

## Agreeableness and Altruism Between First-Born and Later-Born Siblings

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### ABSTRACT

Agreeableness and altruism are personality traits seen in a person. Agreeableness seems to be related to altruistic behaviour, based on existing literature. We are studying the difference in agreeableness and altruism between first-born and last-born siblings. The present study experimentally investigated the difference between levels of agreeableness and altruism and compared the levels between first-born (N=52) and later-born (N=74) siblings from all over India. The data was collected from 102 young adults with siblings using purposive sampling. Their agreeableness levels were measured using NEO FFI 3, and their altruism level was measured using the Altruistic Personality Scale. Data collected was analyzed using IBM SPSS 21. Descriptive statistics and inferential statistics were both used for independent sample t-test analysis. The results revealed that there was no significant difference between the levels of agreeableness and altruism between first-born and later-born siblings.

**Keywords:** Agreeableness, Altruism, First-Born, Later-Born, Siblings, Young Adults

**A**greeableness is probably best conceptualized as a general latent variable that summarizes more specific tendencies and behaviors e.g., being kind, considerate, likable, cooperative, and helpful. It is one of the Big Five personality traits that are commonly used to describe an individual's personality. It refers to a person's tendency to be cooperative, kind, empathetic, and compassionate toward others. Individuals who score high on the agreeableness trait are often described as warm, considerate, and friendly, while those who score low may be more competitive, skeptical, and sometimes confrontational. People who score high on agreeableness tend to be more effective in social settings, as they are better able to establish and maintain positive relationships with others. They tend to be less confrontational, more empathetic, and more willing to compromise in order to reach a resolution that satisfies everyone involved. In contrast, people who score low on agreeableness may struggle more in social situations, as they may be perceived as argumentative, uncompromising, or difficult to work with. (Graziano & Eisenberg, 1997)

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### **Altruism**

Altruism refers to behavior by an individual that increases the fitness of another individual (recipient) while decreasing the fitness of the actor. (Oda et al, 2014) Altruism is a behaviour in which an individual acts selflessly to benefit another person or group, without expecting any personal gain or reward. This behaviour is often seen as morally admirable, as it involves putting the needs and well-being of others before one's own interests. Altruistic behaviours can take many forms, ranging from small acts of kindness, such as holding the door open for someone, to more significant acts of selflessness, such as donating a kidney to a stranger or volunteering in a humanitarian crisis. Altruistic behaviours can be motivated by a range of factors, such as empathy, a desire to help others, a sense of duty, or a commitment to social justice. Overall, altruism is an important aspect of human behaviour that has a profound impact on our relationships, societies, and well-being. While it may not always be easy or convenient to act selflessly, cultivating a spirit of altruism can lead to a more fulfilling and meaningful life, and contribute to a better world for everyone.

### **Birth order and Siblings**

Due to the environmental and genetic similarities between siblings, research has traditionally given siblings considerable consideration. Siblings are defined in this study as children who are completely biologically related and have the same father and mother. Half-siblings, stepsiblings, and adoptive kids are not taken into account. Sibling birth order refers to the child's place in the chronological sequence of the siblings' births. (Consten, 2017)

Furthermore, the order in which a child is born might have an effect on different variables, such as personality (Bleske-Rechek & Kelley, 2014), intelligence (Barclay, 2015), etc. In this study, sibling order was taken as first borns and later borns according to Sulloway's 1996 findings which implies that middle children are less likely to obtain resources than first- and later-born children. As a result of their status as the first and eldest kid, the firstborns experience favouritism over their siblings. Due to the fact that it is the mother's final kid, the last child is given preference. Both the first-born kid and the last-born child go through stages of being the only child at home, which can result in a unique investment on the part of the parents in their child, also due to their inherent authority, older children often assume leadership positions. The older children benefit from having a greater status in the family structure. Children assume various responsibilities in the family based on genetic differences, sex, place in the birth order, and the "principle of divergence." In order to avoid rivalry with their elder siblings, younger offspring must specialize in different areas than their older siblings, according to this Darwinian concept of divergence. That makes it more difficult for parents to compare their children, which is good for younger kids. And finally, deidentification puts out the supposition that kids want to set themselves apart from their older siblings. Thus, younger children attempt to acquire traits and interests that set them apart from their closest siblings. These factors are considered under birth order stereotypes. (Sulloway, 1996).

### ***Agreeableness and altruism: A relationship***

Agreeableness one of the "Big Five" personality traits in psychology refers to the degree to which a person is cooperative, empathetic, and willing to compromise with others. People who score high in agreeableness tend to be kind, compassionate, and considerate of others' feelings. They are often described as warm, friendly, and easy to get along with. They are also more likely to avoid conflict and seek harmony in their relationships. Altruism, on the other hand, is a behaviour that involves helping others without expecting anything in return. Altruistic behaviour can take many forms, such as volunteering, donating to charity, or

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simply lending a listening ear to a friend in need. People who exhibit altruistic behaviour are often motivated by a desire to make the world a better place or to alleviate the suffering of others. Studies have demonstrated that agreeableness was positively related to self-reported altruism, indicating that individuals high in agreeableness were more likely to engage in selfless acts of helping others. (Ashton & Son, 2000)

While agreeableness and altruism are related, they are not the same thing. Someone can be highly agreeable without being particularly altruistic, and vice versa. For example, a person who is very agreeable may go along with what others want even if it goes against their own values, whereas a person who is highly altruistic may be willing to challenge the status quo in order to help others.

### REVIEW OF LITERATURE

A study by Lay and Hoppmann explores the concepts of altruism and prosocial behaviour. Altruism refers to the act of helping others without the expectation of any personal benefit, while prosocial behaviour encompasses any action that benefits others or society as a whole. The authors discuss different theories and models that attempt to explain why people engage in these behaviours, including evolutionary theory, social exchange theory, and empathy-altruism theory. They also explore the factors that influence these behaviours, such as personality traits, social norms, and situational factors. Additionally, the article examines the potential benefits of altruism and prosocial behaviour, including improved physical and mental health, greater social connectedness, and increased life satisfaction. The authors conclude that while these behaviors may sometimes be motivated by self-interest, they ultimately serve important social and emotional functions and contribute to the greater good of society.

In Robert Rowthorn's article "The evolution of Altruism between siblings: Hamilton's rule revisited" examines the evolution of altruistic behavior between siblings he revisits Hamilton's rule, which states that altruistic behavior between related individuals can evolve if the cost to the altruistic individual is outweighed by the benefit to the recipient multiplied by the degree of relatedness between them. Rowthorn argues that the evolution of sibling altruism is influenced by factors such as sibling rivalry, the asymmetry of benefits and costs, and the potential for future reciprocation. He suggests that while Hamilton's rule remains a useful starting point for understanding the evolution of sibling altruism, it needs to be expanded to account for these additional factors. Overall, Rowthorn's paper provides a nuanced perspective on the evolution of sibling altruism, highlighting the complex interplay between genetic relatedness, social dynamics, and long-term strategic considerations.

Deanna R. Smith's paper "The Effect of Birth Order on Attitudes Toward Altruism" they investigate how birth order affects attitudes towards altruistic behavior. The study examines whether first-born children are more likely to hold altruistic attitudes than later-born children. Smith's research involved surveying college students about their attitudes towards altruism, as well as their birth order. The study found that first-born children were more likely to hold positive attitudes towards altruism than later-born children. Smith suggests that this may be due to differences in parenting styles and family dynamics between first-born and later-born children, which could shape their attitudes towards helping others. Overall, Smith's study provides insights into how birth order can influence attitudes towards altruism, highlighting the potential impact of early childhood experiences on the development of pro-social values.

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In Michalski and Shackelford's (2018) study "An Attempted Replication of the Relationships between Birth Order and Personality" examines whether birth order is associated with differences in the "Big Five" personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism. The research involved surveying a sample of college students about their birth order and personality traits. The study found no significant relationship between birth order and personality traits, which contrasts with some previous research that has suggested that birth order is linked to certain personality traits. Overall, Michalski and Shackelford's study provides a valuable contribution to the ongoing debate about the relationship between birth order and personality. While their results do not support the idea that birth order has a consistent impact on personality traits, they highlight the importance of continuing to investigate this area of research to gain a deeper understanding of the factors that shape personality development.

In Tamanna Gupta's study on "Birth Order and Personality" she explores the potential impact of an individual's position in their family's birth order on their personality traits. The article explains that birth order can affect an individual's behavior, social skills, and personal characteristics due to the varying levels of attention, expectations, and experiences they receive from their parents and siblings. According to the article, first-born children tend to be more responsible, ambitious, and perfectionistic, while second-born children are often more outgoing, competitive, and social. Youngest siblings, on the other hand, may be more creative, rebellious, and attention-seeking. The article also suggests that birth order can influence an individual's relationships and career choices. For example, first-borns may be more likely to pursue leadership positions, while youngest siblings may be more drawn to creative fields. However, the author notes that birth order is just one of many factors that contribute to personality development, and there are often exceptions to these generalizations. Overall, Gupta's article provides a brief overview of the potential influence of birth order on personality, emphasizing that individual differences should be taken into account when considering the impact of birth order on personality development.

The study by Oda et al (2017) on "Personality and Altruism in Daily Life" explores how different personality traits can affect an individual's tendency to engage in altruistic behavior. The article defines altruism as behavior that is motivated by a desire to help others, without expecting anything in return. The article explains that individuals with certain personality traits, such as agreeableness, empathy, and openness to experience, are more likely to engage in altruistic behavior. Agreeable individuals tend to be more cooperative and compassionate, while empathetic individuals are better able to understand and respond to the needs of others. Open individuals are more willing to take risks and try new things, which can lead to more opportunities to help others. However, the article notes that altruistic behavior is not solely determined by personality traits. Other factors, such as social norms, situational factors, and individual values, can also influence an individual's decision to help others. The article also suggests that altruistic behavior can have benefits for both the giver and the recipient, such as increased social connection and improved mental health. Overall, Oda's article provides an overview of how personality traits can influence altruistic behavior, emphasizing that there are multiple factors that contribute to this behavior and that the benefits of helping others extend beyond the act itself.

## **METHODOLOGY**

### *Objectives*

The objectives of this study were to find:

- To compare the level of agreeableness among firstborns and later borns and then compare them.
- To compare the level of altruism between the firstborns and later borns and then compare them.

### *Hypothesis*

- H01: There is no significant difference between levels of agreeableness among first-born and later-born siblings.
- H02: There is no significant difference between levels of altruism among first-born and later-born siblings.

### *Participants*

In this study, the sample consisted of young adults with siblings who were divided on the basis of firstborn or later-born. The sample was normally distributed. The sample of the present study was collected via purposive sampling. The sample consisted of 102 young adults aged 18-34 at the time of data collection. It consisted of 47 males and 55 females.

### *Materials*

Two measures were used in the study-

1. **NEO-FFI-3:** The NEO-FFI-3 is a 60-item version of the NEO-PI-3 that provides a quick, reliable, and accurate measure of the five domains of personality (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). Created by Costa & McCrae in 1992 it consists of five 12-item scales that measure each domain. Information on specific facets within each domain is not provided, and the shortened scales are somewhat less reliable and valid than the full NEO-PI-3 domain scales.
2. **Altruistic Personality Scale:** A 20-item scale designed to measure altruistic tendency by gauging the frequency one engages in altruistic acts primarily toward strangers. Created by Rushton, J. P., Chrisjohn, R.D., & Fekken, G. C in 1981 participants answer on a 5-point scale ranging from Never (0) to Very Often (4).

### *Data collection*

The data was collected using Google Forms with informed consent of the participants. Confidentiality was assured. 102 young adults with siblings participated in the study who all met the inclusion criteria.

### *Variables*

- Independent Variable- Agreeableness and Altruism
- Dependent Variable- Birth order

**RESULT AND DISCUSSION**

*Table 1 Socio-demographic data of the participants*

Demographic Data	N	%
<b>Age</b>		
18-22	65	63.72549
23-27	33	33.66
28-34	4	4.08
<b>Gender</b>		
Male	47	46.1
Female	55	53.9
Others	0	0
<b>Birth Order</b>		
First-born	52	51
Late- born	50	49

Table 1 presents the demographic characteristics of the participants in terms of their age, gender, and sibling order. The table displays the total number of participants (N) and the percentage (%) of participants in each category. The results indicate that the highest number of participants were in the age group of 18-22 years, and the ratio of females and males was 55 and 47.

The percentage of participants belonging to 18-22 years is 63%, 23-27 years is 33% and 28-34 was 4%. The proportion of males among the participants is 46.1%, while the proportion of females is 53.9%. The participants were categorized on the basis of birth order where firstborns formed 51%, and the remaining 49% belong to the later born category.

*Table 2 Descriptive Statistics for Agreeableness and Altruism*

Scales	M	SD
Agreeableness	27.892	6.811
Altruism	61.52	16.645

Table 2 presents the average (mean) and variability (standard deviation) scores for agreeableness and altruism. The mean score for agreeableness is 27.892 with a standard deviation of 6.811. For altruism, the mean is 61.52 with a standard deviation of 16.645. Independent sample t-Test was then conducted to compare the means for the two groups across the variables and the factors for Agreeableness and Altruism.

*Table 3: t-Test results comparing levels of agreeableness and altruism among firstborns and later born siblings*

Variables	F	Sig.	t	df	Sig. (2tailed)
Altruism	3.647	.059	4.366	100	.000
			4.393	93.123	.000
Agreeableness	.029	.866	-1.594	100	.114
			-1.594	99.905	.114

Table 3 shows independent sample t-test was used to test if differences in the birth order had any significant difference on the levels of agreeableness and altruism of the population taken. The p-value obtained for altruism is 0.059, which indicates that the results are not statistically significant ( $p > 0.05$ ) accepting the null hypothesis. The pvalue obtained for agreeableness is 0.866, which indicates that the results are not statistically significant

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( $p > 0.05$ ) accepting the null hypothesis ( $H_{01}$ : There is no significant difference between levels of agreeableness among firstborns and later-born and  $H_{02}$ : There is no significant difference between levels of altruism among firstborns and later-born).

An Independent sample t-test was used to test if birth order led to any significant difference in the variables of agreeableness and altruism. This data does not support the previous findings, like that of Smith (2016) which suggested that first-born children were more likely to hold positive attitudes towards altruism than later-born children, these differences can be present due to various reasons such as cultural differences, different parenting styles and family dynamics, etc.

Previous studies like that of Khan et al (2018) on the topic suggest that birth order does not affect the levels of agreeableness in siblings. This was also supported by the findings of our study as well, as seen above.

### CONCLUSION

The aim of the study was to study the relationship between levels of agreeableness and altruism among firstborn and later born siblings and understand the influence these variables have over each other. The aim of the study was to understand the strength of the difference – if there are any – between siblings (first born and later-born). The study was conducted on a sample size of 102 young adults which was further categorized as 52 firstborns and 50 laterborns siblings. There is statistically no significant difference in the two variables between the firstborn and later born among the levels of agreeableness and altruism – which also accepts the null hypothesis. A purposive sampling technique was used for the data collection method.

Descriptive statistics and inferential statistics were applied to analyze the data acquired:

- Findings of the study revealed no significant difference among first-born and later-born siblings in levels of agreeableness.
- Findings of the study revealed a significant difference among first-born and later-born siblings in levels of altruism.

### Limitations

The limitations of the present study were:

- The present study was conducted on a small sample with only 102 participants. It can be conducted on a larger sample to obtain more reliable results.
- The groups were relatively homogenous with regard to their background. This limited the findings as well as the group's experiences might be similar.
- The time period used to collect data was fairly limited affecting the entire study as well.
- The scales used in the study are both Western and thereby not adapted to the Indian context.

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### ***Conflict of Interest***

The author(s) declared no conflict of interest.

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