Influence of Birth Order on Academic Performance of Secondary School Students in Federal Capital Territory, Abuja, Nigeria

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Abstract
This study investigated the influence of birth order on students' academic performance in secondary school in FCT. (In line with its objectives, research questions and hypotheses were raised) Three research questions and two hypotheses were formulated to guide the study. The study used a descriptive survey design. Data were collected from sixteen sampled secondary schools where three hundred and sixty-six students from both Private schools and public schools were purposively sampled. Two sets of instruments were used to collect data namely; Birth order questionnaire(r=0.85) and Students Academic Record. The researcher employed the use of frequency counts, percentages and mean scores for the analysis of data. The hypotheses were tested using one-way ANOVA (analysis of variance) at 0.05 level of significance to test the difference in mean. Result showed that there was a notable influence of birth order on student's academic performance. The study also noted that there are effects of birth order on academic performance of students attending secondary school in FCT-Abuja. It is therefore recommended among other things that parents should not give any form of preferential treatment to any of their children based on their order of birth; they should be treated equally because they all deserve good and quality education and also, the school authority must probe into the family life of underachievers.

Keywords: Academic performance, Birth Order, Secondary School students, FCT, Nigeria

Introduction

The home is the foundation of education, because it plays a central role in socializing the child. The child spends his/her early years and learns his/her language at home. The order in which a person is born into the family plays a substantial role in the development of the individual's personality, character, intelligence, and academic achievement (Stewart, Stewart, & Campbell, 2001). As children are socialized into their families, the children make a place for themselves and no two children make a place for themselves exactly alike, even if they are identical twins. The meaning that an event will have on a particular child's psychological development depends upon that child's interpretation of such event.

Birth order is the ordinal position by birth of a child in relation to one or more other siblings of the same parents. Among a number of siblings, it is also the rank of a child as determined by his or her age. Thus, birth order can be said to mean the order at which a child is born, for example first born, second born, third born or last born.

Conceptualizing the birth order factor in this study is done mainly within the confine of the nuclear family system. A nuclear family or elementary family is a family group consisting only of father, mother, and their children. It is in contrast to a single-parent family, to the larger extended family, and to a family with more than two parents.

Groose (2002) noted that the position of a child in his/her family is a powerful predictor of academic achievement and it is a factor that parents and teachers need to consider as they look for ways to raise happy and well-adjusted children. The earlier born children have the opportunity for parents to devote more attention to their educational needs. Earlier born children often take advantage of special reading time with parents, while later born children do not always have this luxury. Siblings also affect one another's level of success and failure. The further away from the parents the siblings are in birth order, the more strongly they influence each other. Therefore, as the family grows, the influence of siblings on one another grows and the effects of the parents often become diluted (Conley, 2004). The importance of birth order as a factor in the academic performance of school children lies in the fact that children's experiences are influenced by their ordinal position in the family.

In general, it has been found that first-born children have an advantage in professional and academic pursuits while later-born have an advantage in creating and maintaining personal relationships (Herrera, Zajonc, Wieczorkowska & Cichomski 2003). The explanations behind these differences vary and much is left to be understood about the true effects of birth order. Understanding the advantages and disadvantages of being a first-born, middle-born, and last-born, as well as having a gender that is similar or different from other siblings will allow families and professionals to address potential hurdles students may face as a result of their birth order experiences.

In view of the fact that how to improve academic performance of students has always been one of the central goal of educators, effects of birth order on academic performance of school children has been widely researched and since it

has not produced findings consistent across studies, it seems reasonable to investigate further, the influence of birth order on academic performance of secondary school students. Birth order or order of delivery of children in this study was viewed or analyzed from the perspective of the first-born child, the middle-born child and the last-born child. Thus, this study examined the influence of birth order on academic performance of students in Federal Capital Territory.

Statement of the Problem

The level of academic success is the main concern of all stakeholders of education. Students who attend school expect to encounter enriching experiences that will put them on the path to future happiness and success. An ideal educational experience involves students being actively engaged in what they are learning and having positive social interactions and support networks. Unfortunately, the school experiences of many students fall short of these expectations as they struggle to continue their pursuit of education.

In Nigeria, the National Examinations Council (NECO) is one of the public examination bodies saddled with the responsibility of conducting examinations for the award of Junior and Senior Secondary Schools Certificates. However, during NECO June/July 2011 SSCE school-based examination, less than 25 per cent of the 1,160,561 candidates had passes at credit level in subjects, including the two core subjects of Mathematics and English Language across the country. A statistical breakdown of the awful trends revealed that in June/July 2010 Senior Secondary School Certificate Examination conducted by NECO, 79 per cent failed to get credit passes in English Language, while 24 per cent failed Mathematics. NECO Results, 2010-2012. The results of May/June 2014 West African Senior School Certificate Examination (WASSCE) conducted by the West Africa Examinations Council, (WAEC) was also released with mass failure in two compulsory subjects – English Language and Mathematics. The result revealed that a total of 529,425 candidates, representing 31.28 per cent obtained credits in five subjects and above, including English Language and Mathematics. While juxtaposing the new results with the 2012 and 2013 May/June WASSCE it was pointed out that, there was marginal fall in the performance of the candidates just as 38. 81 per cent was recorded in 2012, while the performance level stood at 36.57 per cent in the year 2013 (Chief Examiner's Report, 2014).

The explanations behind the poor performance of students in the various examinations are not really clear, as well as the reason for brilliant performance of the few percentages of students who passed the examinations. Researcher like Tenibiaje (2002) had once asserted that there was significant difference in intelligence capacity between the firstborns and latter born and that latter born children were less capable than earlier siblings. This position is an indication that birth order may have an influence on academic performance. This study therefore, examined the extent to which birth order of the children or their positions in the family affects their performance in school.

The following questions were answered:

1. What is the birth order of secondary school students in FCT, Abuja?
2. What is the academic performance of secondary school students in FCT, Abuja?

The study further tested the hypothesis that stated that there is no significant difference in the academic performance of secondary school students in FCT, Abuja on the basis of birth order.

Methodology

The research design adopted for this study is the descriptive survey design. According to Nworgu (1991), a descriptive survey research is the one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The total population of this study was made up of all the senior secondary school students in FCT. The target population comprised 18,282 secondary school students in FCT, (Secondary Education Board 2015/2016 session). A simple random technique was adopted in the selection of the secondary schools that participated in the study. The sample size for the study was three hundred and seventy-seven (377) Senior Secondary school students from all the six (6) Area Councils in the Federal Capital Territory. This was in accordance with Krejcie and Morgan (1970) who stated appropriate sample sizes for specific populations: with estimated population of 18500, the sample size should be 377 (Krejcie & Morgan, 1970).

The names of all the schools were written on a piece of paper differently and folded. The researcher handpicked sixteen (16) of the folded papers out of the fifty-seven (57) secondary schools. The handpicked secondary schools were chosen for the study. Only the students in Senior Secondary School One (SSS 1) were used for the study. Two research instruments were used. The first instrument is titled:

Birth Order Inventory (r=0.85) It consists of two sections namely: section A and section B. Section A comprises of items on demographic data, while section B present a chart seeking information on students' birth order. The second instrument is the Students' Academic Record (SAR) which was usd to collate data on students' academic performance in Junior Secondary School Certificate Examinations. It comprises of five subjects namely: English Language, Mathematics, Basic Science, Social Studies and Business Studies. The questionnaire was administered directly on the respondents by the researchers. The data collected were analyzed using the Statistical Package for the Social Science Software (SPSS). Statistical techniques used include, frequency counts, mean, and analysis of variance (One-way ANOVA) which was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question One: What is the birth order of secondary school students in FCT, Abuja?

Table 1: Birth Order of Secondary School Students
N= 366

Birth Order	Frequency	Percentage (%)
Firstborn	142	38.80
Middleborn	168	45.90
Lastborn	56	15.30
Total	**366**	**100.0**

Table 1 shows the birth order of secondary school students in FCT, Abuja. The data collected shows that 142 (38.80%) students were first-borns; 168 (45.90%) were middle-borns while 56 (15.30%) were last-borns. It was deduced therefore that more of the participants were middleborns closely followed by the firstborn and with the lastborns coming last.

Research Question Two: What is the academic achievement of secondary school students in FCT, Abuja?

Table 2: Descriptive Statistics on the Academic Performance of Students

N= 366

Subject	Minimum Score	Maximum Score	Mean	Std. Deviation
English Language	40.00	89.00	57.58	14.20
Mathematics	32.00	89.00	60.13	5.60
Basic Science	28.00	87.00	56.83	14.96
Social Studies	32.00	89.00	66.87	16.18
Business Studies	32.00	89.00	56.08	12.92
Mean Score	**40.80**	**85.00**	**59.47**	**9.21**

Table 2 presents descriptive statistics on the academic performance of secondary school students

in the study area. The computations indicate the minimum and maximum scores as well as mean academic performance for each of the subjects. The mean score indicates the overall academic performance of the students. It can be observed from Table 2 that students' academic performance ranges from 40.80-85.00 with an average academic performance of 59.47. This is indicative of good academic performance being above average.

H_{01}: There is no significant difference in the academic performance of the secondary school students in FCT, Abuja due to their birth order

.**Table 3: One-way ANOVA for Test of Difference in the Academic Achievement of Students due to their Birth Order**

Variables	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	1125.83	2	562.92	6.853	.001	Rejected
Within Groups	29818.54	363	82.15			
Total	30944.37	365				

The test on Table 3 was carried out to establish whether there is difference in the academic achievement of secondary school students in the FCT due to their birth order. With a significant value of .001 (less than the 0.05 level of significance), the hypothesis is rejected. It is therefore concluded that there is significant difference in academic achievement of students due to their birth order. It can therefore be inferred from the analysis above that the academic

achievement of students is influenced by their order of birth. In order to substantiate the finding above which stated that there is a significant difference, the mean scores are presented on Table 4.

Table 4: Means Scores for Academic Achievement of Students due to Birth Order

Birth Order	Frequency	Mean
Firstborn	142	61.36
Middleborn	168	57.60
Lastborn	56	59.47
Total	**366**	**100.0**

Table 4 shows that the highest mean score is found among the firstborns while the lowest mean score is found among the middleborns. Lastborns appeared to compete closely with the firstborns in their academic achievement.

Discussion of Findings

The result of the analysis of research question one indicates that the birth order of secondary school students in FCT, Abuja is such that, most of the respondents affirmed that they are middleborns among their siblings, and this accounts for 45.9% of the respondents, followed by 38.8% of the respondents who affirmed that they are in the firstborn position among their siblings, followed by 15.3% of the respondents who also affirmed that they are the last among their siblings. This is important as this study seek to underscore the relationship of birth order on academic achievement of secondary school students in FCT.

The result of research question two revealed the academic performance of secondary school students in FCT. The mean achievement indicates that students' academic achievement ranges from 40.80-85.00 with an average academic achievement of 59.47. This is indicative of good academic achievement being above average. This is however necessary as academic attainment is an important parameter in measuring success in students.

Analysis of the hypothesis seeking difference in academic performance of the secondary school students in FCT, Abuja on the basis of birth order indicated that the academic achievement of students is influenced by their order of birth. The variations in mean scores show that the highest mean score is found among the firstborns while the

lowest mean score is found among the middleborns. Lastborns appeared to compete closely with the firstborns in their academic achievement. This finding is in line with Joseph & Pantano (2011) who concluded that those born earlier perform better in school. These findings were also the same as a Onabarniro, Ositoye & Adeyemi (2010) which found, "there is a significant difference between the mean achievement of first-borns and latter-borns." So, an achievement gap exists between the firstborns and the later-borns.

This finding is however in contrast to that of Sun& Tam (2011) which saw no correlation between birth order and academic performance. A related finding is that of (Iacovou, 2001) which found out that children lower down the birth order do worse than those higher up the birth order. Earlier-born siblings enjoy more time, care and attention than later-born siblings because attention is never divided yet. Each time a sibling is added to the family, parental time is "diluted." Observations and studies have shown that more attention and time are usually accorded the first-borns and parental attention by parents' declines as the number of sibling's increases and later born children perform less well than their earlier born siblings. The parental attention on children born earlier affects the later born children to perform less well than their earlier born siblings. Studies carried out in the past on the relationship academic achievement and birth order have shown that there were positive relationships. For example, Tenibiaje (2002) observed that there was a significant difference in intelligence capacity between the firstborns and later-borns.

The academic performance of the first-born which happens to be better than other siblings can be explained in line with parental attention available to them. Parents are more likely to make strict rules (of their first children, according to survey data. They are also more likely to punish their first child's bad grades (Holzs, 2013). In addition, studies by Zajonc and Markus in 1975 recognized the positive impact of 'ever-changing intellectual environment' on the IQ of firstborns. They explained that: compared to the youngest child, the eldest child is usually accorded undivided attention by their parents; exposure to adult language by firstborns could have improved their IQ test scores; more kids lead to less mature intellectual environment, as shown by children from large families; and firstborns are often engaged in tutoring younger siblings this

helps them to somehow remember data or have more advanced verbal abilities than other kid.

Also, under Adler's birth order model, being the first born does have an effect on better academic standing compared only to the youngest (Adler, 1964). In other words, being the youngest places the adolescent at risk of performing less well compared to older adolescents in their classrooms. One possible reason is that adolescents who are the youngest might be raised in more disadvantaged conditions than adolescents born first, especially in the case of poor families. First born children may benefit not only from more parental attention, but also these children may receive more financial resources that can be allocated to their education. Understanding the importance of birth order and the strains and privileges of individual children within their birth order may help guide proper treatment and services to better the life of those students who are at the disadvantaged.

Conclusion

Based on the findings and observation of the research, conclusions were drawn: The study found that the academic performance of secondary school students in FCT, Abuja is influenced by their order of birth. While the result from the mean scores calculated to test the hypothesis showed that the highest mean score is found among the firstborns while the lowest mean score is found among the middleborns. Lastborns appeared to compete closely with the firstborns in their academic performance. It is therefore concluded that there is significant difference in academic performance of students due to their birth order in secondary schools in Federal Capital Territory.

Recommendations

In view of the findings made in this study, the following recommendations have been made.

1. Parents should not give any form of preferential treatment to any of their children; they should be treated equally because they all deserve good and quality education.
2. Teachers should adjust to remediate school performance differences of students (who happen to be of higher birth order position and that of the lower birth order). The school authority must probe into the family life of underachievers and educate parents on the need to maintain high commitment, for optimal range for academic success.

3. It is also recommended that, parents should be mindful of expectation placed on their children as touching role differentiation. Parental attitudes of taking to account what a child of a particular birth order should do or achieve differently affects their educational attainment.
4. To both the parent and/or the teachers, the disciplinary measure mete for the firstborn's students should also be used for the middle-borns and lastborn respectively. The situation whereby those who are born later face more lenient disciplinary environment should be avoided or jettison. The issue of truancy and delinquents in most secondary schools can also be trace to lack of strong moral etiquette on the part of such students.
5. For the students, it is recommended that their orientation should be geared towards making academic excellence regardless of their birth order.
6. The service of school psychologist or counsellor can be employed to assist students who have been negatively stereotyped because of their order of birth.

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