



Attention deficit hyperactivity disorder in adulthood: a study of persistence factors and therapeutic strategies

Attention deficit and hyperactivity disorder in adulthood: a study on persistence factors and therapeutic strategies

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SUMMARY

This study aimed to understand the factors that influence the persistence of Attention Deficit Hyperactivity Disorder (ADHD) symptoms in adulthood. To this end, a qualitative and exploratory literature review was conducted, analyzing seven scientific articles published between 2008 and 2024, located in databases such as Scielo, PePsic, and PubMed. The research identified genetic, neurobiological, environmental, and psychosocial factors as the main factors contributing to persistence, with emphasis on dopaminergic dysfunction, heredity, and comorbidities such as depression and anxiety. The data revealed low adherence to medication treatment and a lack of structured psychotherapeutic interventions, such as Cognitive Behavioral Therapy (CBT) and psychoeducation. The study also highlighted the importance of multidisciplinary support in managing the disorder, although few studies mention its effective application. The analysis reinforces that treatment must be individualized, continuous and adjusted to the needs of each patient, in order to promote functionality and quality of life.

Keywords: adult; psychotherapy; signs and symptoms; Attention Deficit Hyperactivity Disorder; persistence.

ABSTRACT

This study aimed to understand the factors that influence the persistence of attention deficit hyperactivity disorder (ADHD) symptoms in adulthood. To this end, a qualitative and exploratory literature review was conducted, analyzing seven scientific articles published between 2008 and 2024, found in databases such as Scielo, PePsic, and PubMed. The research identified genetic, neurobiological, environmental, and psychosocial aspects as the main factors of persistence, with emphasis on dopaminergic dysfunction, heredity, and the presence of comorbidities such as depression and anxiety. The data revealed low adherence to drug treatment and a lack of structured psychotherapeutic interventions, such as Cognitive Behavioral Therapy (CBT) and psychoeducation. The importance of multidisciplinary support in the management of the disorder was also verified, although few studies mention its effective application. The analysis reinforces that treatment should be individualized, continuous, and tailored to the needs of each patient in order to promote functionality and quality of life.

Keywords: adult; psychotherapy; signs and symptoms; attention deficit hyperactivity disorder; persistence.

According to the DSM-5-TR, Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder and has a pattern of symptoms with prevalence constant inattention and/or hyperactivity/impulsivity, which affects attention, impulsivity and self-regulation. The first symptoms of the disorder may appear in childhood, up to 12 years of age (APA, 2023).

According to what is described in the DSM-5-TR, the symptoms of inattention are represented by frequent distractions, problems locating objects and losing them. The hyperactivity and impulsivity can be manifested through movements excessive, difficulty waiting your turn, constant interruption of other people and, also, due to impatience, these behaviors cannot be considered common for the individual's age or stage of development. (APA, 2023).

Regarding diagnostic issues related to sex and gender, Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) is more common in males compared to females. female sex, demonstrating a ratio of 2:1 in children and 1.6: in adults (APA, 2023). "Sex differences in the severity of Attention Deficit Disorder symptoms Attention Deficit Hyperactivity Disorder (ADHD) can occur due to genetic differences and different cognitive abilities between the sexes" (APA, 2023, p. 72).

It is estimated that between one-sixth and one-third of people diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) during childhood and who had mild symptoms during this phase of life, they may have behaviors that do not close more diagnosis in adulthood (Barkley, 2000). However, in recent years, it may be observed that the diagnoses and prevalence of Attention Deficit Disorder symptoms Attention Deficit Hyperactivity Disorder (ADHD) in adults has increased (Zalsman and Shilton, 2016). However, it is important to consider that the data may not represent reality due to underdiagnosis and incorrect identification (Waltereit, Ehrlich and Roessner, 2023).

According to the DSM-5-TR, it is estimated that 7.2% of children and 2.5% of adults are impacted by Attention Deficit Hyperactivity Disorder (ADHD), (APA, 2023), some of these people diagnosed with Attention Deficit Disorder and Hyperactivity (ADHD) ADHD continue to present certain symptoms when adults (Bear, 2017), even with advances in pharmacological interventions and psychosocial. Persistent symptoms can lead to impaired performance academic, social and professional (Varrasi *et al.*, 2023).

In this scenario presented, we sought to understand through this work which are the neurobiological, social and behavioral elements that contributed to the continuity of Attention Deficit Hyperactivity Disorder (ADHD) symptoms in adulthood.

The hypothesis for what this work sought to understand is that persistence could be influenced by a complex interaction between neurobiological factors, such as dysfunctions in the dopaminergic system and genetic conditions, and psychosocial factors, including childhood adversities and lack of social support (Volkow *et al.*, 2007).

Therefore, the general objective of this research was to understand how the factors neurobiological, social and behavioral factors contribute to the persistence of symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, highlighting the complexity of the disorder in question and the importance of therapeutic strategies integrated.

In order for the overall objective to be achieved, it was necessary to separate it into specific objectives, being the following:

1. Identify the factors that contributed to the persistence of symptoms Attention Deficit Hyperactivity Disorder (ADHD) in adulthood;
2. Understand the influence of factors that contributed to the persistence of symptoms Attention Deficit Hyperactivity Disorder (ADHD) in adulthood;
3. Problematize/reflect on how to deal with these factors encountered.

The importance of this research was in deepening knowledge about the Attention Deficit Hyperactivity Disorder (ADHD) and how it manifested itself throughout life, with emphasis on symptoms that persisted into adulthood.

People diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) often face challenges in remaining stable in the job market. work and manage their daily responsibilities, thus causing harm considerable for their functionality and well-being (Holst and Thorell, 2020; Varrasi *et al.*, 2023).

Understand the factors that influenced the persistence of Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) in adulthood is essential to fill the gaps existing ones, and consequently help to develop more efficient and adapted strategies to people's individual demands.

When investigating the factors that maintained the symptoms of the disorder, it was possible not to only contribute to the progress of scientific knowledge, through understanding of neurobiological, social and behavioral factors, but also for the creation of

public policies and psychosocial interventions that have improved the support offered to these people throughout their lives.

2. LITERATURE REVIEW

Attention Deficit Hyperactivity Disorder (ADHD) is diagnosed according to DSM-5-TR, if the patient presents: At least five symptoms of categories of inattention and/or hyperactivity/impulsivity (for adults and adolescents over 17 years of age) for a minimum period of six months; symptoms require begin before the patient turns 12; symptoms cause harm significant to the individual's life; the symptoms must occur in two or more environments (e.g., home and work). Likewise, such behaviors do not should be better explained by another mental or behavioral condition, such as schizophrenia or bipolar disorder (APA, 2023).

There are three distinct clinical forms (subtypes) of Attention Deficit Hyperactivity Disorder: Hyperactivity (ADHD): 1) predominantly inattentive; 2) predominantly hyperactive/impulsive; 3) combined (inattentive and hyperactive/impulsive) (APA, 2023). The most common forms are inattentive and combined presentations, except in children small, from 3 to 5 years old, when hyperactivity is more evident (da Silva *et al.*, 2023).

Partial remission of Attention Deficit Hyperactivity Disorder (ADHD) occurs when all necessary criteria have been met previously and within the last 6 months, not all of which were completed. However, despite this symptomatic improvement, the person still demonstrates some ongoing difficulty related to the disorder and has impairment in social, academic, or occupational functioning (APA, 2023).

2.1. Risk factors for persistent Attention Deficit Disorder and Hyperactivity (ADHD) in adulthood

2.1.1. Genetic and gestational factors

The cause of Attention Deficit Hyperactivity Disorder (ADHD) is considered as multifactorial, is a result of the complex interaction between factors genetic and environmental (da Silva, 2023).

Attention Deficit Hyperactivity Disorder (ADHD) has a higher likely to appear in babies born with low birth weight and prematurely. The relationship between the mother's habit of smoking during pregnancy and Attention Deficit Disorder and Hyperactivity (ADHD) persists even when health history is taken into account mental health of parents and socioeconomic status. Another factor highlighted is exposure during childhood pregnancy to neurotoxic substances (such as lead), infections (such as encephalitis) and alcohol have also been considered a risk for the development of Attention Deficit Disorder. Attention Deficit Hyperactivity Disorder (ADHD), although it is not yet known for sure whether these relationships are causal (APA, 2023).

The influence of genetics on the development of Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) is one of the most significant disorders psychiatric. According to research carried out by Faraone *et al.* (2006), the risk of relatives of people with Attention Deficit Hyperactivity Disorder (ADHD) develop the disorder, compared to the risk in relatives of individuals without Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) was 70 times higher for identical twins (monozygotic), approximately 8 times higher for fraternal (dizygotic) twins and biological siblings, between 2 and 3 times higher for half-siblings, 2.2 times higher for cousins first degree and 1.5 times higher for second cousins.

When we sought to analyze heritability data, that is, how much a gene can influence a certain characteristic or trait of the person, for the Disorder of Attention Deficit Hyperactivity Disorder (ADHD), 70 to 80% were found. These estimates seemed to remain stable throughout childhood and adolescence, being the same for both men and women (da Silva *et al.*, 2023).

The supposed decrease in symptoms over the years may be more related to difficulties in measuring these rather than to the real reduction caused by genetics over time (da Silva *et al.*, 2023). Factors such as the severity of symptoms in childhood, the presence of psychiatric comorbidities such as anxiety and depression are predictors important factors in the persistence of symptoms.

2.1.2. Environmental and social factors

Negative experiences during childhood, such as situations of neglect or abuse, are linked to the worsening and persistence of Attention Deficit Disorder symptoms Attention Deficit Hyperactivity Disorder (ADHD) in adulthood (Schmitz, Polanczyk and Rohde, 2007).

2.1.3. Neurological factors

According to Volkow *et al.* (2007), Attention Deficit Hyperactivity Disorder (ADHD) has a well-established neurobiological basis, in which dysfunction of the dopaminergic plays a crucial role, impacting processes such as attention, control inhibitory and motivation. The deficiency in dopamine regulation in the frontal-striatal may justify the challenge of these individuals in maintaining concentration and regulating behavior.

Dopamine is an important neurotransmitter for motivation, control of impulses and learning new actions through reinforcement. In the case of Attention Deficit Disorder, Attention Deficit Hyperactivity Disorder (ADHD), the alteration in the action of dopamine in the cortex prefrontal resulted in difficulties in the reinforcement process. This means that the reinforcement learning was less effective for the person with ADHD, who presented difficulty in associating actions with positive consequences. Similarly, the process of extinction that occurred when a previously reinforced behavior stopped occurring for no longer being rewarded – was also harmed. Thus, behaviors inadequate or maladaptive behaviors could persist for longer, as extinction did not occurred efficiently.

Still according to Sagvolden (2000), dopamine released punctually (phasic activity) occurs with less intensity and delay, while the basal amount (tonic activity) also decreases. This leads to reduced stimulus control, greater sensitivity to immediate consequences and difficulty in extinguishing behaviors. These characteristics could help in understanding attention problems, hyperactivity and resistance to change observed in the disorder (Paradigm Bulletin, 2022).

Therefore, the relationship between genetic predisposition, dopaminergic dysfunction and unfavorable environmental experiences may be the foundation for the persistence of symptoms and obstacles faced by these people (Faraone *et. al.*, 2006).

2.2. Comorbidities

Another relevant factor in Attention Deficit Hyperactivity Disorder (ADHD) is the high presence of comorbidities with psychiatric disorders since childhood, such as bipolar mood disorder, major depressive disorder, oppositional defiant disorder, conduct disorder and substance use disorders. The presence of comorbidities

is also common in adulthood. Females with Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) have higher rates of comorbid disorders, such as oppositional defiant disorder, autism spectrum disorder, attention disorders personality and substance use disorders (APA, 2023).

Most children and adolescents with disruptive dysregulation disorder mood disorder has symptoms that also meet criteria for Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD). Also, a smaller proportion of children with ADHD has symptoms that meet criteria for disruptive mood dysregulation disorder (APA, 2023).

Anxiety disorders, major depression, obsessive-compulsive and explosive intermittent occur in a minority of individuals with Attention Deficit Disorder and Hyperactivity (ADHD), although more frequently when compared to the general population general. Substance abuse disorders are relatively more common among adults with Attention Deficit Hyperactivity Disorder (ADHD) compared to the general population In general, they are present in only a minority of these people. In adults, the disorder Antisocial personality disorder and other personality disorders may be comorbid with Attention Deficit Hyperactivity Disorder (ADHD).

2.3. Impact of symptoms in adult life

Symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in adults can cause considerable challenges, directly impacting the functionality and quality of life of diagnosed individuals. They often face more challenges in their daily routines, especially in terms of time management, execution daily tasks and financial management (Holst and Thorell, 2020; Zalsman and Shilton, 2016). These symptoms of Attention Deficit Hyperactivity Disorder (ADHD) can allow the individual to face limitations in employment opportunities, susceptibility to addiction, vulnerability to depressive and anxiety disorders, behavior reckless driving and risk of premature death from accidents and suicide (Geffen and Forster, 2017).

Furthermore, the challenges extend to the interpersonal level. Individuals with Disorder Attention Deficit Hyperactivity Disorder (ADHD) often present with significant deficits in social and relational contexts, such as reduced quality in friendships, dissatisfaction in marriage and a greater chance of divorce, especially when the diagnosis is made in

adult life (Castro and Lima, 2018). These deficits are linked to the difficulty of emotional self-regulation and impulsivity, characteristics that interfere with building healthy relationships. These psychosocial factors can function as obstacles to symptom control, prolonging the impacts of the disorder over the lifespan life (Swanson *et al.*, 2017).

According to Barkley (2000), Attention Deficit Hyperactivity Disorder (ADHD) would not be limited to a disorder of hyperactivity, distraction or inability to complete tasks, but also demonstrates a failure in organizing behavior. For this reason, still for Barkley (2000), Attention Deficit Hyperactivity Disorder (ADHD) is an executive functioning disorder, linked to behavior aimed at for the future and self-regulation. Therefore, individuals diagnosed with the disorder may often feel like failures when trying to achieve the goals they set, whether by themselves themselves or by others (Barkley, 2000).

2.4. Therapeutic strategies

Therapeutic strategies for the treatment of Attention Deficit Disorder and Hyperactivity Disorder (ADHD) in adulthood were essential to reduce the effects of the disorder and improve the functionality of diagnosed individuals. The persistence of symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in adulthood highlighted the need for effective therapeutic treatments, such as Cognitive Therapy-Behavioral (CBT), which has demonstrated a significant impact on reducing symptoms behavioral, helping in the development of self-regulation skills, organization and time management (Barkley, 2000).

Multidisciplinary support, in turn, which includes psychotherapy and interventions pharmacological measures was fundamental. The administration of psychostimulants, such as methylphenidate, has been shown to be efficient in regulating dopamine levels, contributing to the control of the core symptoms of the disorder (Varrasi *et al.*, 2023). Studies with models animals indicated that the use of the medication reduced deficits in memory and learning by reinforcement (Sagvolden, 2000). However, it was essential to personalize the interventions, taking into account the individual factors that influenced the persistence of symptoms, such as history of trauma, family aspects and comorbid conditions.

The study in question was directly aligned with the area of Psychology, since the Attention Deficit Hyperactivity Disorder (ADHD) has been widely addressed within



in this field, both in terms of evaluation and diagnosis, as well as therapeutic intervention. The research contributed new data for the development of more effective approaches. assertiveness in symptom management and patient support strategies. This survey also made it possible to identify factors for the persistence of symptoms, the who helped psychologists in developing early intervention programs, with the aim aim to improve the quality of life of individuals diagnosed with Disorder Attention Deficit Hyperactivity Disorder (ADHD). (Faraone, Biederman and Mick, 2006).

2.4.1 Drug Treatment for Attention Deficit Disorder and Hyperactivity (ADHD)

Drug treatment was one of the main therapeutic strategies for management of Attention Deficit Hyperactivity Disorder (ADHD) in different age groups age groups. The drugs used acted on the regulation of neurotransmitters such as dopamine and norepinephrine, playing an essential role in the processes of attention, control inhibitory and regulatory behavior. Thus, the drug intervention aimed minimize deficits associated with the disorder, promoting better functionality in daily life of diagnosed individuals (Varrasi *et al.*, 2023).

2.4.1.1 Psychostimulants

Among the therapeutic options, psychostimulants, such as methylphenidate and amphetamines, were often used as the first line of treatment, being widely studied for their effectiveness in reducing the core symptoms of Disorder Attention Deficit Hyperactivity Disorder (ADHD). These medications acted by inhibiting the reuptake of dopamine and norepinephrine in the synaptic cleft, increasing availability of these neurotransmitters and, consequently, improving attention and decreasing impulsivity (Volkow *et al.*, 2007).

In the adult population, the use of psychostimulants has demonstrated a positive impact on several areas, including academic and professional performance, also contributing to time management and task organization (Barkley, 2000). However, despite its benefits, it was essential to consider the possible adverse effects, which include insomnia, loss of appetite, increased heart rate and, in some cases, risk of abuse and dependence, especially among individuals with histories of substance use disorders substances (Faraone *et al.*, 2006).

2.4.1.2 Non-Stimulant Medications

Cortese *et al.* (2018), in a systematic review and comparative meta-analysis, highlight the relevance of non-stimulant medications in the treatment of Addiction Disorder Attention Deficit Hyperactivity Disorder (ADHD), especially for individuals who have contraindications or little response to psychostimulants. Among these alternatives, atomoxetine, a selective norepinephrine reuptake inhibitor, has demonstrated effectiveness in reducing symptoms of inattention and hyperactivity, being particularly recommended for patients with comorbidities such as anxiety and mood disorders. Taylor and Russo (2001), in a study with adults diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), observed that guanfacine, an alpha-2A adrenergic agonist, contributed significantly to the control of impulsivity and physiological arousal, in addition to presenting good tolerability, being indicated in more complex cases.

Although these drugs had less potential for abuse compared to psychostimulants, their side effects such as fatigue, drowsiness and reduced blood pressure arterial, reinforced the need for careful medical monitoring for the suitability of treatment for each individual.

2.4.1.3 Considerations for Treatment Adherence

The effectiveness of medication in the treatment of Attention Deficit Disorder and Hyperactivity Disorder (ADHD) has been widely recognized. However, adherence to treatment pharmacological could be influenced by different factors, such as adverse effects, limited perception of effectiveness and lack of continuous medical monitoring.

In a longitudinal follow-up study, Swanson *et al.* (2017) observed that only 7.4% of participants diagnosed with Attention Deficit Disorder and Hyperactivity (ADHD) in childhood maintained regular use of medication throughout life adult. Most individuals discontinued or used the medication intermittently, revealing a pattern of low adherence to treatment over time. It is also worth noting that the study identified that prolonged use of the medication was not associated with a significant reduction in the severity of symptoms in adulthood.

Cunha and Rocha (2018) highlight that the combination of pharmacotherapy and psychotherapy can enhance the results of treatment, providing greater autonomy and favoring development and helping not only to control symptoms, but

also in the development of strategies for organization, planning and regulation
emotional

3. METHODOLOGY AND MATERIAL

To achieve the general objective presented in this work, which was to understand the factors that influence the persistence of Attention Deficit Disorder symptoms and Hyperactivity (ADHD) in adulthood, a quantitative approach was used exploratory. According to Flick (2013), this approach allows exploring the topic, facilitating understanding of the topic in question.

An exploratory study was chosen, as it allowed flexibility in collection and interpretation of data, which also allows a first approximation to the research problem, favoring the identification of predictors, new possible hypotheses and problems to be considered in future studies (Gil, 2002).

The chosen procedure was the bibliographic review, in which the following were analyzed: scientific articles extracted from databases such as Scielo, PePsic and Pubmed, selected for their relevance and scope in the area of health and psychology.

The choice for this procedure was due to the need, explained in Gil (2002) to obtain theories and scattered information so that there could be an understanding of the theme and if an answer to the research problem was obtained, however, on the other hand, as cited by Gil (2002), the choice required care in the quality of the selection of studies, so that erroneous information would not be reproduced by the research in question. For therefore, it was necessary to take care to remove the materials from reliable places, which were mentioned above.

The inclusion criteria covered only articles published in Portuguese, with a cut between 2008 and 2024, which explored the persistence of the Disorder's symptoms Attention Deficit Hyperactivity Disorder (ADHD) in adulthood and its possible influences.

The following descriptors written in Portuguese were used: disorder attention deficit hyperactivity disorder; longitudinal studies; remission; adults; ADHD; persistence; symptoms; behavioral; predictors; neurobiology.

Combinations of descriptors: ADHD and remission; attention deficit disorder and hyperactivity and remission; predictors, resistance and ADHD; predictors, persistence, symptoms and ADHD; persistence, symptoms, ADHD and adults; resistance, symptoms and ADHD, adults; predictors, persistence, symptoms and ADHD; ADHD and behavioral.

The data presented in the work were extracted from articles in accordance with the PRISMA method. The data collection procedure was first carried out by title selection and abstract screening, and then content-based selection of the full text. This research was based on a set of primary sources necessary to ensure the quality and credibility.

Additionally, technological resources were adopted, including the use of computer, text editing and bibliographic management software such as Word, Google Docs, Sheets, and internet access to search and select materials relevant to this work. The infrastructure provided by the university, including access to the virtual library was of utmost importance for the execution of this work.

This study, based on a bibliographic review, did not include data obtained from humans. All sources used were duly cited, maintaining the standards of copyright and academic ethics. Resolution No. 510/2016 of the National Council of Health (CNS) exclusively exempted bibliographic research from submission to the Research Ethics Committee (CEP). However, this work was conducted in accordance with the ethical principles established for scientific production, thus reiterating the commitment with integrity and responsibility during the realization of this study.

This research has had a positive impact on the field of psychology by providing a overview of the factors that influence the persistence of symptoms of Depression Disorder Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, helping development of more effective interventions for managing the disorder.

3.1. Analysis procedure

For the analysis of the selected articles, the quantitative approach was used and qualitative, which allowed a broad interpretation of the factors that influenced the persistence of Attention Deficit Hyperactivity Disorder (ADHD) into adulthood. The quantitative analysis allowed the collection of numerical data related to research, such as the number of participants, gender distribution and age of the subjects studied. Qualitative analysis facilitated the investigation of the descriptive aspects of the articles, including the main findings on neurobiological and psychosocial factors associated with the disorder, the effects of therapeutic interventions and treatment maintenance strategies.

The choice of this approach was justified by the need to discern the information present in the literature and bring new hypotheses about the persistence of symptoms

of Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, as highlighted Gil (2002).

Still for Gil (2002), qualitative research allowed greater flexibility in interpretation of data and enabled the diffuse information to be organized, structural form, facilitating the understanding of the phenomenon studied. Thus, it was understood that this approach was highly significant in the present study, since the reviewed articles revealed results on Attention Deficit Hyperactivity Disorder (ADHD) in adult life, requiring careful analysis, and not just the simple quantification of data.

3.2. Materials

The materials analyzed were seven articles published between 2008 and 2024. Initially, 45 results were identified. After applying the exclusion criteria, 19 studies were eliminated because they involved children and adolescents, six because they were written in English, four because they are in other languages, seven because they are systematic reviews, one for not mentioning the target audience and one for referring to a study performed on animals. Thus, seven articles comprised the final sample.

The articles used in this research are below:

Author(s)	Article Title	Magazine
Cid Pinheiro Farias, Pedro San Martin Soares, Fernando C. Barros, Ana Maria Baptista Menezes, Helen Gonçalves, Fernando Caesar Wehrmeister, Ricardo Tavares Pinheiro, Luciana de Avila Quevedo, Bernardo L. Horta, 2023.	Conditions of birth and Attention Deficit Disorder with Hyperactivity (ADHD) in adults in the birth cohorts of Pelotas, Rio Grande do Sul, Brazil, from 1982 and 1993.	Scielo
Ednei Messias Alecrim and Magna Rosa da Silva, 2022.	Implications of Attention Deficit Disorder Deficit Hyperactivity Disorder (ADHD) Editor in adulthood.	Attention Perform

Mayara Milena Marques Martinez, Attention Deficit Disorder and Joceline Casimiro Martins, Vanessa Periodicals Hyperactivity Disorder (ADHD): A study by Alves Barbosa, Helen Paola Vieira Bueno, 2024.	UFMS case with teachers, parents and students.
Gustavo Biscaia, Francisco Kelmo, 2013.	The Implications of ADHD in Relationships Marital: Study of Case Exploratory. Periodicals Unifesp
Mariane da Costa Nogueira and Helen, a Paola Vieira Bueno, 2024.	The learning difficulties of teacher with ADHD: a study of case. Even3
Maria das Graças Faustino Reis and School Camargo, Scielo 2008.	practices and performance Dulce Maria Pompêo de academic performance of students with ADHD.
Gustavo Luis Caribé Cerqueira, Eduardo Pondé de Sena, 2020.	Quality of life in adults with Attention Deficit Disorder with Hyperactivity. Periodicals UFBA

Figure 1: Table of articles analyzed in the work in question.

Source: Prepared by the authors.

4. RESULTS AND DISCUSSION

After applying the descriptors to the Pepsic, Scielo and Pubmed websites, found seven articles shown in figure 2. These articles covered the period from 2008 to 2024.

Number of Participants

The surveys presented a variation in the number of participants, with samples from 5 individuals (Reis and De Carmargo, 2008) to a study with 7,354 subjects (Farias *et al.*, 2023). Other articles used case studies for their analysis, presenting n=1 (Biscaia and Kelmo, 2013; Nogueira and Bueno, 2024).

Age Range

The age range of study participants varied from 18 to 55 years (Alecrim and Silva, 2022; Martinez *et al.*, 2024, Biscaia and Kelmo, 2013; Nogueira and Bueno, 2024; Kings and

de Camargo, 2008; and Cerqueira and de Sena, 2020), thus fulfilling the objectives of analyzing the factors that contributed to the persistence of ADHD into adulthood.

In the longitudinal study presented in Farias *et al.* (2023), the correlation between birth characteristics (birth weight, gestational age and intrauterine growth) and the prevalence of Attention Deficit Disorder and hyperactivity in adulthood between two groups, people born in 1982 and 1993 and the follow-up was conducted when participants were 20 and 30 years old. At In the final analysis, the prevalence of ADHD was 4.4% (158 individuals) and 4.5% (170 individuals) respectively. Only gestational age proved to be relevant, but caution is needed when interpretation of the data, since the article mentions that, after adjusting for confounding factors, the value was insignificant (Farias *et al.*, 2023).

However, according to the Diagnostic and Statistical Manual of Mental Disorders - DSM-5-TR (APA, 2023) and Rodhe *et al.*, (2019), recent information indicates that children born with low birth weight and prematurely are more likely to develop the Disorder Attention Deficit Hyperactivity Disorder (ADHD), which contrasts with the results obtained in research by Farias *et al.* (2023).

Gender

Related to gender, the articles demonstrated a greater participation of people of the female gender when compared to the presence of the male gender. In Farias *et al.* (2023), 52% of individuals in 1982 and 53.4% in 1993 were women, while, respectively, 48% and 46.6% were male. In the data that demonstrated the prevalence of Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, this information by gender was not available (Farias *et al.*, 2023).

In Cerqueira and De Sena (2020), 25 people (41.7%) were male and 35 women (58.3%). As in Reis and De Camargo (2008) and Martinez *et al.*, (2024) where 80% were female and in Alecrim and Silva (2022) 87.1% were also male. female gender. In the article by Biscaia and Kelmo (2024) a case study was carried out, this being of the masculine gender.

However, according to the DSM-5-TR, Attention Deficit Hyperactivity Disorder Hyperactivity Disorder (ADHD) is most often diagnosed in people of the gender male, with a ratio of approximately 2:1 in adults (APA, 2023), which contradicts the results obtained in the research. Thus, the discrepancy in participation by gender in studies may reflect differences in recognition and diagnosis of disorder throughout life, but also a greater willingness of women to

participate in research. Because of these hypotheses, it is important that further studies can be carried out in search of a better understanding and deepening of critical analysis.

Psychopharmacological

Regarding psychopharmacological treatment for Attention Deficit Disorder and Hyperactivity (ADHD), two articles reported participants who had already used medication, in Reis and de Camargo (2008) two women used medication even in childhood, while three participants (two women and one man) did not use during this phase, as they were only diagnosed in adulthood. In the study of Cerqueira and De Sena (2020), the majority of participants (51.7%) used drugs such as psychostimulant, but less than half (49.3%) had medical follow-up, in this study in question there was no information by gender.

These data reflect a recurring scenario in clinical practice, in which several factors interfere with adherence to drug treatment. Volkow *et al.* (2007) highlight that psychostimulants, especially methylphenidate and amphetamines, are considered first-line treatment for Attention Deficit Hyperactivity Disorder (ADHD). However, the high rate of participants who do not maintain medical follow-up suggests that continued access to treatment can be a challenge. This difficulty may be related to factors such as lack of knowledge about the importance of monitoring psychiatric, fear of the adverse effects of medication and even difficulties in accessing specialized services.

Furthermore, not all participants who used medication reported improvement. significant symptoms. Response to treatment may vary due to factors such as individual differences in tolerability, presence of psychiatric comorbidities and profiles various clinical trials. A systematic review conducted by Cortese *et al.* (2018) found that, although psychostimulants are effective, acceptability and therapeutic response differ considerably among adults with Attention Deficit Hyperactivity Disorder (ADHD). In view of this, the importance of psychiatric monitoring is reinforced continuous and individualized, so that the treatment is adjusted according to the needs of each patient.

Comorbidities

Two studies reported that their participants (n=2) used psychotropic drugs to the treatment of comorbidities associated with Attention Deficit Disorder and Hyperactivity (ADHD), such as depression, anxiety and insomnia (Biscaia and Kelmo, 2013;

Nogueira and Bueno, 2024). On the other hand, three articles did not mention the use of medication psychopharmacological (Farias *et al.*, 2023; Alecrim e da Silva, 2022; Martinez *et al.*, 2024).

Among participants with Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, 38.3% presented anxiety and depression as comorbidities of the disorder (Cerqueira and de Sena, 2020). Also, in the study carried out by Reis and de Carmo (2008), three of the five participants had depression as a comorbidity, with 1 of these cases presented during adolescence. Two of the five have anxiety and one reports low self-esteem.

According to the DSM-5-TR (APA, 2023), depression and anxiety are more common in individuals with Attention Deficit Hyperactivity Disorder (ADHD) than when compared to the general population, but the conditions occur in a smaller proportion of cases that have attention deficit hyperactivity disorder. However, data found in the present study indicate a higher prevalence of these comorbidities among participants, suggesting that, in clinical practice, the coexistence of Disorder Attention Deficit Hyperactivity Disorder (ADHD) with mood and anxiety disorders can be more expressive than expected.

Regarding persistent Attention Deficit Hyperactivity Disorder (ADHD) in adulthood, the presence of comorbidities is more prevalent among this population. Thus, indicating that comorbidities may be risk factors for symptom resistance (Barkley and Fischer, 2018). Depression and anxiety have also been cited in studies of Barkley and Fischer (2018) and Emilsson *et al.* (2011) as frequent comorbidities in adults with Attention Deficit Hyperactivity Disorder (ADHD) and their presence are important predictors of symptom persistence (da Silva *et al.*, 2023).

Multidisciplinary Treatment

In 57.14% of the studies analyzed, there is no mention of whether there was treatment multidisciplinary approach for Attention Deficit Hyperactivity Disorder (ADHD) (Rosemary and da Silva, 2022; Farias *et al.*, 2023; Martinez *et al.*, 2024; Reis and de Carmo, 2008). On the other hand, 42.86% of the studies indicated the presence of team monitoring multidisciplinary, with neurologist, psychologist and psychopedagogue being the most common specialties cited (Biscaia and Kelmo, 2013; Nogueira and Bueno, 2024; Cerqueira and de Sena, 2020). Among of these, 33.33% reported that treatment with a psychiatrist was focused exclusively on symptoms of depression (Biscaia and Kelmo, 2013).

Varrasi *et al.* (2023) highlight that multidisciplinary support, including psychotherapy and pharmacological interventions, is fundamental for the treatment of Attention Deficit Disorder



Attention Deficit Hyperactivity Disorder (ADHD). Combined treatment, which combines medication and behavioral interventions, is especially important when there are associated symptoms, such as anxiety, depression, deficits in social skills, difficulties in relationships with family members and poor academic performance, contributing to more effective management of painting.

In Cerqueira and de Sena (2020), 15.2% of participants started psychotherapy by the age of 10 years of age, 33% started between the ages of 11 and 25, 27.3% of 26 to 40 years old, 9.1% between 41 and 50 years old and, finally, 15% started the treatment above 50 years of age.

In the results found among the 7 articles analyzed, there were only two participants who reported receiving cognitive behavioral therapy. Both reported benefits in the development of coping skills and self-control (Biscaia and Kelmo, 2013; Reis and de Carmargo, 2008). The other articles did not present information about the use of CBT in the treatment of participants, which is in accordance with evidence that the cognitive behavioral approach (CBT) has been shown to reduce core symptoms of Attention Deficit Hyperactivity Disorder (ADHD), such as also the ability to improve comorbidities and social and emotional functioning of individuals. These improvements were maintained and increased even three months after the end of therapy, which may suggest a lasting effect (Emilsson *et al.*, 2011).

Psychoeducation

None of the articles analyzed clearly mention whether there was psychoeducation in the time of diagnosis or during psychotherapy, however different reports have been reported about coping strategies used by participants to deal with symptoms of Attention Deficit Hyperactivity Disorder (ADHD), such as: partner support, planning and organization, relaxation and meditation techniques, use of technology and structured study strategies (Biscaia and Kelmo, 2013; Nogueira and Bueno, 2024; Reis and De Carmo, 2008).

These strategies, although not formally configured as psychoeducation, demonstrate an attempt at self-regulation and adaptation to the difficulties faced by adults with ADHD. According to Cunha and Rocha (2018), psychoeducation is a tool essential in the treatment of the disorder, as it helps the patient understand the functioning of Attention Deficit Hyperactivity Disorder (ADHD), recognize your symptoms, identify patterns of behavior and develop more effective ways of dealing with the challenges of the disorder.



The longitudinal study carried out by Swanson *et al.* (2017) showed that, although the drug treatment has positive effects in the short term, it did not guarantee the complete remission of symptoms in adulthood. This reinforces the need to include additional therapeutic strategies to the use of drugs, such as psychoeducation, in order to offer more lasting and effective support. The persistence of symptoms over time suggests that interventions that promote patient autonomy, through information, awareness and practical skills are fundamental to the success of treatment.

The absence of psychoeducation in the studies analyzed may indicate a gap in therapeutic approach offered to adults with Attention Deficit Disorder and Hyperactivity (ADHD), which can compromise adherence to treatment and the effectiveness of interventions. Furthermore, by not receiving adequate guidance, many end up resorting to trial and error strategies, which can be exhausting and ineffective.

Attention Deficit Hyperactivity Disorder (ADHD) Subtype

Regarding the subtype of Attention Deficit Hyperactivity Disorder, only in Cerqueira and de Sena (2020) there is this information for the adults participating in the research, being 32 individuals (53.3%) combined, 18 (30%) inattentive and 10 (16.7%) hyperactive/impulsive. These findings are in line with what is indicated in the DSM-5 (APA, 2023), which describes the combined subtype as the most prevalently diagnosed in adult population, as it involves symptoms of both inattention and hyperactivity/impulsivity, which makes it more noticeable throughout life.

The high prevalence of the combined subtype may be associated with the fact that individuals who exhibit both inattention and impulsivity and hyperactivity tend to demonstrate more evident symptoms in different contexts of adult life, such as in work and interpersonal relationships. As highlighted by Barkley (2000), adults with Attention Deficit Hyperactivity Disorder (ADHD) combined subtype often have greater difficulties in emotional self-regulation and control impulsivity, factors that can directly impact functionality and quality of life.

On the other hand, the inattentive subtype, despite representing 30% of the cases in this study, may be underdiagnosed, especially in women. Symptoms of the inattentive subtype tend to be less disruptive and therefore less recognized by teachers and health professionals during childhood, which can lead to diagnosis only later in life adult (Biederman *et al.*, 2006).



The hyperactive/impulsive subtype was the least prevalent among participants (16.7%), which is in line with data from the APA (2023), which indicate that hyperactivity tends to decrease with age, while symptoms of inattention and impulsivity may persist throughout life.

Thus, the findings reinforce the need for a careful evaluation of ADHD in adults, considering that different subtypes may present specific challenges and demand differentiated therapeutic approaches. Another important point is that the sub-representation of the inattentive subtype among those diagnosed highlights the importance of early identification strategies, especially in historically less well-off populations diagnosed, such as women and individuals with no history of behavioral problems in childhood.

Genetics

The severity of ADHD was greater for children who had parents with the same ADHD disorder when compared to those who had parents without ADHD. Also, ADHD paternal was associated with a higher probability of the combined subtype and, in children of the males, a decrease in the inattentive subtype (Cerqueira and de Sena, 2020).

These findings are in line with the data presented by Faraone and Larsson (2019), who analyzed studies with twins and identified that Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) is one of the most heritable psychiatric disorders, with estimated heritability between 70% and 80%. Heritability refers to the proportion of variance of a trait that can be explained by genetic factors within a population.

In this way, the effects of a shared family environment are considered minimum as determining factors for the development of Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD) (da Silva *et al.*, 2023). However, when the focus is on Persistent Attention Deficit Hyperactivity Disorder (ADHD), not observed only a high genetic predisposition, but also the influence of environmental factors to which the individual has been exposed throughout life (Rohde *et al.*, 2019).

5. FINAL CONSIDERATIONS

This work aimed to understand the factors that influence the persistence of Attention Deficit Hyperactivity Disorder (ADHD) symptoms in adult life. Through the analysis of seven scientific articles published between 2008 and 2024, it was possible to achieve this goal by identifying genetic, neurobiological, and

behavioral and psychosocial factors that contribute to the continuity of symptoms over time over time, even after diagnosis and the start of therapeutic interventions.

It was possible to achieve the specific objectives proposed, including: identifying the main predictors associated with the persistence of symptoms, understand the relationship between comorbidities and persistence of the condition and analyze the therapeutic approach aimed at adults with Attention Deficit Hyperactivity Disorder (ADHD). The results pointed out a strong influence of heredity and dopaminergic dysfunction, in addition to reveal the presence of comorbidities such as depression and anxiety in adulthood. Also low adherence to treatment and the scarce presence of interventions became evident formal psychotherapeutic measures in the studies analyzed.

The study contributes to the field of psychology and mental health by gathering data updated that expand the understanding of Attention Deficit Disorder and Persistent hyperactivity disorder (ADHD) in adulthood, revealing relevant gaps in practice clinical. The absence of psychoeducation as a formal strategy in the articles analyzed highlighted the need to expand approaches beyond pharmacotherapy. The literature highlights that psychoeducational interventions promote greater understanding of the disorder, reduction of stigma and better adherence to treatment. Therefore, it is recommended that services mental health include psychoeducational programs as part of the monitoring of adults with Attention Deficit Hyperactivity Disorder (ADHD), promoting greater understanding of the disorder, reducing stigma and improving quality of life. systematization of findings also reinforces the importance of multidisciplinary care and individualization of therapeutic strategies.

Among the limitations of the work, the temporal and linguistic restrictions of the articles included, limited to the period 2008 to 2024 and to the Portuguese language. This delimitation may have excluded relevant studies published in other languages or outside the bases used. Furthermore, as this is an exploratory research and based on in a bibliographic review, it was not possible to delve into quantitative data or perform analyses comparisons between interventions. Another difficulty faced was the scarcity of studies that directly address the experience of adults diagnosed with Attention Deficit Disorder Attention Deficit Hyperactivity Disorder (ADHD), as well as the lack of standardized data on the use of strategies such as psychoeducation, which made it difficult to compare the articles analyzed. It is also recognized that the data organization and analysis stage required longer than expected, especially in selecting studies that really met to the proposed criteria.

For future research, it is suggested to expand the methodological scope with the inclusion of international studies, empirical investigations with diagnosed adults and analysis of effectiveness of specific therapeutic strategies, such as Cognitive Behavioral Therapy and psychoeducation.

It is also important that research explores the impact of late diagnosis in different social groups, especially in women and adults who did not present externalizing behaviors in childhood, given the discrepancy between the studies analyzed and the literature and the scarcity of studies on the topic with adults. Furthermore, the range can be expanded age of participants, including individuals over 60 years old, in order to investigate how the Attention Deficit Hyperactivity Disorder (ADHD) manifests and evolves in phases more advanced aspects of life, which can contribute to a more comprehensive understanding of challenges faced by this population, as well as to investigate possible relationships between Attention Deficit Hyperactivity Disorder (ADHD) and other common conditions in old age.

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