




## **AUTISM SPECTRUM DISORDER (ASD) AND PERSONALITY DISORDERS: DIFFERENTIAL DIAGNOSIS**

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### **ABSTRACT**

Autism Spectrum Disorder (ASD) comprises a set of neurodevelopmental disorders. Individuals with ASD present dysfunctions in social communication, as well as repetitive and specific practices, inclinations, and behaviors. However, these comorbid disorders often have atypical presentations, thus making it difficult to identify concomitant conditions. About adults, personality disorders (PDs) are among the main disorders coexisting with autism; the literature indicates that, in one study, 24% of autistic individuals have PDs as a comorbidity. PDs also affect human relationships, social interaction, and the functioning of the individual, as they are characterized by a pattern of behavior that deviates from common norms. However, they generally begin in adolescence or early adulthood. In the same way that autism is considered a spectrum, PDs also fit into the term, as they present difficulties that vary in intensity and are long-lasting. Understanding how ASD and personality disorders are interconnected can lead to more effective interventions, providing better support and quality of life for those affected. General Objective: To understand the differential diagnosis between Autism Spectrum Disorder (ASD) and Personality Disorders.

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Specific Objectives: To differentiate ASD and Personality Disorders; To know the prevalence of ASD and Personality Disorders; To show through the literature the concomitant occurrence of ASD and Personality Disorders. This study consists of an integrative bibliographic review through a search for scientific articles, carried out from the indexing databases of the National Library of Medicine of the United States of America (MEDLINE/PubMed) and the Virtual Health Library (VHL). In addition, the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-V) was also used.

**Keywords:** Autism Spectrum Disorder. Personality Disorders. Differential Diagnosis.

## INTRODUCTION

Autism Spectrum Disorder (ASD), according to the Diagnostic and Statistical Manual of Mental Disorders - 5th edition (DSM-5), comprises a set of conditions that affect neurodevelopment; that is, the initial manifestations usually occur in early childhood since this phase coincides with the initial period of development. Therefore, individuals with this disorder present a persistent substantial impairment in reciprocal social communication and social interaction (criterion A), as well as restricted and repetitive patterns of behavior, interests, or activities (criterion B). These symptoms are present from early childhood and promote limitations or impairments in daily functioning.

It is estimated that ASD affects approximately 1% of the population worldwide, prevailing among males, in a ratio of 4:2 (Weiner et al., 2023). Regarding its etiology, it is a genetic condition associated with environmental risk factors, such as intrauterine exposure to toxins and advanced maternal age (Dell'Osso et al., 2019).

Thus, it is observed that children with autism demonstrate greater exposure to pre- and postnatal factors compared to those without ASD; thus, there is an association of these exposures with pleiotropy - a manifestation in which a gene is responsible for the occurrence of several human traits -, as well as an increase in the number of certain comorbid conditions in these individuals (Khachadourian et al., 2023).

In addition to social and communication impairment, autistic people are also more likely to have comorbidities in several systems of the body (Khachadourian et al., 2023). Thus, other psychiatric disorders are prevalent together with ASD, with personality disorders (PDs) being one of the most common, and distinguishing between these conditions can be challenging.

About PDs, are recognized for presenting a continuous prototype of intrinsic experience and social behaviors that deviate from the standard expected by society, and cannot be explained by another mental health disorder. Like ASD, personality disorders constitute a set of ego-syntonic spectrum, that is, the behaviors of individuals with these pathologies are directly based on their self-image (Gillet et al., 2023).

The data presented reinforces the importance of the topic since the differential diagnosis between Autism Spectrum Disorder and personality disorders still lacks studies that clarify this relationship. While there is a significant amount of research focused separately on ASD and personality disorders, the scarcity of studies correlating these two areas makes it impossible to acquire a comprehensive and in-depth view of the interactions between these conditions. Therefore, understanding how ASD and personality disorders are interconnected can lead to more effective and resolvable interventions, which provide better

support and quality of life for affected individuals. In addition, more complex knowledge in this area can contribute to reducing stigma and discrimination, situations commonly faced by those who experience these illnesses daily, including those with the disorders themselves, as well as their caregivers, family members, and support networks.

## METHODOLOGY

This study consists of an integrative bibliographic review through a search for scientific articles, carried out by consulting the indexing databases of the National Library of Medicine of the United States of America (MEDLINE/PubMed) and the Virtual Health Library (VHL). In addition, the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V) was also used.

In the first stage, combining Health Sciences Descriptors (DeCS), linked using the Boolean operator AND, "Autism Spectrum Disorder" and "Personality Disorders", a total of 1,018 articles were obtained in PubMed. Based on this result, the following inclusion criteria were adopted: free full texts, a 5-year timeline, and research carried out on humans, totaling 78 articles. Based on the exclusion criteria, which were titles misaligned with the proposed thematic axis and duplicate studies, 10 articles were finalized. In the VHL, "Autistic Disorder" and "Differential Diagnosis" were used, totaling 918 articles. After applying the criteria, 29 remained, and, through reading the titles, 2 articles remained for use in the study. Additionally, a new combination of descriptors was used, "Autistic Disorder" and "Comorbidity", in which 185 articles were found in PubMed and 252 in the VHL; through the inclusion criteria, 106 and 32 articles were totaled and, finally, from the reading of the titles that did not correspond to the objectives of this research, it ended up with 5 and 8 articles, respectively.

## RESULTS

Studies show that, of adolescents with ASD, approximately 70% have psychiatric conditions identified in the DSM-5. It has been recognized that females exhibit higher rates of emotional disorders and Attention Deficit Hyperactivity Disorder (ADHD) related to ASD; on the other hand, they have lower rates of behavioral disorders (Hollocks et al., 2022).

A sample conducted in the United States with 4,657 autistic participants showed that almost half of them (47.45%) had a late diagnosis of ASD, starting at age 21. Thus, 86.8% of the individuals had at least one comorbid mental disorder, a circumstance more frequent in patients diagnosed late and in females. The delay in identifying autism also corroborated the occurrence of other pathological contexts, such as language disorders, learning

problems, and developmental delays. Furthermore, personality disorders were more prevalent in adults over 60 years of age (24.7%) (Jadav; Bal, 2022).

A sample that gathered 40,582 individuals with ASD and 11,389 of their siblings without ASD revealed the prevalence of the disorder in males, as attested by the literature on the subject, with 79% of ASD carriers in the sample being men. Furthermore, individuals with autism express a higher rate of comorbidities, especially psychiatric ones, which negatively influence the quality of life, in addition to representing a sign of greater severity (Kachadourian et al., 2023).

Among the personality disorders that may coincide or be difficult to distinguish from autism, schizotypal personality disorder consists of a comorbidity that demonstrates high phenotypic overlap and is present in many adults diagnosed with ASD (Klang et al., 2022).

A study involving 117 patients diagnosed with ASD revealed that 62% of them met the criteria for at least one personality disorder (PD). Obsessive-compulsive (32%), avoidant (25%), and schizoid (21%) disorders were the most common. A considerable number of patients (35%) presented more than two PDs. The prevalence of PD did not vary significantly between sexes, except in the case of schizoid disorder, which was more prevalent among women (Hofvander et al., 2009, apud Rinaldi, 2021).

## DISCUSSION

### AUTISM SPECTRUM DISORDER

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social communication and repetitive and restricted behaviors that emerge in childhood (before age 3) (Allely; Woodhouse; Mukherjee, 2023). The etiology of ASD has not yet been fully elucidated, but there are genetic and environmental factors involved (Gillet et al., 2023).

Over the years, the increase in the prevalence of ASD has been notable; according to Khachadourian (2023), the diagnosis of ASD has practically tripled in the USA in the last two decades. Therefore, the signs of ASD must be perceived, since changes in the diagnostic and monitoring system for individuals with ASD are essential, to include them equally in society, since autism includes rigidity and difficulties in learning and altering automatic processes (Kaltenegger; Philips, Wennberg, 2019).

Regarding the diagnosis of ASD, it is appropriate that it be made as early as possible, so that therapy can begin in early childhood, minimizing future damage and even the presence of other concomitant psychiatric disorders, given that external variants also strongly influence the occurrence of these diseases (Jaday; Bal, 2022). Therefore, a

neuropsychological analysis of individuals suspected of having autism should be included, which can be performed using standardized observation tools, such as the Childhood Autism Rating Scale (CARS), to ensure the correct diagnosis and measure the severity of the disorder (Braconnier; Siper, 2021). Furthermore, according to the DSM-V, other specifiers of ASD severity are also included, with characterization in three degrees, with level one being milder, requiring support; the second level requiring considerable support; and the third requiring very substantial support. However, diagnosing ASD in adulthood is challenging because many individuals present with masked behaviors that may or may not be associated with other health conditions (Gillet et al., 2023). The first question for clinicians when assessing personality in adults with ASD is to determine whether personality traits are part of the same autistic phenomenology or represent different categorical factors (comorbidity). Results from studies focusing on PD comorbidity have suggested that approximately 50% of individuals with ASD meet diagnostic criteria for at least a PD (Rinaldi et al., 2021).

## PSYCHIATRIC COMORBIDITIES INVOLVED

In addition to social impairment and verbal and nonverbal language, ASD is often associated with high rates of psychiatric comorbidities; approximately 70% of individuals with autism have at least one additional psychiatric diagnosis (Hollocks et al., 2022). Given this, these comorbidities are developed by a variety of factors, such as differences between the sexes and the variation in the age at which the diagnosis of autism is made (Rodgaard et al., 2021).

However, these comorbid disorders often have atypical presentations, thus making it difficult to identify concomitant conditions (Khachadourian et al., 2023). The most common psychiatric comorbidities associated with ASD include attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), and mood disorders. However, in adults, personality disorders (PDs) are among the main disorders coexisting with autism; the literature indicates that, in one study, 24% of autistic individuals had PDs as a comorbidity (Rinaldi et al., 2021).

Furthermore, studies indicate that as the diagnosis of ASD is delayed, especially from the age of 11 and in adulthood, the rates of concomitant psychiatric conditions become higher, including personality disorders. In this context, it is perceived that the late detection of autism also contributes to a greater number of misdiagnoses due to the overlap or co-occurrence of clinical manifestations (Jadav; Bal, 2022).

## AUTISM SPECTRUM DISORDER AND PERSONALITY DISORDERS

Personality is strongly correlated with psychiatric symptoms and diagnoses, as it represents an individual level of behavior, identification of emotions, and cognitive processing (Grella et al., 2022). As for PDs, they also affect human relationships, social interaction, and the functionality of the individual, as they are characterized by a pattern of behavior that deviates from common norms. However, they generally begin in adolescence or early adulthood. In the same way that autism is considered a spectrum, PDs also fit into the term, as they present difficulties that vary in intensity and are long-lasting (Gillet et al., 2023).

As with autism, some personality disorders, especially when severe, present alterations in metacognitive skills, such as dysfunctions in emotional regulation (Vegni; D'Ardia; Torregiani, 2021). Although the direct association between ASD and PDs has not yet been fully elucidated, research shows that autistic individuals meet diagnostic criteria for at least one type of PD according to the DSM-V (Allely; Woodhouse; Mukherjee, 2023). Some of the personality disorders most correlated with autism are borderline personality disorders (BPD), schizotypal, and obsessive-compulsive disorders, which can coexist with ASD and be a differential diagnosis (Gillet et al., 2023).

The juxtaposition of symptoms between ASD and PDs is most noticeable in the sphere of communication and social interaction (Allely; Woodhouse; Mukherjee, 2023). In this regard, the similarity between the clinical manifestations of PDs is vast, considering strange behaviors (schizotypal disorder), social withdrawal (schizoid disorder), emotional imbalance (borderline), decreased empathy (antisocial disorder) and social avoidance (avoidant disorder) (Fusar-Poli et al., 2022 apud Poli, 2022).

In turn, Gillet et al (2023) showed that the coexistence between ASD and PDs may be related to genetic, environmental, and psychological factors, just as the late diagnosis of ASD may preordain the development of a personality disorder.

Individuals with undiagnosed autism in childhood may face stress when trying to adapt to their environment, which can influence the formation of their personality, even triggering the development of a personality disorder. However, the various neuropsychiatric dysfunctions associated with autism allow for a wide variation in personality. Personality has been seen as a mediator between autistic symptoms and emotional well-being and has been explored for a more complete understanding of adults with autism and the development of specific interventions (Rinaldi, et al., 2021).



## IMPASSES FOUND IN THE DIFFERENTIAL DIAGNOSIS BETWEEN AUTISM SPECTRUM DISORDER AND PERSONALITY DISORDERS

The lifetime prevalence pattern between ASD and PDs is antagonistic, since PDs are uncommon in childhood, while ASD is more frequent in childhood (Cook; Zhang; Constantino, 2020). However, in certain situations, there are confounding factors between the conditions that lead to misdiagnoses.

Although PDs and ASD may present in different ways, there may be overlapping characteristics, thus making correct diagnosis difficult. That said, clinical analyses demonstrate that there are similarities between ASD and BPD, such as impairments in social functioning, difficulty in communication, and complicated relationships (Dell'osso et al., 2018). In addition, ASD and schizotypal personality disorder can also be difficult to differentiate, as both compromise the quality of life of individuals, due to deficits in social interactions (Klang, A. et al., 2022) (Parvaiz, R. et al., 2020); it is mentioned that there are 4 domains of confusion between the autistic and schizotypal spectrum, which are: unusual behavior, apathy, impairment in interpretation and difficulty in communication (Ford, T. C. et al., 2018) (Cook; Zhang; Constantino, 2020). Due to the scarcity of research, the relationship between ASD and PDs is currently still limited (Grella, O. N. et al., 2022). However, it is known that the sum of the characteristics of autism and BPD intensifies suffering, increasing the chances of self-harm and suicide (Chenney, L. et al., 2023). Furthermore, autism in females is often misdiagnosed as BPD, because ASD may be underdiagnosed in girls since the clinical course is usually milder; thus, the damage may only manifest in adolescence, when the personality disorder may be wrongly identified (Watts, J, 2023). Another point that makes differential diagnosis or the diagnosis of comorbidities difficult is the subclinical traits of the disorders, in other words, they are characteristics that do not manifest significantly, despite the individual having the disease (Nenadic, I. et al., 2021) (Ziermans, T. B. et al., 2021). That said, these impasses are unfavorable conditions for treatment since patients require individualized care (Kaltenegger; Philips, Wennberg, 2019). In addition, the diagnosis of autism in adult patients suffers from neglect, especially in patients with psychiatric comorbidities (Allely; Woodhouse; Murkherjee, 2023). On the other hand, although certain restricted and repetitive patterns are found in ASD and specific PDs, such as Obsessive Compulsive Disorder, it is important to recognize that these characteristics do not constitute the primary aspect of other PDs, which may contribute to their differentiation in some nuances. Furthermore, in clinical evaluation, instruments can be used to help identify the profile of each individual, such as the International Personality Disorder Examination (IPDE), Autism Diagnostic Interview-



Revised (ADI-R), and Autism Diagnostic Observation Schedule (ADOS-2) (Allely; Woodhouse; Murkherjee, 2023).

Thus, diagnostic doubts may arise and even lead to incorrect diagnoses, since both autism and PDs demonstrate alterations in similar domains, especially in communication and social interaction (Allely; Woodhouse; Mukherjee, 2023). Therefore, in cases where ASD is not identified in childhood, this diagnosis may be missed, as it becomes more difficult to recognize in adulthood. This occurs because these adults usually develop means of adaptation, causing the main characteristics of autism to become masked and possibly confused with personality disorders, for example. Furthermore, information about neurodevelopment is often inaccurate, due to the long period that has passed, in addition to the possibility that caregivers who accompanied this phase are not present (Fusar-Poli et al., 2022).

## CONCLUSION

Based on the data obtained, it is clear that the differential diagnosis between ASD and PDs sometimes presents overlapping nuances, which creates difficulties in the recognition and treatment of both pathologies. Furthermore, as explained above, several studies demonstrate the concomitant occurrence of these disorders and other psychiatric comorbidities, drawing even more attention to the possibility of incorrect and delayed diagnoses.

However, there are characteristic aspects that allow for certain degrees of differentiation between the disorders mentioned, with the DSM-V being an extremely important tool for this. Thus, while personality disorders manifest themselves mainly in adolescence and/or early adulthood, individuals with autism express their particularities earlier, generally from early childhood. Therefore, it is essential to conduct more studies and research on the subject, given its global importance, due to the high prevalence of these psychiatric disorders, which cause harm to the lives of patients, especially if not diagnosed and treated correctly.

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