



Aggression Levels Among Birth Orders: A Comparative Research Analysis Between First Born And Other Birth Orders

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Abstract

The current study sought to investigate the correlation between birth order and aggression in young adults aged 18 to 30 years. A total of 140 participants were chosen through convenience sampling and subsequently divided into two groups, each comprising 70 participants, categorised by first-born birth order and other birth order. The Buss–Perry Aggression Questionnaire was used to measure aggression. It looks at physical aggression, anger, verbal aggression, and hostility. We used Jamovi statistical software to analyse the data we got from an online Google Form.

Descriptive statistics revealed that first-born participants exhibited marginally elevated scores across all dimensions of aggression in comparison to participants of other birth orders. Nonetheless, independent samples t-tests indicated that these differences were not statistically significant across any of the subscales or total aggression scores.

The findings suggest that birth order does not significantly influence aggression levels among young adults. Although minor variations were observed, they were not statistically significant enough to establish a strong relationship. The study highlights that aggression is likely influenced by broader environmental and social factors rather than birth order alone. Further research is recommended to explore additional variables such as family dynamics and parenting styles.

Keywords: Birth Order, first born and other birth order (second, third, only), Aggression.

Understanding human behavior requires an integrated perspective that combines developmental, cognitive, and social dimensions. Human development is a continuous process influenced by biological, psychological, and environmental factors, shaping individuals across the lifespan. Developmental psychology emphasizes how early experiences, family structures, and social interactions contribute to personality formation and behavioral patterns (Kail, Children and Their Development).

In parallel, general psychology provides a broader framework for understanding mental processes such as perception, learning, emotion, and motivation, which underlie observable behavior. These processes interact dynamically with environmental stimuli, highlighting the complexity of human functioning (Ciccarelli & White, Psychology).

Moreover, social psychology extends this understanding by examining how individuals are influenced by social contexts, group dynamics, and cultural norms. Concepts such as aggression, prosocial behavior, and social cognition illustrate how behavior is not only internally driven but also shaped by external social forces (Baron & Branscombe, *Social Psychology*; Aronson et al., *Social Psychology*).

Aggression, in particular, has been widely studied as a multifaceted behavior influenced by biological predispositions, situational triggers, and learned responses. Research suggests that environmental factors such as frustration, social learning, and media exposure play a significant role in shaping aggressive tendencies, making it a critical area of psychological inquiry.

Theoretical Foundations of Birth Order

The concept of birth order has long been central to understanding personality development and behavioral differences among individuals. Alfred Adler, through his theory of Individual Psychology, proposed that children's position within the family significantly shapes their experiences, roles, and psychological traits. First-born children often experience a period of exclusive attention followed by "dethronement" with the arrival of siblings, which may influence traits such as responsibility, dominance, or sensitivity (Kail, 2016).

Expanding on this, Frank Sulloway introduced the Niche Partitioning Theory, suggesting that siblings differentiate themselves to reduce competition by adopting distinct roles within the family. According to this perspective, first-borns tend to align with authority and structure, while other birth orders may become more adaptive, rebellious, or socially flexible. These theoretical perspectives provide a foundational framework for examining how birth order may influence behavioral outcomes such as aggression.

Conceptualizing Aggression in Early Development

Aggression is a complex behavioral construct that includes actions intended to harm or assert dominance over others. It can manifest in multiple forms, including physical aggression (e.g., hitting), verbal aggression (e.g., insults), anger (emotional arousal), and hostility (cognitive resentment) (Ciccarelli et al., 2018).

From a developmental perspective, aggression is not merely negative behavior but also a critical indicator of social adjustment and emotional regulation. Early patterns of aggression can reflect how individuals respond to frustration, competition, and interpersonal conflict. Social psychological research further distinguishes between proactive aggression (goal-oriented) and reactive aggression (impulsive response to threat), both of which play a role in understanding individual differences in behavior (Baron & Branscombe, 2017).

The Dynamics of Sibling Competition and Power

Family environments are often the first context in which individuals experience competition, negotiation, and power dynamics. First-born children, due to their initial position of authority, may engage in behaviors reflecting dominance and control, especially in interactions with younger siblings. In contrast, other birth order children often adapt by developing alternative strategies such as seeking attention, negotiating resources, or displaying social flexibility (Aronson et al., 2019).

This "struggle for dominance" versus "resource-seeking" dynamic may lead to different expressions of aggression. First-born individuals may exhibit more direct or authoritative forms of aggression, whereas other birth order individuals may demonstrate more subtle or socially mediated

forms. These patterns highlight how aggression is not only an individual trait but also a response shaped by interpersonal and familial contexts.

Divergent Behavioral Profiles Across the Sibling Hierarchy

The debate regarding which birth position yields higher aggression is polarized by varying metrics of measurement. Sultana and Latif (2013) utilized the EPPS scale to demonstrate that last-born adolescents in Bangladesh were significantly more aggressive than their first-born peers, a finding they attributed to the "spoiled child" dynamic or a need to compete for attention. This is corroborated by modern behavioral data from Delbianco et al. (2020), who utilized disciplinary records (yellow cards) in Argentinian rugby. Their findings indicated that second-born males with older brothers exhibited higher aggressive behavior on the field, suggesting that younger siblings may adopt aggressive physical "niches" to assert themselves.

Conversely, the aggression of first-borns is often categorized as verbal or dominant rather than physical. Rodgers (2001) discovered that while physical aggression might not differ, first-borns are significantly more argumentative. This "dominance-based" aggression is seen in its most extreme form in the work of Marleau, who found that in 78% of documented fratricide cases, the older sibling was the aggressor. This suggests a "status-maintenance" form of aggression unique to the first-born position.

Psychological Mechanisms and Cognitive Schemas

To understand why these differences occur, researchers have shifted focus toward cognitive and developmental "cascades." Ardebili and Golshani (2016) conducted an ex post facto study of 320 students in Tehran, revealing that birth order significantly influences the development of Early Maladaptive Schemas (EMS). These deep-seated cognitive patterns act as a lens through which siblings perceive conflict; different birth positions lead to different schemas, which in turn predict aggressive tendencies in adolescence.

This developmental process often begins at the "transition to siblinghood." Volling et al. (2017) and Song et al. (2016) utilized longitudinal parent reports to track children from pregnancy through the first year of a sibling's life. They identified a "developmental cascade" where the "dethronement" of the first-born leads to a spike in aggression that predicts long-term sibling antagonism and poorer "theory-of-mind" development.

The Moderating Role of Parenting and Family Structure

Research suggests that birth order does not act in a vacuum but is moderated by the family environment. Roychan et al. (2025) and Zhang et al. (2024) found a sharp contrast between "only children" and those with siblings; while only children may suffer from higher anxiety, siblings provide a "training ground" for both warmth and aggression. The quality of this training is dictated by parenting: Rahman et al. (n.d.) and Girard et al. (2019) argue that coercive parenting and maternal depression are stronger predictors of chronic aggression than birth rank alone.

In the Chinese context, Qi et al. (2025) highlighted how the "Three-Child Policy" landscape affects mental health, noting that first-borns often receive less parental warmth than other birth orders, leading to higher externalizing problems. Furthermore, Soto et al. (2024) used multilevel modeling to show that birth order acts as a "buffer" or "trigger" for Adverse Childhood Experiences (ACEs), with younger siblings exhibiting higher aggression specifically when family-wide stress is high.

Methodological Conflicts: Population vs. Behavioral Studies

A critical "depth" issue in this field is the conflict between large-scale datasets and micro-level behavioral studies. Rohrer et al. (2015) and Damian and Roberts (2015) analyzed datasets of over 20,000 participants and concluded that birth order has a negligible effect on broad personality traits. However, as Aggarwal and Imran (2024) and Largado et al. (2024) point out, these large studies often miss the nuanced, situation-specific expressions of aggression such as video gaming behavior or peer leadership that smaller, more targeted studies capture.

Purpose of the study

Existing literature has examined aggression across diverse populations, from individuals with ADHD (Hsu et al., 2019) to Gen-Z gamers (Singh, n.d.), but these findings remain fragmented and context-specific. Most studies focus on specific groups or variables, limiting a comprehensive understanding of aggression, and are often cross-sectional with methodological constraints such as regional and gender biases (e.g., Ardebili's all-female sample). Moreover, limited research has integrated birth order theories with multiple dimensions of aggression. Therefore, the present study adopts a comparative approach to examine aggression among first-born and other birth order young adults, incorporating multiple dimensions of aggression within a single sample to provide a more holistic understanding of the relationship between birth order and aggressive behavior.

Method

Hypothesis

H_0 (Null Hypothesis): There will be no significant difference in aggression between first-born and other birth order young adults.

H_1 : There will be a significant difference between first-born and other birth order individuals across the dimensions of aggression, namely physical aggression, anger, verbal aggression, and hostility.

H_2 : First-born individuals will report higher levels of aggression, including physical aggression, anger, verbal aggression, and hostility, compared to other birth order individuals.

Sample

The present study was conducted on a sample of 140 young adults aged between 18 and 30 years. The participants included both males and females. The sample was divided into two equal groups based on birth order: 70 participants identified as first-born individuals, while the remaining 70 participants comprised other birth order individuals (including second-born, third-born, and only children). A convenience sampling method was employed to recruit participants.

Tools

Data for the study were collected using a structured online questionnaire created through Google Forms. The primary instrument used to assess aggression was the Buss–Perry Aggression Questionnaire (BPAQ), a standardized and widely validated scale measuring different dimensions of aggression, including physical aggression, verbal aggression, anger, and hostility. For statistical analysis, Jamovi software was used to compute descriptive and inferential statistics, ensuring accurate and reliable data interpretation.

Procedure

The research process began with the selection of a relevant topic after an extensive review of literature. Following this, an appropriate and standardized psychological scale (Buss–Perry Aggression Questionnaire) was selected to ensure validity and reliability of measurement.

A Google Form was then designed, incorporating informed consent and the selected scale items. The form was circulated among young adults aged 18–30 through online platforms. Participants voluntarily responded to the questionnaire.

Once data collection was completed, the responses were screened and cleaned to remove incomplete or inconsistent entries. The refined dataset was then entered into Jamovi software for statistical analysis. Finally, the results were interpreted in line with the research objectives.

Results

An independent sample *t*-test was conducted to examine differences in aggression between first-born (Group 1) and other birth order individuals (Group 2).

Descriptive Statistics

The descriptive analysis indicated that first-born participants ($M = 86.6$, $SD = 13.01$) reported slightly higher total aggression scores compared to other birth order participants ($M = 84.2$, $SD = 12.92$). Similarly, across subscales, first-born individuals showed marginally higher mean scores in physical aggression ($M = 26.0$ vs. 25.4), anger ($M = 20.0$ vs. 19.6), verbal aggression ($M = 15.6$ vs. 15.3), and hostility ($M = 24.9$ vs. 23.9).

Assumption Testing

The Shapiro–Wilk test indicated that the assumption of normality was met for all variables ($p > .05$). Additionally, Levene’s test for equality of variances was non-significant across all measures ($p > .05$), confirming homogeneity of variance.

Inferential Analysis

The independent samples *t*-test revealed that there was no statistically significant difference between first-born and other birth order individuals on total aggression, $t(138) = 1.069$, $p = .143$, Cohen’s $d = 0.18$.

Table 1.1 Test for Inferential statistics (N= 140)

Variable	t	df	p	Cohen’s d
Physical Aggression (PA)	0.653	138	.257	0.11
Anger (A)	0.592	138	.278	0.10
Verbal Aggression (VA)	0.583	138	.280	0.09
Hostility (H)	1.249	138	.107	0.21
Total Aggression	1.069	138	.143	0.18

Table 1.2 Test for Descriptives (N= 140 , n (First born) = 70, n (Other born) = 70)

Variable	Birth Order	M	SD	Min	Max
Total Aggression	First-born	86.60	13.01	52	115
	Other-born	84.20	12.92	52	115
Physical Aggression (PA)	First-born	26.00	5.69	12	41
	Other-born	25.40	5.44	14	38
Anger (A)	First-born	20.00	3.86	11	27
	Other-born	19.60	4.14	7	33
Verbal Aggression (VA)	First-born	15.60	3.18	8	23
	Other-born	15.30	2.90	9	23
Hostility (H)	First-born	24.90	4.94	12	34
	Other-born	23.90	4.80	13	36

Hypothesis Testing

The null hypothesis (H_0), which stated that there would be no significant difference in aggression between first-born and other birth order individuals, was **Failed to Reject**. The alternative hypothesis (H_1), which proposed that a significant difference would exist between the groups, was **rejected**, as all p -values were greater than .05.

Summary of Findings

Although first-born individuals consistently showed slightly higher mean scores across all aggression dimensions, these differences were not statistically significant, and the effect sizes were small. This indicates that birth order (first-born vs. other birth orders) does not have a significant impact on aggression levels among young adults in the present study.

Discussion

The present study aimed to examine whether birth order (first-born vs. other birth orders) has a significant effect on aggression levels among young adults. The findings revealed that although first-born individuals showed slightly higher mean scores across all dimensions of aggression (physical aggression, anger, verbal aggression, hostility, and total aggression), these differences were not statistically significant. This suggests that birth order may not play a strong or direct role in determining aggression levels.

These findings are consistent with several previous studies that have questioned the strength of birth order effects on personality and behavior. For instance, research indicates that differences in aggression based on birth order are often minimal or inconsistent, suggesting that environmental and social factors may play a more dominant role (Harris, 1999) . Similarly, large-scale studies on personality have found that birth order effects are generally small and not practically significant (Rohrer et al., 2015) . judithrichharris.info

From a theoretical perspective, Adler's Birth Order Theory proposes that first-born children tend to be more responsible, dominant, and sometimes more aggressive due to their initial position of authority and subsequent "dethronement" when siblings are born. This may explain the slightly higher aggression scores observed among first-born individuals in the present study. However, Adler also emphasized that individual experiences and family dynamics play a crucial role, which may account for the lack of significant differences in this study . pjpr.scione.com

Furthermore, Social Learning Theory suggests that aggression is learned through observation and environmental influences rather than innate traits like birth order. Factors such as parenting style, family environment, and exposure to conflict have been found to significantly influence aggressive behavior (Hsu et al., 2019) . This supports the current findings, indicating that aggression is more context-dependent than birth-order dependent. Interestingly, some research suggests that first-born children may exhibit higher aggression in specific contexts, such as sibling interactions, where they assume dominant roles (Potvin, n.d.) . However, these effects may not generalize to broader social behavior, especially in adulthood, which aligns with the present study conducted on young adults. creativematter.skidmore.edu

Overall, the results suggest that while birth order may contribute to slight variations in aggression, it is not a significant predictor. Instead, aggression appears to be influenced by a complex interaction of social, environmental, and psychological factors.

Conclusion

The present study aimed to examine the influence of birth order on aggression among young adults aged 18–30 years. The findings indicated that first-born individuals reported slightly higher levels of aggression across all dimensions, including physical aggression, anger, verbal aggression, and hostility. However, these differences were not statistically significant, suggesting that the variation observed is minimal.

These results imply that birth order does not play a major role in determining aggressive behavior. While slight trends were observed, they were not strong enough to establish birth order as a significant predictor. This highlights the possibility that aggression is shaped more by external factors such as environmental influences, social learning, and personal experiences rather than ordinal position within the family.

In conclusion, the study suggests that aggression is a complex behavior influenced by multiple factors, and birth order alone cannot adequately explain individual differences. Future research should explore additional variables such as parenting styles and family dynamics to gain a more comprehensive understanding of aggression.

Implications

The findings of the present study indicate that birth order does not have a significant effect on aggression, thereby challenging common stereotypes that first-born individuals are inherently more aggressive. Instead, the results suggest that aggression is more strongly influenced by environmental and social factors, such as parenting styles and peer interactions, rather than family position alone. These findings highlight the importance for psychologists, educators, and counselors to focus on broader developmental influences when understanding and addressing aggressive behavior.

Additionally, the study contributes to existing literature by examining multiple dimensions of aggression—including physical aggression, anger, verbal aggression, and hostility—within a single framework. Overall, the results support a more holistic understanding of human behavior, emphasizing that personality traits and behavioral tendencies cannot be explained by a single factor such as birth order.

Limitations

Despite its contributions, the present study has several limitations. The use of convenience sampling restricts the generalizability of the findings, as the sample may not accurately represent the broader population. Additionally, the reliance on self-report measures may introduce response biases, such as social desirability or inaccurate self-assessment. The cross-sectional nature of the study further limits the ability to establish causal relationships between birth order and aggression. Moreover, the study did not control for other potentially influential variables, including parenting style, socio-economic status, and family environment, which may have affected the results. Lastly, the sample was limited to young adults aged 18–30 years, thereby limiting the applicability of the findings to other age groups.

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