

## Weaknesses and opportunities in the management of Attention Deficit Hyperactivity Disorder in adults in primary care – integrative review

*Fragilidades e oportunidades no manejo do Transtorno de Déficit de Atenção e Hiperatividade em adultos na atenção primária – revisão integrativa*

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### ABSTRACT

Attention deficit/hyperactivity disorder (ADHD) is a neurodevelopmental pathology that usually manifests in childhood and can continue into adulthood, with significant personal and labor losses. The aim of this review is to make a scientific contribution to improve primary care services for adults with ADHD. This article presents an integrative literature review, with searches carried out in the PUBMED and SciELO databases. Complete articles in Portuguese, English and Spanish from the last 10 years were included, and those that were not relevant to the theme or that did not fit the eligibility criteria were excluded. Eighteen articles were included, with different study designs, the results of which showed the difficulties of access to primary care, significant variation in clinical protocols between child/adult services, stigmas about the pathology and poor adherence to treatment as main weaknesses. The opportunities highlighted are the strengthening of the doctor-patient bond, improvements in the structure of services, continuous education for health professionals, psychoeducation for the community, and strengthening the sense of co-responsibility and autonomy of patients. Although there are already theoretical models on the transition of care from childhood and adolescence to adulthood in patients with ADHD, more research is needed to evaluate the role of each of the therapeutic opportunities in the long term.

**Keywords:** ADHD; Adult; Primary care, Integrative review.

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## RESUMO

O transtorno de déficit de atenção/hiperatividade (TDAH) é uma patologia do neurodesenvolvimento que costuma se manifestar na infância e pode continuar na fase adulta, com prejuízos pessoais e laborativos importantes. O objetivo desta revisão é a contribuição científica na melhoria dos serviços da atenção básica aos adultos com TDAH. O presente artigo traz uma revisão integrativa da literatura, com buscas realizadas nas bases de dados PUBMED e SciELO. Foram incluídos artigos completos nos idiomas português, inglês e espanhol dos últimos 10 anos, e excluídos aqueles não apresentavam relevância à temática ou que não se enquadravam nos critérios de elegibilidade. Foram incluídos 18 artigos, com delineamentos de estudos diversos, cujos resultados demonstraram como principais fragilidades as dificuldades de acesso à atenção básica, variação expressiva nos protocolos clínicos entre os serviços infantis/adulto, estigmas sobre a patologia e má adesão ao tratamento. As oportunidades destacadas são o estreitamento do vínculo médico-paciente, melhorias na estrutura dos serviços, educação contínua para profissionais da saúde, psicoeducação para a comunidade, fortificação de senso de corresponsabilização e autonomia dos pacientes. Apesar de já existirem modelos teóricos sobre a transição do cuidado da fase infantil e adolescência para a adulta em pacientes com TDAH, mais pesquisas são necessárias para avaliar o papel de cada uma das oportunidades terapêuticas no longo prazo.

**Palavras-chave:** TDAH; Adulto; Atenção primária; Revisão integrativa.

## INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental pathology involving alterations in the early stages of brain development, with repercussions in the areas of the basal ganglia, prefrontal lobe and cerebellum in their dopaminergic and noradrenergic pathways. Imaging studies demonstrate a volumetric reduction of these affected areas, resulting in an overall brain decrease of about 3-4% and reduced striatal perfusion<sup>1-3</sup>.

It is a pathology that usually manifests itself in childhood, and its diagnosis is often difficult before the age of 4 and the beginning of school years, when increased demands highlight the difficulties related to the pathology. It has strong heritability, reaching 77% in studies with monozygotic twins, attributed to a wide genetic polymorphism with varied environmental factors such as prematurity, resulting, finally, in a complex and diverse phenotype<sup>1,4</sup>.

The American Psychiatric Association in its 5<sup>th</sup> revised edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR), released in 2022, presents the references and criteria on attention deficit/hyperactivity disorder, keeping them in the chapter on neurodevelopmental

disorders, as in the previous edition. It is a reference for clinicians around the world so that their actions can be supported, mitigating differences and unifying conduct<sup>1</sup>.

The characteristics of the inattentive pole highlighted in this manual are grouped into 9, namely: difficulties in paying attention, causing errors; difficulties in maintaining focus on tasks and activities; appearing not to listen when called; difficulties in completing activities and instructions to the end; difficulties in managing tasks and their organization; reluctance and contempt in prolonged activities; loss of important goals; easy distractibility and forgetfulness in ordinary activities. The characteristics of the hyperactive and impulsive pole are also grouped into 9 categories: hyperkinesia of limbs and trunk; difficulties in remaining seated in necessary situations; feeling of restlessness or tachykinesia itself; inability to engage in activities in a calm way; difficulties in remaining still; tachylalia; difficulties in waiting for questions to finish; difficulties in waiting for schedules; tendency to interrupt and intrude in other people's affairs<sup>1</sup>.

According to the DSM-5-TR, the diagnosis of this condition is a persistent clinical picture of either inattention

and/or hyperactivity and impulsivity with profound functional and developmental repercussions. Within the 9 characteristics listed in the manual, at least 6 are required, for at least 6 months, except for only 5 being required in the case of individuals over 17 years-old and adults. Within these symptoms, several must be present before the age of 12, due to this being a typical disease of human neural development. It is also necessary to have impairment in social, academic and/or labor functionality, and causes that better explain the symptoms should be ruled out as differential diagnoses of this condition<sup>1</sup>.

In order to refine this diagnosis, specifiers are used, which delimit characteristics in common regarding the pattern of presentation: combined, predominantly inattentive and predominantly hyperactive/impulsive; regarding its severity: mild, moderate and severe, taking into account the symptoms and their impact on functionality and also regarding its current state as partial remission<sup>1</sup>.

The estimated worldwide prevalence is about 7.2% of children and 2.5% of adults, being more frequent in males in a ratio of 2:1 in children, and decreasing its difference to 1.6:1 in adults<sup>1,5</sup>. Within the children affected by ADHD, about 15% become adults with full symptoms, about 65% reach adulthood with partial remission and only the rest remit completely<sup>6</sup>.

Adults with this condition may present significant losses in the most varied spheres such as in personal life, as well as academic and professional performance, with possible development of comorbidities such as substance abuse, mood disorders, anxiety disorders, difficulties in interpersonal relationships, low self-esteem, increased incidence of automobile accidents and injuries and also an increased incidence of divorce, occupational and academic failure, and may even culminate in cases of suicide.<sup>1,3</sup>

Treatment is individualized and multidisciplinary, with a focus on cognitive behavioral therapy and, if necessary, psychopharmacological treatment with gold standard drugs such as presynaptic noradrenaline and dopamine reuptake blockers such as methylphenidate and lisdexamfetamine, and second-line drugs such as atomoxetine, guanfacine, clonidine and even bupropion and imipramine<sup>3</sup>.

Although it is a neurodevelopmental disease, with clear damage during childhood and adolescence, many patients do not get a diagnosis in this age group, and their condition is only elucidated in adulthood. Thus, this diagnosis should not be ruled out in adult patients just because they have not yet been diagnosed, since the clinical repercussions in this age group are significant and the benefits of therapy are possible and transformative in the lives of these people, given the great losses observed when untreated, even if they occur late<sup>1,3</sup>.

In our country, Brazil, primary health care is the main gateway to the public health system, respecting its essential attributes such as accessibility, universality, integrality and equity. It is believed that about 80% of demands can be solved at this level of care. In addition to reducing costs and

facilitating access, direct care of the main health conditions and diseases with general practitioners leads to more appropriate care with better results and the possibility of longitudinal, comprehensive treatment that is close to the users' reality<sup>7,8</sup>.

The purpose of this integrative review article is to investigate and synthesize how the continuity of care for children and adolescents who develop into adults with ADHD is carried out in primary care, highlighting its weaknesses and potentials with a view to maximize this care, by providing subsidies for public health improvement and the creation of policies that can be planned and rethought.

In addition to benefiting patients and caregivers in improving the health system, the aim of this review is to make a scientific contribution to improving primary care services for adults with ADHD, since there is a knowledge gap to be explored, with consequences for current treatment, which is carried out empirically.

## METHODS

The article proposes an integrative literature review of a descriptive character, as it is an instrument of great importance in the so-called "Evidence Based Practice" - EBP, with a broad approach of studies allowing a range of diverse inquiry, whether exploratory or non-exploratory, and also for allowing to synthesize knowledge in a way that can be used in health practice<sup>9</sup>.

The creation process respected the stages of an integrative review, successively, namely: elaboration of the guiding question, search or sampling in the scientific literature, data collection, critical analysis of the included studies, discussion of the results, and finally, presentation of the review<sup>9</sup>.

The strategy of formulating questions was based on the acronym "PICO", which refers to "P" for population (adults with ADHD), "I" for intervention (continuity of care in primary care), "C" for comparison (in relation to child/adolescent treatment) and "O" for "outcome" (fragilities and opportunities). Thus, the following guiding question was elaborated: What are the weaknesses and opportunities of continuity of care in primary care for adult patients already diagnosed with ADHD<sup>10</sup>?

The search was carried out through the "PubMed" platform of the "National Library of Medicine" linked to the North American agency "National Institutes of Health" whose information database includes the "Medical Literature Analysis and Retrieval System Online" (MEDLINE). The electronic information base "Scientific Electronic Library Online" (SciELO) was also used.

Data identification and collection took place between April and May 2023, through the keywords, according to the descriptors of the "Medical Subject Headings" (MeSH), namely: "ADHD", "adult" and "primary care". The Boolean operator "AND" was used between the descriptors due to the importance of the presence and integration of the words in the search.

Only complete articles in Portuguese, English and Spanish, published in the last 10 years, covering all types of study, with the exception of books and documents, were included.

Articles that were not among the eligibility criteria, languages and period selected and that were not relevant to the theme were excluded. The selection was conducted by the responsible researcher, through a systematization of successive steps such as analysis of the title of the article, critical reading of its abstract and full reading of the selected work.

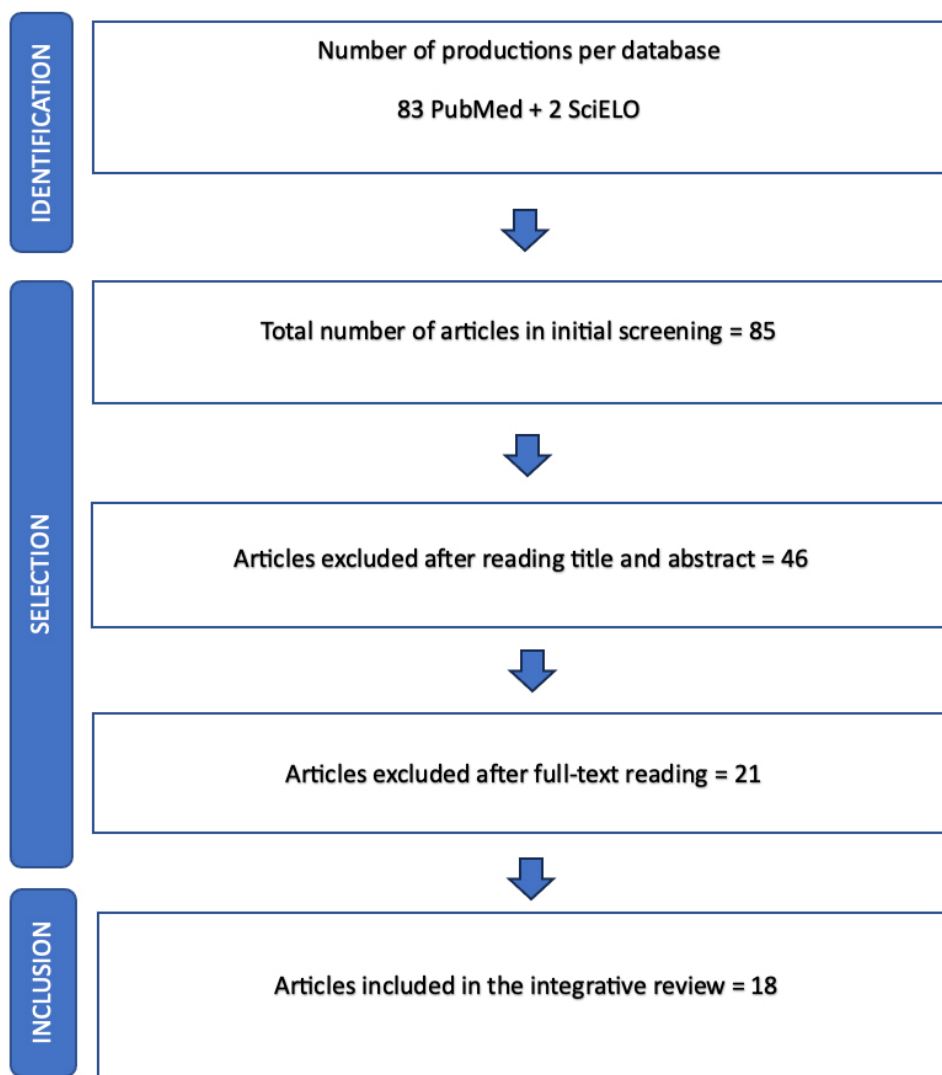
The selected studies were cataloged in a Microsoft Excel 2016 spreadsheet, containing the following information: author, year of publication, title of the work, study design, study objectives and results found. This information was grouped in a way that contributed to the analysis, discussion and synthesis of the results obtained.

## RESULTS

We obtained 83 articles from PubMed and 2 articles from SciELO. There were no duplicate articles, maintaining the number of 85 articles in the initial identification phase. No articles were found in Portuguese, 84 were in English and 1 in Spanish (Figure 1).

The main reasons for the exclusion of articles during the reading phase of title, abstract and reading in its entirety were: emphasis on other psychiatric pathologies such as Autism Spectrum Disorder and Anxiety Disorders, child and adolescent population and purely pharmacological approach and / or specific therapies that are beyond the scope of this article.

Following the systematization of analysis in steps and the criteria of originality, quality and relevance to the proposed theme of this review, 18 articles were selected, all in English, with publication dates in international journals within the range of 2013 to 2020 (Table 1).



**Figure 1.** Search systematization diagram.

**Source:** Prepared by authors.

**Table 1.** Information from selected articles.

Year	Authors	Title	Type of study	Objectives	Results
2017	Jason M. Fogler; David Burke; James Lynch; William J. Barbares; Eugenia Chan.	Topical Review: Transitional Services for Teens and Young Adults With Attention-Deficit Hyperactivity Disorder: A Process Map and Proposed Model to Overcoming Barriers to Care	Systematic review	Analyze the main topics of social vulnerability and problems faced by young adults with ADHD and propose solutions for the transition of care to adulthood.	Solutions are proposed such as staggering responsibilities, improving doctor-patient relationship, family and professional support, help to navigate the education system, ensuring involvement in health by the young population through technology. It emphasizes the need for further studies.
2020	Lisanne Scholza; Jana Werlea; Alexandra Philipsenb; Marcel Schulzeb; Julien Collonges; Jochen Gensichena.	Effects and feasibility of psychological interventions to reduce inattention symptoms in adults with ADHD: a systematic review	Systematic review	Identify psychological interventions that decrease ADHD symptoms in young adult patients, such as neurofeedback, cognitive training, behavioral therapy, coaching and psychoeducation. The secondary objective is to assess feasibility aspects.	In several studies, several categories were rated at high risk of bias due to self-report, unblinded outcomes and raters, and inaccurate descriptions of randomization. It concludes that the review focused on symptoms of inattention rather than general symptoms of ADHD, with behavioral therapy being the effective psychological intervention in reducing this symptom. Shorter interventions seem to favor feasibility, as well as from an economic point of view.
2020	Hsiang Huang; Heather Huang; Margaret Spotswood; Nassir Ghaemi.	Approach to Evaluating and Managing Adult Attention-Deficit/Hyperactivity Disorder in Primary Care	Systematic review	Provide a pragmatic clinical approach in the diagnostic assessment and treatment of ADHD in adults in the primary care setting.	It proposes a review of the diagnostic criteria for ADHD in adults through the DSM-V; emphasizes the clinical character of the diagnosis and brings resources such as scales and therapeutic possibilities. It concludes on the increase in the request for evaluation in primary care in cases of ADHD in adults.
2016	Tamás Treuer; Kwok Ling Phyllis Chan; Bung Nyun Kim; Ganesh Kunjithapatham; Dora Wynchank; Bengi Semerci; William Montgomery; Diego Novick; Héctor Duenas.	Lost in transition: A review of the unmet need of patients with attention deficit/hyperactivity disorder transitioning to adulthood	Systematic review	Identify the main problems of patients with ADHD in the transition to adulthood; review the clinical picture and country-specific approaches to the management of the transition to adulthood; discuss the challenges faced by clinicians and patients about the beginning of ADHD treatment; assess the consequences of ADHD.	It concludes that this period of transition from ADHD to adulthood is an understudied subject. Studies are suggested on the differences between actual practice and that recommended in manuals, and the impact on patients, family members and health professionals.

Year	Authors	Title	Type of study	Objectives	Results
2020	Jesse Elliott; Amy Johnston; Don Huserau; Shannon E. Kelly; Caroline Eagles; Alice Charach; Shu-Ching Hsieh; Zemin Bai; Alomgir Hossain; Becky Skidmore; Eva Tsakonas; Dagnara Chojecki; Muhammad Mamdani; George A. Wells.	Pharmacologic treatment of attention deficit hyperactivity disorder in adults: A systematic review and network meta-analysis	Systematic review and meta-analysis	Evaluate the relative effects of individual pharmacological treatments for adults with ADHD in relation to clinical response, quality of life, performance, health service seeking, among others.	Results show that pharmacotherapy was more effective than placebo in clinical response, quality of life, performance. Among the pharmacotherapies, atomoxetine was associated with better clinical response. However, in low risk of bias studies due to blinding, there was no significant difference between placebo and pharmacotherapy. Increased discontinuation was observed with short-term treatment with osmotic-release methylphenidate.
2017	Rekesh Jain; Saundra Jain; Brendan Montano.	Addressing diagnosis and treatment gaps in adults with attention-deficit/hyperactivity disorder	Systematic review	Describe the negative impact of ADHD in adults on multiple functional domains, its diagnostic criteria, clinical features, assessment tools and clinical interviews to aid diagnosis, as well as treatment options.	The diagnosis of ADHD in adulthood can be difficult due to overlap with psychiatric comorbidities. The longitudinal and family interview provides more information about the diagnosis and differentiation between ADHD and other psychiatric comorbidities. Potential cardiovascular and addiction risks promoted by drugs should be considered during their prescription.
2016	Joel L. Young; David W. Goodman.	Adult Attention-deficit/hyperactivity disorder diagnosis, management and treatment in the DSM-5 era	Systematic review	Increase knowledge about ADHD in adulthood in primary care in order to promote appropriate management of the condition.	Despite the increased prevalence of ADHD in adulthood, there is still underdiagnosis and inappropriate treatment in the United States of America. The publication of the DSM-V clarified the diagnostic criteria for this disorder in adulthood, however, the management of the transition phase from childhood to adulthood is still deficient.
2016	Deborah Antai-Otong; Michele L. Zimmerman.	Treatment Approaches to Attention Deficit Hyperactivity Disorder	Systematic review	Gain an overview of the main features of ADHD and the main causal factors. Emphasize the importance of collecting data from the patient himself. Discuss the importance of the nursing team in the identification, monitoring and knowledge of the disorder.	Multimodal treatment shows more promising results for patients with ADHD. Psychotherapeutic approach and psychosocial interventions (through sport, religion, community activities) promote greater patient knowledge of their own conditions and support social functions.



Year	Authors	Title	Type of study	Objectives	Results
2018	B. French; K. Sayal; D. Daley.	Barriers and facilitators to understanding of ADHD in primary care: a mixed-method systematic review	Systematic review	Establish the barriers and facilitators in relation to attitudes, beliefs and experiences of ADHD diagnosis and treatment in primary care.	The barriers identified were similar internationally. The following were identified: need for education, misconceptions and stigmas, lack of multidisciplinary approach, and restrictions in recognition, management and treatment. The presence of shared and integrated care reflected a better outcome in relation to the identification and management of the disorder.
2016	Johanne Telnes Instranes; Kari Klungsoyr; Anne Halmøy; Ole Bernt Faste; Jan Haavik.	Adult ADHD and Comorbid Somatic Disease: A Systematic Literature Review	Systematic review	This review aims to link ADHD with somatic diseases such as obesity, sleep, migraine, celiac disease, asthma, among others.	There was a large association between ADHD and increased risk of developing obesity, sleep disorders, asthma, migraine, and celiac disease. Less clear associations were found for enuresis, restless leg syndrome, epilepsy, fibromyalgia, systemic lupus erythematosus and atopic dermatitis.
2014	Alice R. Mao; Robert L. Findling.	Comorbidities in Adult Attention-Deficit/Hyperactivity Disorder: A Practical Guide to Diagnosis in Primary Care	Systematic review	Discuss the possible comorbidities with ADHD in adults, such as anxiety, mood disorder, substance use, personality disorder (antisocial and borderline). Suggest ways to recognize these comorbidities and distinguish them from ADHD.	A careful clinical history remains the key element in recognizing ADHD and classifying symptoms, possible comorbidities and treatment planning. It notes that establishing guidelines assists in diagnosis.
2015	Greg Mattingly; Larry Culppepperb; Thomas Babcock; Valerie Arnold.	Aiming for remission in adults with attention-deficit/hyperactivity disorder: The primary care goal	Systematic review	Provide a practical definition of remission in adults with ADHD from symptom reduction and not necessarily cure. It suggests a multidisciplinary approach to achieve greater patient functionality.	Clinical experiences suggest that patients may go in and out of remission over time, requiring ongoing care in order to maintain functional improvement and alleviate symptoms. Treatment of ADHD aims not only to reduce symptoms but to restore maximum functionality.
2017	Mohammed A. Rashida; Sophie Lovickb; Nadia R. Llanwarmac.	Medication-taking experiences in attention deficit hyperactivity disorder: a systematic review	Systematic review	Address individual studies on the experience of medication use in ADHD in order to guide clinicians to share effective treatment decisions.	Shared decision making is a well-established approach to improve quality and adherence of care. It involves professionals providing information about treatment and values so that the patient is aware of the best individual treatment option.

Year	Authors	Title	Type of study	Objectives	Results
2018	Margaret Lanca.	Integration of Neuropsychology in Primary Care	Case report	Describe two case reports conducted in two primary care clinics, clarifying the process of integrating neuropsychology with primary care.	With the integration of primary care and neuro-psychology, patients receive a variety of cognitive assessments (e.g., screens, brief neuropsychological evaluation, treatment recommendations) based on a stepped care model that can more effectively diagnose cognitive disorders/problems and assist with treatment.
2016	Alison S. Poulton.	Transition in ADHD: attention to the lifespan	Original article	Describe and address the evidence and effectiveness of models of care for people with ADHD, particularly in the transition period between childhood and adulthood.	In the transition phase, the clinical team must understand and be willing to get to know the needs and particularities of the young person with ADHD. It suggests a model for realities with limited resources as a specialized service for individuals of all ages with ADHD, throughout their lives.
2015	L. Reale; M. Bonati.	Mental disorders and transition to adult mental health services: A scoping review	Systematic review	Summarize evidence of the transition from childhood to adulthood in mental health services.	It refers to the need for studies to identify and evaluate optimal service models with systematized transition protocols for patients with mental disorders requiring longitudinal treatment in adult mental services.
2014	Elias Sankis.	Addressing Attention-Deficit/Hyperactivity Disorder in the Workplace	Systematic review	Describe how ADHD symptoms affect workplace behaviors, their effects on employment and job performance.	ADHD has economic consequences such as increased unemployment, disagreement with colleagues, increased number of abstentions, disorganization, procrastination, among other losses. In order to alleviate work performance problems, a multimodal approach should be taken.
2013	K. D. Swift; K. Sayal; C. Hollis.	ADHD and transitions to adult mental health services: a scoping review	Systematic review	Addressing the difficulties of transitioning young people with ADHD into adult mental health services.	Studies on ADHD transition from childhood to adulthood are limited, due to the difficulties of transition from services that have different rules, as well as difficulty in adhering to treatment (both due to the disorganization caused by ADHD itself and the lack of parental support at this stage) and lack of specialized services in the pathology.

**Source:** Prepared by authors.



## DISCUSSION

The transition from child and adolescent life to adulthood in itself involves major biopsychosocial challenges that can be amplified by the burden of difficulties imposed by existing pathologies, such as ADHD and its comorbidities. Although in recent years there has been an increase in recognition and awareness of the pathology, diagnostic difficulties and treatment interruptions are frequent<sup>11-16</sup>.

In this period, the symptoms that are sustained can be harmful to professional and family life with frequent forgetfulness of appointments and deadlines, impairment in the functioning of demands, inattention in activities that require focus, feelings of frustration about one's own organizational capacity, being more prone to risk behaviors, discontinuing the use of medication, having lower employment and income prospects and using psychoactive substances. They are also subject to comorbid somatic pathologies such as obesity and sleep disorders and psychiatric pathologies such as anxiety and depressive disorders. Symptoms of hyperactivity tend to subside, but should not be neglected<sup>11-15,17-21</sup>.

Among the weaknesses identified that hinder the transition from caring for children and adolescents with ADHD to adulthood, we can highlight the difficulties in accessing the health system, whether these stem from individual vulnerabilities aggravated by the pathology, such as functional executive deficit, multiple comorbidities, greater risk-taking, or those related to the health system, such as precarious geographical access, limited infrastructure and human resources. These are important challenges that we know all too well, and that end up being a major barrier to the success of the therapeutic alliance<sup>11,16,21-23</sup>.

The prioritization of emergency care in emergency services is an aggravation of an inefficient health system, which, due to the failure of longitudinal monitoring in primary care, means that patients are faced with transversal and segmented care<sup>11,16,21-23</sup>.

Emphasizing care based solely on active seeking after impulsive and risky behavior does not change the prognosis of these patients who, if treated using preventive health practices, might not have negative outcomes<sup>11,16,21-23</sup>.

In addition, the hierarchy and arrangement of the service structures persist, which can behave in a complex manner, with barriers to access services, rules established in an arbitrary non-consensual manner, and expressive variation in protocols between child and adult health services<sup>11,16,21-23</sup>.

Another obstacle to this transition is the persistence of the culture that ADHD is only related to children and adolescents, incompatible with the "adult clinic", due to the skepticism and unpreparedness of some professionals about the persistence of this condition in adulthood, despite the numerous scientific evidence that proves the opposite. Psychiatric comorbidities that are extremely prevalent in this population can also mask and take the focus off ADHD therapy, blaming signs and symptoms on other isolated diagnoses<sup>11,13,14,18,22,24,25</sup>.

In the current model of primary care, in which patient demands end up being greater than the available supply of

labor, primary care professionals increasingly find themselves with a greater number of tasks at work and less time for each patient, making it difficult for effective care based on providing quality scientific evidence<sup>11,22</sup>.

Adherence to treatment is also a challenge at this stage, with potential losses due to the high cost of medication, deficits on psychoeducation across time, impairment of the doctor-patient relationship, reduced number of referrals of patients in transition to adulthood in appropriate primary care and the lack of protocols adapted to each society, making the patient feel distant and excluded from being an active element in their own care<sup>12,24</sup>.

Thus, strategies that can be adopted to forward the success of the treatment are linked to the strengthening of the doctor-patient relationship, which must be permeated by trust, mutual respect and true and open dialogue, and to the autonomy and effective use of community resources, such as the creation of teams, focused on the transition and reference of care in adulthood; in addition to the use of technology, such as applications to schedule appointments, creating patient information portals, online therapies, health teaching videoconferences, among others<sup>11</sup>.

A possible alternative is the proposal of a model of escalating responsibilities that progress as the patient's age increases, promoting behavioral changes and a sense of empowerment and commitment. These changes begin with the child knowing the name of the medication used, and increase successively until adulthood, with the patient being able to be responsible for his medication and the paths of his treatment<sup>11</sup>.

The role of the professional at the primary health level is crucial, from the recognition and prompt diagnosis, to the initiation and monitoring of their treatment, promoting a multidisciplinary approach and greater reduction of symptoms with the preservation of functionality in an active, social and healthy life. This process is made closely with the patient, ensuring that the patient has the correct information, maintaining motivation, co-responsibility and commitment<sup>18-20,26,27</sup>.

Continuing education of professionals is also an opportunity that cannot be neglected. Access to diagnostic manuals and the possibility of using useful tools such as screening scales for ADHD in adults such as the "Wender Utah Rating Scale", "Conner's adult ADHD Rating Scale", and the widespread "Adult ADHD self-report scale", whose acronym is ASRS and has a negative predictive value of 98%, should be emphasized. Neuropsychological tests are also important to define executive dysfunction, although these resources should assist clinicians and not be an obstacle to the diagnosis – a clinical picture is after all imperative. Initiatives that improve diagnosis and therapeutic management, in addition to increasing service quality, can lead to a more efficient use of health services.<sup>12-14,22,23,25,28</sup>

## CONCLUSION

Within the scope of public health policies, prioritizing the continued education of professionals on ADHD,

qualifying care, associated with the valorization of primary care and its workforce, are fundamental steps to strengthen the entire health system, with benefits to patients and society as a whole.

When developing an individualized therapeutic plan for adults, it is important to recognize the demands of adult life in its most varied areas and how symptoms can be detrimental to their success, conducting treatment in a comprehensive and humanized way, avoiding making the mistakes discussed previously.

In addition, another error associated with the diagnosis of ADHD is related to hyperdiagnosis, that is, patients without the condition are misdiagnosed due to the disregard and inattention of health professionals to the criteria proposed in the "Statistical Diagnostic Manual of Mental Disorders" of the American Psychiatric Association. This causes an increase in the number of patients who are misdiagnosed and is linked to cases of hypermedication with its subsequent losses.

Access to diagnosis, pharmacological therapy, psychotherapy and interdisciplinary support are fundamental for the successful care of adult patients with ADHD and demonstrate the importance of the cohesive multiprofessional team, as well as close and longitudinal care.

There is a vacuum of knowledge to be compiled, identified as stemming from the lack of unified, consensual and tested protocols on the treatment of ADHD in the adult population in primary care, based on the technical rigor of evidence-based practice in the area of mental health.

Although this study contributes to the scientific literature in the area, it highlights the limitations of the methodology used and the number of databases used.

Theoretical models are used based on empiricism about the transition from child and adolescent to adult care in the context of ADHD pathology, with strategies that make it possible to improve care, avoiding greater trauma and iatrogeny during the process. However, more research is needed to understand and optimize these mechanisms, in order to present more clearly the real role of each of the therapeutic opportunities in the long-term clinical outcome.

## AUTHORS' CONTRIBUTIONS

Author contributions are structured according to the taxonomy (CRediT) described below:

*Conceptualization, Data Curation, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft, Writing – Review & Editing:* FOM, NMV, JSC.

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