

Autism Spectrum Disorder and Oppositional Defiant Disorder: Difficulties in Diagnosis

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ABSTRACT

Introduction: Autism Spectrum Disorder (ASD) and Oppositional Defiant Disorder (ODD) are disorders commonly diagnosed in individuals still in childhood.

Objective: To identify possible factors that may hinder the differential diagnosis of ASD and ODD.

Methodology: An integrative literature review was conducted, which selected articles in the VHL, CAPES and PEPsic databases between September and October 2021. For this, the keywords Autism Spectrum Disorder, autism, Oppositional Defiant Disorder, Oppositional Defiant Disorder, diagnosis, comorbidities, disruptive behaviors and diagnostic difficulties were used.

Results: Eight articles were selected for data extraction. The correct diagnosis of ASD and ODD can be challenging due to the overlap of symptoms with other disorders and comorbidities, as well as the diversity present in the autistic spectrum and the variety of manifestations of disruptive disorders. In addition, most studies highlight the impairments in the area of communication, the impairment in the social area and the degrees of severity, as being similar characteristics between the two disorders, which may be possible factors that may hinder the diagnosis of ASD and ODD, in a differential or concomitant way.

Conclusions: The number of studies related to the disorders mentioned above is lower than what is necessary for better knowledge on the subject. With regard to the research of scientific materials, difficulties were found to obtain studies that were in accordance with our research. Thus, more research is needed to investigate and understand why there is a shortage of material that studies ASD and ODD concomitantly.

Keywords: Autism Spectrum Disorder; Autism; Oppositional Defiant Disorder; Diagnosis

Abbreviations: ASD: Autism Spectrum Disorder; ODD: Oppositional Defiant Disorder; VHL: Virtual Health Library; PEPsic: Electronic Journals in Psychology; CAPES: Coordination for the Improvement of Higher Education Persons; DSM: Diagnostic and Statistical Manual; ADHD: Attention Deficit/Hyperactivity Disorder; CT: Conduct Disorder

Introduction

The field of mental health is extensive with regard to its history and studies that seek to know, evaluate and explain disorders, syndromes, psychological processes and mental states, thus contributing to the advancement of scientific and empirical knowledge. The DSM-5

(Diagnostic and Statistical Manual of Mental Disorders), currently, is the main means used to define the criteria for diagnosis of disorders, having several groups of classifications and specificity of each [1]. Among the classification groups present in the DSM-5, there are Neurodevelopmental Disorders that have specific conditions

for diagnosis, determined by their developmental deficits, which are diversified between specific limitations and global damage in sociability or intelligence. Autism Spectrum Disorder (ASD) is within this class, containing as criteria for diagnosis restricted and repetitive patterns of behavior and persistent impairments in communication and social interaction, which may or may not be related to one or more diagnoses [2].

In the year 1911 the term «autism» was first used by a psychiatrist named Eugene Bleuler. Its use was to refer to children who apparently lost touch with reality and who also had problems communicating verbally and non-verbally. In 1943, Leo Kanner, a psychoanalyst, described autism as an Autistic Affective Contact Disorder. His research focused on observing 11 children who had loneliness, obsessive anxiety, echolalias and inflexibility in changing routines. The same psychoanalyst believed that autism preceded schizophrenia, which is now known not to be true (although it may exist as a comorbidity). Since then, there have been changes in its nomenclature and diagnostic criteria [3]. According to Godim and Sobral [4], the signs of ASD can be observed even before 3 years of age, with a prevalence four times higher in boys than in girls, and may or may not have some associated comorbidity, affecting on average 1 in 59 children.

Similar symptoms of ASD can often be found in other disorders, including Oppositional Defiant Disorder (ODD), included in the group of disruptive, impulse control, and conduct disorders. According to Caponi [5], this is characterized by an irritable mood, argumentative and challenging behavior, aggressiveness and vindictive nature, presented in the last 6 months. Some people on the autism spectrum may exhibit similar behaviors. As described in the APA [2], the prevalence of ODD ranges from 1 to 11% of the population (with no concrete data on the predominance in Brazil), occurring in course and variable evolution, being, it seems, more frequent in male children, before adolescence. Other factors influencing the prevalence are the age and gender of the child.

Barletta [6] states that disruptive disorders (including DOT) can be difficult to diagnose and treat in view of the fact that children and adolescents, in their typical development, present a range of behaviors, including challenging ones. The differential diagnosis of ODD occurs from the existence of symptoms with frequency and repetition higher than the standard of normality for the age group, cultural and gender issues of the individual, being issued with at least one person who is not his brother. Although the criteria established in the Diagnostic and Statistical Manual of Mental Disorders of both ASD and ODD have undergone changes over the years, it is worth considering the extent to which they are valid or sufficient. This questioning is based on several diagnoses that were granted to children and/or adolescents who presented some type of disruptive behavior during their development and that, over the years, it was observed that that diagnosis was not the most appropriate/correct for that situation [1].

With the significant increase in ASD diagnoses and earlier and earlier, other diagnoses may occur concomitantly or later. Despite this, it is observed in the literature some comorbidities that are more studied in ASD and DOT, while others are little cited. As for ASD, Intellectual Disability is the most commented, followed by language disorders, while in relation to Oppositional Defiant Disorder the greatest link is with Deficit and/or Hyperactivity Disorder and with Conduct Disorder because it is a disorder that precedes, in many cases, DOT.

Therefore, the present study aimed to identify possible factors that may hinder the differential diagnosis of Autism Spectrum Disorder and Oppositional Defiant Disorder.

Methodology

This is an integrative literature review, in which a broad methodological approach is considered to include experimental and non-experimental studies with the objective of fully understanding the phenomenon under analysis. Through the definition of concepts, theoretical reviews and methodological problems is that the goal can be achieved. The six stages of the elaboration of the integrative review are: elaboration of the guiding question, search or sampling in the literature, data collection, critical analysis of the included studies, discussion of the results and presentation of the integrative review [7].

The selection of articles was made between the months of September and October 2021, through the analysis of titles and abstracts of complete works collected from publications of reference authors in the area, in the databases Virtual Health Library (VHL), Electronic Journals in Psychology (PEPSIC) and Journal of the Coordination for the Improvement of Higher Education Persons (CAPES). The following descriptors were used in combination and individually: Autism Spectrum Disorder, autism, Oppositional Defiant Disorder, Oppositional Defiant Disorder, diagnosis, comorbidities, disruptive behaviors and diagnostic difficulties.

The inclusion criteria of the bibliographic references used were works published between the years 2011 to 2020, which provide the complete work on the internet or available by the original source, written in Portuguese and English. The works are of primary research or literature review in structure of scientific articles. There was the exclusion of works in book format, undergraduate, graduate, master's or doctoral theses, abstracts of events without complete work available and materials with paid access. After the selection of the articles, the materials were read and the main information compiled from the texts were recorded, being the authors, the year of publication, the objective, the methods and the results. From this, there was an integrative analysis of the works, seeking, with this, to clearly fix an understanding and greater knowledge about the content investigated in which they are highlighted in the field of Results of the present study.

Findings

Using the indicators described above, 818 bibliographic references were found in the database of the Virtual Health Library, 4,445 in the virtual library of the Journal of the Coordination for the Improvement of Higher Education Persons and 1 article in the database of the Electronic Journals of Psychology, totaling 5,264 studies.

In the database of the Virtual Health Library (VHL) the following combinations were used: «Neurodevelopmental Disorder and Conduct Disorder» which found 86 studies, but with careful reading of the titles and abstracts it was identified that none of the studies met the investigative question; «Autism Spectrum Disorder and comorbidity» that found only 4 articles, discarded after reading titles because they addressed issues far from the objective in question.

Also in this same database, the descriptors «oppositional defiant disorder and comorbidity» were used, which resulted in 1 article also later discarded because it was a thesis; «oppositional defiant disorder» that resulted in 22 articles being discarded after reading titles, for addressing subjects other than the objectives; «Autism Spectrum Disorder and Disruptive Behavior» found 426 articles, but only 56 articles remained after selecting the filters. Finally, 3 of these were used. No studies were found based on the descriptors «Autism and Oppositional Defiant Disorder» and, «Autism Spectrum Disorder and Oppositional Defiant Disorder»; the combination of the descriptors «Autism Spectrum Disorder and Conduct Disorder» selected 279 articles, after the filters 37 articles remained and after reading the titles all were discarded for not meeting the investigative question or for being paid articles.

The research was also carried out in the Capes Periodicals database. The combination «Autism Spectrum Disorder and Disruptive Behavior» found 4,455 studies and of these, 5 articles were selected for the present study; «Neurodevelopmental disorder and conduct disorder» obtained 84 articles, but the titles did not meet the objective; «Autism Spectrum Disorder and Comorbidity» selected 4 studies, but it was not the objective of the research; «oppositional defiant disorder» did not result in any article less than ten years in the making; Also in the CAPES Journal, the descriptors «autism and oppositional defiant disorder» were also used, resulting in 3 articles after the selection of the filters, and 0 articles after reading the themes; «Autism Spectrum Disorder and Conduct Disorder» found 6 articles after the filters, but the discursions were not related to the question in question and «Oppositional and Defiant Disorder and comorbidity» which found no study.

The same descriptors mentioned above were used for the searches carried out in the PESIC database. From this was found only 1 study, but it was discarded after reading the title: this addressed the theme autism in a subject distant from the objective of the work. In general, the articles had themes that diverged from what was being researched. The themes most present during the data screening were linked to school difficulties, family issues and other areas that were not related to Psychology. These were discarded because they did not provide relevant data for this study. Thus, (Figure 1) summarizes information regarding the selection path of these references. The table below shows the scientific studies used as a basis in the construction of this research. The information present in this is composed of author, year of publication, objectives, methods and results (Table 1).

Table 1: Identification of the articles found in the search.

Authors/year	Goals	Methods	Findings
GODIM, SOBRAL [4]	Understand the process of in/exclusion of students with ASD / DOT in the school environment.	Systematic review of the literature.	It was verified the scarcity of literary material. It was found that throughout the research process the in/exclusion dichotomy was prominent regarding the emergence of public policies, the process of school inclusion, the work of the teacher, and the conceptions about the individual with ASD/TOD.
BORGES, MOREIRA [3]	Review the most relevant information of the last decades regarding Autism Spectrum Disorder, building scientific foundations for Gilberg's Autism Plus.	Systematic review of the literature.	Over the years the criteria for autism and its classification have changed. Among the findings, determinant environmental factors, several psychiatric and genetic conditions in comorbidity were discovered.
MILK, FIELDS [11]	To make a survey of the Brazilian literature on Oppositional Defiant Disorder.	Systematic review of the literature.	ODD was only found as an association with other pathologies. Aspects Social such as environmental factors, family and school problems influence DOT, being (or not) comorbid to other disorders.
FIGUEIREDO, [1]	Discuss the use of diagnostic criteria for Oppositional Defiant Disorder in the light of behaviorist theory	Systematic literature review and critical analysis of a case study.	The Manuals Diagnostics used by therapists as Strategy can have impacts Positive in evaluation in programming and the effectiveness of treatment the inside Of principles Of Analysis of Behaviour.
GILLBERG, Fernell [9]	Investigate or why of increase in rate from diagnostics of TEA and if the incidence has was higher with or without comorbidities.	Review of literature systematics.	One of the main factors for the increas meaningful of ASD diagnosis, is on To diagnosi from "features Autistic.com comorbidities" how Being "Disorder of the Autism Spectrum."
ALMEIDA [12]	Develop one analysis funcional from one child with signs of Oppositional Defiant Disorder (ODD).	Case study.	It was observed the absence of research on the topic of DOT, especially when associated with functional analysis.

LINS [10]	To analyze which factors have been researched and associated with externalizing problems and child aggressiveness in Brazilian empirical studies.	Systematic review of the literature.	In summary, this study demonstrates that the main factors researched regarding externalizing problems/aggressiveness are related to aspects of parental education and characteristics of childhood.
BARLETTA [6]	Reflect on the aspects considered necessary and important to the Service psychotherapy in the disorders Disruptive	Systematic review of the literature.	In the follow-up performed for disruptive disorders there is a vast field of possibilities, and there is no closed protocol. Therapists sometimes choose the most cognitive work, and sometimes choose to behavioral techniques.

Note: Source: Self-Authored.

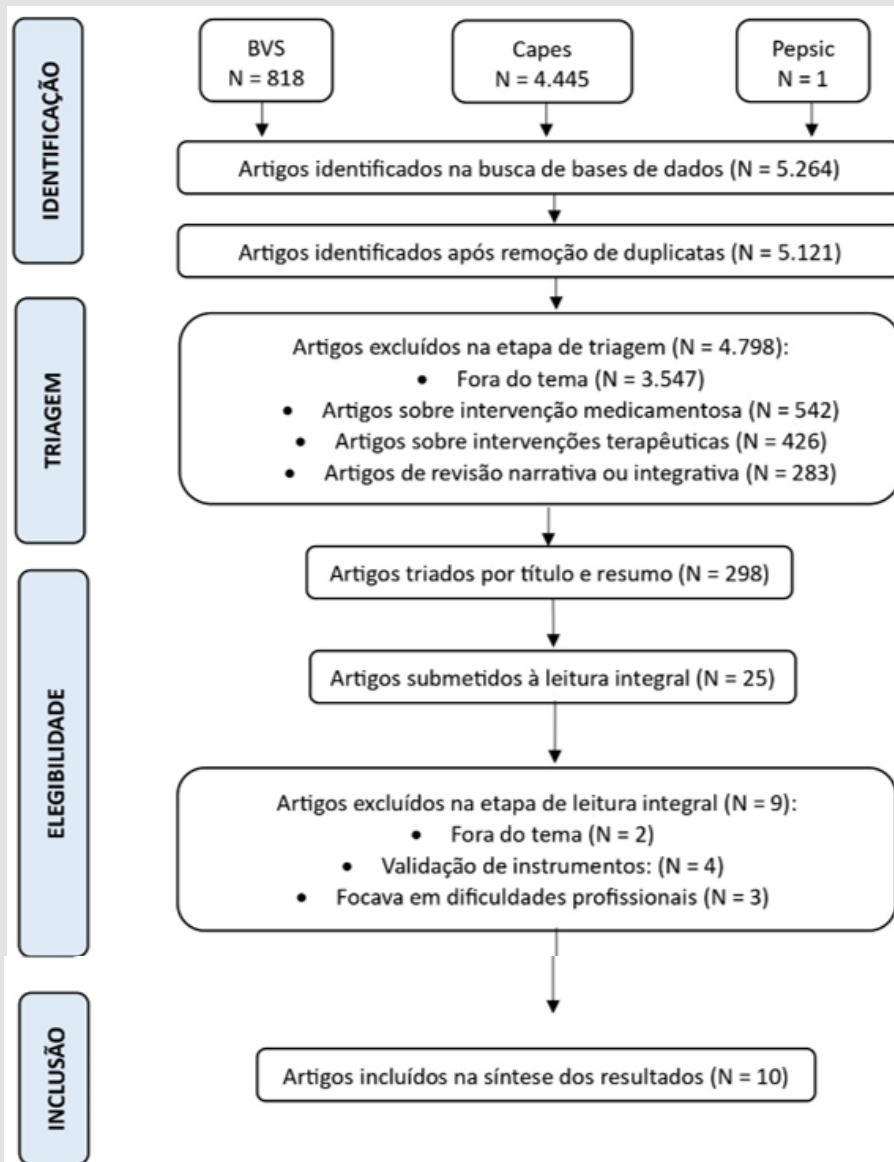


Figure 1: Flowchart referring to the selection path of the articles.

Discussion

Autism Spectrum Disorder

Currently, the characteristics of Autism Spectrum Disorder can be identified as early as the first months of the child's life, although its closed diagnosis will only happen, usually, when it turns 2 or 3 years old. Difficulties in social interaction, communication or restricted and repetitive behaviors are characteristics of ASD that makes up the group of criteria for diagnosis and that can be observed by parents in the early months of the child's life, which until the revision of the last Diagnostic and Statistical Manual of Mental Disorders (DSM-5) was difficult to identify because there are several other disorders with similar characteristics [3]. In view of this, Godim and Sobral [4] present an American data survey showing that 1 in 59 children has the diagnosis of ASD, covering all social, economic, racial, educational and cultural groups. The authors report that the existing difference consists in the conditions of access that families have in health systems and support networks. The earlier the reach to these systems, the more favored is the development of the differentiated diagnosis and, consequently, the necessary interventions to stimulate the child in the face of their deficits.

To perform these interventions, it is necessary to understand that ASD, as Onzi and Gomes [8] describe, has three subcategories that take into account the degree of existing impairment. Level one, the subject needs some kind of support; level two, considerable support; Level three, requires a lot of support from the family, caregivers and treatment team. Because it is a disorder that still brings with it particularities and that does not have a standardization in its behavioral expressions and cognitive deficits (that is, each spectrum is a spectrum), research on this topic is not interested in seeking a cure, but rather in knowing better to overcome the difficulties of diagnosis. In addition, Borges and Moreira [3] say that ASD can be divided into idiopathic and secondary. Idiopathic diseases refer to conditions that do not have a clear and defined cause, in which it fits about 90-95% of cases; and secondary ones when one can identify environmental causes, gene mutations or chromosomal irregularity, in this comprises about 5-10%. Because the vast majority of cases are idiopathic, there are still difficulties in accurately diagnosing people with ASD, since there is no instrument that can negative or positive the condition of the disorder, in the same way measure the degree of impairment that the spectrum caused.

Although there are difficulties that may delay diagnosis (such as associated comorbidities that stand out in their symptoms, for example), it can be observed that a few years ago there was a large increase in cases of Autism Spectrum Disorder. It is also analyzed that the considerable increase in people diagnosed with ASD is related to the greater (re)knowledge of the conditions that assert the spectrum, since there is a wide worldwide dissemination of guidance regarding the concepts and characteristics that involve autism (4:125). With the increase in research in the area, knowledge about

the autistic spectrum has been expanded. However, some researchers also consider that this data may bring some kind of impairment in the screening of autistic and comorbid characteristics. Gillberg and Fernell [9], in their research, made themselves available to understand why the numbers of autism have increased considerably in recent years and point out that often the diagnosis ends up being closed in the wrong way because they do not take into account the possibility of being another disorder other than ASD. With this, the authors state that «it is time for the medical community to take a step back from the excessive focus on autism and again begin to see the bigger picture» (9:3275).

When talking about the bigger picture, the authors want to convey the idea that in addition to ASD there are many other disorders that can compromise the same areas of domain that the spectrum compromises. Consonant with this, it opens the discussion of disorders and syndromes that may be associated with ASD, or the other way around. Although there are several cases of autism and other disorders such as comorbidities, Godim and Sobral [4] state that this is still a field of knowledge that is not very well explored in the literature. Borges and Moreira [3] state that between 5 and 10% of people with ASD also present another comorbid condition. Continuing this idea, Lins [10], in his study analyzing 129 individuals who have the spectrum, observed that about 56.6% of the evaluated had some correlated psychiatric disorder. Of these, 39.5% had symptoms of anxiety and 9% bipolarity. The authors listed some comorbidities that may be associated with the autistic spectrum. Attention Deficit/Hyperactivity Disorder (ADHD), developmental coordination disorder; disruptive behavior, impulse control, or conduct disorders; anxiety, depressive or bipolar disorders; tic or Tourette's disorder; self-injury; food, elimination or sleep, among others» (4:121).

Affirmative to this, Borges and Moreira [3] also reported some psychiatric disorders that may be associated with autism, namely: ADHD, ODD (Oppositional Defiant Disorder), Fragile X Syndrome, mood imbalance, intellectual disability, among others. Although there are several possibilities of disorders such as comorbidities, in the literature there is a large collection of publications that refer to ASD often linked to Intellectual Disability and ADHD, while with other disorders there is little to read (as is the case of Oppositional Defiant Disorder) or even nothing [9].

Oppositional Defiant Disorder

One of the disorders that may be associated in some cases with ASD is oppositional defiant disorder (ODD), a disruptive disorder defined by a global pattern of disobedience, defiance, and hostile behavior. This disorder is included in the groups of attention deficit disorders and disruptive behavior, being one of the relevant and prominent pathologies in these groups [11]. Disruptive disorders are classified as difficult to diagnose and treat. This process becomes complex in the face of the common presentations of a series of behaviors during

the development of children and adolescents, among these being the challenging behaviors. However, the intense and repetitive emission of these behaviors in relation to cultural issues, gender, normality pattern and involving at least one person who is not a sibling, can configure the disruptive disorder [6].

In agreement with this, Almeida [12] emphasizes that the distinction between normal and psychopathological behaviors is made from the verification of the occurrence of the behaviors, considering whether these behaviors occur occasionally, in isolation or if they constitute syndromes, pointing out a deviation from the typical development curve. Barletta [6] also described regarding the classification for disruptive disorder present in the diagnostic and statistical manual of mental disorders that specifies that behaviors characteristic of DOT are norm-breaking, challenging and antisocial, which cause much discomfort in people because they are externalizing problems, which significantly harm the life of the child or adolescent in a school context, family and social. Also in this general classification are described the Conduct Disorder (CT) and the Oppositional Defiant Disorder (ODD) that affects children and adolescents. The emission of these behaviors by people over the age of 18 is called Antisocial Personality Disorder.

Continuing in this idea, Leite and Campos [11] highlight that for the diagnosis it is necessary to observe the presentation of aspects of cruelty to people or animals, destruction of goods, aggressive behaviors, tyranny and theft, flight from home and daily commitments (school), tantrum crises and disobedience outside the standards that are recurrent and serious. However, the presentation of only one of the dissocial behaviors is not sufficient for the diagnosis of DOT. Confirming this point of view, the behaviors mentioned above are included in the diagnostic criteria of the DSM-5 [2], which emphasizes that for the diagnosis of oppositional defiant disorder it is necessary that the individual presents symptoms of the following categories: Angry/irritable mood (frequent tantrum and irritability most of the time), questioning/challenging behavior (refusal and questioning of requests, rules and authority figures) and vengeful nature (spiteful children who exhibit vengeful behavior at least twice in the existing standard time).

Also according to Leite and Campos [11], it is mandatory the existence of occurrence of at least four symptoms of these types manifested in the period of the last 6 months. Almeida [12] emphasizes that the emission of these behaviors should occur in public places, in addition to school and home. Adding to this, the symptoms presented and the incidence of this disorder differ in relation to puberty, affecting before that more male children. However, when the onset of symptoms occurs after puberty, they are similar for males and females [6]. In this regard, Barletta [6] states that the probability of symptoms that appear in children before 10 years of age prevailing during adolescence and are characterized by oppositional defiant disorder is higher than the cases in which these symptoms appear

after this age group. According to the authors, when these behaviors are manifested after the age of 10, they tend to be less intense and frequent, thus being less likely to trigger the personality disorder.

Children with Disruptive Disorder are often diagnosed as anxious, depressed, and even with attention-deficit/hyperactivity disorder (ADHD). Excessive hyperactivity, extreme reactions to situations and behavior of others, and difficulty in calming down are characteristic of ODD and ADHD, hindering the process of differential diagnosis and leading at least to the linkages of these diagnoses as comorbidities [6]. Thus, in order to provide a correct intervention for individuals diagnosed with this disorder, it is necessary to implement clinical practices in conjunction with the literature, taking into account scientific updates [11].

Similar Characteristics Among the Disorders

Although Autism Spectrum Disorder and Oppositional Defiant Disorder are in different diagnostic groups and have apparently different established criteria, some children may present similar and simultaneous characteristics between the disorders and that may somehow interfere with the individual's diagnostic process. Both ASD and DOT present some degree of impairment in the social area, and the subject who has them may present disruptive behaviors in which it is necessary to identify what the function of each one is in order to be able to differentiate what is ASD and what is DOT [1]. In this regard, Figueiredo [1] also states that for an evaluation to be well performed and to be able to track behavioral functions, it is necessary for the evaluator to take into account the environment in which the individual is inserted. In this regard, Almeida [12] says that in order to really identify whether the child has Oppositional Defiant Disorder, it is necessary to have an analysis of the frequency of disruptive behaviors that occur both at home, with family members, and with other people who are not in the person's family context. The same is true of ASD. Many children learn to communicate inappropriately because they are reinforced by those who live around (screaming or hitting to get something, for example) [8].

Godim and Sobral [4] also show that ASD and ODD have three degrees of impairment, mild moderate and severe. In both, there is some kind of need for support and discrimination of environments. The difference that ODD presents is that its levels stand out in symptoms that present in family environment, external environment and both. While in autism, levels refer to the degree of support required by the person. Still following the ideas of the authors mentioned above, often children who have the diagnosis of ASD and / or ODD present behaviors of anger attacks, varying levels of tolerance to frustration, low self-esteem (when they have good cognitive to somehow verbally express such characteristics). And, because they exhibit such impulsive behaviors, they end up being children with few friends due to rejection by peers. Delayed diagnosis can have a significant impact on a child's life. When medical conditions or developmental problems are not

identified early, adverse consequences for the physical, emotional and cognitive well-being of the individual in training can arise. In terms of health, delayed diagnosis can result in more complex and less effective treatments, impairing long-term prognosis. In addition, the child may face academic, social, and emotional difficulties as their specific needs are not adequately met. The feeling of frustration and helplessness can negatively affect your self-esteem and confidence, compromising your personal development. Therefore, it is of utmost importance that health professionals and educators be attentive to any signs of delay or changes in the development of the child in order to ensure an early and adequate intervention, promoting a healthier and more successful future for him.

Conclusion

The importance of diagnostic criteria for mental illnesses and disorders, especially for Autism Spectrum Disorder (ASD) and Oppositional Defiant Disorder (ODD), is fundamental to provide effective treatments and reduce damage caused by the disorders. The correct and early diagnosis can contribute significantly to the development of the individual, whether the associated disorders or not. However, this study pointed out that there are challenges in the differentiation of the disorders, due to similar behaviors that can be observed in both. The scarcity of studies on the relationship between ASD and ODD is remarkable, which highlights the need for further research in this area to better understand and define investigation protocols that allow the distinct and concomitant identification of these disorders in the lives of individuals. This would be fundamental for a more accurate and appropriate diagnosis for each case.

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