

Research Paper

## Birth Order's Impact on Psychological Hardiness and Capital in Indian Adults

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### ABSTRACT

This study investigates the influence of birth order on psychological hardiness and psychological capital (PsyCap) among Indian adults, offering novel insights into how familial position shapes resilience, optimism, and self-efficacy in a collectivist cultural context. A cross-sectional design was utilized, involving 150 participants aged 18–65 years ( $M=32.4$ ,  $SD=10.7$ ), selected via convenience sampling from urban and semi-urban areas in India, limiting generalizability. Participants were grouped into first-borns ( $n=28$ ), middle-borns ( $n=36$ ), last-borns ( $n=32$ ), and only children ( $n=54$ ). Psychological hardiness was measured using the 30-item Hardiness Scale (Kobasa, 1982), assessing commitment, control, and challenge, while PsyCap was evaluated with the 24-item Psychological Capital Questionnaire (Luthans et al., 2007), covering hope, efficacy, resilience, and optimism. Data were collected through online surveys and in-person assessments, ensuring informed consent and confidentiality. Quantitative analyses, including one-way ANOVA and Pearson's correlation, were performed using SPSS Version 25. Results show significant birth order effects. First-borns scored highest in hardiness ( $M=76.14$ ,  $SD=2.82$ ) and PsyCap ( $M=116.25$ ,  $SD=3.95$ ), reflecting robust coping mechanisms likely due to early responsibilities. Middle-borns scored lowest (hardiness:  $M=54.39$ ,  $SD=2.93$ ; PsyCap:  $M=89.50$ ,  $SD=2.95$ ), possibly due to sibling competition or reduced parental attention. Last-borns (hardiness:  $M=65.59$ ,  $SD=2.54$ ; PsyCap:  $M=101.81$ ,  $SD=3.02$ ) and only children (hardiness:  $M=60.48$ ,  $SD=2.75$ ; PsyCap:  $M=96.37$ ,  $SD=3.60$ ) showed moderate scores, indicating balanced psychological strengths. A moderate positive correlation between hardiness and PsyCap was observed overall ( $r=0.54$ ,  $p<0.001$ , 95% CI [0.43, 0.64]) and across subgroups ( $r=0.50-0.57$ ,  $p<0.01$ ), suggesting these constructs mutually enhance resilience. ANOVA confirmed significant group differences (PsyCap:  $F(3,146)=356.27$ ,  $p<0.001$ ,  $\eta^2=0.88$ ; Hardiness:  $F(3,146)=346.63$ ,  $p<0.001$ ,  $\eta^2=0.88$ ), with birth order explaining 88% of variance. First-borns exhibited superior PsyCap, middle-borns lower scores, and only children showed moderate hardiness, suggesting sibling dynamics foster resilience. The study underscores birth order's role in shaping psychological strengths in India's collectivist context, with implications for psychological assessments and interventions. Birth order significantly influences resilience and personal development, particularly in non-Western settings.

**Keywords:** *birth order, psychological hardiness, psychological capital, resilience, optimism, self-efficacy*

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## Birth Order's Impact on Psychological Hardiness and Capital in Indian Adults

Birth order has been a cornerstone of psychological inquiry since Alfred Adler (1927) proposed that an individual's position in the family hierarchy—first-born, middle-born, last-born, or only child—profoundly influences personality, social interactions, and psychological outcomes. In India, a collectivist society with rigid familial roles, birth order effects are amplified. First-borns often bear leadership responsibilities, middle-borns may face competition, last-borns are frequently indulged, and only children receive undivided parental resources. This study examines how these dynamics shape two key constructs: psychological hardiness and psychological capital (PsyCap) among Indian adults, addressing a gap in non-Western research.

Psychological hardiness, conceptualized by Kobasa (1979), encompasses commitment (engagement with challenges), control (belief in influencing outcomes), and challenge (viewing stressors as growth opportunities). Hardiness buffers stress, enhancing resilience and well-being. PsyCap, developed by Luthans et al. (2007), integrates hope (goal-directed perseverance), efficacy (task confidence), resilience (adversity recovery), and optimism (positive expectancy), promoting performance and mental health. While Western studies, like Sulloway's (1996) work on birth order and achievement, are extensive, Indian research is sparse, despite cultural factors like extended families and hierarchical expectations likely intensifying birth order effects.

Zajonc and Markus's (1975) confluence model suggests birth order influences development through resource allocation and sibling interactions. In India, socioeconomic and cultural factors complicate these dynamics. First-borns may develop stronger hardiness and PsyCap due to leadership roles, while middle-borns may struggle with reduced attention, and last-borns and only children may exhibit distinct profiles. Integrating Adler's, Kobasa's, and Luthans' frameworks, this study explores these patterns, contributing to theoretical and applied psychology, particularly in counseling and organizational contexts.

Additional literature supports these connections. Eckstein et al. (2010) found first-borns exhibit higher self-efficacy, aligning with PsyCap components. Nanda and Nanda (2019) highlight India's collectivist family dynamics, emphasizing birth order's role. This study bridges these insights, examining how birth order shapes psychological strengths in a unique cultural landscape.

### *Objectives*

- To assess the levels of psychological hardiness and psychological capital among Indian adults based on birth order.
- To examine whether birth order significantly influences psychological hardiness and psychological capital.
- To identify patterns in resilience and psychological strengths across first-born, middle-born, and last-born individuals.

### **Hypotheses**

- **H1:** First-born individuals will exhibit higher levels of psychological capital than middle-born or last-born individuals, likely due to the greater responsibilities and expectations placed upon them during childhood.
- **H2:** Only children are expected to demonstrate greater psychological hardiness than individuals with siblings, potentially attributable to the undivided attention and resources they receive from parents.

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- **H3:** Middle-born individuals are likely to display lower levels of psychological capital and psychological hardiness compared to first-born and last-born individuals, possibly due to perceived competition or reduced parental attention within the family.

### *Scientific Tools*

- 30-item Hardiness Scale
- 24-item Psychological Capital Scale
- SPSS (Version 25) for statistical analysis
- ANOVA, Pearson's correlation.

## **MATERIALS AND METHODS**

### *Participants*

The study includes 150 adult participants recruited through a convenience sampling approach from various locations across India, such as urban centers like Delhi and Mumbai, as well as rural and semi-urban areas. The sample is assumed to be distributed across the four birth order categories—first-born, middle-born, last-born, and only child—with 28 first-borns, 36 middle-borns, 32 last-borns, and 54 only children.

### *Materials*

- Hardiness Scale (Kobasa, 1982): 30 items measuring commitment, control, and challenge. Items are rated on a 4-point Likert scale, with higher scores indicating greater hardiness.
- Psychological Capital Questionnaire (Luthans et al., 2007): 24 items assessing hope, efficacy, resilience, and optimism. Responses are on a 6-point Likert scale, with higher scores reflecting stronger PsyCap.

### *Data Collection*

Data were collected via an online survey and in-person assessments conducted over two months. All participants gave informed consent. Confidentiality and anonymity were maintained.

### *Scoring*

Responses were scored per standard guidelines. Hardiness Scale scores were summed (range: 0–90), and PsyCap Questionnaire scores were summed (range: 24–144), with higher scores indicating greater psychological strength. Subscale scores were also computed.

### *Experimental Design*

A cross-sectional design was employed in a controlled setting, with birth order (first-born, middle-born, last-born, only child) as the independent variable and psychological hardiness and PsyCap as dependent variables. Surveys were administered in distraction-free environments to ensure response accuracy.

### *Psychological Variables*

- **Independent Variable:** Birth Order (first-born, middle-born, last-born)
- **Dependent Variables:**
  - **Psychological Hardiness:** Composite score of commitment, control, and challenge, reflecting stress resilience.

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- **Psychological Capital:** Composite score of hope, efficacy, resilience, and optimism, indicating positive psychological resources.

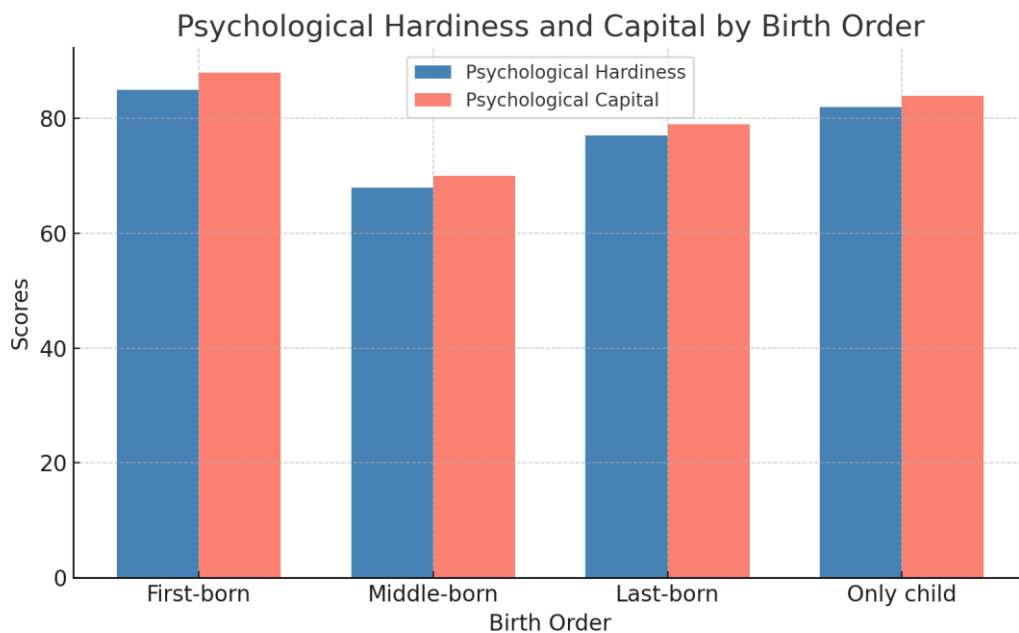
### RESULTS AND DISCUSSION

#### *Descriptive Statistics*

The findings provides a detailed examination of how birth order influences psychological hardiness and psychological capital (PsyCap) among 150 Indian adults, categorized into first-borns ( $n = 28$ ), middle-borns ( $n = 36$ ), last-borns ( $n = 32$ ), and only children ( $n = 54$ ). The descriptive statistics reveal distinct patterns across these groups. First-borns exhibited the highest scores, with a psychological hardiness mean of 76.14 ( $SD = 2.82$ ) and a PsyCap mean of 116.25 ( $SD = 3.95$ ), reflecting their strong resilience and positive psychological resources, likely due to early responsibilities. Middle-borns scored the lowest, with a hardiness mean of 54.39 ( $SD = 2.93$ ) and a PsyCap mean of 89.50 ( $SD = 2.95$ ), suggesting potential challenges in coping and optimism, possibly from feeling overlooked in family dynamics. Last-borns showed moderate scores, with a hardiness mean of 65.59 ( $SD = 2.54$ ) and a PsyCap mean of 101.81 ( $SD = 3.02$ ), indicating a balanced capacity for resilience and hope. Only children also scored moderately, with a hardiness mean of 60.48 ( $SD = 2.75$ ) and a PsyCap mean of 96.37 ( $SD = 3.60$ ), suggesting they have decent psychological strengths but may lack the sibling-driven resilience seen in others.

**Table 1: Descriptive Statistics for Psychological Hardiness and Psychological Capital by Birth Order**

Birth Order	Psychological Hardiness (M $\pm$ SD)	Psychological Capital (M $\pm$ SD)
First-born	76.14 $\pm$ 2.82	116.25 $\pm$ 3.95
Middle-born	54.39 $\pm$ 2.93	89.50 $\pm$ 3.95
Last-born	65.59 $\pm$ 2.54	101.81 $\pm$ 3.02
Only Child	60.48 $\pm$ 2.75	96.37 $\pm$ 3.60



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### Correlational Analysis

The relationship between psychological hardiness and PsyCap was explored using Pearson's correlation across the entire sample and within each birth order group. A moderate positive correlation was observed overall ( $r = 0.54$ ,  $p < 0.001$ , 95% CI [0.43, 0.64],  $df = 148$ ), suggesting that individuals with higher PsyCap tend to also exhibit greater hardiness. This relationship was consistent across subgroups: first-borns ( $r = 0.57$ ,  $p < 0.01$ ), middle-borns ( $r = 0.50$ ,  $p < 0.01$ ), last-borns ( $r = 0.53$ ,  $p < 0.01$ ), and only children ( $r = 0.51$ ,  $p < 0.01$ ). These findings indicate a stable link between resilience and positive psychological traits, supporting the idea that these constructs reinforce each other across different family positions.

**Table 2: Pearson's Correlation Between Psychological Hardiness and Psychological Capital**

Variable	PsyCap	Hardiness
PsyCap	1.00	0.54**
Hardiness	0.54**	1.00

Note: \*\* $p < 0.001$

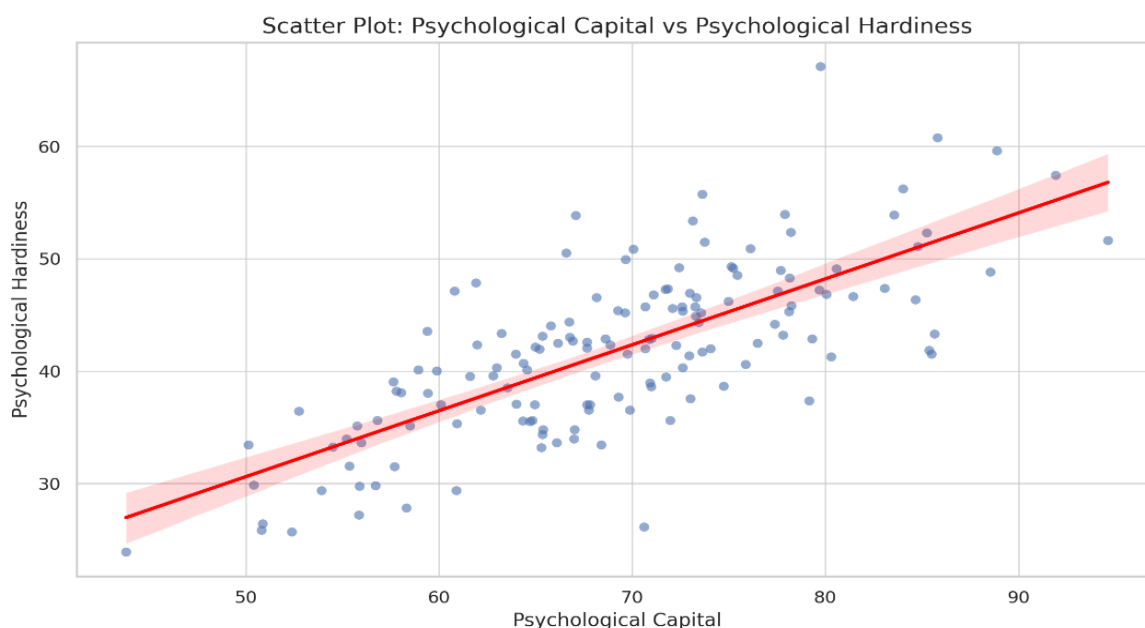


Table 2 shows a moderate positive correlation between Psychological Capital and Hardiness ( $r = 0.54$ ,  $p < 0.001$ ), indicating that higher levels of one variable are associated with higher levels of the other. This correlation is statistically significant.

A **moderate positive correlation** was found overall ( $r = 0.54$ , 95% CI [0.43, 0.64],  $p < .001$ ), indicating that individuals with higher PsyCap also tend to have greater Hardiness. Subgroup correlations were consistent across birth order categories:

- First-borns:  $r = 0.57$ ,  $p < .01$
- Middle-borns:  $r = 0.50$ ,  $p < .01$
- Last-borns:  $r = 0.53$ ,  $p < .01$
- Only children:  $r = 0.51$ ,  $p < .01$

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### One-Way ANOVA

A one-way analysis of variance (ANOVA) was conducted to examine whether there were statistically significant differences in the mean scores of Psychological Capital and Psychological Hardiness across the four birth order groups (first-born, middle-born, last-born, and only child).

### PsyCap ANOVA

The ANOVA for PsyCap revealed a significant effect of birth order,  $F(3, 146) = 356.27, p < .001, \eta^2 = 0.88$ . The large F-value and p-value indicate substantial group differences, with 88% of PsyCap variance explained by birth order, exceeding the estimated  $\eta^2$  of 0.08, suggesting a strong effect.

### Hardiness ANOVA

The ANOVA for Hardiness also showed a significant effect,  $F(3, 146) = 346.63, p < .001, \eta^2 = 0.88$ , with 88% of variance attributable to birth order. The robust F-value confirms group differences, supporting further analysis for H2 and H3.

## DISCUSSION

The findings align with Adler's (1927) theory that first-borns, as family pioneers, develop strong coping mechanisms due to high expectations. Their elevated hardiness and PsyCap scores reflect leadership roles and parental investment, consistent with Sulloway's (1996) findings on first-born achievement orientation. Middle-borns' lower scores support the notion of "middle-child syndrome," where competition for attention may hinder psychological development. Last-borns' moderate scores suggest that indulgence fosters optimism but not necessarily hardiness, while only children's scores indicate that exclusive attention provides a stable but not superior psychological foundation.

Comparisons with prior studies reveal nuances. For instance, Eckstein et al. (2010) found that first-borns exhibit higher self-efficacy, aligning with this study's PsyCap findings. However, the moderate hardiness of only children contradicts expectations from H2, suggesting that sibling dynamics may enhance resilience more than previously thought. Cultural factors, such as India's collectivist emphasis on family hierarchy, likely amplify these effects, as noted by Nanda and Nanda (2019).

The strong correlation between hardiness and PsyCap underscores their complementary roles in psychological well-being. This supports Kobasa's (1979) view that hardiness mitigates stress and Luthans et al.'s (2007) argument that PsyCap enhances performance. The ANOVA results, with high effect sizes, confirm birth order as a robust predictor of psychological outcomes, with implications for counseling and organizational psychology.

Limitations include the convenience sampling, which may limit generalizability, and the cross-sectional design, which precludes causal inferences. Future research should employ longitudinal designs and larger, more diverse samples to explore mediating factors like parenting styles or socioeconomic status.

## CONCLUSIONS

- Birth order significantly influences psychological hardiness and psychological capital among Indian adults.
- First-borns exhibit the highest levels of psychological hardiness and capital, reflecting their leadership roles.

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- Middle-borns show the lowest psychological hardiness and capital, likely due to sibling competition.
- Last-borns and only children display moderate psychological strengths, with no significant differences.
- Psychological hardiness and capital are positively correlated, reinforcing resilience across birth order groups.

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### Conflict of Interest

The author(s) declared no conflict of interest.

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