

Research Paper

## A Comparative Study of Intelligence in First-Born and Last-Born Adolescents

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### ABSTRACT

**Background:** Adolescence is a crucial developmental period, during which adolescents experience rapid biological, psychological, cognitive, emotional, and social changes. This stage is considered crucial because intelligence plays a crucial role in academic achievement, problem-solving ability, decision-making, and overall adjustment. Comparative studies have often found differences in intelligence between first-born and last-born adolescents. **Objective:** This study was conducted to compare the intelligence between first-born and last-born adolescents. It used a cross-sectional research design. **Sample:** The sample included 60 intermediate students. Simple random sampling technique was used to collect data from various schools, colleges, and plus two schools in the East Singhbhum district. **Procedure:** Of these 60 participants, 30 were first-born and 30 were last-born adolescents. The sample was selected from the East Singhbhum district of Jharkhand. After participant selection, sociodemographic data were collected from all participants using sociodemographic and clinical data sheets. Subsequently, all participants were assessed using the Mohsin General Intelligence Test. **Results:** The current results indicate that differences in intelligence were found between the two groups.

**Keywords:** *First Born, Last Born, Adolescents, Intelligence*

Adolescence is a crucial development stage character by Rapid biological, cognitive, emotional and social changes. during this period the intelligence place a crucial role in academic achievement problem solving ability decision making and overall adjustment. Intelligence is not slowly determinant by biological factors: rather, it is influence by a complex combination of genetic inheritance and environment condition such as family structure, parental behaviour, and sibling relationship.

First born adolescence often grows up in environments where they receive parental attention during their early years. They are often given leadership roles, greater responsibilities, and higher academic expectations by their parents. These factors may promote achievement motivation, discipline, and intellectual maturity. In contrast, last born adolescence typically grows up in more relaxed family environments, often receiving emotional support from

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parents and guidance from older siblings. Although they may benefit from greater social interaction, they may receive comparatively less direct cognitive stimulation from parents. Understanding the differences in intelligence between first born and last-born adolescents is important for educators, clinical psychologists and parents. It helps identify how family dynamics contribute to cognitive development and how educational interventions can be tailored to meet individual needs. Therefore, this topic focuses on a review of theoretical explanations and empirical findings related to intelligence difference between first born and last-born adolescents.

Sharma and Singh (2012) conducted a study on Indian adolescents and found that prioritizing social family support and school resources, and found that birth order has little effect on IQ.

Jensen and Reynolds (2018) conducted study and found that there are difference in birth order due to parental education, family income and structured.

Steinmayr et al., (2011) conducted research and found that there are difference in birth order and first birth having high level of Intelligence.

Ernst & Angst (1983) conducted a comprehensive analysis and found that first-born children had slightly higher IQ scores, especially on verbal intelligence.

### **METHODOLOGY**

#### *Aim:*

The present study was conducted to compare the intelligence among first born and last-born adolescents.

**Research Design:** It was a cross-sectional research design.

#### *Sample:*

The sample consisted of **60** intermediate students. Simple random sampling was used to collect data from various schools, colleges, and plus two schools in the East Singhbhum district. Of these **60** participants, **30** were first-born and **30** were last-born adolescents. All participants in this study were at the intermediate level and were from the East Singhbhum district.

#### **Inclusion Criteria**

- Boys and Girls were selected.
- Students of class 11<sup>th</sup> and 12<sup>th</sup> as per availability.
- Age range between 16 to 19 years.
- Govt and Private School/College students has been selected.
- Participants who are able to comprehend Hindi and English.
- Students who has been cooperative.

#### **Exclusion Criteria**

- Participants having history of psychiatric illness
- Family history suggestive of psychiatric illness
- Participants having epilepsy, other neurological disorders
- Participants having major/severe physical illness.

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### Tools used:

The following tools were used for data collection:

1. Socio Demographic and Clinical Data Sheet.
2. Mohsin General Intelligence Test (Mohsin, 1968)

### 1. Sociodemographic and clinical data sheets:

These data sheets were specifically designed to record essential details about each subject. These included information such as age, gender, education, stream, family status, place of residence, occupation, family income, birth order, age of onset, and family history of mental illness.

### 2. Mohsin General Intelligence Test (Mohsin, 1968)

Mohsin General Intelligence Test: The General Intelligence Test (GIT), adapted by Mohsin (1968), was used to measure the subjects' verbal intelligence. It consisted of six subtests: best answer, classification, analogy, logical reasoning, sentence completion, and reasoning. The number of questions in these six subtests was 20, 30, 40, 22, 26, and 18, respectively. Its test-retest and internal consistency reliability, as reported in the manual, are .89 and .95, respectively.

### Procedure

In this study, 60 participants who met the inclusion and exclusion criteria were selected using a simple random sampling technique. Of these 60 participants, 30 were first-born and 30 were last-born adolescents. The sample was drawn from the East Singhbhum district of Jharkhand. After participant selection, sociodemographic data were collected from all participants using sociodemographic and clinical data sheets. Subsequently, all participants were assessed using the Mohsin General Intelligence Test.

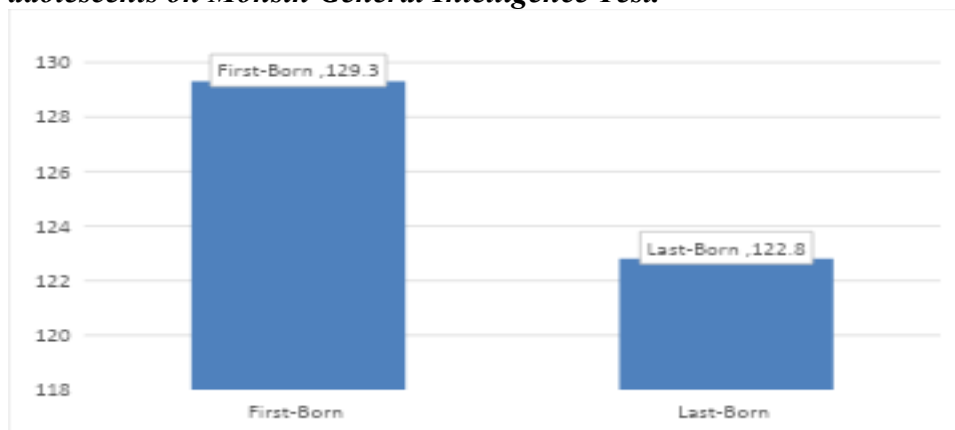
## RESULT AND DISCUSSION

Table 1: Mean difference in intelligence between first-born and last-born intermediate adolescents on Mohsin General Intelligence Test

Variable	First-Born N =30 Mean+SD	Last-Born N=30 Mean+SD	df	t-test
Mohsin General Intelligence Test	129.30+6.78	122.80+6.93	58	3.67*

\* Significant at 0.05 level

Graph 1: Comparison of mean intelligence scores of first-born and last-born intermediate adolescents on Mohsin General Intelligence Test.



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Table 1 and Graph show a comparison of intelligence scores between first-born and last-born adolescents among intermediate students on the Mohsin General Intelligence Test. The current results indicate that the average score for first-born adolescents was 129.30, and for last-born adolescents was 122.80. The results indicate a significant difference between first-born and last-born adolescents on the Mohsin General Intelligence Test. The results also indicate that first-born adolescents had higher intelligence than last-born adolescents. Zajonc, R. B., and Marcus, G. B. (1975) also found that first-born children consistently scored higher on intelligence tests than later-born siblings. The current results also agree with suggestions by Belmont, L., and Marolla, F. A. (1973).

### CONCLUSION

The results of this study suggest that there is a difference in the intelligence of first-born and last-born adolescents. Furthermore, the study's results also showed that first-born adolescents had higher intelligence scores than last-born adolescents. Therefore, the results of this study suggest that there is a potential difference in the intelligence of first-born and last-born adolescents.

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### Conflict of Interest

The author(s) declared no conflict of interest.

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