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BIRTH ORDER AS A CORRELATE OF EDUCATIONAL PERFORMANCE AMONG SECONDARY SCHOOL STUDENTS IN AKURE, SOUTHWESTERN NIGERIA

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ABSTRACT

This study examines the relationship between birth order and academic performance. A survey design using random sampling technique was employed in administering 240 structured questionnaires among secondary school students in Akure, Ondo State. Data was analyzed with the aid of the SPSS 15.0. Statistical techniques used include percentage distribution and simple regression analysis, including ANOVA for the regression. Results show inverse relationship exist between birth order and academic performance ($F=21.7, p>0.05$) The study concluded that parents have roles to play in ensuring that children's birth order does not undermine their academic performance.

Key words: Birth order, family size, academic achievement, educational performance

INTRODUCTION

Academic achievement or the level of academic success is the main concern of all stakeholders of education. However, it is sad to observe that poor academic performance have become the hallmark of both secondary and tertiary levels of education in Nigeria (Tenibiaje, 2009). According to Aremu *et al.* 2001, poor academic performance have been attributed to self-efficacy, self-concept, peer influence, parental involvement, and state of the school, society, and government. Apart from these factors, student's birth order may be related to and indeed influence school performance.

Groose (2000) noted that the position of a child in his 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 studies of Teti *et al.* (1996) stressed that security of first born attachment decreases significantly after the birth of the second child. Aremu and Oluwole (2001) inferred from this submission that the firstborn mainly develop security anxiety which may affect his academic performance in school. Most of the

refrain, most of the time, from where they cannot excel or make it. Uba (1989) and Becker (1981) corroborate the above statement by noting that the oldest child is usually advantaged by a good deal of attention and warmth during the early stage of life. More attention and time are usually accorded to them (the firstborns); this may lead them to doing well in their academic endeavours.

The middle child is influenced by the elder child, the second or the middle child usually imitates the firstborn and he is likely to strive to attain as much as the firstborn. Goose (2002) however noted that second and middle born differs greatly from the first born in personality interest and achievement. Lacovou (2001) noted that, middle or youngest child performs better than other siblings. The only children, Goose (2002) noted, are achievement oriented and most likely to attain academic success. They may be creative, sometimes, like lastborns; they may rely on services from others rather than put in their own efforts. Against the backdrop of consistent poor academic performance of students in Nigerian public secondary schools, it is important for research to sustain focus on any cause of poor academic performance among students in the country.

LITERATURE REVIEW

Tenibiaje (2002) and Spears (1982) agreed 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 posits are indications of birth order influence on academic achievement. As each child is born, they enter into a different environment than the previous child. Because parents are more experienced upon arrival of a second child, they may be calmer, yet now, the child needs to compete for their parents' attention and resources (Zajonc 2001). In understanding how birth order can affect a child helps make parents and society more sensitive to the unique situation each child is born into and can help parents and caregivers mode their care giving techniques to fit the child's unique needs.

Birth order has been studied for many years as a factor that plays a part in an individual's intelligence. In general, not much has been looked into concerning birth order and education. Firstborns and children bore later have many circumstances, within the family unit, that affects the development of strengths and weaknesses and ultimately influence their personality traits. Parents are often overly anxious about their first child and may be more restrictive with them than with later children (Eisenman, 1992). Birth order theory holds that children develop their behavioural patterns largely as a result of their position within their family (Morales, 1994).

Intellectually, firstborns have been found to have larger receptive vocabularies than later born children, but that later born may have better conversational skills than firstborns (Coates and Messer, 1996). Social interactions experienced by later born children are characterized by less

supportive and more directional communication than firstborn. These less supportive interactions may result in later born children having smaller vocabularies (Coates and Messer, 1995). The study of interactions among intellectual performance, family size, and birth order according to Zajonc (1976), predicts an additive decrease in intellectual performance with increasing family size, and birth rank. Studies have shown that firstborns hold memberships in more organizations and demonstrated a significantly higher GPA than later borns (Nelson & Harris, 1995). As such, education would be directly affected by these achievements.

Firstborns tend to be different, some of the time, than children born into other birth orders. This may be due to the early parental treatment received. The firstborn has more time alone with the parents than the later born children, by virtue of having no siblings until the second child is born. The early adult oriented styles learned when they had only the parents and no other siblings would account for the anxiety, achievement, and creativity of some firstborns (Eisenman, 1992). Children's perception of the influence of parental and sibling responsiveness and support differs by birth order. For firstborn children, second born sibling warmth was a stronger predictor of self perceptions than maternal warmth and responsiveness.

Mothers influence on firstborn children's self perceptions was mainly indirect and occurred by influencing second born siblings' warmth, which then influenced the firstborn children's perceptions of intellectual and physical abilities, self-assurance, and happiness (Barnes, 1995). The order of a person's birth has a lasting impact on personal development. Studies have indicated a strong relationship between birth order and perception of favoritism, where there is clearly a tendency for favoritism to be perceived from the opposite-sex parent (Chalfant, 1994). Findings about the connections between differential treatment and children's sibling relationships also were consistent in showing equal treatment by both parents has the most positive correlates (McHale, 1995).

Previous studies have shown that the main problem is that the education performance of students is due to the position in which they are born into the family. Researchers has proved that the firstborns usually turns out to be the most intelligent in the family and later in life, turns out to be either an accountant, engineer, pilot or a medical doctor, to mention a few; While the latter born turns to imitate his/her elder siblings. But the main problem we are faced with is that does birth order really affect/influence the educational performance or academic achievement of students? However, researchers have virtually ignored the relationship between students' birth order and their academic performances.

In addition, apparently no previous study has been concerned with whether or not children's birth order predict academic performance or the effects of socio-demographic factors on students' academic performance. The implication of research in this area may allow the educational authorities to modify selectively their teaching strategies to favorably influence anxiety and

causal attributions. In particular, teachers may be able to improve students' performance and work habits by reducing their anxiety through changing their negative attributions.

DATA AND METHODS

This study was conducted in Akure, Ondo State, Southwestern, Nigeria. Akure is the capital town in Ondo State, Southwestern Nigeria. It lies in the southern part of the forested Yoruba Hills within the Latitude: 7° 16' 48" N and Longitude: 5° 14' 41" E with a population between a range of 250,000 and 500,000 and a cross intersection of roads from Ondo, Ilesha, Ado-Ekiti, and Owo. Akure is an agricultural trade centre for yams, cassava, banana, rice, palm oil and kernels grown by the Ondo aspect of Yoruba people. Although, cocoa is by far the most important local commercial crop, cotton, teak, and palm produce are also cultivated for export. The area has long been populated. Skeletons of people dating to the tenth millennium BC have been found in a burial site at Iwo Eleru near to Akure. Rock engravings dating back to the Mesolithic period; have been discovered on the outskirts of Akure at Igbara-Oke. A simple random sampling technique was adopted in the selection of the respondent (Secondary school students) in Akure, Ondo State. The questionnaire designed for the study was administered among the pupils of selected secondary school. The sample size was derived using the formular:

$$n_f = \frac{n}{1 + \frac{(n)}{(N)}} = \frac{400}{1 + \frac{400}{1000}} = 286$$

where n_f = the desired sample size when population is less than 10,000

n = the desired sample size

N = the estimate of the population size

After returning from the field work, information supplied in the questionnaire was edited to check for inconsistencies and inadequacies. Thereafter, the response were categorized and recoded where the questions are open-ended type. The coding was used in preparing the frequency tables and cross tabulations tables. The cross-tabulations were then prepared for analytical purposes. Data collected was analysed using parametric simple regression analysis to examine the relationship between birth order and academic performance obtained from average score in the last but one academic term. Based on Gupta (2011), the simple regression model was constructed as follows:

$\hat{Y} = \hat{\beta}_0 + \hat{\beta}_1 X_1 + U_i$; where $\hat{\beta}_0$ and $\hat{\beta}_1$ are estimators of the true parameters β_0 and β_1 , X_1 is birth order and U_i is the random error component. The adequacy of the regression model was examined using the Analysis of Variance (ANOVA) approach to regression.

RESULTS AND DISCUSSION

Table 1 presents respondent's socio-demographic characteristics. Majority of the respondents are teenagers with nearly two thirds of them in the 14 to 16 years age interval. More than half of the respondents are male; however the proportion of female is substantial. There were more rural residents in the sample compared with urban residents. The dominant religion among the respondents is Christianity and virtually all the respondents were Yoruba. The dominant family size among the respondents is between 6 to 8 persons; however more than one third of the respondents are from households with family size of between 3 to 5 persons. More than half of the respondents reported good academic performance with 60% of them scoring above 60%. The results of parameter estimates shown in Table 2 indicate that a linear relationship exist between birth order and academic performance ($p < 0.05$). The relationship is however an inverse relationship suggesting that a unit change in birth order may result in a decline in academic performance. However, as shown in Table 3, the regression model is however not explaining a significant proportion of the variation in academic performance ($F = 21.7, p > 0.05$).

Table 1: Percentage distribution of Demographic and Socio-economic Characteristics of respondents

Variables	Number	Percent (%)
Age		
11-13	29	13.4
14-16	144	66.4
17-20	44	20.3
Sex		
Male	130	59.9
Female	87	40.1
Residence		
Urban	99	45.6
Rural	118	54.4
Religion		
Christianity	201	92.6
Islam	11	5.1
Traditional	5	2.3
Ethnicity		
Yoruba	199	91.7
Igbo	13	6.0
Others	5	2.3
Family size		
3-5	76	35.0
6-8	119	54.8
9-12	20	9.2
14 and above	2	0.9
Number of siblings		

1-3	137	63.1
4-6	64	29.5
Other	16	7.4
Average Score (academic performance)		
0-39	3	1.4
40-49	25	11.5
50-59	57	26.3
60-69	67	30.9
70 and Above	65	30.0
Total	217	100.0

Source: Field Report, 2012

This study examines the relationship between birth order and child's academic performance. Findings show that an inverse relationship exists between birth order and academic performance which suggests that the birth order of students affects their educational performance. Parents are encouraged to take note of this relationship in order to take steps to address likely decline in academic performance of children with high birth orders. In virtually all Nigerian communities, there is high social expectation from the first child in the family. In some cultures, the first child is given full attention to achieve educational success so that he/she is in a position to guide other siblings to academic success. Most often parents put more efforts on training the first child, this may affect the care for other children in the family if parents do not apply caution. However, regardless of a child's birth order, parents are obliged to cater for the educational needs of their children.

Table 2: Result of regression analysis showing significance of parameter estimates

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig
	Beta	Std. error	Beta		
Constant	4.62	.195	12.3	23.6	p<0.05
Birth order	-4.84	.104	-3.03	-4.7	p<0.05

Parents can play an important role in strengthening their children education if they take proper care of each and every birth order without giving any sort of preferential treatment to any child. However, parents and/or teachers may adjust to remediate school performance differences of children (who happen to be of higher order birth) but if there is any change in the behaviour of parents

and/or teachers which does not resolve differences on the other types of learning as measured by academic performance. The parenting paradigms and lifestyle of the parents have a marked bearing on the student's education and future career development.

Table 3: Result of ANOVA for the regression analysis examining goodness-of-fit of the regression model

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	8.539	1	8.539	21.732	p<0.05
Residual	84.475	215	.393		
Total	93.014	216			

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