

Birth Order and Achievement of Students in Obio/Akpor LGA of Rivers State

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DOI: 10.56201/ijee.v8.no6.2022.pg1.11

Abstract

This study investigated birth order and achievement of students in Obio/Akpor LGA. Two research questions and two corresponding null hypotheses guided the study. The correlational research design was adopted for the study. The participants were secondary school students from government secondary schools in Obio/Akpor LGA. The study group included 300 students, of whom 60.9% (103) were female, and 39.1% (66) male. There were 58 (34.3%) first-born, 56 (33.1%) middle-born and 55 (32.5%) last-born participants. The finding of the study revealed that birth order significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. The study also showed that family types significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. Based on the findings of this study, it was also gathered that birth order, locus of control, parenting styles, family type, and gender (male/female) significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. It was therefore recommended that more academic events should be conducted to help students review and utilize their knowledge and skills, as well as to make them more competitive, in order to improve academic achievement or bring out the students' potential academically.

Keywords: Birth Order, Family Type, Academic Achievement

Introduction

Birth order has a significant social effect on children, one that can shape their life choices. Different developmental circumstances, such as being older or younger than one's siblings or being exposed to a variety of perspectives held by one's parents, each contribute in their own

unique way to the formation of an individual's overall point of view. Even if they were brought up in the same setting and share the same genetic pool from both parents, children who come from the same family might have very distinct personalities and behaviours. Since Adler (1920), who first hypothesised the connection between birth order, sibling size, sex, and uniqueness, birth order studies have garnered a growing amount of attention from academics (Bredin and Rodney, 2002). He emphasized the significance of not only the physical birth order but also the psychological birth position. According to him, if the oldest child grows out to be an imperfect individual, psychological birth order may play a large effect, and the second child is likely to take on the role of the first-born (Shulman and Mosak, in Akgeyik, 2013)

In addition to their acts, siblings can be differentiated from one another in terms of personality, characteristics, IQ, family mood, and other things. The amount of attention, participation, and expectations that parents have for their children varies according to the child. It was also hypothesised that the amount of parental resources obtained by a child decreases as the number of siblings living in the same household increases. Because of the sequence in which they were born, every child receives a different quantity of resources and attention from their parents; the specific circumstances under which they were raised have a significant bearing on the path that their lives ultimately take (Sun Ha & Tam 2011).

In the past few decades, there have only been a handful of studies based on Adler's theory that have been undertaken to investigate how one's birth order affects one's intelligence, career inclinations, and level of success (Eckstein et al., 2010; Leong, 2002). There is also a common belief concerning the effects that are associated with one's birth position. According to the findings of one study conducted by Herrera et al. (2003), participants thought that first-born children were the most intelligent, middle children were the most envious, last-born children were the most creative, and only children were the most disagreeable.

According to the findings of various pieces of study, the setting in which a child spends his or her formative years has a significant impact on the cognitive, emotional, and social development of that child over the course of his or her lifetime (Holmgren, Molander, & Nilsson, 2006; Leman, 2009). The vast majority of scientists and academics are in agreement that a child's entire development is shaped and created by the home environment, including variables such as the quality of parenting and the resources that are easily accessible to the family (Downey, 2001). It may come as a surprise to some professionals and laypeople, but Downey (2001) found that "one of the most stable markers of educational performance is the number of siblings, or sibship size" (p. 497). Because of this, it is impossible to place enough attention on the significance of the connections between siblings and the impact of birth order.

According to Booth and Kee (2009), it is essential for politicians to engage in academic pursuits and provide support for academic achievement. They also argued that the economics of families shed light on the significance of families in terms of educational attainment, pointing out that there is a very low probability that parents will be able to allocate the same amount of resources to each of their children (Blake, 1981; Booth & Kee, 2009). Since the first-born child is typically the only child in the home until the arrival of the subsequent sibling, he or she is more likely to

receive the majority of parental attention; siblings who arrive after the first born child spend their entire lives competing with one another for their parents' attention and resources (Badger & Reddy, 2009; Blair, 2011; Blake, 1981; Booth & Kee, 2009). However, it is also possible that parents will mature and acquire superior parenting talents as well as increasing financial resources with the passage of time, hinting that having the firstborn child does not come without its share of negatives (Booth & Kee, 2009).

Problem Statement

There have been a number of studies conducted on birth order; however, very few, if any, have concentrated especially on the psychological effects of birth order (Campbell et al., 1991; Stewart & Campbell, 1998; Gfroerer et al, 2003). However, Adler (1927, 1946), who is widely regarded as the pioneer of birth order research, maintained throughout his publications that the individual's conception of his or her function within the family is what truly influences his or her development. Adler published these ideas in the years between 1927 and 1946. (Ansbacher & Ansbacher, 1956). Leman (2009) argued that the circumstances surrounding birth order (i.e. divorce, remarriage, sibling deaths) are much too essential in a child's life to simply neglect or understate. However, it is also plausible that parental skills, as well as increased financial resources throughout time, are the reasons why some siblings outperform others. therefore this research aimed to know the relationship of various birth orders and academic performance of students in Obio/Akpor LGA of Rivers State.

Aim and Objective of the Study

the aim of the study is to investigate birth order and achievement of students in Obio/Akpor LGA; the following objectives guided the study

1. examine the extent birth order predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.
2. Find out the extent family type (nuclear/extended) predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Research questions

1. To what extent does birth order predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State?
2. To what extent does family type (nuclear/extended) predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State?

Hypotheses

The following null hypotheses were test at a significant level of 0.05

1. Birth order does not significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.
2. Family types (nuclear and extended) do not significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Birth order

The order in which children are born is a concept that is accorded outstanding value among families belonging to a wide variety of cultures and racial backgrounds. Even though they were raised in the same environment, such as the same neighbourhood, and have the same genetic pools from both of their parents, children of the same family will frequently behave in very different manners. This is the case even if they have the same genetic pools. According to a few of the intrauterine theories, a younger mother is in a better position to provide her earlier born children with a "rich uterine environment," which, as a result, results in higher levels of both physical and mental well-being in the earlier born children. This is one of the premises on which the intrauterine theories are based. (Adams, B. N. 1972) They believe that firstborns are always labelled as being responsible, high achievers, and perfectionists, but last borns and only children are always portrayed as predominantly being spoiled children. This is because firstborns are typically the only children in the family. In a manner analogous to this, they continue by saying that only children are consistently portrayed as being primarily entitled youngsters.

Researchers in the departments of psychology, sociology, and anthropology have been researching the consequences of birth order for more than a century now (Sulloway, 1996). It has been shown in a large number of studies that these effects do, in fact, occur, despite the fact that the degree of the effects of birth order appears to be wholly determined at random (Kluger, 2011). It has been found that first born children have a disproportionately high representation in some occupations, such as chief executive executives, presidents, astronauts, elected positions in government, attorneys, and physicians. This is especially true in the United States (Kluger, 2011; Leman, 2009). On the other hand, children who are born last have a greater propensity to adopt occupations related to the entertainment sector or to become entrepreneurs (Kluger, 2011).

According to the findings of a number of studies, first-born children are shown to have an edge over their younger siblings in a range of domains. This advantage can be shown in both academic and social domains. Because of this, the possibility that first-born children have an advantage in academic achievement over their younger siblings should not come as a complete or whole shock to anyone. As a result of this, the researcher was curious to find out, in addition to the fact that every person is different from one another, if the birth order of a person influences his or her academic accomplishments in this generation. In other words, the researcher wanted to know if a person's academic success is influenced by the order in which they were born. There is the potential for difference not just in the academic performance of the students but also in the order in which they were born. It is of particular interest to the researcher to determine whether or not the academic performance of an individual can be estimated by looking at their ordinal position; whether or not the intellectual achievement of students is dependent on their respective birth order; and whether or not it was significantly influenced by the intellectual environment of the family and the opportunity to serve as an intellectual resource.

Marisa Reyes-Baybay (2018) conducted an investigation into the connection between the order in which a person was born and their level of academic success among second-year students

attending the Pupa University Santa Rosa Campus. According to the findings of the survey, middle children included a disproportionately significant share of respondents who had exceptional academic performance. In a similar vein, a p value of 0.584 was obtained, which was greater than the 0.05 threshold for significant difference. This suggests that there is no statistically significant connection between the academic success of the respondents and the order in which they were born. There is either a very weak or completely nonexistent association between the respondents' birth order and the amount of academic achievement they have achieved. As a consequence of this, we can draw the conclusion that the null hypothesis is accurate.

The Influence of a Person's Psychological Birth Order on Academic Success and Motivation

A pioneer in the field of birth order research by the name of Adler came up with the definition of psychological birth order as the manner in which an individual recognises their place within the family (Campbell et al., 1991; Gfroerer et al., 2003). In point of fact, a person's psychological birth order may be quite dissimilar to their chronological or biological birth order due to circumstances such as divorce, the passing of siblings or parents, or the incapacity of siblings. These kinds of life events can have a significant impact on a person's birth order (Leman, 2009). A person's psychological birth order is a depiction of their birth order and reflects the roles that they may be forced to play as a result of their biological birth order (Adler, 1927; Ansbacher & Ansbacher, 1956). Adler (1927) stated the following, which can be paraphrased as follows: "What the kid feels need not truly be the case. It makes no difference what the actual circumstances are or whether or not the person in question is truly beneath others. It is necessary to take into account his perspective on the circumstances" (p. 150). Adler believed that psychological birth order had a significantly larger impact in development, but the scientific community is not yet on board with this theory (Leman, 2009).

Although birth order continues to be one of the most heavily investigated and highly disputed subjects in the field of personality psychology (Herrera, Zajonc, Wieczorkowska, & Cichomski, 2003; Leman, 2009; Sullo way, 1997), many academics argue that the order in which a person is born has little to no impact on either social or cognitive development. However, studies have shown that the environment in which a kid spends his or her youth has a profound and long- (another subscale of motivation scales)

Researchers have also discovered that home-related factors have a low impact (Alos et al. 2015), and birth order has no bearing on the career decisions of the adolescent kids of OFWs. However, she identified academic achievement as a vital factor in choosing what course to take in college (Esprero, 2010). Another conclusion that was drawn from the results was that there was no difference between the male and female participants in terms of their manner of communication; as to the birth order of the participants.

According to the findings of a regression analysis presented in Tekin Akgeyik's (2013) research on the relationship between birth order and academic success, the size of the participant's families did not prove to be a significant factor in predicting their levels of academic success.

METHOD

The researcher adopted the correlational research design. The participants were secondary school students from government secondary schools in Obio/Akpor LGA. The study group included 300 students, of whom 60.9% (103) were female, and 39.1% (66) male. There were 58 (34.3%) first-born, 56 (33.1%) middle-born and 55 (32.5%) last-born participants. Based on the research design, the researcher designed an anonymous questionnaire, questions designed aimed to assess the respondent's academic performance thru their general average grade and birth order position. To ensure soundness, the questionnaire was validated through consultation with adviser and statistician. The draft was revised until it reached the proper content needed. Pilot test was conducted to identify its strength and weaknesses in terms of instruction and content. Those items which are not clearly understood were revised in the final draft. The descriptive statistics was reported using the correlated R^2 . While the one way ANOVA was employed to test the null hypotheses at a significance level 0,05.

Result

Research Question One: To what extent does birth order predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State?

Table 1: Simple Regression Analysis on the extent birth order predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561 ^a	.315	.313	3.43638

Table 4.1 revealed that the regression coefficient R was calculated to be 0.561 while the regression squared value was computed to be 0.315. This shows that there is a high and positive prediction between birth order and academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. Judging by the coefficient of determination, it shows that 31.5% change in academic achievement among secondary school students can be predicted by birth order , while 68.5% was accounted by other variables not considered in this study.

Research Question Two: To what extent does family type (nuclear/extended) predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State?

Table 2: Simple Regression Analysis on the extent family type (nuclear/extended) predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.486 ^a	.237	.234	3.62804

Table 2 revealed that the regression coefficient R was calculated to be 0.486 while the regression squared value was computed to be 0.237. This shows that there is a weak and positive prediction between family type and academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. Judging by the coefficient of determination, it shows that 23.7% change in academic achievement among secondary school students can be predicted by family type, while 76.3% was accounted by other variables not considered in this study.

Hypothesis One: Birth order does not significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Table 3: Summary of One Way ANOVA Analysis on how birth order predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1618.670	1	1618.670	137.074	.000 ^b
Within Groups	3518.997	298	11.809		
Total	5137.667	299			

Table 3 shows showed that the sum of squares for between groups and within groups are 1618.670 and 3518.997 with mean squares of 1618.670 and 11.809 respectively. The degrees of freedom are 1 and 298 with F-calculated value of 137.074. Based on the decision rule, the null hypothesis is rejected since the significant value of 0.000 ($P < 0.05$) is less than the alpha level of 0.05. Therefore, it is concluded that birth order significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Hypothesis Two: Family types (nuclear and extended) do not significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Table 4: Summary of One Way ANOVA Analysis on how family types (nuclear and extended) predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	104562.440	1	104562.440	496.423	.000
Within Groups	62768.226	298	210.632		
Total	167330.667	299			

Table 4 shows showed that the sum of squares for between groups and within groups are 104562.440 and 62768.226 with mean squares of 104562.440 and 210.632 respectively. The degrees of freedom are 1 and 298 with F-calculated value of 496.423. Based on the decision rule, the null hypothesis is rejected since the significant value of 0.000 ($P < 0.05$) is less than the alpha level of 0.05. Therefore, the researcher concluded that family types (nuclear and extended) significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Discussion of Findings

Birth order and Achievement

The result of this study showed that birth order significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. Therefore, the null hypothesis was rejected in favour of the alternative that birth order significantly predict academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. The finding of the present study is in agreement with an earlier study by Alissa (2016) who found out that psychological birth order (first born, middle born, youngest, only child) predicted student motivation in the area of fun seeking (part of the motivation scales). Also, psychological birth order (first born, middle born, youngest child) predicted student motivation in the area of reward responsiveness (another subscale of motivation scales). On the other hand, the findings of the present study does not agree with that by Chen and Wei (2011) who found out that birth order does not significantly predict academic achievement among secondary school students.

Family Types and Achievement

The finding of the present study showed that family types significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. The null hypothesis was rejected in favour the alternative that family types significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State. The finding of the present study disagrees with that of an earlier study by Tekin Akgeyik (2013) on the effect of birth order on achievement whose regression analysis show that family size was found to be an insignificant predictor of the participants' achievement scores.. They further added that that children raised in extended families have a lot of free time and minimal or no supervision, as such they are more likely to engage in vices like vandalism, delinquency, which in turn affect their academic performance. He added that when academic achievement is observed at home, it is then imitated and exhibited in school and among peers. Whitbourne (2013) also found out that family type significantly predicts academic achievement students from nuclear families are more likely to indulge in deviant behaviour based on the fact that parents of nuclear families tend to encourage or reinforce negative behaviour of their children by petting, attending, laughing or approving of such behaviours, while ignoring positive behaviour when it is exhibited.

Conclusion

Based on the findings of this study, it was gathered that academic achievement is a major problem among secondary school students especially in Obio/Akpor Local Government Area of Rivers State. It was also gathered that birth order , locus of control, parenting styles family type, and gender (male/female) significantly predicts academic achievement among secondary school students in Obio/Akpor Local Government Area of Rivers State.

Recommendation

Based on the findings and concluded, the researchers recommend the following:

1. The researchers suggest conducting more academic events to help students review and utilise their knowledge and skills, as well as to make them more competitive, in order to improve academic achievement or bring out the students' potential academically.
2. Future researchers may choose to undertake a study similar to this one, but they may focus on factors other than academic achievement and tie them to birth order. They may also choose to use various research techniques.

References

- Adams, R. L., & Phillips, B. N. (1972). Motivational and achievement differences among children of various ordinal birth positions. *Child Development*, 43, 155- 164. DOI: 10.1111/1467-8624.ep12280071.
- Adler, A. (1927). *Understanding human nature*. Garden City, NY: Garden City Publishers.
- Adler, A. (1946). *The practice and theory of individual psychology*. London: L. Paul, Trench, Trubner & Co, Ltd
- Alos, S. et al. (2015), “Factors Affecting the Academic Performance of the Student Nurses of Benguet State University”
- Blair, L. (2011). *Birth order: What your position in the family really tells you about your character*. London, England: Little, Brown Book Group.
- Blake, J. (1981). Family size and the quality of children. *Demography*, 18, 421-442. DOI: 10.2307/2060941
- Booth, A. L., & Kee, H. J. (2009). Birth order matters: The effect of family size and birth order on educational attainment. *Journal of Population Economics*, 22, 367-397. DOI: 10.1007/s00148-007-0181-4.
- Campbell, L., White, J., & Stewart, A. (1991). The relationship of psychological birth order to actual birth order. *Individual Psychology*, 47(1), 380-391. Retrieved from psychINFO.
- Carette, B., Anseel, F., & Van Yperen, N. W. (2011). Born to learn or born to win? Birth order effects on achievement goals. *Journal of Research in Personality*, 45, 500-503. <http://dx.doi.org/10.1016/j.jrp.2011.06.008>
- Carette, B., Anseel, F., & Van Yperen, N. W. (2011). Born to learn or born to win? Birth order effects on achievement goals. *Journal of Research in Personality*, 45, 500-503. <http://dx.doi.org/10.1016/j.jrp.2011.06.008>
- Espero, C.O., (2010), “Correlates of career decisions among children of overseas Filipino workers”
- Gfroerer, K. P., Gfroerer, C. A., Curlette, W. L., White, J., & Kern, R. M. (2003). Psychological birth order and the *BASIS-A Inventory*. *The Journal of Individual Psychology*, 59(1), 30-41. ISSN: 1522-2527.
- Ha, Tshui Sun and Tam, Cai Lian, (2011) “A Study of Birth Order, Academic Performance, and Personality”, *International Proceedings of Economics Development and Research*, Volume 5, Number 1, Pages 28-32,

- Holmgren, S., Molander, B., & Nilsson, L. G. (2006). Intelligence and executive Functioning in adult age: effect of sibship size and birth order. *European Journal of Cognitive Psychology*, 18(1), 138-158. DOI:10.1080/09541440500216150.
- Hussain, L. et al. (2012)16, “Impact of Birth Order on Academic Achievement of Students”, Academic Journal Article, The journal of Educational Research (1027-9776);Vol. 15 Issue 2, p27
- Kluger, J. (2011). *The sibling effect: What the bonds among brothers and sisters reveal about us*. New York, NY: Riverhead Books.
- Marisa Reyes-Baybay, (2018), “The Relationship of Birth Order and Academic Achievement of PUP Santa Rosa Campus Second Year Students” in 4th International Research Conference on Higher Education, KnE Social Sciences, pages 947–953. DOI 10.18502/kss.v3i6.243
- Sulloway, F. (1997). *Born to rebel: Birth order, family dynamics, and creative lives*. New York, NY: Pantheon Books.
- Tekin Akgeyik (2013). The Effect of Birth Order On Achievement* (A Study On A Turkish Sample). *Journal of International Management Studies*, V. 13 (4), 2013: 5-12.
- Vidal – Fernandez et al. (2014)1, Early Origins of Birth Order Differences in Children’s Outcomes and Parental Behavior
- Whitbourne, S.K. (2013). Is birth order destiny? *Psychology Today*. Retrieved from <https://www.psychologytoday.com/blog/fulfillment-any-age/201305/is-birth-order-destiny>.
- Zarah, L., (2012). Education in the Philippines: The Link Between Birth Order and Academic Performance, Research Works,