

Sibling Secrets: Effects of Birth Order and Gender Differences on Personality Traits of Emerging Adults

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ABSTRACT

The study examined birth order and gender differences of individuals impacts their personality traits. People have their own unique personality and individual differences that occur because of differences in their genetics, environment, and many other factors. This study used a quantitative approach by investigating which birth order (firstborn, middle born, lastborn, and single child) and gender (males and females) individuals show dominance in specific personality traits. This was done by using Demographic Questionnaire and Big Five Inventory (BFI). It has a sample of 121 participants, from which 29 firstborns, 31 middle borns, 33 lastborns and 28 single children were taken, out of which 59 were males and 62 females. The sample was taken from emerging adults of India aged between 18-28 years. Data analysis was done using descriptive stats, one way ANOVA and a t-test. Results indicated that both birth order and gender had significant effects on personality traits. Specifically, there were significant differences in personality traits because of birth order. Additionally, differences were found between genders, with females high on agreeableness, extraversion, and neuroticism compared to males, as indicated by t-test results. These findings highlight the significance of both inherent and societal influences in understanding personality development.

Keywords: *Firstborns, Middle borns, Lastborns, Gender, Personality traits*

Every person possesses unique personality traits which are formed due to a number of factors including genetics, environmental differences, and several other factors. Personality is "the dynamic organization within the individual of those psychophysical systems that determine his characteristics, behavior and thought" by Allport (1961). Various classifications of personality have been suggested, among which Costa and McCrae's (1992) Five-Factor Model (FFM) stands out as particularly popular. This model encompasses Openness, Neuroticism, Extraversion, Conscientiousness, and Agreeableness, collectively known as the 'Big Five' (Cole, 2013).

Individuals high in neuroticism may exhibit significant anxiety and hostility towards others, whereas those with low neuroticism tend to be less anxious and more relaxed. Although this trait is often viewed negatively, certain aspects of it, such as vulnerability, impulsiveness,

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and self-consciousness, are essential in moderation. While high levels in these areas can have negative effects, they still represent a fundamental aspect of human behavior (Cole, 2013).

Extraversion is defined by a preference for being outgoing, enjoying large social events, and displaying assertiveness, activity, and talkativeness. People scoring high on extraversion are generally upbeat, lively, and positive (Digman, 1989; Digman & Inouye, 1986; Mervielde et al., 1995; Agbaria & Mokh, 2021). This trait also includes being sociable, enthusiastic, assertive, and inclined to seek excitement (Agbaria & Mokh, 2021).

Conscientiousness means the ability to control impulses and resist urges, resulting in people high in this trait striving for competence and dutifulness (Costa & McCrae, 2008; Agbaria & Mokh, 2021). Additionally, these individuals are often determined, strong-willed, and highly purposeful. Although high conscientiousness is associated with academic and professional success, it can also lead to overly fastidious behaviors, obsessive tidiness, and tendency towards workaholism (Digman, 1989; Digman & Inouye, 1986; Mervielde et al., 1995; Agbaria & Mokh, 2021).

Openness involves a readiness to embrace new and unconventional ways of thinking and acting. Individuals high in openness exhibit flexible behavior, whereas those low in this trait tend to be rigid, traditional in their values, and less emotionally complex. People with low scores in openness prefer simple and clear-cut options over complex, ambiguous, and nuanced ones (Cole, 2013).

Agreeableness (A) refers to the tendency to be altruistic, empathetic, and willing to assist others, with the belief that others will reciprocate (Digman, 1989; Digman & Inouye, 1986; Mervielde et al., 1995; Agbaria & Mokh, 2021). Individuals scoring high on agreeableness are typically easygoing. Conversely, those who score low in agreeableness often exhibit rigid thinking and behavior, finding it difficult to adapt and change their routines (Cole, 2013).

The purpose of the study is to explore how birth order and gender affect personality traits. By looking into these influences, we can achieve a deeper insight into reasons of people's behaviour and develop in specific ways. Examining the relationship between birth order and gender will help us uncover the factors that shape individual personalities.

Birth Order

Birth order denotes the sequential pattern in which children are born in a specific household. Typically, the first child is the oldest child, the middle child can be the second or third child or beyond, up to the youngest or "baby" of the family (Gupta, 2019). The theory of the birth order's effects on personality traits was originally pioneered by psychiatrist Alfred Adler in the 1920s. Adlerian theory states that children raised in the same family environment may experience varied effects on their personality development (K. et al., 2019). He discussed four distinct birth order positions: the firstborns, the middleborns, the lastborns, and the single children.

Firstborns often assume leadership roles within the family and aim to please parents. While they are often oriented towards achievement, are organized, and responsible, they may also exhibit traits like envy and perfectionism compared to their younger siblings (Hartshorne,

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2010; Saher et al., 2022). The eldest child might feel compelled to regain the parental attention and approval they enjoyed before the arrival of their siblings. They may experience feelings of being unloved due to the mother's perceived shift of affection towards the newborn. Adler introduced the term "dethronement" to define the experience of being surpassed by a subsequent member of the household. As a result, the firstborn may develop into a strict or authoritative individual. Their inherent concern about losing their dominant status may lead them to become more cautious and averse to take risks or pursue new ventures (Kaizyn & Vaghchipawala, 2023).

Middle children uniquely experience being the youngest in the family for a period. During this time, they enjoy all the privileges typically given to the youngest child until another sibling is born. This shift can lead to feelings of resentment, but researchers have observed that middle children are generally the easiest to get along with. Unlike firstborns, who might develop unrealistic expectations due to extensive interactions with adults, middle children often compare themselves to their peers, leading to more realistic expectations (Kaizyn & Vaghchipawala, 2023).

The lastborn is typically considered the family's most charming member. They often stand out as the life of the party, frequently seeking attention and excelling in social interactions compared to their siblings. However, they might also be viewed as spoiled and undisciplined due to parental pampering. In contrast to their elder siblings, the youngest member of the family does not face the same risk of losing their position of authority. Instead, they may develop assertive and defiant behaviors due to being overlooked or teased by their older siblings. Additionally, they may develop manipulative and defiant behaviors due to being overlooked or teased by elder siblings (Kaizyn & Vaghchipawala, 2023).

Having a single child was once frowned upon, but this family structure has become more common over time. Only children often exhibit many of the same traits as firstborns, but these characteristics tend to be more pronounced. Without siblings, single children do not experience conflict or contest for parental care, affection, and material support. However, they forego the socialization prospects inherent in belonging to a larger family unit (Kaizyn & Vaghchipawala, 2023).

Sulloway (1996) proposed a theory about effects of birth-order through an evolutionary perspective, linking personality traits to various positions within the birth order. In this, first borns tend to display dominance and lower agreeableness compared to their younger siblings due to their physical advantage, enabling them to assert dominance. Conversely, later borns are more likely to exhibit extraversion and sociability, prioritizing interpersonal relationships to gain advantages. Overall, firstborns rely on physical superiority to achieve their goals, leading to the development of dominant and less compromising traits over time. The way a child interacts with their parents plays a crucial role in shaping their personality, as it serves as a foundation of developing interpersonal skills. Equitable treatment by parents towards all their children is vital in forming a child's personality. Differences in parenting behavior are observed between parents of firstborns and those of later-born children (K. et al., 2019).

Gender Disparity in Personality Traits

The assessment of personality traits frequently involves identifying whether males or females tend to score higher on those traits, on average (Weisberg et al., 2011). The aim of

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exploring gender disparities in personality is to comprehend the typical behavioral tendencies of males and females, recognizing that both genders can display the entire range of most traits. The differences in scores do not suggest that men and women are restricted to opposite extremes of the trait spectrum. In fact, notable differences can coexist alongside substantial intersections in the distributions among males and females (Hyde, 2005; Weisberg et al., 2011).

Previous studies in this field have produced varied results, with some studies finding significant association between birth order and specific personality traits, while others report no relationship between both of them. It also suggests that many important factors related to the birth order are yet to be explored. The demographics such as type of sample and socio-economic status can be described better.

Mu et al. (2023) conducted a study on birth order's influence on personality traits. Although the influence of birth order on personality traits has been extensively investigated for nearly a century, previous studies have mainly concentrated on Western cultural settings, leaving a gap in understanding within East Asian cultures. The study found the consequences of birth order were insignificant and minimal on personality traits.

Study was conducted by Saher et al. (2022) investigating the link of birth order with the personality trait of extraversion, the results indicated a significant correlation between personality characteristics, specifically extraversion, and birth order. Furthermore, the research revealed gender differences in extraversion, concluding that lastborn girls were more extraverted compared to males.

Gupta (2021) conducted a research to investigate the psychological distinctions between men and women apart from their biological differences. The results, analyzed using a t-test, indicate that there are differences between both genders across the personality traits.

A study by Botzel et al. (2020) revealed minimal impact of birth order on the Big Five personality traits, and other such factors within the Indonesian context. Moreover, the study suggested that birth order effects observed in previous research may be culturally specific. This research highlights the importance of investigating the influence of birth order across different cultural contexts to gain a comprehensive understanding of how family dynamics and sibling relationships shape personality development and other life aspects.

Boccio et al. (2019) examined the relationship between birth order and personality traits. However, the results unveiled no uniform evidence of an association between birth order and big five personality traits.

In Gupta's work (2019), the researcher examined the Personality Traits in people of various birth orders: firstborns, middleborns, and lastborns. To evaluate personality traits, the NEO-FFI Questionnaire was administered. The findings indicated that lastborn individuals were higher on Neuroticism, Openness, and Agreeableness compared to both middleborns and firstborns individuals. Middleborn individuals, on the other hand, scored higher on Extraversion (E) in contrast to both firstborn and lastborn individuals.

South et al. (2018) examined whether there are qualitative differences between women and men in genetic mechanisms, or if differences lie in the quantitative aspects of genetic and

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environmental variance within the Big Five Model personality domains. Findings revealed observable gender differences in Neuroticism, Agreeableness, and Conscientiousness but found no evidence of gender differences in biological or environmental influences on any of the traits.

Objectives:

- To examine the differences in firstborns, middle borns, lastborns and single children in the big five personality traits of emerging adults.
- To explore the differences between females and males in the big five personality traits of emerging adults.

Hypotheses

- There will be significant differences in the big five personality traits of firstborns, middle borns, lastborns and single children.
- There exist differences between personality traits of males and females.

METHODS AND MATERIALS

Sample:

A sample of 121 participants was taken in the study as presented in Table 1 and 2 was taken from adults which belong to the age group of 18-28 years. Participants drawn were from India only. Twins, multiples, single or step-siblings and people with mental health issues were excluded from the sample.

Table 1: Participants according to birth order

Birth order	N
Firstborns	29
Middle borns	31
Lastborns	33
Single child	28
Total	121

Table 2: Participants according to gender

Gender	N
Males	59
Females	62
Total	121

Tools:

- **Demographic Questionnaire:** This includes questions such as age, gender, education, birth order of the person, and consent form.
- **Big Five Inventory:** This is a self-assessment questionnaire which is utilised to evaluate personality traits. It is derived from the Big Five personality model. It measures personality in terms of five traits widely known as 'OCEAN'. It was developed by John O.P., Donahue, and Kentle (1991). The inventory comprises 44 items to measure these five factors. Participants assess each item and rate it on the BFI using a 5 -point likert scale, which ranges from 1 for disagree strongly to 5 for agree strongly. Scale scores for each personality dimension are calculated by taking the average of participants' ratings for all items related to that dimension.

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Procedure:

The data was collected from various regions of India. The participants were chosen according to specific inclusion and exclusion criteria and were informed regarding the purpose of the research. The self-report questionnaires i.e., demographic details questionnaire and BFI were used. After the successful collection of data, the scoring was done. The results were interpreted on the basis of the scores and the conclusion was made.

Data Analysis

Data analysis was done on the collected data by using one-way ANOVA and t-test to explore the effects of birth order and comparative analysis for gender respectively on all personality traits. For analysing the data, level of significance (p) was accepted at 0.05 level as significant.

RESULTS AND DISCUSSION

This study has investigated the effects of birth order and gender separately on personality traits. The results of one way ANOVA conducted for birth order are given below as presented in Table 3:

Table 3: Results of ANOVA for all personality traits

Personality Traits	F	p value
Extraversion	4.817	0.003
Agreeableness	3.430	0.019
Conscientiousness	7.278	0.000
Neuroticism	3.166	0.027
Openness to experience	4.398	0.006

This study revealed a significant effect of birth order on extraversion. In post-hoc analysis in which Tukey HSD test was used, it was found that middle-borns were observed to have lower scores of extraversion compared to firstborns and only children.

A significant effect of birth order was found on agreeableness. Tukey's post-hoc analysis revealed that firstborns differ significantly from lastborns, with firstborns being more agreeable.

A significant effect of birth order was found on conscientiousness. First borns scored higher than middleborns and lastborns significantly. Additionally, middle-borns differed significantly from both firstborns and only children, with middle-borns scoring lower in conscientiousness compared to firstborns but higher than only children.

Study also revealed a significant effect of birth order on neuroticism. Regarding neuroticism, lastborns were found to differ significantly from only children, with lastborns scoring lower on neuroticism compared to only children.

Birth order had a significant effect on openness to experience. Firstborns scored significantly higher than both lastborns and only children. Firstborns demonstrated a greater openness to new experiences compared to these groups.

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Table 4: Descriptive statistics and results of t-test

Personality Traits	Gender	N	Mean	S.D.	t	p value
Extraversion	Male	59	26.15	3.68	-2.402	0.018
	Female	62	27.74	3.60		
Agreeableness	Male	59	31.66	4.31	-4.917	0.000
	Female	62	35.26	3.72		
Conscientiousness	Male	59	31.83	3.77	-1.750	NS
	Female	62	32.98	3.49		
Neuroticism	Male	59	24.32	3.89	-2.461	0.015
	Female	62	26.27	4.77		
Openness to experience	Male	59	37.31	3.70	0.158	NS
	Female	62	37.19	4.05		

A t-test was done to compare between females and males in personality traits. The results are presented above in Table 4, which presents the means and S.D. for each personality trait by gender. Overall, significant gender differences were observed in three out of the five personality traits examined which are agreeableness, extraversion and neuroticism. Specifically, females scored higher on these personality traits than males. These findings suggest that gender differences exist in certain aspects of personality, as indicated by significant variations in mean scores between males and females.

CONCLUSION

The present study seeks to highlight the effects of birth order and gender on the differences in personality traits of young adults, utilizing a one way ANOVA and a t-test. The study revealed that birth order has a significant impact on all personality traits. Middle-borns tended to be less extraverted than firstborns and only children, while firstborns showed higher agreeableness compared to lastborns. Firstborns also scored higher in conscientiousness than middle-borns and lastborns. Interestingly, lastborns scored lower in neuroticism compared to only children. Additionally, firstborns displayed greater openness to experience compared to lastborns and only children.

Gender differences were evident, with females consistently scoring higher in extraversion, agreeableness, and neuroticism compared to males. These findings underline the significance of considering inherent and societal factors both in understanding personality development.

Practical Implications of the study

Future studies could improve from employing a larger sample size to provide better applicability of results. Additionally, investigating the combined effects of birth order and gender differences on personality traits could provide deeper insights into how these factors collectively shape individual differences in behavior and disposition. By exploring these aspects further, future studies can contribute to a more detailed understanding of personality development.

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Conflict of Interest

The author(s) declared no conflict of interest.

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