

**UNDERSTANDING THE DIFFERENCES IN BIG FIVE  
PERSONALITY TRAITS BETWEEN ADOLESCENT  
BOYS AND GIRLS OF KOLKATA CITY**

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## **ABSTRACT**

*The study explores differences in the Big Five personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism—between adolescent boys and girls in Kolkata city, West Bengal. A sample of 300 adolescents, equally divided between boys and girls aged 15-18, was assessed using the Big Five Inventory by Oliver John and Verónica Benet-Martínez. Statistical analyses, including mean, standard deviation, and Pearson correlation, were conducted to interpret the data. The results showed no significant differences between boys and girls in traits like Extraversion, Agreeableness, Neuroticism, and Openness, indicating similar levels of sociability, emotional stability, openness, and cooperation. However, there was a significant difference in Conscientiousness, suggesting that boys and girls vary in their levels of organization, responsibility, and discipline. These findings emphasize that while many personality traits are similar across genders during adolescence, there are still distinct differences that can inform tailored support for healthy development. Based on these findings, recommendations were made for adolescents, parents, teachers, and other societal stakeholders to support healthy development.*

**Keywords:** *Big Five personality traits, adolescents, gender differences, openness, conscientiousness, extraversion, agreeableness, neuroticism*

## **Introduction**

Personality development is a complex and multifaceted process, particularly during adolescence—a crucial period marked by significant biological, cognitive, and social transformations. As individuals transition from childhood to adulthood, they undergo profound changes that shape their identities, behaviors, and emotional responses. Understanding the intricacies of personality development during this stage is essential for educators, parents, and mental health professionals, as it provides insights into the factors that influence adolescent behavior and well-being.

Research has consistently shown that there are gender differences in these personality traits, with variations often emerging during adolescence. For instance, girls typically score higher on traits such as Agreeableness and Neuroticism, whereas boys tend to score higher on traits like

Extraversion and Openness. These differences can be attributed to a combination of biological, psychological, and social factors. Biological influences include hormonal changes that occur during puberty, which can impact mood and behavior. Psychological factors encompass differences in emotional regulation and coping mechanisms, while social influences involve gender role expectations and cultural norms that shape behavior from a young age.

Despite the growing body of literature on gender differences in personality traits, there is a need for further research to explore these variations specifically during adolescence. This period is critical for personality development, as adolescents navigate the complexities of forming their identities, establishing independence, and developing social relationships. By examining the differences in Big Five personality traits between adolescent boys and girls, we can gain a deeper understanding of how gender influences personality development and the implications for educational and psychological interventions.

This paper aims to address this gap in the literature by providing a comprehensive analysis of gender differences in the Big Five personality traits among adolescents. Through a review of existing studies and empirical data, we will explore how these differences manifest during adolescence and discuss the potential implications for supporting the developmental needs of boys and girls. By shedding light on these gender differences, this research contributes to the broader field of developmental psychology and offers valuable insights for those involved in the care and education of adolescents.

## **Review of literature**

**Weisberg, Y. J., DeYoung, C. G., & Hirsh, J. B. (2011).** "Gender differences in personality across the ten aspects of the Big Five." This study examined gender differences in the Big Five traits and their aspects. It found that women, including adolescent girls, scored higher in Neuroticism and Agreeableness, while men, including boys, scored higher in Extraversion and Openness.

**De Bolle, M., et al. (2015).** "The emergence of sex differences in personality traits in early adolescence: A cross-sectional, cross-cultural study." This cross-cultural study investigated the emergence of sex differences in the Big Five traits among adolescents in multiple countries. It

reported consistent findings of girls scoring higher in Neuroticism and Agreeableness across cultures.

**Soto, C. J., & John, O. P. (2014).** "Traits in transition: The structure of parent-reported personality traits from early childhood to early adulthood." This longitudinal study explored the development of the Big Five traits from childhood to early adulthood. It found gender differences in traits such as Agreeableness and Neuroticism during adolescence.

**Klimstra, T. A., in et al. (2011).** "Personality development in adolescence: Relations between Big Five personality traits and coping with interpersonal stress." This study found that adolescent girls scored higher on Neuroticism and Agreeableness compared to boys. Boys, on the other hand, scored higher on Extraversion and Openness.

**Van der Linden, D., et al. (2010).** "The General Factor of Personality: A meta-analysis of Big Five intercorrelations and a criterion-related validity study." *Journal of Research in Personality*, 44(3), 315-327. This study examined intercorrelations among Big Five traits and found gender differences, with girls scoring higher in Neuroticism and Agreeableness, and boys scoring higher in Extraversion and Openness during adolescence.

## **OBJECTIVES –**

To Study the differences in big five personality traits between adolescent boys and girls of Kolkata city.

**HYPOTHESIS –** There will be no significant relationship in Big Five Personality traits between Adolescent boys and girls in Kolkata city.

## **VARIABLE –**

**Independent variable - Gender** (boys, girls)

**Dependent variable –**

**Big Five Personality Traits:** Openness to Experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism

**Control variable –**

- a. Age –15-18 years
- b. Place – Kolkata, West Bengal.

## **RESEARCH METHODOLOGY**

### **Sample Selection**

300 adolescents (15-18 years age range) 150 boys and 150 girls were selected purposively from Higher Secondary Schools of Kolkata, West Bengal for sample of the study as following -

Gender	Number
Male	150
Female	150
Total	300

**Psychological tools-** Big Five Inventory - Oliver from Berkeley Personality Lab and Verónica Benet-Martinez, psychology professor at University of California at Davis, created the 44-item “Big Five Inventory” (BFI). The Big Five Inventory (BFI) is a self-report scale that is designed to measure the big five personality traits (**Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness**).

**Methodology** – 300 adolescents (15-18 years age range) 150 boys and 150 girls were selected purposively from Higher Secondary Schools of Kolkata, West Bengal as sample of the study. The Big Five Inventory by Oliver from Berkeley Personality Lab and Verónica Benet-Martinez, psychology professor at University of California at Davis was administered on the sample, which measures five personality traits. The study focuses on the Big Five personality traits- **Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness**) which were administered on the sample. Raw scores of personality traits were calculated. To find the results of study data analyzed by statistical methods mean (M), standard deviation (SD), Pearson Correlation (r). According to the results obtained, suggestions were given to adolescents, parents, teachers, and society.

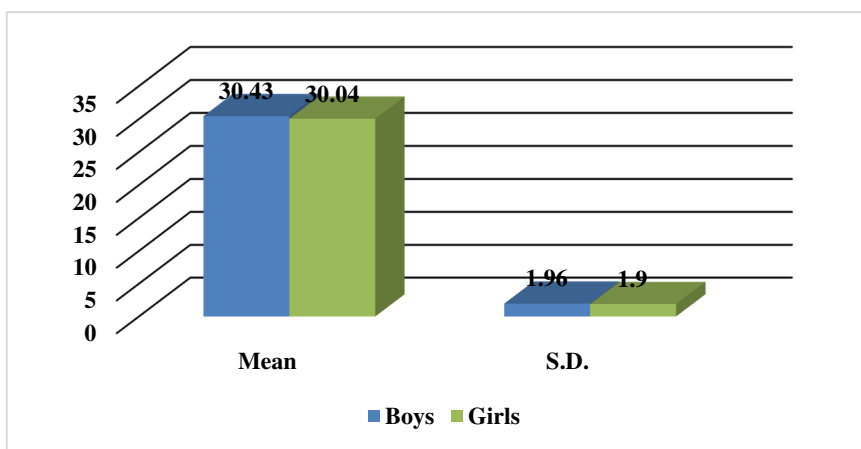
## **Result analysis and discussion**

**Difference in extraversion personality trait between adolescent boys and girls of Kolkata city.**

Group	Number	Mean	S.D.	t-test	P value
Boys	150	30.43	1.96	1.73	>0.05
Girls	150	30.04	1.90		

Above table shows the result of “Difference in Extraversion Personality Trait between adolescent boys and girls of Kolkata city.” Mean value of Extraversion Personality Trait of adolescent boys and girls are 30.43 and 30.04 respectively. There is no significant difference between means. Calculated critical ratio value is 1.73 which is not significant at 0.05 level of significance because the calculated critical ratio value is less than the minimum value 1.96 at 0.05.

Therefore, we can say that there is no significant difference in Extraversion Personality Trait between adolescent boys and girls of Kolkata city.

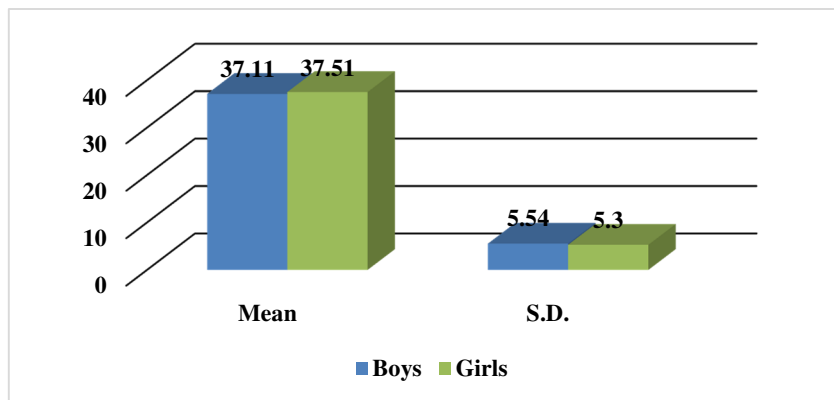


**Difference in Agreeableness Personality trait between adolescent boys and girls of Kolkata city.**

Group	Number	Mean	S.D.	t-test	P value
Boys	150	37.11	5.54	0.65	>0.05
Girls	150	37.51	5.30		

Above table shows the result of “Difference in Agreeableness Personality Trait between adolescent boys and girls of Kolkata city.” Mean value of Agreeableness Personality Trait of adolescent boys and girls are 37.11 and 37.51 respectively. There is no significant difference between means. Calculated critical ratio value is 0.65 which is not significant at 0.05 level of significance because calculated critical ratio value is less than minimum value 1.96 at 0.05.

Therefore, we can say that there is no significant difference in Agreeableness Personality Trait between adolescent boys and girls of Kolkata city.

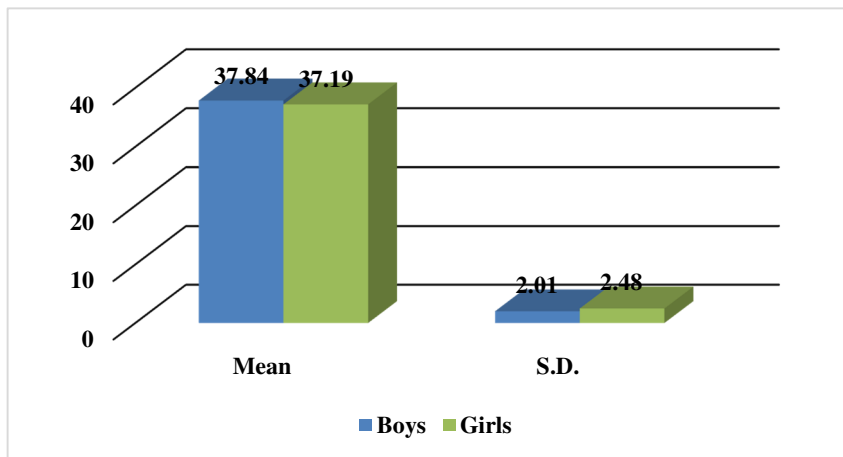


**Difference in Conscientious Personality Trait between adolescent boys and girls of Kolkata city.**

Group	Number	Mean	S.D.	t-test	P value
Boys	150	37.84	2.01	2.50	<0.05
Girls	150	37.19	2.48		

Above table shows the result of “Difference in Conscientious Personality Trait between adolescent boys and girls of Kolkata city.” Mean value of Conscientious Personality Trait of adolescent boys and girls are 37.84 and 37.19 respectively. There is a significant difference between means. Calculated critical ratio value is 2.50 which is significant at 0.05 level of significance because the calculated critical ratio value is greater than the minimum value 1.96 at 0.05.

Therefore, we can say that there is a significant difference between Conscientious Personality Trait in adolescent boys and girls of Kolkata city.

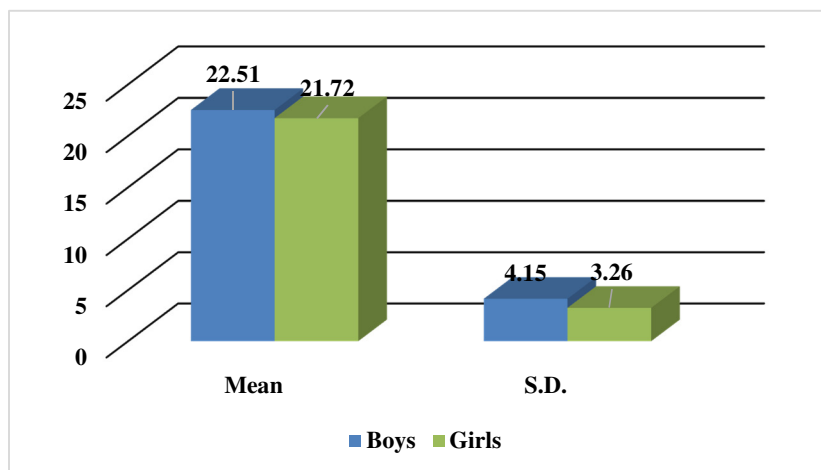


### Difference in Neuroticism Personality trait between adolescent boys and girls of Kolkata city.

Group	Number	Mean	S.D.	t-test	P value
Boys	150	22.51	4.15	1.82	>0.05
Girls	150	21.72	3.26		

Above table shows the result of “Difference in Neuroticism Personality Trait between adolescent boys and girls of Kolkata city.” Mean value of Neuroticism Personality Trait of adolescent boys and girls are 22.51 and 21.72 respectively. There is no significant difference between means. Calculated critical ratio value is 1.82 which is not significant at 0.05 level of significant because calculated critical ratio value is less than minimum value 1.96 at 0.05.

Therefore, we can say that there is no significant difference in Neuroticism Personality Trait between adolescent boys and girls of Kolkata city.



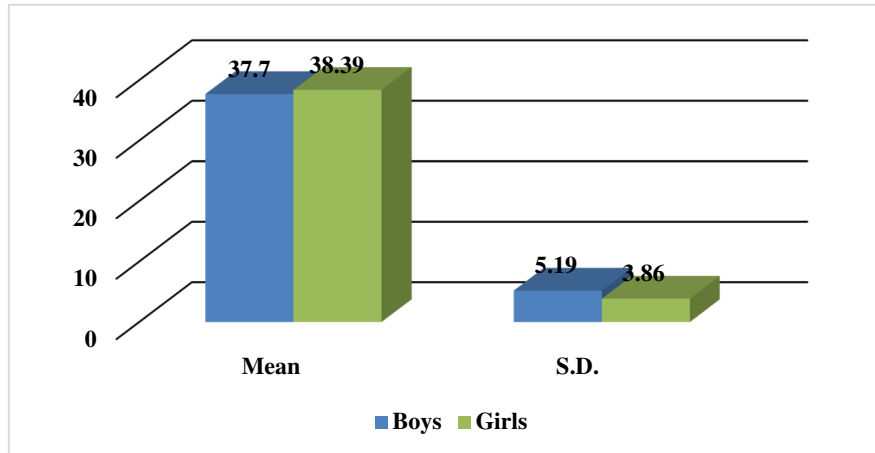
### Difference in Openness Personality trait between adolescent boys and girls of Kolkata city.

Group	Number	Mean	S.D.	t-test	P value
Boys	150	37.70	5.19	1.30	>0.05
Girls	150	38.39	3.86		

Above table shows the result of “Difference in Openness Personality Trait between adolescent boys and girls of Kolkata city.” Mean value of Openness Personality Trait of adolescent boys and girls are 37.70 and 38.39 respectively. There is no significant difference between means. Calculated critical ratio value is 1.30 which is not significant at 0.05 level of significance because calculated critical ratio value is less than minimum value 1.96 at 0.05.

Therefore, we can say that there is no significant difference in Openness Personality Trait between adolescent boys and girls of Kolkata city.





### Conclusion-

The study aimed to explore the differences in personality traits between adolescent boys and girls in Kolkata. It found that for most of the traits, including Extraversion, Agreeableness, Neuroticism, and Openness, there were no significant differences between the two groups. This suggests that boys and girls in this age group tend to have similar levels of sociability, emotional stability, openness to new experiences, and cooperative behavior. However, the study did identify a notable difference in the Conscientiousness trait. This means that boys and girls in Kolkata differ in their tendency to be organized, responsible, and disciplined, with one group likely exhibiting higher levels of conscientiousness than the other. This finding highlights that while many aspects of personality may be similar, there are still areas where gender differences can be observed during adolescence.

### Further suggestions

Further research on gender differences in Big Five personality traits among adolescents could focus on several areas:

1. Longitudinal Studies: Examining how these gender differences evolve over time from adolescence into adulthood to understand the stability and change in personality traits.
2. Cultural Influences: Investigating how cultural, social, and environmental factors influence gender differences in personality traits across different societies.

3. Biological Factors: Exploring the role of genetics and neurobiological mechanisms in shaping these gender differences.
4. Impact of Socialization: Studying the influence of parenting styles, peer interactions, and educational environments on the development of personality traits in boys and girls.
5. Intervention Studies: Developing and accessing interventions aimed at mitigating the negative impacts of certain personality traits (e.g., high Neuroticism) and promoting positive development in adolescents.
6. Diverse Populations: Including more diverse samples in terms of ethnicity, socioeconomic status, and geographical location to ensure generalizability of findings.

These areas could provide a deeper understanding of the underlying mechanisms and broader implications of gender differences in personality traits during adolescence.

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