

## Conference Paper

# The Relationship of Birth Order and Academic Achievement of PUP Santa Rosa Campus Second Year Students

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### Abstract

Throughout the history, birth order is a significant concept in families of different cultures and race. Every child in the family may differ from his/her siblings because of his/her role in the family. The first born may be a lot more different from the second born and last born. His/her academic achievement may also be affected because of the expectancy from parents. Individual personality of a child may also influence by his/her role in the family for it is his/her first group experience.

According to Adler, character traits and behaviours derive primarily from developmental issues, including birth order. This study was conducted to examine birth order's relationship to academic achievement in order to further understand the links between the said variables.

This research was conducted to determine if birth order is related to the academic achievement of the second year students of Polytechnic University of the Philippines - Sta. Rosa Campus. A descriptive type of research was used in this study. The research locale is the Polytechnic University of the Philippines - Sta. Rosa Campus. With a total population of 766 second year students enrolled during the school year 2014-2015, using Sloven's Sampling Technique with 5 percent margin of error, sample size were arrived at 263 respondents. The researcher used a researcher made questionnaire in collecting information among the respondents.

Based on the statement of the problems, findings were a greater number of respondents were middle child who has a good academic performance. Likewise, a p value of 0.584 was obtained which was higher than the 0.05 level of significance which reveals that there is no significant relationship between the respondents' birth order and academic achievement. The respondents' birth order has little to no bearing on their academic achievement. Therefore, the null hypothesis is accepted.

**Keywords:** academic achievement, average grade point, birth order, first born, last born

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## 1. Introduction

Birth order is a significant concept in families of different culture and race. Children of a family behave differently although they were raised in the same environment, such as neighbourhood, and share the same genetic pools from both of their parents. Some of the intrauterine theories claimed that young mother is able to provide a “rich uterine environment” for her earlier born children and hence, results in greater health and intelligence in the earlier born. (Adams, B. N. 1972) [1] Likewise, they say that the firstborns are always described as being responsible, high achievers and perfectionists whereas last born and only child are always described as mostly spoiled kids.

The academic achievement may also be affected because of the expectancy from parents. Most of the time, older siblings always serve as intellectual resource to the younger siblings and this stimulates the intellectual development of the older siblings. The youngest and only children are never a “teacher” from their siblings so they may not perform as well as firstborns in academics.

The pioneer of birth order researches, Alfred Adler [2], had theorized that each birth position has a set of personality traits and academic performance. According to Adler, character traits and behaviors derive primarily from developmental issues, including birth order. Based on his theory, for example, the oldest child who is prone to perfectionism and need for affirmation which tends to become intellectual, conscientious and dominant in social settings. Adler describes the second-born child was someone who has a “pacemaker” or a leader. This child may grow to be more competitive, rebellious and consistent in attempting to be best. Middle children may struggle with figuring out their place in the family and, later, in the world. They are eager for parental praise and thus tend to develop gifts in the arts or academia in order to accomplish this goal. Due to their “middle” status, they also may be the most flexible and diplomatic members of the family. In Adler’s theory, the youngest child may be dependent and selfish due to always being taken care of by family members. However, this child may also possess positive traits of confidence, ability to have fun and comfort at entertaining others. Only children do not have to share their parents’ attention. They may have a hard time when they are told do so, and school may be a difficult transition as they are not the sole focus of the teacher. On a positive note, Adler believed that, compared to others as to their age, only children tend to be more mature, feel more comfortable around adults and even do better in intellectual and creative pursuits.

They say that the earlier born siblings enjoy more parental time than later-born siblings. This may probably be explained that earlier-born may do better in school.

Second, there could be differences in the genetic endowment of children by birth order. Indeed, later born siblings are born to older mothers so they are more likely to receive a lower quality genetic endowment. Third, first-borns and parents' experience with them, may have undue influence on parents' subsequent fertility decisions. Many theories have been posited, ranging from genetics to the stability of family life to the teaching dynamics among siblings. Pantano and Hotz (2015) [3]. offer a different explanation: It comes down to parents' reputations for maintaining discipline with their kids. Reputations matter for politicians, teachers, and even used car salesmen. Less obvious, but still important, is a parent's reputation in their children's eyes. There are parents wherein they will punish their children when they have a poor school performance, regardless of the child's birth order. Filipino dilemma says, if they don't punish their oldest child's poor behavior, all of their children may tend to not work hard in school. As a result, the younger children, seeing their big brother or sister punished, will be less likely to slack off in school because they can't be sure that mom and dad aren't really unforgiving types.

Some researchers have shown that first-born children are better at a lot of things than their younger siblings. So it probably won't surprise anyone that first-borns may do better in school than their younger siblings. That is why the researcher interestingly wanted to know aside from the fact that every individual is different from another, if birth order of a person affects his/her academic achievements to this generation. The academic achievement and birth order of the students maybe different from one another. However, the researcher notably wants to know if one's academic performance can be predicted by looking at his or her ordinal position; if the cognitive achievement of the students is depended on their respective birth order, if it was largely influenced by familial intellectual environment and the opportunity to serve as intellectual resource.

## 2. Objectives of the Study

This study aimed to examine if the birth order of an individual specifically second year PUP Santa Rosa Campus students has something to do with their academic achievement and in order to further understand the links between the said variables. It is obvious that the academic achievement and birth order of the students are different from one another. That is why the researcher's came up with the idea of knowing whether the variables are associated with each other.

### 3. Materials and Methods

The design employed in this research is a descriptive method. It is a general procedure that has a chief purpose for the description of phenomena. It also describes the nature of a situation as it exists at the time of the study and to explore the course of a particular phenomenon. The researcher considered it as the most appropriate to use because the main purpose of this study is to identify the relationship between birth order and academic achievement of the students.

A researcher-made questionnaire was used in collecting information among the respondents which consisted of two parts. The first part is the respondents' birth order whether they are first born, middle child, last born and only child while the second part is their academic achievement or average grade point whether they performed in school as excellent with an average grade point 1.0-1.49, very good (1.50-1.99), good (2.0-2.49), satisfactory (2.50-2.99), passed (3.0-3.50), and failed (3.51-5.0).

To determine the sample size of the respondents, a simple random sampling technique was used. Out of 766 total population from the different courses of the second year students from Polytechnic University of the Philippines, Sta. Rosa Campus, using the Sloven's formula with a 5 percent margin of error, 263 sample size was computed namely: BSIE having 19 respondents, BSECE having 20 respondents, BSE-MATH having 6 respondents, BSBA-HRDM having 43 respondents, BSBA-MM having 95 respondents, BSIT having 36 respondents, BS-EN having 15 respondents, BSP having 15 respondents and BSA having 14 respondents.

#### 3.1. Data collection procedure

The procedures made to collect the data were: first, the researcher prepared a letter addressed to the director of the Polytechnic University of the Philippines Santa Rosa Campus to provide the researchers the list of total population of the respondents. Then, the provided list of population was computed using Sloven's formula in getting the Sample size. After getting the list of population and the approval from the director, the researcher then personally administered the questionnaires to the respondents. The answered questionnaires were tabulated, analyzed and interpreted, subjected to statistical treatment.

### 3.2. Data analysis

The Statistical treatment of data used are as follows: frequency, to determine the number of responses; mean, to describe the respondents' birth order dimensions; percentage to describe the proportion of the respondents' birth order and academic achievement and Chi-square test was used to determine if there is significant relationship between the respondents' birth order and academic achievement.

## 4. Results and Discussion

This study was conducted to find out if there is indeed a significant relationship between the birth order and the academic achievement of the second year students of Polytechnic University of the Philippines, Santa Rosa Campus.

TABLE 1: The Academic Achievement of the Respondents According to Birth Order.

BIRTH ORDER	ACADEMIC ACHIEVEMENT															
	EXCELLENT (1.0-1.49)		VERY GOOD (1.5-1.99)		GOOD (2.0-2.49)		SATISFACTORY (2.50-2.99)		PASSING (3.0)		CONDITIONAL (4.0)		FAILURE (5.0)		TOTAL f %	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%		
FIRST BORN	0	0	10	3.8	41	23.19	21	7.99	3	1.14	0	0	0	0	95	34.12
MIDDLE CHILD	2	0.76	8	3.04	66	25.1	14	5.32	3	1.14	0	0	1	0.38	94	35.74
LAST BORN	0	0	8	3.04	33	12.15	13	4.94	0	0	0	0	0	0	54	20.53
ONLY CHILD	1	0.38	3	1.14	12	4.56	3	1.14	1	0.38	0	0	0	0	20	7.6
TOTAL	3	1.14	29	11.03	172	65.4	51	19.39	7	2.66	0	0	1	0.38	243	100

Table 21 presents the academic achievement of the respondents according to birth order. It reveals that 3 or 1.14% of the respondents were Excellent, 2 or 0.76% of them are Middle Child and 1 or 0.38% are Only Child. While 29 or 11.03% were Very Good, 10 or 3.8% of them are first born, 8 or 3.04 of them are middle child and last born, respectively, and 3 or 1.14% of them are only child. Meanwhile, 172 or 65.4 % of the respondents were Good, 66 or 25.1% of them are middle child, 61 or 23.19% are first born, 33 or 12.55% are last born, and 12 or 4.56% are only child. While, there were 51 or 19.39% respondents has a Satisfactory academic achievement, 21 or 7.99% of them were first born, 14 or 5.32% were middle child, 13 or 4.94 were last born and 3 or 1.14%

were only child. While, there were 7 or 2.66% of the respondents were Passing, 3 or 1.14% of them were first child and middle child, respectively and 1 or 0.38% were only child. However, there were no Conditional academic achievement among the respondents, likewise only one respondent or 0.38% was considered Failure, of them was middle child respondent. This implies that a greater number of respondents were middle child who has a good academic performance.

TABLE 2: Relationship between the Respondents’ Birth Order and Academic Achievement.

VARIABLE(S)	CHI-SQUARE TEST	P VALUE	INTERPRETATION	DECISION
BIRTH ORDER AND ACADEMIC ACHIEVEMENT	13.243	0.584	NOT SIGNIFICANT	ACCEPT $H_0$

Table 2 presents Chi-Square values and p values with its interpretations for the relationship between the respondents’ birth order and academic achievement based on a 0.05 level of significance.

A p value of 0.584 was obtained which was higher than the 0.05 level of significance. This shows that there is no significant relationship between the respondents’ birth order and academic achievement. The respondents’ birth order has little to no bearing on their academic achievement. Therefore, the null hypothesis is accepted.

The interpretation of data was supported by the study of Koren M. Dailey about Birth Order And Its Effect On Motivation And Academic Achievement (2009) [4]. where 40 psychology students undergone the Academic Motivation Scale (Baker, 1984)[4] with questions included involving birth order and grade point average which revealed that birth order effects on academic achievement are so small that many more participants would be needed to find a significant effect in this study.

## 5. Conclusion and Recommendation

Based on the findings, the researchers concluded the following:

1. A great number of the respondent’s academic achievement based on their grade point average was “Good”, among them were first born and middle child.
2. There is no significant relationship between the respondents’ birth order and academic achievement; therefore, birth order has little to no bearing at all with the respondents’ academic achievement.

Based on the above findings, the following are the recommendations given by the researcher.

1. To improve academic achievement or to bring out the students' potential academically, the researchers recommend innovation on academic approach/ technique in teaching and/or conducting more academic events to review and utilize knowledge and skills of the students and to make them competitive.
2. Future researchers may conduct similar study considering variable other than academic achievement and relate it to birth order and to utilize different research designs.
3. Future researchers may increase the sample size and collect data from various universities with different year level.

## Author's Note

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