



Impact of Parents' Types on Mathematics Achievement of Secondary School Students in Ogun-State, Nigeria

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Abstract

The study looked at how different parent types affected the mathematical performance of senior secondary school students in Ijebu ode local government area in Ogun state, Nigeria. Two hypotheses were postulated to guide the study. The study design used was a descriptive survey. In the study area, five senior secondary schools were specifically selected using simple random sampling techniques. However, 250 senior secondary school 1 Students were picked from five secondary schools located in Ogun State's Ijebu Ode Local Government Area. The research used questionnaires and a Mathematics Achievement Test (MAT), both demonstrating reliability coefficients of 0.87 and 0.75, respectively. The gathered data were examined using correlation analysis. The findings showed that both single and dual parent types have diverse impact on students' academic performance in mathematics. It is concluded that parental types have a significant impact on the mathematical performance of senior secondary school students. It is recommended that schools should reach out and build communications with parents, in other to provide feedbacks to them whether requested for or not.

Keywords: Academic Achievement, Dual, Mathematics, Parent types, Single, Students.

INTRODUCTION

For a country, education is the greatest gift it can provide its people, especially its young people, because it plays a pivotal role in the advancement of any society or community. Adeyeye (2023) submitted that, human progress depends on education since it develops the skills and information necessary for people to properly integrate into any community. Bringing about a constructive shift in a student's conduct is the primary goal shared by all parties involved in education. It encompasses the process of imparting valuable knowledge and enlightening the intellect of individuals within the society. As articulated by Okafor and Louis (2014), education encompasses all experiences that facilitate the acquisition of knowledge and the enlightenment of intellect.

According to Adeleke (2023), a student must achieve a minimum of five credits in two exam sittings, including English Language and Mathematics, to progress to higher education. Mathematics, which has been integral to human existence since ancient times, is regarded as fundamental. Awofala & Lawani (2020) argue that God, being the ultimate Mathematician, designed the world with mathematical principles, emphasizing its crucial role in individuals' lives and the broader world. Otin (2021) underscores the extensive practical applications of mathematics across various domains, asserting that it serves as a gateway to scientific understanding.

Mathematics proficiency is essential for both individuals and nations, impacting domestic and business transactions, scientific advancements, technological innovations, problem-solving, and decision-making across various life scenarios (Waikato, 2018). Despite its significance, there's a concerning trend of declining academic achievement in Mathematics among students over time. As highlighted by Asanre, Abiodun, Olaniyan,

Cite as:

Asanre A.A., Abiodun T.O., Adeleke H.O. and Aviwe S. (2024). Impact of Parents' Types on Mathematics Achievement of Secondary School Students in Ogun-State, Nigeria, *Journal of Science and Information Technology (JOSIT)*, Vol. 18, No. 1, pp. 1-7.

©JOSIT Vol. 18, No. 1, June 2024.

Olusola & Ogunmokun (2023), prioritizing students' achievement is crucial for meaningful Mathematics education. The consistent decline in performance indicates a lack of proficiency in the core Mathematics curriculum. While attention is often drawn to poor performance, little focus is directed towards identifying its root causes. In Nigeria, there's a notable discrepancy between students' performance in Mathematics compared to other subjects, making the issue of poor performance in Mathematics a prominent concern (Adeleke, 2023).

Awofala & Fatade (2023) assert that parents, students, instructors, and the Ministry of Education all have an impact on how well Nigerian students achieve in mathematics. They emphasize the importance of these stakeholders' accountability for learning outcomes, which significantly impacts students' behavior, motivation, and ultimately, their development of mathematical expertise, skills, and proficiency. In the Nigerian educational landscape, the Parents Teachers Association (PTA) plays a crucial role in engaging parents in school activities and providing regular progress reports on their children's performance (Adeleke, 2023). However, Onete (2021) asserted that Parenting encompasses more than just biological relationships; it also refers to the complexities of raising children.

A child's physical, emotional, social, spiritual, and intellectual growth is supported and encouraged from infancy to maturity when parenting and childrearing are done well. Additionally, Bannawi, Foy-awen, Joseph, Rosario, Andawi, Eslao, Banih, & Pelila (2023) opined that Parenthood is often described as bearing parental obligations, although the term "parent" just refers to a father or a mother. Adeleke (2023) suggests that direct parental involvement in Mathematics homework, regardless of the level of assistance or autonomy, does not directly correlate with children's grades. Instead, students with higher academic achievements tend to have attentive parents who foster conducive learning environments and take an active role in their kids' schoolwork

Parents play pivotal roles in their children's education, serving as intermediaries between schools and students. Their involvement and interest are crucial factors in shaping students' academic success. In today's educational landscape, it is essential for parents to actively

monitor and guide their children to help them reach their full potential, particularly in Mathematics performance. As highlighted by Naite (2021), parental engagement communicates to children the importance of their education and fosters a sense of responsibility towards their academic pursuits. Lemmer (2016) conducted research in South Africa focusing on educators' experiences regarding parental involvement, using Epstein's model of family-school collaborations. The findings revealed that there is a favorable relationship between parents' attendance and their kids' achievement in school, underscoring the significance of parents actively demonstrating their commitment to education.

Adeleke (2023) highlights the significance of taking into account family dynamics in addition to parental participation in schooling. She notes that in some cases, students have both parents, but only one is actively engaged in their academic and school-related matters. This situation often leads to conflicts of interest regarding the children's needs, significantly affecting their motivation to learn and their academic performance. Conversely, some students benefit from having both parents actively involved in their education, ensuring consistent support even if one parent is unavailable. Additionally, Adeleke (2023) points out that single-parent household can be viewed from two perspectives: those where the parent participates actively in their child's educational endeavors and those where the parent is preoccupied with financial struggles and survival, making it challenging to prioritize the child's academic needs. Bannawi, et al (2023) submitted that Due to various circumstances, some single parents raise their children alone and maintain no contact with other people. Additionally, Kessie (2023) made a distinction between the several kinds of single-parent households, including those that arise from parental death, divorce or separation, or never-married parents. A man or woman who does not live with a spouse or other significant person is considered a single parent. To put it another way, a man or woman who is the biological parent of a kid and is responsible for raising the child alone is considered a single parent, Onete (2021). According to Peter (2016), research shows that two-parent families are more likely than single-parent homes to provide their kids more time, love, and supervision.

Adeyeye (2023) asserted that dual parenting family consists of a mother, a father, and their children. It is the most basic type of family and is usually portrayed in the media as a happy, harmonious family. It has long been believed that raising children in a family with two parents is the best environment.

Children who grow up in a two-parent household receive stability and support. Ella, Odok & Ella (2015) elaborated on the societal regard for the nuclear family, comprising both a male and female parent along with children, as the ideal environment for raising children. They argue that such family structures offer children strength, stability, and enhanced opportunities, primarily due to the financial stability provided by two parents. Parenthood, they assert, entails a shared responsibility between both parents to ensure the whole growth of their kids. Additionally, Betty & Murage (2016) reported that, because dads provide a strong male role model for their kids, biological fathers provide unique and irreplaceable contributions to the wellbeing of their children, which makes two-parent families beneficial over single-parent households. Also, Fathers serve as the children's disciplinarian, provide their girls a masculine viewpoint on heterosexual relationships, and via their distinct play methods, fathers who are more generative see their children succeed better academically and professionally.

The ecological systems theory of Bronfenbrenner was used to guide this study. The theory is an ecology framework developed in 1979. This underscores the idea that children are influenced by the environment and the interactions they have with others. The macrosystem's impact is evident in the ways that other systems, such families, schools, and communities, operate (Kitchen et al., 2019). In addition, the EST model may help parents educate and mentor their kids. It can encourage parents to help their kids make friends, locate safe neighborhoods, and discover decent schools. This idea is pertinent to the study as it examined the effect of parent types on academic achievement in a system that included both parents and students, which is the case in this study.

STATEMENT OF THE PROBLEM

Teachers and school administrators in Ijebu-Ode face a significant challenge regarding ways to improve the engagement of parents in their kids' education to enhance student achievement. The level of parental involvement, encompassing upbringing, engagement, and nurturing interest, profoundly influences students' academic outcomes, attitudes, and behaviors. Many parents are unaware of modern learning methods and ways to actively participate in their child's education, presenting a barrier to effectively home-school collaboration. Despite the implementation of various initiatives by school administrators to foster stronger home-school relations, initiatives to engage parents in their kids' education at the senior secondary level have been largely ineffective. There is a noticeable decline in parental involvement as students' progress through high school, with parents typically more engaged during early education stages and less so during later years. Additionally, there is a lack of understanding regarding the impact of single versus dual parental participation on academic performance. Therefore, this research conducted at Senior Secondary Schools in Ijebu-Ode aims to look at how different parent types affect their children's mathematical achievement.

PURPOSE OF THE STUDY

The study aimed at investigating the influence of parental types in their children's academics on students' mathematics performance and outcomes in Ogun State's senior secondary schools in Ijebu-Ode. The study's particular goals are to:

- i. investigates the effect of single parenting on student's mathematical achievement.
- ii. investigate the impact of dual parenting on students' mathematics achievements.

HYPOTHESES

The investigation was designed and tested with the following hypotheses in mind:

- i. There is no significant relationship between the students of single parents and their achievement in mathematics.
- ii. There is no significant relationship between the students of dual parents and their achievement in mathematics.

METHODOLOGY

A descriptive survey research design was employed in this study to collect the opinions of Ijebu-Ode secondary school students on the subject topic. The population of interest included all SSS1 students enrolled in secondary schools within the Ijebu-Ode Local Government Area, Ogun State. From among the five senior secondary schools selected in the Ijebu-Ode Local Government Area, a sample size of 250 SSS1 students was chosen using simple random sampling technique.

The mathematics achievement test (MAT) and a questionnaire served as the research tool. The questionnaire was adapted from Bora (2018) and Nwaoboli (2022)., which are broken down into sections A and B. Questions concerning the respondents' demographics are found in Section A, while Section B elicited students' perceptions and attitudes regarding their parents' involvement in their interest in mathematics, essential for addressing the research questions. The four-point rating system of Strongly Disagreed (SD), Strongly Agreed (SA), Disagreed (D), and Agreed (A) allowed subjects to express how much they agreed or disagreed. The MAT comprised 20 multiple-choice objective questions that were designed to evaluate the academic success of children in mathematics, based on specifications outlined in the SS1 curriculum and textbooks. Experts in the departments of psychology and mathematics evaluated the questionnaire and MAT validity using face and content validity. Twenty (20) students participated in trial testing of the validated tools from another school different from the samples in order to improve the instrument's quality. The reliability of the questionnaire was assessed using the Cronbach alpha coefficient., which came out to be 0.87 and the Mathematics Achievement Test was determined using Split Half Method to give 0.75. The data collected were analysed and transferred into data coding sheets. Then, to evaluate the data, inferential statistics were performed using correlation analysis.

RESULTS

Hypothesis 1: There is no significant relationship between the students of single parents and their achievement in mathematics.

Table 1. Correlation Analysis between Single Parental Involvement and Students' Mathematics Achievements.

	Students' Mathematics Achievement	Single Parental Involvement
Students' Academic Achievement	1	
Single Parental Involvement	0.718	1

As revealed by table 1 above there is an obvious correlation between pupils' success in mathematics and the engagement of single parents as the correlation coefficient is 0.718. This shows that the availability of a single parent and the extent to which they get involved in the process of academics measured greatly on the academic performance of the students.

Hypothesis 2: There is no significant relationship between the students of dual parents and their achievement in mathematics.

Table 2. Correlation Analysis between Dual Parental Involvement and Students' Mathematics Achievements.

	Students' Mathematics Achievement	Single Parental Involvement
Students' Academic Achievement	1	
Dual Parental Involvement	0.669	1

As revealed by table 2 above, the success of students in mathematics and the engagement of both parents are positively correlated as the correlation coefficient is 0.669. This shows that the availability of both parents and the extent to which they get involved in the academic

process measured greatly on students' academic achievements.

DISCUSSION OF RESULT

The study uncovered that senior secondary school students with single parental involvement exhibited below-average performance in the mathematics test, potentially attributed to insufficient monitoring and communication with the school. This is corroborated by the findings of Bannawi, et al (2023) that determined that single parents were quite involved in their kids' academic success. Additionally, it aligns with the research conducted by Durisiae and Bunijevac (2017), suggesting that more parental participation correlates with enhanced student success and an improved school climate. Additionally, the study identified several home factors contributing to senior secondary school students' poor performance in mathematics, includes parents' inability to review their mathematics notes, insufficient time to inquire about their progress in Mathematics from teachers, and a lack of parental assistance with homework assignments. This is in consistent with the result of Onete (2021), that found a detrimental effect of single parenthood on SS children' academic achievement. Since it takes two to tangle, raising children is not an exception. Parenting is necessary for a successful social adjustment, but it requires both spouses.

Furthermore, the study indicated that students with dual parental involvement demonstrated above-average performance in the mathematics test, likely attributable to the consistent availability and both parents' active involvement in their children's educational endeavors, both at home and in the classroom. The findings align with the conclusion of Adeyeye (2023) that dual-parent nuclear families are by far the most common family type among students that affects their academic achievement, emphasizing that the stability of the parent-child bond and the harmony between the parents had a significant impact on students' academic performance in secondary schools in Oyo State, Nigeria. Additionally, this observation echoes the conclusion drawn by Adeleke (2023), which suggests that increased parental involvement leads to enhanced academic achievement, positive attitudes, and behaviour among students, ultimately fostering

a greater sense of comfort in unfamiliar settings.

CONCLUSION

In conclusion, this study emphasizes that parent types significantly enhance, motivates, encourages, and improves students' learning in mathematics. Recognizing parental types as an essential part of academic success, it performs a pivotal part in enhancing children's proficiency in mathematics. The findings underscore the importance of schools actively engaging with parents, providing consistent communication and feedback, whether requested or not. Hence, the parent types have influence on the mathematics achievement of a senior secondary school student in Ogun State, Nigeria's Ijebu Ode Local Government Area.

RECOMMENDATION

It is recommended that similar studies should be conducted across all school levels and other subjects' area to further understand the effect of parenting types on students' overall academic achievement, since the sample size cannot be generalized to come to a conclusion on the entire students in Ogun State. Additionally, Parents should make an effort to establish a positive home environment that supports their child's appropriate social and intellectual adjustment since the house plays a crucial part in their growth. More so, it is important for parents, especially single parents, to manage their time so they can help their children finish their assignments, offer guidance on achieving academic achievement, attend the schools their children attend to observe things firsthand, and meet their needs as much as they can for school.

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