



An Exploration of the Relationship between Anxiety and Big Five Personality Traits among Adolescents: A Correlational Study

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ABSTRACT:

The present research aims to investigate the relationship between anxiety and the big five personality traits among adolescents. The study utilized data collected through questionnaires administered to 109 adolescents, focusing on the Beck's Anxiety Inventory (BAI) and the Big Five Inventory-10. The objective was to understand the specific personality trait associated with anxiety and explore the overall correlation between anxiety and the big five factors of personality.

The results of the study revealed a significant positive correlation between anxiety and neuroticism, indicating that higher levels of neuroticism were associated with increased anxiety levels. Conversely, extraversion exhibited a negative correlation with anxiety, suggesting that individuals with higher extraversion tended to experience lower levels of anxiety. The other personality traits, namely openness, agreeableness, and conscientiousness, also demonstrated negative correlations with anxiety, albeit to a lesser extent.

Overall, this research provides valuable insights into the interplay between anxiety and personality traits, highlighting the significance of neuroticism and extraversion as potential predictors of anxiety. Understanding the relationship between anxiety and personality factors can aid in identifying vulnerable individuals and developing targeted interventions to manage anxiety effectively. However, further longitudinal research is warranted to delve deeper into the complex dynamics between anxiety and personality traits to inform more comprehensive psychological interventions.

1. Introduction

Human beings adapt the reaction of stress and anxiety with many interconnected mechanisms of social and psychological factors of life. Moreover, we all inherit various traits from our early life experiences, and cognitive predilections to act and react against the stressors of life. It has been found that resilience and vulnerability to stressors are greatly depending upon various individual personality traits (Lecic-Tosevskiet et al, 2011). In this regard, the big five-factor theory of personality is noteworthy to contemplate personality traits. D. W. Fiske (1949) first proposed the big five personality traits idea, which was then improved by other researchers such as Norman (1967), Smith (1967), Goldberg (1981), and McCrae & Costa (1987)(Oates, 2023). A lot of research has been done on the big five factors of personality to predict behavior with the help of five traits of personality. Henceforth an effort has

been done to identify the relationship between the big five factors of personality and anxiety.

The term anxiety is so loosely used that people use it synonymously for stress, tension, fear etc. We need to understand that stress is of two types, distress and eustress. Distress is a state or condition when one is very upset or suffering. On the other hand, eustress is positive stress, which is also called beneficial stress. It energizes and motivates one to bring about change. Tension is the feeling of being so nervous that one cannot relax. Fear is a realistic dread of something dangerous. With that, we come to understand the term anxiety and its interconnectedness to the other terms. Anxiety can sometimes be a normal reaction to stress.

It is said that how we think, feel, act and behave cumulates into a common set of characteristics which makes up our personality. The most famous theory of personality is understood by the acronym OCEAN



where O means one's openness to new experiences, willingness to newness and engagement in imaginative activities. C stands for conscientiousness which means how a person regulates their impulses. E refers to extraversion which explains assertiveness, talkativeness and high emotional expressiveness. Agreeableness is denoted by A which refers to people who are cooperative, show high interest in others in terms of helping nature. N denotes neuroticism which refers to people who have emotional instability, are easily anxious, get worried about things, and struggle to bounce back after stressful events. In order to study the relationship between anxiety and big five personality factors, this research has been conducted.

2. Review of Literature

In a study by Kaplan, et al., (2015) to understand social anxiety and big five personality traits using two undergraduate samples (N= 502; N= 698). The findings showed that social anxiety had weaker connections with agreeableness, openness, and trust, and that it positively interacted with neuroticism and negatively with extraversion. There was a significant interaction between trust and openness over and above gender in linear regression predicting social anxiety. In addition to supporting previous research on social anxiety and the Big Five, we found that openness is related to social anxiety for individuals low in trust. Our results suggest that high openness may protect against the higher social anxiety levels associated with low trust. Another research by Muris, Meesters and Asseldonk (2017) showed similar results. It was carried out to investigate the connections between teenagers without clinical anxiety disorders, self-conscious emotions, personality features, and symptoms of anxiety disorders. 118 teenagers between the ages of 12 and 15 made up the sample. The findings revealed a unique and positive correlation between self-conscious feeling and a wide spectrum of anxiety disorder symptoms, as well as a positive correlation between neuroticism and extraversion. Additionally, shame continuously remained a strong correlate of the symptoms of anxiety disorders even after adjusting for neuroticism and extraversion.

Adding to the concept, another research by Safranji and Zivlak (2019), which was to explore the effects of Big Five Personality Traits and Fear of Negative Evaluation on Foreign Language Anxiety showed similar trends. The sample consisted of 296 students. The findings indicate that, as determined by the scores on the subscales, high levels of general language anxiety and its types were consistently predicted by low levels of emotional stability. Also, students prone to fear of negative evaluation were more inclined to experience

foreign language anxiety. Since the correlation between Fear of negative evaluation and Fear of feedback by peers and teachers is only moderate, it can be concluded that foreign language anxiety is not only a consequence of the general fear of negative evaluation. High Conscientiousness proved to be a specific predictor of the high level of Communication apprehension. In a study by Babakhouya (2019) a comparative study that examined the relationship between the Big Five personality factors and English language speaking anxiety among Moroccans (N=270) and Koreans (N=257), who finished the English Language Speaking Anxiety Scale and the International Personality Item Pool Big Five Inventory. The findings show that only Openness and Neuroticism were significant predictors of speaking anxiety in English in the two nations, with Openness being the largest significant predictor in Morocco and Neuroticism in Korea. Implications suggest that determining a student's personality may help identify those who are more likely to suffer these worries. In a study by Almutairi, et al., (2020), one of the aims was to examine the relationship between level of anxiety and personality factors and another aim was to understand various types of oral parafunctional habits in the Saudi adult population, using a Pearson's Chi square and binary logistic regression. The results showed that participants who were extroverts were more likely to be associated with clenching (46.4%). The likelihood of nail biting (28.4%), grinding (24.9%), clenching (35.8%), and object/lip biting (48.4%) was much lower among emotionally stable individuals. The prevalence of temporomandibular joint dysfunction was substantially lower among participants who described being conscientious and emotionally stable.

In a study by Nikčević, et al., (2020), they tried to understand the vulnerability and protective factors in predicting anxiety during the COVID. The study included 502 participants who were United States residents. The results showed that extraversion, agreeableness, conscientiousness, and openness were negatively correlated with generalized anxiety and depressive symptoms and that neuroticism, health anxiety and both measures of COVID-19 psychological distress were positively correlated with generalized anxiety and depressive symptoms. In a study by Melody, Tatiana and Raquel (2021), they were trying to find the association between the Big Five Personality Traits and Anxiety. The study included 48 college students recruited through a psychology subject pool. The results showed that the correlation between anxiety and neuroticism was significant, conscientiousness, extraversion, agreeableness and anxiety was negative but openness and anxiety was positive. Social Isolation and aloofness were also found associated with anxiety in various other studies (Devanani et al, 2022; Vajpayee Devanani and Sanghani, 2023).



Rationale of the Research

The rationale of the study lies in the need to explore and understand the relationship between anxiety and the big five personality traits among adolescents. Anxiety is a prevalent mental health issue that can have significant impacts on the well-being and development of adolescents. It is crucial to identify factors that contribute to anxiety in this age group to develop effective interventions and support systems.

The big five personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) have been extensively studied and are known to play a crucial role in shaping individuals' behaviors, emotions, and coping mechanisms. Previous research has shown that certain personality traits are associated with higher or lower anxiety levels, making it essential to investigate how these traits specifically relate to anxiety in adolescents.

The present study aims to contribute to the existing body of literature by focusing on the adolescent population. Adolescence is a critical period characterized by significant physical, emotional, and cognitive changes. Understanding the interplay between anxiety and personality traits during this phase can offer valuable insights into potential risk factors or protective factors that influence anxiety levels and also found linked with attachment style (Patwari and Vajpayee, 2022).

The research also aims to identify the specific personality trait most strongly associated with anxiety in adolescents. This knowledge can be instrumental in early identification and intervention for vulnerable individuals, potentially preventing the escalation of anxiety-related issues.

Given the global prevalence of anxiety and its potential long-term effects on individuals' mental health, the research is timely and significant. By shedding light on the complex dynamics between anxiety and personality traits, this study may contribute to the development of more comprehensive and personalized psychological interventions to manage anxiety effectively among adolescents.

3. Methodology

Objective of the Research:

The main objective of this research is to explore the relationship between anxiety and the big five personality traits among adolescents. The study aims to investigate how these personality traits influence anxiety levels in the adolescent population. Specifically, the research seeks to achieve the following objectives:

- i. To examine the correlation between anxiety and each of the big five personality traits, namely neuroticism, extraversion, openness, agreeableness, and conscientiousness.
- ii. To identify the specific personality trait that is most strongly associated with anxiety in adolescents.
- iii. To provide valuable insights into the interplay between anxiety and personality factors, especially focusing on the significance of neuroticism and extraversion as potential predictors of anxiety.
- iv. To contribute to the existing body of literature on anxiety and personality traits, particularly in the context of adolescents, and offer a deeper understanding of the role of personality in shaping anxiety levels.
- v. To offer potential implications for identifying vulnerable individuals and developing targeted interventions to manage anxiety effectively among adolescents based on their personality profiles.

The research aims to enhance our understanding of the complex relationship between anxiety and personality traits and provide valuable insights for mental health professionals, educators, and policymakers in addressing anxiety-related concerns in adolescent populations.

Hypotheses of the Research:

- i. Null Hypothesis (H0): There is no significant correlation between anxiety and the big five personality traits among adolescents.
Alternative Hypothesis (H1): There is a significant correlation between anxiety and at least one of the big five personality traits among adolescents.
Specific Hypotheses for Individual Personality Traits:
 - ii. H0: There is no significant correlation between anxiety and neuroticism among adolescents.
H1: There is a significant positive correlation between anxiety and neuroticism among adolescents.
 - iii. H0: There is no significant correlation between anxiety and extraversion among adolescents.
H1: There is a significant negative correlation between anxiety and extraversion among adolescents.
 - iv. H0: There is no significant correlation between anxiety and openness among adolescents.
H1: There is a significant negative correlation between anxiety and openness among adolescents.
 - v. H0: There is no significant correlation between anxiety and agreeableness among adolescents.
H1: There is a significant negative correlation between anxiety and agreeableness among adolescents.
 - vi. H0: There is no significant correlation between anxiety and conscientiousness among adolescents.



H1: There is a significant negative correlation between anxiety and conscientiousness among adolescents.

Tools Used: Data was collected through two questionnaires

1. Beck's Anxiety Inventory (BAI) by AARON BECK in 1988
2. Big Five Inventory- 10 by Rammstedt and John in 2007

Procedure: For the aim of collecting data, the adolescents were connected through face to face or through telephone. The brief instruction and introduction was given to them. The data was collected through google form in order to save the paper. The form included four sections: volunteer to participate, personal

details, Big Five Inventory-10 and Beck's Anxiety Inventory. The consent for the participation was taken through the form. Participants were given the right to withdraw and were debriefed after they submitted the data. In total 122 questionnaires were received but some of them were rejected since they were incomplete or were not meeting the different criterias. Finally, 109 questionnaires were retained.

3. Analysis Of Result

Correlation between Openness and Beck's Anxiety Inventory score

See Table 1 for correlation scores between openness as a big five personality trait alongwith the score of beck's anxiety inventory.

Correlations Table 1

Pearson Correlation	Openness (Item no. 5+10)	Total BAI
Openness	1	-0.090
Total BAI	-0.090	1

The correlation value is -.090 which indicates that the correlation is negative. The p value is 0.352 and since it is greater than the level of significance which is 0.01, it means that the correlation is not statistically significant.

Correlation between Conscientiousness and Beck's Anxiety Inventory score.

See Table 2 for correlation scores between conscientiousness as a big five personality trait along with the score of Beck's anxiety inventory.

Correlations Table 2

Pearson Correlation	Conscientiousness (Item no. 3+8)	Total BAI
Conscientiousness	1	-0.065
Total BAI	-0.065	1

The correlation value is -.065 which indicates that the correlation is negative. The p value is 0.505 and since it is greater than the level of significance which is 0.01, it means that the correlation is not statistically significant.

Correlation between Extraversion and Beck's Anxiety Inventory score

See Table 3 for correlation scores between extraversion as a big five personality trait along with the score of Beck's anxiety inventory.

Correlations Table 3

Pearson Correlation	Extraversion (Item no. 1+6)	Total BAI
Extraversion	1	-0.079
Total BAI	-0.079	1



The correlation value is -.079 which indicates that the correlation is negative. The p value is 0.412 and since it is greater than the level of significance which is 0.01, it means that the correlation is not statistically significant.

Correlation between Agreeableness and Beck's Anxiety Inventory score

See Table 4 for correlation scores between agreeableness as a big five personality trait along with the score of Beck's anxiety inventory.

Correlations Table 4

Pearson Correlation	Agreeableness (Item no. 2+7)	Total BAI
Agreeableness	1	0.103
Total BAI	0.103	1

The correlation value is 0.103 which indicates that the correlation is positive and small, hence it could be a matter of chance. The p value is 0.287 and since it is greater than the level of significance which is 0.01, it means that the correlation is not statistically significant.

Correlation between Neuroticism and Beck's Anxiety Inventory score

See Table 5 for correlation scores between neuroticism as a big five personality trait along with the score of Beck's anxiety inventory.

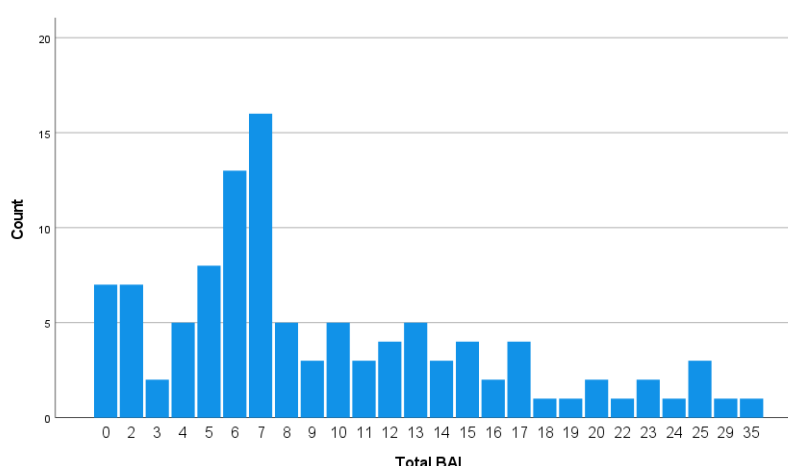
Correlations Table 5

Pearson Correlation	Neuroticism (Item no. 4+9)	Total BAI
Neuroticism	1	0.413**
Total BAI	0.413**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation value is 0.413 which indicates that the correlation is positive. The correlation is statistically significant at the level of significance which is 0.01. This indicates that there is enough evidence in our sample to establish a correlation between neuroticism and the score of Beck's anxiety inventory.

BAI



Findings of the Research

Based on the findings of the research, the study aimed to explore the relationship between anxiety and the big five personality traits among adolescents. The research utilized data collected from 109 adolescents through questionnaires that assessed anxiety levels using the

Beck's Anxiety Inventory (BAI) and measured their big five personality traits using the Big Five Inventory-10. The specific objectives and corresponding findings are as follows:



Objective i: To examine the correlation between anxiety and each of the big five personality traits.

The results showed that neuroticism, one of the big five personality traits, exhibited a significant positive correlation with anxiety. This finding indicates that higher levels of neuroticism were associated with increased anxiety levels among adolescents. On the other hand, extraversion, openness, agreeableness, and conscientiousness demonstrated negative correlations with anxiety, albeit to a lesser extent. This means that individuals with higher extraversion tended to experience lower levels of anxiety, and the other personality traits also showed a tendency toward reduced anxiety levels.

Objective ii: To identify the specific personality trait that is most strongly associated with anxiety in adolescents.

The analysis revealed that neuroticism was the most strongly associated personality trait with anxiety in adolescents. This finding highlights the significance of neuroticism as a potential predictor of anxiety in this age group.

Objective iii: To provide valuable insights into the interplay between anxiety and personality factors, especially focusing on the significance of neuroticism and extraversion as potential predictors of anxiety.

The research provided valuable insights into how specific personality traits, particularly neuroticism and extraversion, influence anxiety levels among adolescents. Neuroticism was positively linked to anxiety, suggesting that individuals with higher emotional instability and a tendency to worry are more likely to experience higher anxiety levels. Conversely, extraversion exhibited a negative correlation with anxiety, indicating that adolescents with higher assertiveness, talkativeness, and emotional expressiveness tend to experience lower levels of anxiety.

Objective iv: To contribute to the existing body of literature on anxiety and personality traits, particularly in the context of adolescents, and offer a deeper understanding of the role of personality in shaping anxiety levels.

The research adds to the existing body of literature on anxiety and personality traits by focusing specifically on the adolescent population. It provides empirical evidence supporting the relationship between specific personality traits and anxiety levels among adolescents, contributing to a deeper understanding of the role of personality in shaping anxiety.

Objective v: To offer potential implications for identifying vulnerable individuals and developing targeted interventions to manage anxiety effectively among adolescents based on their personality profiles.

The findings have potential implications for identifying vulnerable individuals who may be at higher risk of experiencing anxiety based on their personality traits, particularly high levels of neuroticism. Targeted interventions can be developed to support adolescents in managing anxiety effectively, taking into account their individual personality profiles.

The research demonstrates a significant positive correlation between anxiety and neuroticism, while extraversion exhibits a significant negative correlation with anxiety among adolescents. The other personality traits, namely openness, agreeableness, and conscientiousness, also demonstrated negative correlations with anxiety, although the correlations were not statistically significant at the chosen significance level.

The study provides valuable insights into the interplay between anxiety and personality traits in the context of adolescents, underscoring the importance of considering individual personality profiles when addressing anxiety-related concerns. However, it is essential to acknowledge the limitations of the study, such as the use of self-report questionnaires and the cross-sectional design. Future research with longitudinal designs and more diverse samples can provide a more comprehensive understanding of the complex dynamics between anxiety and personality traits among adolescents.

Further Prospects:

Cultural and Contextual Factors: This study focused on a specific group of adolescents; however, cultural and contextual factors can play a significant role in shaping anxiety and personality traits. Future research should consider including diverse cultural groups and varying contexts to examine how cultural norms, societal expectations, and environmental influences may interact with personality traits to impact anxiety levels in adolescents (Mishra and Vajpayee, 1996).

Mediation and Moderation Analysis: While this research identified correlations between anxiety and personality traits, further studies could delve deeper into the underlying mechanisms. Mediation analysis can explore whether certain personality traits mediate the relationship between specific stressors or life events and anxiety levels. Additionally, moderation analysis could investigate whether other factors, such as coping strategies or social support, moderate the relationship between personality traits and anxiety.

Intervention Studies: Building on the implications of this research, future studies can explore the effectiveness of targeted interventions based on individual personality profiles. Developing and



implementing interventions tailored to the specific personality traits of adolescents may lead to more effective anxiety management strategies (Vajpayee, 2017a; Vajpayee2017b). Comparative studies could also investigate the relative effectiveness of different intervention approaches for adolescents with varying personality profiles (Mishra and Vajpayee, 2000; Vajpayee and Mishra, 2003). There is further need to identify various kinds of intervention issues to address mental health issues.

Biological and Neurobiological Factors: While this research focused on the psychological aspects of anxiety and personality traits, future research could explore the potential role of biological and neurobiological factors. Understanding the interplay between genetics, brain structure, and personality traits in the context of anxiety could provide a more comprehensive understanding of anxiety etiology and inform personalized treatment approaches.

Resilience and Positive Psychology: In addition to exploring the factors associated with anxiety, future research could also investigate resilience and positive psychology aspects among adolescents. Identifying protective factors that contribute to lower anxiety levels and promote well-being could help in developing strengths-based interventions to enhance psychological resilience with the longevity of life (Vajpayee and Sanghani, 2022).

Multi-method Approaches: Combining self-report questionnaires with other methods, such as behavioral observations and physiological measures, can provide a more comprehensive assessment of anxiety and personality traits. Integrating multi-method approaches can help validate findings and provide a more holistic understanding of the relationship between anxiety and personality traits (Vajpayee, 2017a).

Researchers can deepen our understanding of the complex dynamics between anxiety and personality traits among adolescents and develop evidence-based strategies to support their mental health and well-being. Ultimately, this research can contribute to the development of more comprehensive and targeted interventions to address anxiety-related concerns in the adolescent population (Joshi, Vajpayee and Mishra, 2005; Vajpayee, 2017b).

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