

Relationship between Parents' and Adolescents' Personality Factors: A Study through Big Five Inventory

ASIMA PATRA*¹AND PAROMITA GHOSH²

¹Junior Research Fellow and ²Professor

Department of Home Science, University of Calcutta, Kolkata (W.B.) India

ABSTRACT

A number of studies have been conducted to analyze relationship between parents and adolescents. The present study centred around personality of parents and adolescents and significance of parents' personality on adolescents' personality. The present investigator considered Big Five Personality to perform this study. The Big Five are five types of the personality of human beings given by American psychologist Lewis Goldberg in 1990. These Big Five personality traits are-Openness to experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism. The Big Five model of personality is also known as OCEAN model. Big Five Inventory by John and Srivastava (1999) was utilized to uncover personalities of parents and adolescents, these personalities were examined thoroughly to find out the relationship between parents' personalities and adolescents' personalities. Data were collected on adolescents (aged 13-19 years) and their parents by using Big Five Inventory(John and Srivastava, 1999) through a stratified random sampling method. Self-made general information schedules were used to collect background information about participants. The design of the study was correlational. Mean, Standard deviation, Chi-square, Pearson's Correlation and Partial Correlation were administered to analyze data statistically. After analysis of the data, the investigators found that: (1) Adolescents scored high in Openness to Experience and Extroversion, Fathers scored high in Conscientiousness and Agreeableness and Mothers scored a high score in Neuroticism, (2) Parents' and Adolescents' three personality factors that are - Openness to experience, Extroversion, and Agreeableness were significantly correlated. So the investigators opined that Adolescents' and Parents' personality factors match due to shared heredity and environmental factors, (3) An effect of having siblings was noted on the relationship between Adolescents' and Parents' personality factor of Openness to experience.

Key Words : Personality, Relationship, Big Five model (OCEAN), Adolescents, Parents

INTRODUCTION

Studying the personality of human beings - how people think, feel, behave, and react to others, is always fascinating for researchers. Several psychological theories on personality have been proposed by psychologists at different times. Carl Jung contributed much to the field of personality by distinguishing two different types of attitudes - Introverts and Extroverts. Jung defined Introversion as an attitude type marked by an orientation toward subjective psychic contents and Extroversion was defined as the concentration of energy and interest in

external objects (Morgan *et al.*, 1987). Eysenck built on Jung's work and in 1967 gave the hierarchical theory of personality which concisely described important elements of personality known as factors. These factors are - Extraversion-Introversion, Neuroticism, and Psychoticism (Eysenck, 1967). Each type of personality has certain traits. For example, people who fit Eysenck's extroverted type are said to have such characteristics as sociability, liveliness, and excitability. Each one of these characteristics, according to Eysenck, can be broken down into certain habitual-response patterns that can be broken further into specific responses within specific

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situations. This progression from broad, global types down to specific, situation-specific responses is what makes Eysenck's approach a hierarchical theory (Ciccarelli *et al.*, 2017). Extraversion and Neuroticism proposed by Eysenck (1967) are common with two traits of McCrae and Costa's Five-Factor OCEAN Model (McCrae and Costa 1987). Ashton and Lee relatively recently created the HEXACO model of personality which is also known as the Six-Factor model of personality. These six factors are- Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to experience (Ashton and Lee, 2007). Since this model is undergoing refinement the investigators of the present study chose not to include the HEXACO model but to work with the OCEAN model.

The relationship between parents and offspring is unique. Much research has been conducted in this particular area to study this relationship. In this study, the investigators tried to find out the correspondence between parents' and adolescents' personality factors in the light of the OCEAN model. The OCEAN model is popularly known as the Big Five model of personality. The five major personality factors are exclusive, independent, and different from one another in subsumed traits. These factors are - Openness to experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism (John and Srivastava, 1999).

The Big Five model was initially proposed by Ernest Tupes and Raymond Christal in 1961, which was grounded in the theory of Raymond Cattell's 16 Personality Factors (Tupes and Christal, 1961; Cattell *et al.*, 1970 as cited by John and Srivastava, 1999). In 1990 T. M. Digman improved the Five Factor model (Digman, 1990). Later Lewis Goldberg extended this model to its most acceptable form (Goldberg, 1990). Characteristics of each factor of the Big Five model of personality are-

- a. Openness to experience : This personality factor refers to the characteristics of people who are adventurous and always welcome new beginnings, they are curious and creative and less conservative .
- b. Conscientiousness : Conscientiousness is identified by certain characteristics like being organized, disciplined, industrious, goal-oriented, and motivated in nature.
- c. Extroversion : Extrovert people are energetic, expressive, friendly, outgoing, flexible, and like to be surrounded by people, they are not fond of

spending time alone.

- d. Agreeableness : Persons with this trait are soft and harmonious by nature and generally get along with people. They are helpful, merciful, and cooperative.
- e. Neuroticism : Neurotic people are usually anxious, worried, insecure, and depressed (Lim, 2020).

The Big Five personality traits of Adolescents and parenting styles seem strongly correlated. Other factors that also influence the personality patterns of Adolescents and children are heredity, environment especially socio-economic status, birth order, etc. (Waheed *et al.*, 2017; Ayoub *et al.*, 2018; Ayoub *et al.*, 2021). So close relationships between Parents' and Adolescents' personality traits are expected to be more or less evident in the following studies. Tomsik and Ceresnik in 2017 observed that Parents' child-rearing practices cast an influence on Adolescents' personalities. Children's personality patterns are improved by specific child nurturance skills and educational practices of Parents. They further found that integrative and liberal parenting patterns assist personality characteristics of Conscientiousness, Extroversion, and Openness to experience. Neuroticism trait is found to be influenced by authoritarian and indifferent parenting styles. Another study (Tomsik, 2018) tried to find out the relationship between parental control and the personality dimensions of Adolescents. Data were collected from 346 Adolescents using the NEO FFI questionnaire to measure the personality dimensions (Big Five Model) of Adolescents and a questionnaire to measure parental control. Personality dimensions such as Extroversion, Openness to experience, Agreeableness, and Conscientiousness were positively correlated while Neuroticism was negatively correlated with parental control. From the study by De Haan *et al.* (2012), it emerged that parental personality heavily influenced over-reactive behavior which Adolescents' personalities did not do to that extent but Parents' and Adolescents' personalities were alike in influencing warmth. Parents' and Adolescents' Agreeableness and Adolescents' Extroversion were prime determiners of parenting. Relationship between parental personality and parenting were correlated in cases of easy Parents and difficult Adolescents and for Parents' rearing daughters and those parenting sons. Maladjusted and accommodating parenting were influenced by Parents' and Adolescents'

behavioral characteristics. Ashraf *et al.* (2019) selected 281 University students from different faculties (Natural and Social Sciences) and found significant relations between parenting styles (authoritarian, authoritative and permissive) and Big Five Personality traits. Najar and Darr (2017) studied the Big Five Personality traits of Post-Graduate students in concerning their gender, type of family, and residential background. Data were collected from 250 Post-Graduate students of Kashmir University by using NEO-FFI 3 developed by McCrae and Costa (1987). Neuroticism emerged as the most important trait, whereas Extroversion and Openness to experience were less important characteristics of these students. Agreeableness and Conscientiousness were found to be of even less importance as traits. There was a non-significant difference in Big-Five Traits when the genders were compared. Female students were found more neurotic than their male cohorts. In a study (Clark *et al.*, 2018) earnestness and animosity in Adolescents and Parents cast a significant impact on Adolescents' ability to regulate their behavior and aggression. The authors added that Adolescents' who had a lower ability to manage behavior were susceptible to more negative behavior than those with better regulation of behavior.

In a longitudinal study, a complex interplay of variables was revealed. For both Parents, more Agreeableness and autonomy accounted for more parental warmth and more depressive symptoms and lower Agreeableness accounted for more over-reactive discipline. Both Parents' depressive symptoms accounted for their interparental stress. Paternal over-reactive discipline was shaped by the mother's Extraversion and interparental stress and paternal warmth were affected by the mother's experienced interparental stress in addition to the father's psychological resources (Van Eldike *et al.*, 2019). In another study siblings' Big Five personality traits and it's association with attribute of sibling relationships were studied among college students (n=115) and one of their older siblings. Big Five traits were found to be large predictors of variability in warmth and conflict among siblings. Positive sibling outcomes were significantly and consistently predicted by their extent of Agreeableness (Lanthier, 2007). In still another study it was concluded that higher Neuroticism, lower Conscientiousness, and Agreeableness in Parents were found to have a significant impact on their emotional outbursts (Vigouroux *et al.*, 2017). Volkom *et al.* (2019) investigated the association between parenting pattern,

birth order, personality, and relationships among siblings using Lifespan Sibling Relationship Scale (LSRS) and Big Five Inventory (BFI). Results revealed that features of the sibling relationship had not been affected by birth order but the latter might have affected Conscientiousness and Neuroticism. Authoritative parenting had positive outcomes for offspring. Similarly in another study, it was found that Parents' personalities had a great influence on children's psychiatric illnesses (Oliveira *et al.*, 2017). A look at these studies reveals the important roles played by Agreeableness and Neuroticism in sibling relationships viewed from the perspective of parents.

These studies had been mostly conducted in the Western milieu. Such rigorous studies appear to be rare in India. In one such rare study, Kour and Rani (2018) observed the influence of parenting styles on the self-concept of secondary school students (9th and 10th graders) in Pathankot City in Punjab. 200 Adolescent students were studied using correlation and hierarchical multiple regression. The Self-concept of Adolescents was significantly related to parenting styles (democratic, autocratic, and accepting). Democratic parenting had a great influence on developing self-concept among Adolescents. No relation was found between the gender of Adolescents and parenting styles. This is an unexpected finding for a traditionally conservative society such as India. It perhaps shows a decline in the practice of gendered parenting. Deb *et al.* (2015) conducted another study in India to conclude that parental care was related to more self-confidence and less emotional stress in Parents. Fathers' friendly attitude was found to be related to developing high self-concept and low emotional adjustment among Adolescents and mothers' short temper was found to be linked to more anxiety. Dysfunctional families had a detrimental effect on Adolescents' anxiety, personal issues, educational pressure, and parental interference had an adverse effect on Adolescents' matters confidential. Parental attributes were found to negatively influence mental health and different factors like anxiety, adjustment, self-concept, and self-confidence of Adolescents. In a study carried out in India on the regulation of emotion among Adolescents, parental psychological control and Big Five Inventory traits appeared influential. Neuroticism was found to play a significant role in emotional control and parental psychological control (Tholia and Suri, 2020). There was still another study (John *et al.*, 2019) that focused on cross-cultural validation. In this study tools like BFI – 10

and NEO-FFI-3 were administered to Adolescents in India and the need for culture-specific adaptations of the tools originally devised for the Western population was felt. This argument could be strengthened if more studies in the Indian context are conducted. The present study is a step in that direction.

The recent and relevant research literature also reveals an interesting angle - the impact of not having siblings or having them on personality factors with the acronym of OCEAN (e.g. Badi, 2017; Stronge *et al.*, 2019; Arora and Teotia, 2021). In one such study, Badi (2017) tried to find out the differences between the personality of 'Only Children' and 'Children with a Sibling.' NEO-FFI was used on 200 college students to study the OCEAN model of personality. It was concluded that there were no significant differences in personality between 'Only Children' and 'Children with a Sibling' including an intra-gender comparison of personalities (only boys and boys with a sibling, only girls, and girls with a sibling). Stronge *et al.* in 2019 did a panel study on 20,592 adults in New Zealand to find personality differences between adults with or without siblings. Studies showed that adults with no siblings had low levels of Conscientiousness and honesty-humility and significantly high levels of Neuroticism and Openness than adults with siblings.

Several scholarly works have attempted to find the relationship between personality traits and aspects of sibling relationships. A study was conducted by Gozu and Newman in 2018 on aforesaid factors, they tried to investigate the association between Big-Five personality factors and the quality of sibling relationships among young adults aged 18-25 years. 552 University students (female-54% and male-46%) were studied. The Big Five Inventory and The Lifespan Sibling Relationship Scale were successively used to assess personality and sibling relationships. Results from regression analyses showed that personality traits and the quality of relationships of sibling pairs were significantly associated when gender and gender constellation were control variables. The quality of sibling relationships was found to be strongly predicted by the Big Five factor of Agreeableness. Golsteyn and Magnee (2020) examined whether personality traits were affected by sibling gender. They collected longitudinal cohort data from the British population. The individuals were followed from birth onwards and were studied at ages 10 and 16. They found that the oldest boy in a family was more agreeable if the

next-born sibling was a girl.

Different nature of findings have been obtained by other researchers. For example, a study (Arora and Teotia, 2021) was conducted in a non-western setting of India to compare adjustment and other factors of personality between Only Child and Child with Siblings. Data were collected from 100 Adolescents (50 only children and 50 children with siblings) using NEO-FFI and Adjustment Inventory. Results indicated that there were meaningful differences in personality dimensions of Neuroticism, Extraversion, and Openness to experience between an only child and a child with a sibling. The latter scored high on Neuroticism, Extraversion, and Openness to experience as compared to only children (Arora and Teotia, 2021). Therefore there seems to be a lack of unanimity among investigators on the differences between the impact of not having siblings or having them on Big Five personality factors. This lack of unanimity also needs to be resolved. This would be attempted in the present study.

METHODOLOGY

Research Objectives:

To find out the relationship, if any, between Parents' and Adolescents' Big Five personality factors and to find out the influence of siblings, if any, in this context.

Research Hypothesis:

- A) There is a relation between Parents' and Adolescents' personality factors of Openness to experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism.
- B) There is an influence of having siblings on the relationship between Parents' and Adolescents' personality factors of Openness to experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism.

Sample:

1. **Sample size and nature**-There are two samples - one of the Adolescents and another of Parents. The size of the sample of Adolescents (aged 13-19 years) was 80. In this sample, there were forty 13-15 years olds (20 girls, 20 boys) and forty 16-19 years olds (20 girls, 20 boys). The sample of Parents consisted of 80 Fathers and 80 Mothers. So the size of the sample of Parents was 160. The nature of the two samples was

stratified random. Stratification was done based on age and gender in the sample of Adolescents and gender in the sample of Parents. Gender was considered as a classification variable in the light of findings of the studies e.g. Gozu and Newman (2018) and Golsteyn and Magnee (2020).

2. Sample Characteristics:

- a) The sample comprised Adolescents and their Parents.
- b) The ages of Adolescents were between 13-19 years. They were all students of Class VII of school through 1st year of college.
- c) Fathers of Adolescents were involved in government services, businesses, farming, and private sector services. Mothers were generally homemakers and few were involved in services. They were all educated from Class V of school through Post-Graduation.
- d) In general, the participants were normal in physical health.
- e) They were residents of North 24 Parganas, South 24 Parganas, Kolkata, Howrah, Bankura, and Jhargram districts of West Bengal in India.

Tools used:

The following tools were administered to participants for data collection:

(i) General Information Schedule :

- A. General Information Schedule for Adolescents- This was prepared by the present investigators to collect data from participants regarding their background and identifying features. There are 11 items in the schedule of which only 1 is closed-ended. The items asked for participants' names, ages, gender, occupation, class in school, names, and occupations of Parents, addresses and numbers of siblings.
- B. General Information Schedule for Parents- This was prepared by the present investigators to collect data from participants regarding their background and identifying features. There are 11 items in the schedule of which only 3 are closed-ended. The items

asked for participants' names, ages, gender, educational qualification, occupation, marital status, name, and age of spouse, name and age of children, type of family- and address.

- (ii) **Big Five Inventory (John and Srivastava 1999)** : Big Five Inventory (BFI) developed by Oliver P. John and Sanjay Srivastava in 1999 is a standardized tool to measure five dimensions of personality (Openness to experience, Conscientiousness, Extroversion, Agreeableness, and Neuroticism). There are 44 statements to measure personality dimensions and for each dimension, there are 5 items to which subject responds whether they agree or disagree with the statement on a 5-point Likert scale (Disagree strongly, Disagree a little, Neither agree nor disagree, Agree a little and Agree strongly). The Mean test-retest reliability of this scale is .83 with Cronbach alphas ranging from .75 to .90. It has high convergent validity (.92) when compared with an abbreviated version of Costa and McCrae's (1992) NEO Personality Inventory (NEO-FFI). The norms are in terms of mean and standard deviation.

Research Design :

The design of the present study was non-experimental.

Techniques of Statistical Analysis:

After data collection, the data were scanned. Incomplete or doubtful data were discarded. Then the identifying information was tabulated. Data were collected by administering the standardized test which is the Big Five Personality Inventory were scored using the procedure stated in the manual. After that, all the data were tabulated and the following statistical techniques were used for analysis:

- a) Mean
- b) Standard Deviation
- c) Chi-square
- d) Pearson's Correlation
- e) Partial Correlation

RESULTS AND DISCUSSION

From Table 1 it was found that in mean Openness to experience, on average, Adolescents scored higher

Table 1 : Descriptive Statistics (Mean & Sd) of Big Five Personality Dimensions of Adolescents' and their Parents

Sample/Strata	Variables	Mean	Standard Deviation
Entire Sample (n=80)	Adolescents' Openness to Experience	36.06	4.62
	Adolescents' Conscientiousness	30.88	6.01
	Adolescents' Extroversion	28.41	4.91
	Adolescents' Agreeableness	33.88	5.11
	Adolescents' Neuroticism	22.40	5.43
Fathers (n=80)	Fathers' Openness to Experience	32.91	5.05
	Fathers' Conscientiousness	36.21	4.96
	Fathers' Extroversion	26.71	4.67
	Fathers' Agreeableness	35.73	5.14
	Fathers' Neuroticism	20.80	5.10
Mothers (n=80)	Mothers' Openness to Experience	32.02	5.32
	Mothers' Conscientiousness	35.51	5.41
	Mothers' Extroversion	27.56	4.60
	Mothers' Agreeableness	35.21	5.57
	Mothers' Neuroticism	24.08	6.29

than Fathers' and Mothers' mean values in Openness to experience. Mothers on average had the least mean in Openness to experience. It appears that in mean Conscientiousness Fathers' scores were higher than Adolescents' and Mothers' mean in Conscientiousness. Adolescents had the least mean in Conscientiousness. It was observed that in mean Extroversion, Adolescents scored higher than Fathers' and Mothers' mean values. Fathers on average had the least mean in Extroversion. It was noticed that in mean Agreeableness, Fathers scored higher than Adolescents' and Mothers' mean values in the factor. Adolescents had the least mean in Agreeableness. It was concluded that in Neuroticism, Mothers, on average, scored higher than Adolescents' and Fathers' mean in Neuroticism. Fathers had the least mean in Neuroticism.

From Table 2, it was found that in mean Openness to experience, the participants 16-19- year olds scored higher than those of participating 13-15- year-olds. It was concluded that in mean Conscientiousness, 13-15- year-

old Adolescents scored higher than the 16-19-year-olds. It was observed that in mean Extroversion, 13-15-year-olds Adolescents scored higher than 16-19-year-olds. It was noticed that in mean Agreeableness, 13-15-year-olds Adolescents scored higher than 16-19-year-olds. In mean Neuroticism, 13-15-year-olds Adolescents scored higher than the 16-19-year-olds (Fig. 1).

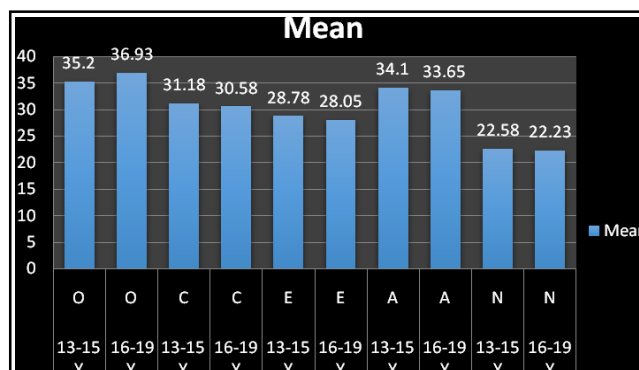


Fig. 1 : Means on Big Five Factors sorted by Age

Table 2 : Descriptive Statistics Sorted by Age

Sample/Strata	Variables	Mean	Standard Deviation
13-15 Years (N=40)	Adolescents' Openness to Experience	35.20	5.16
16-19 Years (N=40)	Adolescents' Openness to Experience	36.93	3.88
13-15 Years (N=40)	Adolescents' Conscientiousness	31.18	6.00
16-19 Years (N=40)	Adolescents' Conscientiousness	30.58	6.08
13-15 Years (N=40)	Adolescents' Extroversion	28.78	5.09
16-19 Years (N=40)	Adolescents' Extroversion	28.05	4.78
13-15 Years (N=40)	Adolescents' Agreeableness	34.10	4.98
16-19 Years (N=40)	Adolescents' Agreeableness	33.65	5.30
13-15 Years (N=40)	Adolescents' Neuroticism	22.58	5.50
16-19 Years (N=40)	Adolescents' Neuroticism	22.23	5.41

Table 3 : Descriptive Statistics Sorted by Gender

Sample/Strata	Variables	Mean	Standard Deviation
Female (N=40)	Adolescents' Openness to Experience	35.25	5.33
Male (N=40)	Adolescents' Openness to Experience	36.88	3.65
Female (N=40)	Adolescents' Conscientiousness	30.45	6.09
Male (N=40)	Adolescents' Conscientiousness	31.30	5.98
Female (N=40)	Adolescents' Extroversion	29.13	4.55
Male (N=40)	Adolescents' Extroversion	27.70	5.22
Female (N=40)	Adolescents' Agreeableness	33.75	5.19
Male (N=40)	Adolescents' Agreeableness	34.00	5.10
Female (N=40)	Adolescents' Neuroticism	22.60	5.99
Male (N=40)	Adolescents' Neuroticism	22.20	4.87

From Table 3 and Fig. 2, it was observed that in mean Openness to experience, male participants had an average score higher than female participants. It was noticed that in mean Conscientiousness, male participants scored higher than female participants. It was stated that in mean Extroversion, female participants had an average score higher than male participants. It was found that in

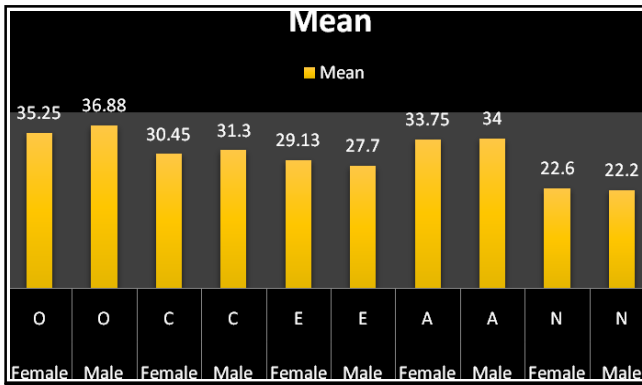


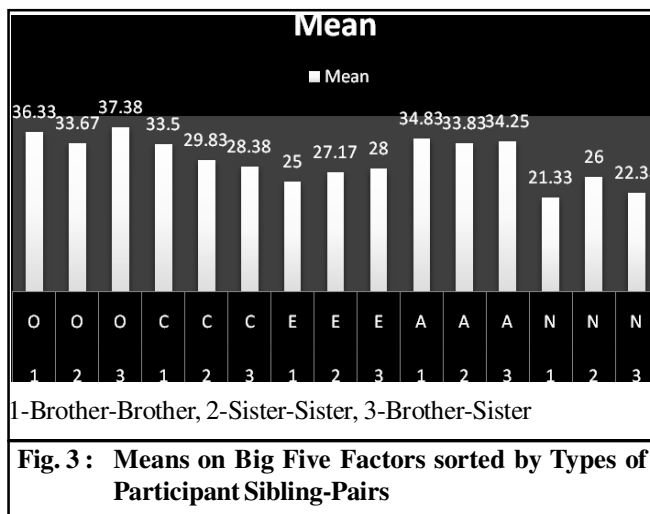
Fig. 2 : Means on Big Five Factors sorted by Gender

mean Agreeableness, male participants scored higher than female participants. It was apparent that in mean Neuroticism, female participants had an average score higher than the male participants. This finding agrees with that of a previous study conducted by Najar and Darr (2017).

From Table 4 and Fig. 3, it was observed that in mean Openness to experience, brother-sister participant sibling pairs scored higher than brother-brother and sister-sister participant sibling pairs. Sister-sister participant sibling pairs had the least mean in Openness to experience. It was stated that in mean Conscientiousness, brother-brother participant sibling pairs scored higher than sister-sister and brother-sister sibling pairs. Brother-sister sibling pairs had the least mean in Conscientiousness. It was apparent that in mean Extroversion, brother-sister participant sibling pairs scored higher than brother-brother and sister-sister participant sibling pairs. Brother-brother participant sibling pairs had the least mean in Extroversion. It appeared that in mean Agreeableness, brother-brother

Table 4 : Descriptive Statistics Sorted by Types of Participant Siblings

Sample/Strata	Variables	Mean	Standard Deviation
Brother-Brother	Adolescents' Openness to Experience	36.33	3.07
Sister-Sister	Adolescents' Openness to Experience	33.67	4.76
Brother-Sister	Adolescents' Openness to Experience	37.38	4.98
Brother-Brother	Adolescents' Conscientiousness	33.50	3.72
Sister-Sister	Adolescents' Conscientiousness	29.83	6.82
Brother-Sister	Adolescents' Conscientiousness	28.38	8.10
Brother-Brother	Adolescents' Extroversion	25.00	6.13
Sister-Sister	Adolescents' Extroversion	27.17	3.76
Brother-Sister	Adolescents' Extroversion	28.00	6.33
Brother-Brother	Adolescents' Agreeableness	34.83	2.99
Sister-Sister	Adolescents' Agreeableness	33.83	4.96
Brother-Sister	Adolescents' Agreeableness	34.25	4.83
Brother-Brother	Adolescents' Neuroticism	21.33	3.67
Sister-Sister	Adolescents' Neuroticism	26.00	4.24
Brother-Sister	Adolescents' Neuroticism	22.38	7.35



participant sibling pairs scored higher than sister-sister and brother-sister sibling pairs. Sister-sister participant sibling pairs had the least mean in Agreeableness. It was noticed that in mean Neuroticism sister-sister sibling pairs scored higher than brother-brother and brother-sister participant sibling pairs. Brother-brother sibling pairs had the least mean in Neuroticism.

Sibling pairs share both heredities and learn through observation at least in the family context (Waheed *et al.*, 2017, Ayoub *et al.*, 2018, Ayoub *et al.*, 2021). So the present investigators have controlled it to study the comparison that is similarities and differences among them concerning the relationships under study.

From Table 5, it was found that there was a positive correlation between Adolescents' and Parents' Big Five Personality Factors. Significant relations had been obtained in the following cases: Adolescents' Agreeableness with Fathers' Agreeableness, Adolescents' Openness to experience with Mothers' Openness to experience, Adolescents' Extroversion with Mothers' Extroversion, and Adolescents' Agreeableness

with Mothers' Agreeableness. A positive correlation means in these cases that the tendency of higher scores on Adolescents' Big Five Factors was associated with higher scores on Parents' Big Five Factors and lower scores on Adolescents' Big Five Factors were associated with lower scores on Parents' Big Five Factors. So hypothesis 3.2 A was supported in cases of relationships between Parents' and Adolescents' personality factors of Openness to experience, Extroversion and Agreeableness. These results agreed with those of De Haan *et al.* (2012) and Tomsik (2018).

Table 6 showed that there were both positive and negative correlations between Parents' and Adolescents' Big Five Personality Factors (when the types of sibling pairs were the control variable). As sibling pairs have shared heredity and generally share family environments (Waheed *et al.*, 2017; Ayoub *et al.*, 2018; Ayoub *et al.*, 2021), the present investigators have controlled the variable of sibling pairs for comparison. There was a negative correlation between Adolescents' Extroversion and Fathers' Extroversion; and Adolescents' Agreeableness and Fathers' Agreeableness. In Pearsonian correlation (Table 5) Adolescents' Extroversion and Fathers' Extroversion; Adolescents' Agreeableness and Fathers' Agreeableness were found to be positively correlated. So comparing Table 5 and Table 6 the investigators observed that relations between Adolescents' Extroversion and Fathers' Extroversion; Adolescents' Agreeableness and Fathers' Agreeableness had shown an effect of the type of sibling pairs. Positive correlations have been obtained in the following cases - Adolescents' Openness to experience with Fathers' and Mothers' Openness to experience; Adolescents' Conscientiousness with Fathers' Conscientiousness; and Adolescents' Neuroticism with Fathers' Neuroticism (Table 6). There were negative correlations between

Variables	Fathers' Openness to Experience	Mothers' Openness to Experience
Adolescents' Openness to Experience	.15	.32**
Variables	Fathers' Conscientiousness	Mothers' Conscientiousness
Adolescents' Conscientiousness	.16	.21
Variables	Fathers' Extroversion	Mothers' Extroversion
Adolescents' Extroversion	.16	.29**
Variables	Fathers' Agreeableness	Mothers' Agreeableness
Adolescents' Agreeableness	.28**	.45**
Variables	Fathers' Neuroticism	Mothers' Neuroticism
Adolescents' Neuroticism	.19	.22

df=78. *p<.05, **p<.01

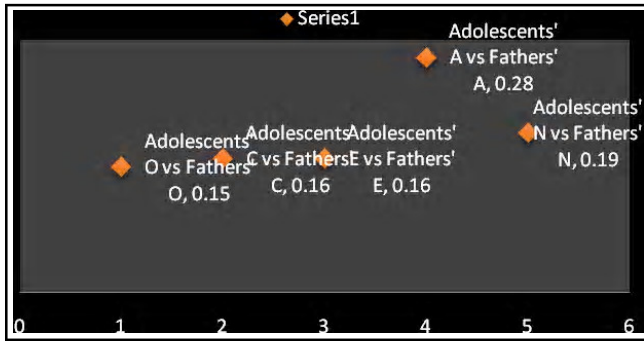


Fig. 4 (a): Relations of Adolescents' and Fathers' Big Five Factors: Pearsonian Correlation Coefficients

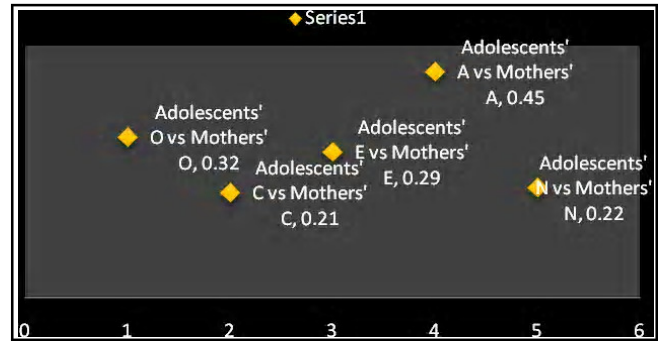


Fig. 4 (b): Relations of Adolescents' and Mothers' Big Five Factors: Pearsonian Correlation Coefficients

Adolescents' Conscientiousness and Mothers' Conscientiousness; Adolescents' Neuroticism with Mothers' Neuroticism. In Table 5 these traits were positively correlated. So comparing Table 5 and Table 6 the investigators found that Adolescents' Conscientiousness and Mothers' Conscientiousness; Adolescents' Neuroticism with Mothers' Neuroticism had shown an effect of the type of sibling pairs. A positive correlation means the tendency of higher scores on Adolescents' Big Five Factors to be associated with higher scores on Parents' Big Five Factors and lower scores on Adolescents' Big Five Factors to be associated with lower scores on Parents' Big Five Factors. A negative correlation means the tendency of higher scores on Adolescents' Big Five Factors to be associated with lower scores on Parents' Big Five Factors and lower scores on Adolescents' Big Five Factors to be associated with higher scores on Parents' Big Five Factors. Significant relations have been obtained in the following cases - Adolescents' Openness to Experience with Fathers' Openness to experience and Adolescents' Openness to experience with Mothers' Openness to

experience (when the type of sibling pairs was the control variable) (Fig. 4 (a) and (b)).

So, comparing Table 5 with Table 6 the investigators observed that significant relation has been obtained only in the case of Adolescents' Openness to experience with Mothers' Openness to experience for both Pearsonian correlation (Table 5) and partial correlation (Table 6) but the value has increased (Table 5 correlation coefficient, $r=.32$ and Table 6, $r=.73$) in partial correlation (Table 6). Thus there was an effect of type of sibling pairs. In Pearsonian correlation (Table 5) Adolescents' Openness to experience with Fathers' Openness to experience was not significant but in partial correlation (Table 6) this was significant. So in the case of partial correlation (Table 6), there was an effect of the variable called type of sibling pairs. In Pearsonian correlation (Table 5) Adolescents' Extroversion with Mothers' Extroversion was significant but this was not significant in the case of Partial correlation (Table 6). So in this factor, there was an effect of the type of sibling pairs. In Pearsonian correlation (Table 5), it was observed that the relation of Adolescents' Agreeableness with Parents' Agreeableness was

Table 6 : Results of Partial Correlations: Control Variable-Types Of Participant Sibling Pairs: Relations of Adolescents' and Parents' Big Five Factors

Variables	Fathers' Openness To Experience	Mothers' Openness To Experience
Adolescents' Openness to Experience	.61**	.73**
Variables	Fathers' Conscientiousness	Mothers' Conscientiousness
Adolescents' Conscientiousness	.26	-.005
Variables	Fathers' Extroversion	Mothers' Extroversion
Adolescents' Extroversion	-.19	.06
Variables	Fathers' Agreeableness	Mothers' Agreeableness
Adolescents' Agreeableness	-.14	.16
Variables	Fathers' Neuroticism	Mothers' Neuroticism
Adolescents' Neuroticism	.10	-.33

df=17; * $p<.05$; ** $p<.01$

significant but it was not significant when Partial correlation (Table 6) was carried out. Thus there was an effect of the type of sibling pairs on this factor. So investigators concluded that these contrasts (Table 5 vs Table 6) were due to the effect of the type of sibling pairs. This is in line with the results reported by Arora and Teotia (2021). Agreeableness was also found to strongly predicted the quality of sibling relationships in earlier studies (e.g. Gozu and Newman, 2018; Lanthier, 2007).

Types of sibling pairs were categorical variables and strata sizes were small so investigators used the Chi-square test (results in Table 7) to study the relationship

between Adolescents' and Parents' Big Five Factors sorted by types of sibling pairs.

Table 7 shows that obtained Chi-Square values were less than the critical value (at a 5% level of significance). The hypothesis of no difference (null hypothesis) is accepted and there were non-significant relationships between Parents' and Adolescents' Big Five Personality Factors. This happened because when the data were classified according to sibling pairs, no significant correspondence was found. From Table 5 it was found that there was a significant relationship between Parents' and Adolescents' personality factors of Openness to experience but from Table 7 we didn't find any. So this

Table 7 : Correspondence between Adolescents' and Parents' Big Five Factors Sorted by Types of Sibling-Pairs

Types of Sibling-Pairs	Variables	Chi-square	df	Sig
Brother-Brother (N=6)	Relations with Fathers' Big Five Factors			
	Openness to Experience	12.00	10	.29
	Conscientiousness	12.00	10	.29
	Extroversion	12.00	10	.29
	Agreeableness	6.00	6	.42
	Neuroticism	9.00	8	.34
	Relations with Mothers' Big Five Factors			
	Openness to Experience	12.00	10	.29
	Conscientiousness	12.00	10	.29
	Extroversion	12.00	10	.29
Sister-Sister (N=6)	Relations with Fathers' Big Five Factors			
	Openness to Experience	12.00	10	.29
	Conscientiousness	12.00	10	.29
	Extroversion	12.00	10	.29
	Agreeableness	12.00	8	.15
	Neuroticism	12.00	8	.15
	Relations with Mothers' Big Five Factors			
	Openness to Experience	12.00	10	.29
	Conscientiousness	12.00	10	.29
	Extroversion	12.00	10	.29
Brother-Sister (N=8)	Relations with Fathers' Big Five Factors			
	Openness to Experience	20.00	18	.33
	Conscientiousness	24.00	21	.30
	Extroversion	20.00	18	.33
	Agreeableness	20.00	18	.33
	Neuroticism	9.00	10	.53
	Relations with Mothers' Big Five Factors			
	Openness to Experience	16.00	12	.20
	Conscientiousness	24.00	21	.30
	Extroversion	20.00	18	.33
Agreeableness	20.00	18	.33	
Neuroticism	5.33	5	.38	

difference (Table 5 vs Table 7) seems due to an effect of the types of sibling pairs. Thus hypothesis 3.2 B is supported concerning one of the Big Five personality factors namely Openness to experience.

Conclusion:

The purpose of the present study was to examine associations between Parents' personalities and Adolescents' personalities through the administration of the Big Five Inventory. From the above study, the investigators concluded that Parents' personalities and Adolescents' personalities were significantly correlated in the cases of the factors of Openness to experience, Extroversion, and Agreeableness. It may be suggested that the Parents and Adolescents (irrespective of their type of sibling pairs) be advised to select and engage in collaborative activities that suit their matching Big Five personality factors.

Limitation of the study:

- The sample of the present study was not very large.
- Children were not included in the study. So, the study was limited in the generalization of findings.
- Only Big Five Personality factors were considered. Study of other personality variables like anxiety, locus of control, self-esteem, sense of security etc. could have further enriched.

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