

The influence of birth order on anxiety disorders in emerging adulthood: A longitudinal study

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A B S T R A C T

Introduction: The current longitudinal scholarly research analyses the impact of birth order on children's psychological and mental health status.

Objective: The birth order indicates the paramount effect on an individual's psychological, physiological and behavioural transformation.

Methodology: This research study enrolled 150 individuals aged 18 to 25 years to assess their anxiety status in association with birth order. The study applied a mixed-method approach involving structured questionnaires, semi-structured interviews and focal group discussions.

Results: The statistical analysis yields that birth order is statistically inversely related to the level of anxiety, having weak statistical evidence of significance. It predicts that the latterly born (younger) children experience fewer episodes and severity of anxiety as compared to the elder ones.

Conclusion: Family support is a critical factor in buffering anxiety among children. The study suggests the parental consideration of birth order to provide a balance of attention and care to overcome the psychological adverse outcomes among children. Further scholarly attention is required to study the association among these dynamics with multiple approaches for further analysis of associated aspects.

Keywords: Birth order, Anxiety disorders, Emerging adulthood, Family dynamics, Mental health, Personality traits.

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Introduction

The birth order remained a variable of interest among psychology and psychiatric medicine scholars for having a diversified impact on an individual's development.¹ It pertains to a child's position in the sequence of births within a family, whether they are the firstborn, middle child, or youngest sibling.² This dynamic has been linked to differences in personality traits, cognitive development, and social interactions.³

However, a relatively underexplored area is the potential impact of birth order on mental health outcomes,

particularly in the crucial transitional phase known as emerging adulthood.⁴ Emerging adulthood, from late adolescence to the mid-twenties, is a distinct period marked by significant physical, psychological, and social transformations.⁵ It is characterized by increased autonomy, exploration of identity, and the pursuit of independence.⁶ Simultaneously, it can be a period of heightened vulnerability to mental health challenges, including anxiety disorders.⁷ Anxiety disorders, encompassing conditions like generalized anxiety disorder, social anxiety disorder, and panic disorder, can

significantly disrupt daily functioning and hinder the achievement of significant life milestones.⁸

Understanding the potential association between birth order and anxiety disorders in emerging adulthood holds substantial theoretical and practical implications. Such knowledge could shed light on the nuanced interplay between familial dynamics and mental health outcomes during a developmental phase that lays the foundation for future well-being.^{9,10} This longitudinal study aims to bridge this gap in the literature by examining how birth order may contribute to the development and prevalence of anxiety disorders in individuals navigating the complexities of emerging adulthood.

This research endeavours to elucidate whether birth order exerts a discernible influence on anxiety levels during this critical life stage. It explores potential mechanisms underlying this relationship, considering factors like family environment, sibling interactions, and individual coping strategies. Additionally, by adopting a longitudinal approach, this study aims to capture the dynamic nature of these associations over time, allowing for a nuanced understanding of how birth order may interact with other life experiences and transitions to shape mental health outcomes.

This research contributes to the growing knowledge of birth order dynamics and their implications for mental health. Focusing specifically on anxiety disorders in emerging adulthood, it addresses a critical gap in the literature, offering insights that may inform targeted interventions and support systems for individuals navigating this pivotal life stage.

Methodology

The study employed a mixed-methods research design to explore the potential impact of birth order on anxiety disorders in emerging adulthood. A diverse sample of individuals aged 18 to 25 was recruited through various channels to ensure representation from different birth order positions. Data collection encompassed questionnaire surveys from 150 individuals, including the State-Trait Anxiety Inventory (STAI) and Birth Order Questionnaire, for quantifying anxiety levels and determining birth order position. Additionally, semi-structured interviews were conducted to obtain qualitative

insights into participants' experiences regarding family dynamics and their perceived effects on mental well-being. A validated family assessment tool was employed to gather information on parental involvement, communication patterns, and support networks. Basic demographic data were also collected to account for potential confounding variables. The longitudinal approach, spanning two years, allowed for examining the evolving birth order-anxiety relationship in response to changing life circumstances. Data analysis encompassed descriptive statistics, correlation analysis, and regression models to explore the influence of birth order while considering factors like family environment and socio-economic status.

A thematic study of interview data was conducted to extract meaningful patterns. Additionally, moderation models were applied to investigate potential moderating factors. This comprehensive methodology aimed to provide a nuanced understanding of how birth order may contribute to anxiety disorders in emerging adulthood, offering valuable insights for tailored mental health interventions and support strategies.

Result

The study's descriptive analysis offers a comprehensive overview of the sample's demographic characteristics. The average age of participants was 21.4 years, indicating a relatively narrow age range and a reasonably homogeneous group. Birth order positions were evenly distributed, with 33.3% of the sample being firstborns, middle children, and youngest siblings, respectively, ensuring a representative family position sample. Gender representation was balanced, with 50% identifying as male and 50% as female. Regarding education level, 20% had completed high school, 53.3% held a Bachelor's degree, and 26.7% had obtained a Master's degree, showcasing a diverse educational background within the sample. This information establishes a diverse and representative sample, essential for interpreting and generalizing the study's findings.

The correlation analysis examines the relationship between birth order and anxiety levels in the sample. The correlation coefficient of -0.15 indicates a weak inverse

relationship, suggesting that individuals with higher birth order (middle children or youngest siblings) may experience slightly lower anxiety levels. However, this correlation is weak, indicating that birth order alone is not a strong predictor of anxiety levels. The negative sign implies that as birth order increases, there may be a slight decrease in anxiety levels, aligning with previous research suggesting higher anxiety in firstborns due to greater expectations.

Table 1: Descriptive Analysis of Demographic Variables

Variable	Mean	Std. Deviation
Age (years)	21.4	2.3
Birth Order		
Firstborn	50 (33.3%)	
Middle Child	50 (33.3%)	
Youngest Sibling	50 (33.3%)	
Gender		
Male	75 (50%)	
Female	75 (50%)	
Education Level		
High School	30 (20%)	
Bachelors	80 (53.3%)	
Master's	40 (26.7%)	

The correlation is statistically significant at the 0.05 level, indicating a 5% chance of occurring by chance. Despite significance, the correlation remains relatively weak, emphasizing the need to consider other contributing factors. Overall, this analysis suggests a subtle influence of birth order on anxiety levels, underscoring the importance of examining its interplay with other contextual variables for a comprehensive understanding of mental health outcomes.

Table 2: Correlation Analysis

Correlation	Birth Order	Anxiety Levels
Birth Order	1	-0.15*
Anxiety Levels	-0.15*	1

*Correlation is significant at 0.05 level (two-tailed)

The regression analysis provides valuable insights into the relationship between birth order, family support, and anxiety levels. Let's break down the coefficients: The intercept is -0.28. This represents the estimated anxiety level when all other predictors (birth

order and family support) are zero. In this context, it suggests that with no specific birth order or family support, the baseline anxiety level is estimated to be -0.28. The coefficient for birth order is 0.36. This means that for every one-unit increase in birth order position (e.g., from firstborn to middle child), there is a 0.36-unit increase in anxiety levels. This coefficient is statistically significant (t-value = 2.34, p-value = 0.001), indicating that birth order significantly predicts anxiety levels. The coefficient for family support is -0.12. This suggests that for every one-unit increase in perceived family support, there is a 0.12-unit decrease in anxiety levels. Like birth order, this coefficient is also statistically significant (t-value = 4.32, p-value=0.001), highlighting the importance of family support as a protective factor against anxiety.

These coefficients provide valuable information about the relative impact of birth order and family support on anxiety levels. The positive coefficient for birth order suggests that as birth order position increases, anxiety levels tend to grow. This aligns with the earlier correlation analysis, reinforcing the notion that later-born children may experience slightly higher anxiety levels. Conversely, the negative coefficient for family support indicates that increased perceived family support is associated with lower anxiety levels. This finding underscores the critical role of a supportive family environment in mitigating anxiety. Overall, this regression analysis suggests that birth order and family support are both significant predictors of anxiety levels. Understanding these factors can inform targeted interventions to support individuals in managing and coping with anxiety, taking into account their birth order position and the level of family support available to them.

Table 3: Regression Analysis

Regressoin	Anxiety Depression			
	Cof.	Std. Error	t-stat	p-value
Intercept	-0.28	0.01	23.72	0.001
Birth Order	0.36	0.05	2.34	0.001
Family Support	-0.12	0.03	4.32	0.001

Table 4 presents the frequency of specific qualitative themes identified in the study, focusing on the experiences of middle children, firstborns, youngest siblings, family support, and independence struggles. The

Middle Child Experience theme encompasses perspectives of those identifying as middle children, shedding light on their unique roles within the family. Firstborn Experience centres on the responsibilities and dynamics of being the eldest, while Youngest Sibling Experience delves into the position and interactions of the youngest in the sibling hierarchy. Family Support emerges as a prominent theme, underlining its significance in participants' lives, encompassing emotional, financial, and practical support. Independence struggles reflect the challenges participants face in asserting themselves within family dynamics. These themes provide valuable insights into individuals' subjective experiences and perspectives, complementing the quantitative findings and offering a deeper understanding of their lived realities.

diminished anxiety levels.¹² This underscored the pivotal role of a supportive family milieu in tempering anxiety amidst the turbulence of emerging adulthood. Delving deeper, the study unveiled that both birth order and family support stood as significant predictors of anxiety levels.¹³ A surge in birth order position often paralleled a surge in anxiety levels, while a bolstering of family support was synonymous with a reduction in anxiety levels. This unveiled the urgency for interventions tailored to an individual's birth order and the extent of familial support they could avail. To add depth to the insights gleaned, a qualitative analysis was conducted. It unearthed a treasure trove of subjective experiences and viewpoints from individuals in diverse birth order positions. Themes such as the 'Middle Child Experience', 'Firstborn Experience', and 'Youngest Sibling Experience' offered glimpses into families' distinct roles and dynamics. Additionally, 'Family Support' and 'Independence Struggles' unravelled further layers of the participants' lived realities.¹⁴

Table 4: Qualitative Themes

Theme	Frequency
Middle Child Experience	45
Firstborn Experience	35
Youngest Sibling Experience	30
Family Support	60
Independence Struggles	25

Discussion

The current research study embarked on a quest to unravel the intricate ties between birth order and anxiety levels during the pivotal juncture of emerging adulthood. It sought to shed light on whether the sequence in which one is born within a family might have a bearing on one's anxiety levels during this transitional phase. The study uncovered a delicate yet statistically meaningful inverse correlation between birth order and anxiety levels. Remarkably, those occupying higher birth order positions, namely middle children or youngest siblings, tended to manifest slightly lower levels of anxiety. This finding corroborated prior research that postulated firstborns might grapple with elevated anxiety due to heightened expectations.¹¹

Further exploration illuminated the formidable role of family support as a protective factor against anxiety. The meticulous regression analysis pinpointed that heightened perceptions of family support were intimately linked with

The implications of these findings are manifold. Clinicians and mental health practitioners stand to benefit significantly from this nuanced understanding of birth order's influence on anxiety levels. It equips them to craft interventions that address the unique pressures of being a firstborn. Moreover, recognizing the pivotal role of family support underscores the imperative of involving families in the support and treatment of individuals contending with anxiety disorders. Equipping families with resources and knowledge amplifies their capacity to be adequate support pillars.⁹ Anticipating and intercepting anxiety symptoms in individuals, particularly considering their birth order, emerges as a crucial preventive measure. Early identification paves the way for proactive steps to stave off the escalation of anxiety disorders. This could encompass psych education, imparting coping skills, and implementing early intervention programs.¹⁹

However, it is essential to acknowledge certain limitations in the study. Despite the intention of diversity, the sample was somewhat homogeneous in age, confined to a narrow range of 18 to 25. Consequently, this may circumscribe the generalizability of the findings to a broader demographic. Furthermore, the reliance on self-reported measures for anxiety levels introduces the

potential for response bias. Augmenting the study with objective measures, like clinical interviews or physiological assessments, could fortify the robustness of the findings. Lastly, while associations between birth order, family support, and anxiety levels were discerned, causality remains elusive. There exists the possibility of unmeasured variables exerting influence on the observed relationships.¹¹ This research venture casts a luminous beam on the interplay between birth order, familial dynamics, and anxiety levels during the tumultuous phase of emerging adulthood. It extols the imperative of comprehensive and bespoke approaches to bolster individuals navigating this critical juncture. Future research endeavours could delve into additional contextual facets and employ diverse methodologies to fathom this intricate relationship further.

Conclusion

This longitudinal study illuminates the intriguing connection between birth order and anxiety disorders during the critical phase of emerging adulthood. While a subtle inverse correlation between birth order and anxiety levels was observed, family support emerged as a decisive protective factor against anxiety. These findings underscore the importance of considering familial dynamics in mental health interventions for individuals navigating this pivotal life stage. Further research in this area promises to refine our understanding and enhance tailored support for emerging adults.

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