area of concern that is particularly significant for primary school children in Rivers State, Nigeria. Early childhood is a critical period for the development of cognitive functions such as attention, memory, and problem-solving, which are foundational to academic success and overall life outcomes. Existing studies in Nigeria have primarily focused on bullying's prevalence and its psychosocial repercussions (Oluwatosin, 2021; Gabriel-Job & Azubogu, 2022), with limited research addressing how different forms of bullying (physical, verbal, and relational) might impair these essential cognitive processes.

In Rivers State, the high incidence of bullying reported in various studies suggests that many children may be at risk of cognitive deficits due to repeated exposure to aggressive behavior. This is particularly concerning given that cognitive impairments acquired during the formative primary school years can have long-lasting effects on educational attainment and socio-emotional development. Moreover, potential moderating factors such as gender, socio-economic status, and individual stress responses have not been adequately explored in this context, leaving a critical gap in understanding the full impact of bullying on young learners.

Without targeted research in this area, educational authorities and policymakers in Rivers State are left with an incomplete picture, hindering the development of effective intervention programs designed to protect and promote both the cognitive and emotional well-being of primary school children. Therefore, this study aims to systematically examine the relationship between bullying and cognitive development among primary school children in Rivers State, with the goal of informing contextually relevant strategies that can mitigate these adverse outcomes.

Purpose of the Study

The primary aim of this study was to investigate the relationship between bullying and cognitive development of primary school children in Rivers State. Specifically, this study sought to:

1. Examine how different forms of bullying (physical, verbal, relational) affect key cognitive functions—such as attention, memory, and problem-solving skills among primary school children in Rivers State.
2. Identify potential moderating factors (e.g., gender, socio-economic status, and age) that may influence the extent of cognitive impairment resulting from bullying among primary school children in Rivers State.
3. To find out how socio-demographic factors such as gender, socio-economic status, and age moderate the relationship between bullying and cognitive development among primary school children in Rivers State.

Research Questions

The following research questions guided the study:

1. What is the extent of the impact of bullying on the cognitive development of primary school children in Rivers State?
2. Which forms of bullying (e.g., physical, verbal, relational) are most strongly associated with deficits in cognitive functions among these primary school children in Rivers State?

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3. How do socio-demographic factors such as gender, socio-economic status, and age moderate the relationship between bullying and cognitive development among primary school children in Rivers State?

Hypotheses

The following null hypotheses guided the study:

1. Primary school children in Rivers State who experience bullying do not perform significantly lower on cognitive assessments (focusing on attention, memory, and problem-solving skills) compared to primary school children who do not experience bullying.
2. There is no significant relationship between the severity and frequency of bullying incidents and the degree of cognitive impairment observed among primary school children.
3. Demographic variables do not significantly moderate the relationship between bullying and cognitive development of primary school children in Rivers State.

Theoretical Review

Social Cognitive Theory

Social Cognitive Theory (Bandura, 1986) posits that behavior is learned through observation, imitation, and modeling. In the context of bullying, children not only witness aggressive behaviors but may also internalize these actions as acceptable means of interacting with others. This learned behavior can extend to their cognitive processes—affecting problem-solving, attention, and decision-making skills. As children repeatedly observe or experience bullying, their self-efficacy and beliefs about social interactions may be undermined, leading to anxiety and diminished cognitive engagement (Bandura, 1986).

Cognitive Developmental Theories

Drawing from Piaget's stages of cognitive development and Vygotsky's Sociocultural Theory (Vygotsky, 1978), it is clear that early childhood is a critical period for the development of cognitive functions. Bullying, which introduces chronic stress and negative emotional experiences, can disrupt the normal progression of these cognitive milestones. Stress-related hormonal responses, such as elevated cortisol levels, are known to interfere with memory consolidation and executive functions (Lazarus & Folkman, 1984). These disruptions are particularly detrimental during primary school years when foundational cognitive skills are being established.

Ecological Systems Theory

Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1979) offers a broader framework by emphasizing the interaction between a child and multiple layers of their environment. In Rivers State, where community and school environments may vary in resources and social norms, bullying can be seen as a phenomenon influenced by factors at the microsystem (family and school), mesosystem (interactions between school and family), and exosystem (community and socio-economic factors) levels. This framework underscores how external pressures and the social milieu can compound the negative cognitive impacts of bullying on children.

Empirical Review

Recent studies have begun to quantify the prevalence and impacts of bullying among Nigerian school children. For instance, Oluwatosin (2021) found that a significant proportion of primary school pupils in Nigeria experience bullying, which is associated with increased stress and anxiety—factors known to impede cognitive processes such as attention, memory, and executive

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functioning. Similarly, Gabriel-Job and Azubogu (2022) reported that bullying behaviors, particularly physical aggression and relational hostility, were linked with lower cognitive performance among students, highlighting the urgent need for intervention in educational settings.

These empirical findings provide evidence that the theoretical mechanisms outlined above are at play in the Nigerian context. The stress induced by bullying, compounded by socio-economic and environmental factors, appears to have a measurable effect on the cognitive development of primary school children, which could hinder their academic achievement and overall developmental trajectory.

Research in Nigeria has increasingly focused on how bullying affects children's thinking and learning abilities. Although there aren't many studies that look only at primary school children in Rivers State, several related studies from across Nigeria help us understand the issue.

1. Bullying and Cognitive Functioning in School-Aged Children

In one study, Oluwatosin (2021) looked at how bullying affects children's overall adjustment. The study found that children who experienced repeated bullying did worse on tests that measured skills like attention, memory, and problem-solving. The researchers believe that the stress and anxiety from bullying interfere with these important mental processes, especially during critical learning periods. Even though this study covered a wide area, its findings are very relevant for primary school children in Rivers State, where similar challenges exist.

2. Bullying Behaviors in Rivers State

Another study by Gabriel-Job and Azubogu (2022) focused on secondary school students in the Obio Akpor area of Rivers State. They found that students involved in bullying—whether as victims or bullies—tended to have higher levels of stress and anxiety. These emotional issues can disrupt cognitive skills such as problem-solving and working memory. While this study was done with older students, the results suggest that similar effects might be seen in primary school children, highlighting the importance of early intervention to prevent lasting cognitive harm.

3. Bullying, Emotional Distress, and Cognitive Outcomes

Eze and Okoro (2020) conducted a study that included primary school students from different parts of Nigeria, including Rivers State. They used standardized tests to measure cognitive abilities and discovered that children who were bullied often struggled with tasks that required good working memory and focus. The researchers suggest that the emotional distress from bullying—like increased stress and anxiety—plays a key role in these cognitive challenges. This study directly shows that bullying in primary schools can affect how children learn and process information, making it crucial to address the problem early.

Relevance to the Study

Integrating these theoretical perspectives offers a robust framework for examining how bullying affects cognitive development in Rivers State. By:

Applying Social Cognitive Theory, the study can explore how observed and experienced behaviors in school environments contribute to negative cognitive outcomes.

Utilizing Cognitive Developmental Theories, it becomes possible to assess the impact of stress on the maturation of essential cognitive functions during a critical developmental period.

Employing Ecological Systems Theory, the research can consider how various environmental factors (e.g., family dynamics, socio-economic status, community norms) interact with bullying experiences to influence cognitive development.

This theoretical review not only grounds the study in established psychological frameworks but also underscores the importance of context-specific research. Understanding these interactions in Rivers State is crucial for designing effective school-based interventions and policies that aim

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to mitigate the adverse cognitive and emotional effects of bullying among primary school children.

METHODOLOGY

RESEARCH DESIGN: The cross sectional survey type of quasi-experimental design was used for the study.

Population of the Study: The population of the study comprised of 266740 learners from 3,982 primary schools in Rivers State.

Sample and Sampling Procedure: A sample size of 350 respondents (primary six pupils) was drawn using purposive sampling technique

Instrument For Data Collection: An instrument titled "Bullying and Cognitive Development Questionnaire (BCDQ)" was self-developed by the researcher and used for data collection. The instrument was modified in accordance to Likert four point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree. The first part of the instrument addressed the demographic features while the second part elicited responses from the questionnaire items.

VALIDITY OF THE INSTRUMENT: The content and face validity of the research instrument was validated by research experts.

Reliability of the Instrument: A reliability coefficient index of 0.861 was obtained using Cronbach Alpha statistics.

Methods of Data Analysis: The data collected from research questions were analyzed using mean and standard deviation while the hypothesis were tested using Spearman's rank (rho) correlation coefficient.

RESULTS:

Research questions one: What is the impact of bullying on the cognitive development of primary school children in Rivers State?

S/N	ITEMS	SUM	$\bar{x}$	SD	REMARKS
1	Children who are bullied develop anxiety and stress which affects their emotional well being	1,020	2.914	1.707	Agreed
2	Bullied children lowers cognitive ability in areas such as working memory, processing, speed and reading.	1,025	2.928	1.711	Agreed
3	Children who are bullied have difficulty in concentrating, problem solving which affects their overall academic performance.	1,085	3.101	1.760	Agreed
4	Children who are constantly bullied often struggle with task that requires good working, memory and focus.	1,032	2.948	1.716	Agreed
5	Constance exposure to bullying can lead to increased stress levels which can impair cognitive functioning.	1,048	2.994	1.730	Agreed

Table 1 data analysis showed that items 1-5 had all the mean scores above the criterion mean of 2.5, indicating that bullying impacts on cognitive development of primary school children by developing anxiety and stress which affects their emotional well-being by having difficulty in concentration and problem solving, also it lowers cognitive ability in areas such as working memory, processing speed and reading.

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Research Question 2: What forms of bullying are strongly associated with deficits in cognitive functions among primary school children in Rivers State?

TABLE 2: Mean and Standard Deviation scores on the forms of bullying, that are strongly associated with deficits in cognitive functioning.

S/N	ITEMS	SUM	$\bar{x}$	SD	REMARKS
6	Physical aggression among peer groups affects cognitive functions.	1,040	2.971	1.723	Agreed
7	Harassment of children by opposite sex impedes their cognitive ability	1,005	2.871	1.694	Agreed
8	intimidation by elder ones often affects their emotional well being	1,025	2.928	1.711	Agreed
9	Constant humiliation by fellow learners disrupts their cognitive skills.	1,040	2.971	1.723	Agreed

Analysis of data on Table 2 revealed that items 6-9 had all the mean scores above the criterion mean of 2.5, meaning that the forms of bullying that are strongly associated with deficits in cognitive functioning include, physical aggression among peer groups, harassment of opposite sex, intimidation and constant humiliation of learners to disrupt their cognitive skills.

Research Question 3: How does the demographic factors such as socio-economic status, gender and age moderate the relationship between bullying and cognitive development.

S/N	ITEMS	SUM	$\bar{x}$	SD	REMARKS
10	Female children are bullied more than the male children	1,050	3.000	1.732	Agreed
11	Children from low social economic status tend to bully others.	1039	2.968	1.722	Agreed
12	Young ones between 5-12 years are mostly bullied.	1,032	2.948	1.716	Agreed
13	Children are bullied by peers who are larger and stronger	1,020	2.914	1.707	Agreed

Data analysis on table 3 showed that items 10-13 had all the mean scores above the criterion mean of 2.5, affirming that demographic features such as age, gender and socio-economic status moderates the relationship between bullying and cognitive development. Hence, female students or learners are bullied more than the male ones, and children from low economic status tend to bully children more than those from high economic status.

HYPOTHESES

There is no significant relationship between the impact of bullying and cognitive development among primary school children in Rivers State.

TABLE 4: Spearman's (rho) rank order on the relationship between bullying and cognitive development.

	Bullying	Cognitive
Spearman rho, Bullying, Correlation Coefficient	1.000	768
Sig (2 tailed)		0.000
N	350	350

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Cognitive, CorrelationCoefficient Sig (2 tailed)	.768 0.000	1.000
N	350	350

From the table 4 above, rho value is 0.768 using a 2 tailed test, $P = 0.000$ at $P < 0.05$ level of significance; meaning it is positively correlated. Thus, the null hypothesis is rejected, meaning there is significant relationship between the impacts of bullying on cognitive development among primary school children in Rivers State.

H_0 , there is no significant relationship between various forms of bullying and cognitive development among primary school children in Rivers State.

TABLE 5: Spearman's (rho) rank order on the relationship between various forms of bullying and cognitive development.

	Bullying	Cognitive
Spearman's rho, Forms of Bullying, Correlation Coefficient Sig (2 tailed) N	1.000 350	.435 .000 350
Cognitive Correlation Coefficient Sig (2 tailed) N	.435 .000 350	1.000 350

Analysis of data on table 5 revealed that rho value is 0.435 using 2 tailed test $P = 0.000$ at $P < 0.05$ level of significance, indicating it is negatively correlated, thus, the null hypothesis is accepted, meaning that there is no significant relationship between the various forms of bullying and the cognitive development among primary school children in Rivers State.

H_{03} , Demographic variables do not significantly moderate the relationship between bullying and cognitive development of primary school children in Rivers State.

Table 6, rho showing the moderating effect of demographic variables on bullying and cognitive development.

Control Variables	Correlation	Sig. 2 tailed	DF	Correlation	Sig. 2 tailed	DF
Bullying	1.000		0	.764	.000	347
Cognitive	.764	.000	347	1.000		0

From table 6 rho value is 764 using a 2 tailed test $P = 0.000$ at $P < 0.05$ level of significance, showing a significance effect of the moderating variable, demographic features on the relationship between bullying and cognitive development. Thus, the null hypothesis is rejected, hence demographic features moderates effectively on the relationship between bullying and cognitive development of primary school children in Rivers State.

DISCUSSION OF RESULTS

The findings of research question one and hypothesis one indicates that bullying impacts significantly on the cognitive development of primary school children in Rivers State, as it develops anxiety and stress which affects their emotional well-being and lowers cognitive ability. This finding aligns with Job and Aubogu (2022) who stated that children who are involved in bullying tend to have higher levels of stress and anxiety which have measureable effect on their cognitive development.

Research Question 2 and hypothesis two findings revealed that various forms of bullying such as intimidation, humiliation, physical aggression and so on, does not significantly relate with cognitive development as constant humiliation or intimidation of children destroys their cognitive skills and abilities. This finding is in agreement with Oluwatosin (2021) who contended that children who experienced repeated bullying in school perform poorly in measured skills like attention memory and problem solving.

The findings of research question three and hypothesis three showed that demographic variables moderates effectively the relationship between bullying and cognitive development of primary school children in Rivers State. The findings indicates that children from low socio-economic backgrounds tend to bully those from high socio-economic background. This finding is supported by Job Aubogu (2022) who inferred that low socio-economic level was associated with the involvement in school bullying.

CONCLUSION

In the contemporary Nigerian Society, bullying is linked to many negative outcomes including its impacts on mental health substance use and suicide. It has become a worrisome phenomenon in schools. Hence, this study explores its impact on cognitive development on children at the primary school level, on the basis of the above, the study concludes that bullying impacts negatively on the cognitive development of primary school children as they develop stress and anxiety, hence they could not adequately cope with academic activities in the school.

RECOMMENDATIONS

Based on the findings of this study, it was recommended that:

1. School heads and teachers should regularly monitor and supervise the activities of children entrusted in their care in the school.
2. The Government of Rivers State should enact laws to regulate the activities of students who carry out bullying in schools and provide appropriate sanctions for such acts.
3. The counselling department in schools should be made functional to assist in advising children in the right path to success in life.

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