

Parenting Styles and Academic Achievement of Primary School Pupils in Mathematics in Awka South Local Government Education Authority

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Abstract

This study was carried out to investigate the influence of parenting styles on the academic achievement of pupils in Mathematics in Awka South Local Government Education Authority of Anambra State. The study adopted an ex-post facto research design. Two research questions guided the study. The population of the study consisted of 2,377 Primary five pupils in the 45 public primary schools in Awka South Local Government Education Authority. The sample comprised of 424 Primary five pupils selected using multi-stage sampling. Data were collected using a researcher structured questionnaire titled "Questionnaire on Parenting Styles (QPS)". The 2018/2019 mathematics achievement scores of students in each sampled schools were also used. The QPS was validated by three experts. The reliability of the instrument was determined using Cronbach Alpha which yielded an overall co-efficient of 0.83. Mean was used to answer the research questions while standard deviation was used to check the closeness of the respondents' responses to the mean. The findings revealed that parents use of authoritative parenting style mostly influence academic achievement of excellence in pupils in mathematics; Parents use of authoritarian and permissive parenting styles mostly influence academic achievement of good in pupils in mathematics; and parents use of uninvolved parenting style mostly led to failure of pupils in mathematics. Based on these findings, the researcher recommended among others that the State government through the Ministry of Education should organize guidance and counseling programmes in the communities to sensitize, educate and empower parents on various parenting styles and their influence on academic achievement of pupils; and Teachers should make efforts to know their pupils' parents and families so as to know the goals they have set for their children.

Keywords: Parenting styles, Academic achievement, Mathematics, Pupils.

Introduction

Mathematics is a major subject in primary education curriculum in Nigeria. The importance of Mathematics to growth of science and technology in modern societies is evidenced in the increasing importance and attention given to the subject which results from the fact that without Mathematics, there is no science, without science there is no modern technology and without modern technology there is no modern society (Umeh, 2010). Hence, the importance of mathematics is in recognition of the indispensable role it plays in realization of a nations' dream of rapid scientific and technological development. Paying proper attention to mathematics as a core subject at the primary school level has a positive influence not only on learners' acquisition of knowledge but in various aspects of life such as attitude, interests, values and achievement.

Achievement involves level of competency, proficiency, knowledge and skills acquired. It is accomplishing whatever goals one sets for oneself which is doing what one wants to do within the limits of the law, overcoming obstacles and attaining a high standard (Kilonzo, 2017). Achievement requires drive, single mindedness and it is about completing goals one has set for oneself. Similarly, Singh (2015) noted that academic achievement is the state or level of person's skill, the range, depth of his knowledge and his proficiency in a designed area of learning and behaviour. Academic achievement is the outcome of education, the extent to which students, teachers or institutions have attained their educational goals. It is commonly measured by examinations or continuous assessment (Bossart, Doumen, Buyse & Verschueren, 2011). In this study, academic achievement scores of pupils were derived using mathematics examination which comprised of three terms (first, second and third terms) in the 2017/2018 session. To optimize the academic achievement of pupils', parents

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have a great role to play in this 21st century period if every child must perform well in mathematics.

In spite of all efforts made by parents and the government (Federal, State and Local government) and non-governmental organization in organizing mathematics quiz, examinations as well as awarding of scholarships to pupils, there is still problem of poor academic achievement of pupils in mathematics in primary schools. Reports from the Anambra State Universal Basic Education Board (ASUBEB, 2017) revealed that the academic achievement of pupils in core subjects especially mathematics has been decreasing yearly. Data collected from 2015 to 2017 revealed a high rate of failure of 31%, 28% and 25% respectively for the 3-year period. The poor academic achievement in mathematics in primary schools makes one begin to wonder what could be the major cause of pupils' consistent poor achievement in mathematics considering that it is one of the major subjects that pupils need to pass before they transit to secondary schools.

Various factors such as pupils, teachers, funding, equipment and parents' attitude have been indicated by some educators and researchers as responsible for this poor pupil achievement in mathematics (Kilonzo, 2017). Kilonzo further stressed that notable among factors predicting pupils' achievement in mathematics is the parenting styles. It is a known fact that parents play a pivotal role in the socialization of a child because they act as their models by sharing their beliefs, values and expressing a specific style of behaviours. The presence of parents in a child's life may be a distinguishing factor between children who successfully avoid the negative effects of risks they face and those who follow trajectories towards deviance (Werner & Smith, 2012). Hence, authors such as Talib, Mohamad, and Mamat (2011); Kilonzo (2017) opined that parenting style is a critical factor to be considered in accessing academic achievement of primary school pupils.

Parenting style is defined as the child rearing practices and interactive behaviour which are developed and implanted by parents. According to Guarian (2012), parenting style is the collection of parenting behaviours and goals that are primarily characterized by combinations of warmth, demandingness and autonomy granting which affects the child's personality. Succinctly, the style of parenting adopted in different homes affects the children's disposition. This can enhance the development of a child or be detrimental to the academic achievement of the child. Scholars such as Kilonzo (2017) and Ofosu-Asiamah (2013) identified four main types of parenting style which include; authoritarian, authoritative, permissive/indulgent, and neglectful/uninvolved. These parenting styles would likely have various influences on the child.

Authoritarian parenting style is a parenting style in which children are expected to obey their parents' orders. According to Brown and Iyengar (2010), authoritarian style of parenting involves children being expected to

follow strict rules established by parents without any questioning and failure to follow such rules usually results in punishment. Brown and Iyengar further posited that authoritarian parents fail to explain the reasoning behind these rules and if asked to explain, the parent might simply reply, "Because I said so". According to Atanda (2013), authoritarian style of parenting demands obedience from the child and tries to shape and control the child's behaviours with an absolute set of standards. Apart from authoritarian parenting style, there is the authoritative which is slightly similar.

Authoritative parenting style is the act of believing that children are expected to obey authority and rules without being impulsive. According to Changalwa, Ndurumo and Poipoi (2012), authoritative parenting style usually establishes rules and guidelines that their children are expected to follow but the parenting style is much more democratic than authoritarian and the parents are more responsive to their children and willing to listen to questions. Authoritative parenting as described by Atanda (2013) contains the following elements: an expectation of mature behaviour from the child and clear setting of standards by the parents; firm enforcement of rules and standards, using commands and sanctions when necessary; encouragement of the child's independence and individuality.

The third parenting style is the permissive parenting style which is also called the indulgent parenting style. According to Morawska (2017), indulgent parenting style is the state of allowing children do just whatever they want. Kang and Moore (2011), permissive parenting style involves parents who are also known as permissive parents who usually have very few demands to make of their children and rarely discipline their children. According to Tiller, Garrison and Block (2013), children of permissive parents are immature, lack impulse control, self-reliance and exhibit a lack of social responsibility and independence. Kang and Moore (2011) noted that unlike the authoritative and authoritarian parents, punishment is very rarely used in permissive homes and children are commonly given greater opportunity to make their own decisions in life.

The neglectful parenting style involves failure of parents to take care of children. According to Fakeye (2014), neglectful parenting style is characterized by few demands, low responsiveness and little communication between parents and children. The author further posited that at times these parents fulfill the child's basic needs even though they are generally detached from their child's life while in extreme cases, these parents may even reject or neglect the needs of their children. The uninvolved parenting style is predominantly characterized by low levels of both warmth and control. This is often reflected by parents' emotional detachment from the children as they are often seen responding only to their children's needs out of annoyance rather than compassion, and would otherwise be completely unresponsive (Tiller, Garrison & Block, 2013). Sequel to

this, parenting styles may pose low or high academic achievement depending on the gender of their child.

Gender refers to the socially or culturally constructed characteristic, qualities behaviours and roles which different societies ascribe to females and males (Okeke, 2010). Similarly, United Nations International Children's Emergency Fund (UNICEF) (2016) classified children as either boy or girl. Reports from Longe and Adedeji (2013) as cited in Tilahun (2012). opined that science and technology is a boy-dominated subject and girls shy away from scientific and technological fields and focus on fields that has to do with personal aesthetics (fashion and interior design). Following boys' behaviour which is described as aggressive, assertive and competitive, reports have revealed that parents usually adopt authoritarian and sometimes authoritative parenting style in order to make boys succeed most especially in science-related field (Muniy, 2013). These forms of parenting styles may not be applicable to girls who are described as collaborative and supportive. Another study with a sample of high school students reported that an authoritative parenting style was the most commonly employed parenting style for daughters whereas neglectful parenting style was the most predominantly adopted parenting style for sons (Kassahun, 2015 as cited in Walson and Yellowe, 2018). On the other hand, Kassahun as cited in Walson and Yellowe (2018) in the same study, with a sample of elementary school students revealed that irrespective of children's sex, an authoritative parenting style was the most commonly employed parenting style in the families of Ethiopia. Therefore, the influence of parenting styles on academic achievement of boys and girls in mathematics remains a debate. In line with this, declining achievement of pupils in Mathematics in Anambra state calls into question if the problem could be parenting style.

Data from ASUBEB (2017) shows the persistent increase in the failure rate of pupils' academic achievement in mathematics (external examination) between 2015 to 2017 and this could have been as a result of the type of parenting styles used by their wards. Some parents are naturally non-challant to their children as regards their academic pursuit and achievement. They claim to be busy with their daily work routines and care-less about their child's educational achievement. From the foregoing, the importance of parenting, in students' academic achievement cannot be overemphasized. Hence, this study focused on ascertaining if parenting styles influence academic achievement of primary school pupils in mathematics in Awka Local Government Education Authority of Anambra State.

Purpose of the Study

The general purpose of the study was to determine parenting styles and academic achievement of primary school pupils in mathematics in Awka South Local Government Education Authority. In specific terms, the study determined the:

1. Mean mathematics achievement scores of male and female primary five pupils whose parents use authoritarian and authoritative parenting style.

2. Mean mathematics achievement scores of male and female primary five pupils whose parents use permissive and uninvolved parenting style.

Research Questions

1. What are the mean mathematics achievement scores of male and female primary five pupils whose parents use authoritarian and authoritative parenting style?
2. What are the mean mathematics achievement scores of male and female primary five pupils whose parents use permissive and uninvolved parenting style?

Method

The study adopted an ex-post facto research design and was carried out in Awka South Local Government Education Authority. The population for the study was 2,377 primary five pupils (1031 boys and 1346 girls) in the 45 public primary schools. The sample size of the study is 424 Primary five pupils using multi-stage sampling. The instrument for data collection was a structured questionnaire which was validated by three experts. The inputs, corrections and comments by the experts guided the researcher in modifying the final copy of the instrument. Cronbach alpha reliability of 0.83 was obtained for the entire instrument.

The copies of the questionnaire were administered personally by the researcher and three research assistants were briefed who guided the pupils on the modalities for the administration and collection of the questionnaire. The class teachers also helped to follow-up the pupils in order to complete the questionnaire. A period of four weeks was used for the distribution and collection of the instrument. A total of 408 copies of questionnaire were successfully retrieved and were used for data analysis. Also, through the help of the head-teachers, the promotional scores of the sampled primary five pupils were obtained. Promotional scores were utilized because the average of the pupils scores in the three terms were computed to give one score which was used for promotion. After the promotional results have been compiled, the achievement scores of the pupils were tagged on the collected questionnaire which was identified using the registration number of the pupil in the school.

Mean and Standard deviations were used to analyze data related to the two research questions posed. Mean was used to ascertain the parenting style each pupil was subjected to by assuming that the section of the questionnaire each pupil scored the highest was the parenting style utilized by the pupil's parents. The registration number of the pupils in each school was used to link the questionnaire they filled on parenting styles to the achievement scores of sampled primary five pupils in mathematics. Academic achievement score of pupils were classified into; Excellent = 70% or above, Good = 55-69%, Average = 40-54%, Fail = Below 40%. The standard deviation was used to ascertain how far or close the respondents were from the mean.

Results

Research Question 1: What are the mean mathematics achievement scores of male and female primary five pupils whose parents use authoritarian and authoritative parenting style?

Table 1: Mean Mathematics Achievement Scores of Male and Female Pupils Whose Parents use Authoritarian and Authoritative Parenting Styles

S/N	Parenting Styles	Gender	No	Min	Max	X	SD	Remarks
i	Authoritarian	Male	82	29	76	64.5	15.20	Good
		Female	61	27	73	61.7	14.47	Good
		Mean Difference				2.8		
ii.	Authoritative	Male	57	36	88	70.3	16.02	Excellent
		Female	63	37	91	71.9	15.68	Excellent
		Mean Difference				1.6		

Key; No = Total number; Min = Minimum score in the group; Max = Highest score in the group; X = Mean of the group; SD = Standard Deviation

Data from Table 1 revealed that out of 143 pupils whose parents use authoritarian styles, 82 were males while 61 were females. The mean score for male pupils was 64.50 with a SD of 15.20 while the mean scores for the female pupils was 61.70 with a SD of 14.47. The mean scores of male and female primary five pupils whose parents use authoritarian styles was 64.50 and 61.70 respectively which are graded as good in primary schools. However, male pupils performed slightly higher than female pupils with a mean difference of 2.80. The SD scores of 15.20 and 14.47 indicated that a majority of the scores fall within normal curve meaning that the achievement scores were close to the mean.

Data from Table 1 also revealed that out of 120 pupils whose parents use authoritative style, 57 were males while 63 were females. The mean score for male pupils was 70.30 with a standard deviation of 16.02 while the mean scores for the female pupils was 71.90 with a standard deviation of 15.68. The mean scores of male and female primary five pupils whose parents use authoritative styles was 70.30 and 71.90 respectively which are graded as Excellent in primary schools. However, female pupils performed slightly higher than male pupils with a mean difference of 1.60. The Standard deviation scores of 16.20 and 15.68 indicated that a majority of the scores fall within normal curve meaning that the achievement scores were close to the mean

Research Question 2: What are the mean mathematics achievement scores of male and female primary five pupils whose parents use permissive and uninvolved parenting style?

Table 2: Mean Mathematics Achievement Scores of Male and Female Pupils Whose Parents use Permissive and Uninvolved Parenting Style

S/N	Parenting Styles	Gender	No	Min	Max	X	SD	Remarks
i	Permissive	Male	42	28	83	70.01	13.66	Excellent
		Female	51	30	76	62.44	11.33	Good
		Mean Difference				7.57		
ii	Uninvolved	Male	29	21	60	42.6	10.12	Average
		Female	23	22	55	36.42	9.4	Fail
		Mean Difference				6.18		

Data from Table 2 revealed that out of 93 pupils whose parents use permissive style, 42 were males while 51 were females. The mean score for male pupils was 70.01 with a standard deviation of 13.66 while the mean scores for the female pupils was 62.44 with a standard deviation of 11.33. The mean scores of male and female primary five pupils whose parents use permissive styles was 70.01 and 62.44 which are graded as excellent and good respectively in primary schools. Hence, male pupils performed higher than female pupils with a mean

difference of 7.57. The Standard deviation scores of 13.66 and 11.33 indicated that a majority of the scores fall within normal curve meaning that the achievement scores were close to the mean

Data from Table 2 further revealed that out of 52 pupils whose parents use uninvolved style, 29 were males while 23 were females. The mean score for male pupils was 42.60 with a standard deviation of 10.12 while the mean scores for the female pupils was 36.42 with a standard deviation of 9.40. The mean scores of male and

female primary five pupils whose parents use authoritative styles was 42.60 and 36.42 which are graded as average and poor respectively in primary schools. Hence, male pupils performed higher than female pupils with a mean difference of 6.18. The Standard deviation scores of 10.12 and 9.40 indicate that a majority of the scores fall within normal curve meaning that the achievement scores are close to the mean.

Discussion of the Findings

The findings of the study on the mean mathematics achievement scores of male and female primary five pupils whose parents use authoritarian parenting style showed that both males and females were graded good although males performed slightly better. The findings was in consonance with Brown and Iyengar (2010) who found out that the achievement of boys and girls influenced by authoritarian parents are relatively the same. The findings were also in cognizance with Odongo, Aloka and Raburu (2016) who found out that boys performed better than females when subjected to authoritarian style. This could be because male and female pupils are taught by the same teacher and in the same environment.

The findings of the study on the mean mathematics achievement scores of male and female primary five pupils whose parents use authoritative parenting style showed that both males and females were graded excellent although females performed slightly better. The findings are in line with Singh (2015) who found out that authoritative parenting style makes pupils excel academically in comparison to other parenting styles. The findings are also in line with Syahidah, Nabeel and Chin (2014) who found out females perform better than males when subjected to authoritarian style.

The findings of the study on the mean mathematics achievement scores of male and female primary five pupils whose parents use permissive parenting style showed that males were excellent in mathematics while their female counterparts were graded as good. Hence, males performed significantly higher than their female counterparts. The findings are in line with Gupta (2017) who found out that permissive parenting style generally lead to scores of 55 -69 (Good) in females and 70 or above (excellent) in boys in primary school pupils. Hence, permissive parenting style favour boys more than girls in primary schools.

The findings of the study on the mean mathematics achievement scores of male and female primary five pupils whose parents use uninvolved parenting style showed that males had performed averagely in mathematics while their female counterparts had a mean of were graded as fail. Hence, although boys and girls performed poorly when parents used uninvolved parenting styles, males performed significantly higher than their female counterparts. The findings are in line Changelwa, Ndurumo and Poipoi (2012) who found out

that uninvolved parenting style generally lead to mean scores graded as fail in females and average in boys in primary schools. The low performance of pupils could be because at the primary school level, pupils need guidance which the uninvolved parental style does not provide. However, higher performance of boys could be as a result of more emotional stability.

Conclusion

The aim of the study was to find out the influence of parenting styles on the academic achievement of primary school pupils in mathematics in Awka South Local Government Education Authority of Anambra State. Based on the findings of the study, it was concluded that: pupils who had achievement scores above 70% (excellent) in mathematics have parents that use authoritative parenting style. Furthermore, it was concluded that pupils with permissive and authoritarian parents graded as good. However, children with permissive parents were higher based on the findings of the study. Finally, primary school children who have neglectful parents failed based on the findings of the study. It can therefore be concluded that authoritative parenting lead to excellent performance of pupils in mathematics, permissive and authoritarian parenting lead to pupils graded good while neglectful parenting style lead to failure in mathematics among primary five pupils. From the findings of the study, different parenting styles influence academic achievement of pupils in primary schools

Recommendations

Based on the findings of this study, the following recommendations were made:

1. The Anambra State government through its Ministry of Education and Anambra State Basic Education Board (ASUBEB) should organize guidance and counseling programmes in the communities to sensitize, educate and empower parents on various parenting styles and their influence on academic achievement of pupils.
2. Teachers should make efforts to communicate with their pupils' parents and families so as to understand the goals they have set for their children. They should welcome the parents, appreciate them and support them in their roles as teachers of their children.
3. Pupils should be motivated by parents and teachers to develop the right mental attitude and self-efficacy in pursuit of their education, and strive to rise above their circumstances irrespective of the environment they grew up in.
4. Parents should ensure that parenting styles such as neglectful parenting styles are avoided by being involved in the academic activities of their children to ensure that their children perform to their optimum academically.

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