

# How Do the Big Five Personality Traits Correlate with the Symptoms of Autism Spectrum Disorder (ASD)?

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## Abstract

Extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience are the Big Five personality qualities, sometimes called the Five-Factor Model. Studies on the relationship between these characteristics and Autism Spectrum Disorder (ASD) have shed important light on the behavioral phenotypes of people with ASD.

**Keywords:** ASD, personality, traits

## Big Five Traits and ASD: Correlations and Observations

Each of the Big Five personality traits was found to have a negative correlation with the characteristics of ASD, according to a meta-analysis of 14 research. Extraversion and conscientiousness showed the biggest negative relationships.

Adults with ASD were more neurotic and less extroverted, pleasant, conscientious, and receptive to experience than neurotypical controls, according to a study by Schriber et al.

The Big Five features were found to be responsible for 70% of the variance in autism trait scores in a different study by Schwartzman et al. While the other four traits showed negative connections, neuroticism exhibited a positive correlation with the severity of the autism symptoms.

## The Role of Personality in ASD Symptomatology

Numerous research studies have suggested different behavioral phenotypes within ASD based on the Big Five features, raising questions about the complicated role that personality plays in the symptomatology of ASD. For instance, Schwartzman et al.'s study identified four FFM subtypes among individuals with ASD, three of which were characterized by high neuroticism and none by neuroticism below the average.

Furthermore, research has indicated that the link between autism features and internalizing symptoms like anxiety and depression may be mediated by personality. For instance, Maddox and White's study revealed that characteristics like neuroticism may be linked to a greater incidence of social anxiety disorder in people with ASD.

## Specific Personality Trait Correlated with the ASD Symptom

Neuroticism, one of the Big Five personality qualities, has repeatedly been demonstrated to have the largest positive link with the severity of ASD symptoms. In other words, more severe ASD symptoms are linked to higher degrees of neuroticism. Many studies have supported this.

For instance, a study by Schwartzman et al. discovered a positive correlation between neuroticism and the severity of autistic symptoms. This study demonstrated that neuroticism significantly explained the variance in autism trait scores using the International Personality Item Pool Representation of the NEO-PI-R (IPIP-NEO-120), a measure of the Big Five personality traits.

Another study by Schriber et al., which also used the Big Five model of personality, found that individuals with ASD were more neurotic than neurotypical controls. This suggests that neuroticism is a common personality trait among individuals with ASD and potentially a risk factor for more severe ASD symptoms [ncbi.nlm.nih.gov](http://ncbi.nlm.nih.gov).

Kanai et al.'s research also showed that adults with ASD had significantly higher neuroticism scores than controls. Their study further demonstrated a significant correlation between the total score of the Autism Spectrum Quotient (AQ), a measure of ASD symptom severity, and neuroticism scores [ncbi.nlm.nih.gov](http://ncbi.nlm.nih.gov).

Contrarily, it has been discovered that the Big Five personality qualities of extraversion, openness to experience, agreeableness, and conscientiousness are adversely associated with the severity of ASD symptoms. This indicates that more severe ASD symptoms are linked to lower levels of these features.

## Discussion

Although there is no clear explanation for the relationship

between neuroticism and the severity of the symptoms of Autism Spectrum Disorder (ASD), various possibilities have been put up.

According to one of these theories, neuroticism, which is characterized by emotional instability, anxiety, moodiness, and a propensity for negative emotions, may make it even harder for people with ASD to comprehend and control their emotions. This can potentially make the symptoms of ASD more severe.

According to another view, people with ASD may exhibit higher degrees of neuroticism as a result of the ongoing stress they endure while attempting to make sense of a frequently confusing and overwhelming reality. This ongoing stress may be a factor in the emergence of more severe ASD symptoms.

On the other hand, extraversion, openness to new experiences, agreeableness, and conscientiousness, the other four characteristics of the Big Five personality model, have been demonstrated to correlate negatively with ASD symptoms. The possible explanation for the phenomenon might be the behavioral symptoms shown with the diagnosis of ASD, like their preference for predictable and structured environments, difficulties with adapting to unfamiliar situations, challenges in social interactions and appropriate understanding of social cues, and a tendency to be less goal-oriented.

However, not every person with ASD exhibits the same association between the Big Five personality traits and the symptoms of ASD. Individuals can differ significantly from one another, so it's crucial to take into account the diversity of the ASD population.

Each person with ASD has distinctive abilities, difficulties, and traits. While some people with ASD might show the anticipated relationships between the Big Five qualities and ASD symptoms, other people with ASD might not follow similar trends. The way the Big Five qualities relate to ASD symptoms individually depends on how the ASD symptoms manifest and how severe they are.

## Conclusion

The Big Five personality traits and ASD are found to be significantly correlated, with neuroticism positively correlated with the severity of ASD symptoms and the other four traits negatively correlated with it. The association between internalizing symptoms and ASD features may be mediated by personality. To completely

understand the intricate relationships between personality traits and the symptoms of ASD, more study is necessary. Future studies could concentrate on figuring out how personality qualities affect the symptoms of ASD, developing more complex ASD subtypes based on personality, and analyzing how these subtypes might affect treatment and intervention approaches. Further research into the role of personality in modulating the link between ASD features and internalizing symptoms would also be advantageous because it may have a substantial impact on how ASD patients are treated for co-occurring mental health issues.

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