

ADULT ATTENTION DEFICIT

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ABSTRACT: Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder characterized by difficulties in maintaining attention, impulsiveness and hyperactivity, presenting in childhood and persisting in some cases in adulthood. There are several studies on ADHD in children, however, there is little research on attention deficit focused on adults.

The objective of this research is to carry out a systematic review of the characteristics of the articles in indexed journals on attention deficit in older adults. The search was performed in the databases, advanced search fields were used in two languages: English and Spanish.

The results show that ADHD impacts the quality of life of adults and has a significant impact in the social, work and family areas, determining some symptoms that may occur

KEYWORDS: Brain Areas, Attention Deficit in Adults, Brain Waves, ADHD, Cognitive Behavioral Therapy.

I. INTRODUCTION

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), ADHD is a neurodevelopmental disorder characterized by a pervasive pattern of attention deficit, hyperactivity and/or impulsivity, inappropriate for the age of the person. person who suffers from it and that interferes with its functioning or development (APA, 2014).

The authors Cunill & Castells (2015) point out that the symptoms of Attention Deficit Hyperactivity Disorder are impulsive behaviors, attention difficulties and hyperactivity.

The prevalence of ADHD in adults is 2.8% on average according to a study carried out with people from America, Europe and Asia (Fayyad et al., 2016).

On the other hand, in a systematic review and meta-regression analysis study, the worldwide prevalence of ADHD in children was estimated at around 5% and that of adults at 2.5% (Polanczyk et al., 2014)

On the other hand, different authors have confirmed that the origin of ADHD is related to the dysfunction of the frontal lobe of the brain, specifically in the prefrontal cortex. This is the main brain region responsible for executive function. They also point out that there are alterations in the basal ganglia, which are involved in impulse control and in the inhibition of automatic responses (Grael, 2012).

In adults with ADHD, there is also a high prevalence of psychiatric comorbidity (60-70%). Among the psychiatric disorders that are usually associated with ADHD, anxiety disorders, affective disorders (depression and bipolarity), substance use disorders and personality disorders stand out (Pera, 2017).

For the authors Adler & Shaw (2011); Asherson et al. (2016); Jaimes & Ortiz (2016) adults with ADHD often present difficulties in daily life, which have a significant impact in the social, work, family and couple areas, among others, becoming reasons for consulting specialists in mental health.

According to Jiménez-Arriero et al. (2005) report that adults with ADHD have difficulty organizing and managing daily tasks, frequently forget or suffer sudden mood swings. In addition, it has been described that emotional expression would be affected, since emotions are manifested disproportionately to the situation

that generates them, particularly emotions such as annoyance, anger and/or resentment (Brown, 2011). Other symptoms include a tendency to be distracted by irrelevant thoughts, difficulties listening to and reading instructions, problems remembering childhood events, difficulties waiting and staying alert in unstimulating activities, and difficulties starting tasks (Barkley et al. , 2008). Due to the above, this condition also frequently affects academic development, expressed in higher rates of student dropout and difficulties in finishing their studies (Adler & Shaw, 2011; Barkley et al., 2008).

Methodology:

To carry out the systematic review of the literature, the criteria of the PRISMA model (Preferred Reporting Items for Systematic Reviews and Meta-Analyzes statement) were used, in order to present a critical assessment.

The following research questions are raised:

- Determine the characteristics of attention deficit in adults.
- Examine the behavior of adults against ADHD

Database search and search engines:

Table 1. Keyword search

DeCS (Descriptors in Health Sciences) MeSH (Medical Subject Headings)	MeSH (Medical Subject Headings)
Attention deficit in older adults	Attention deficit in older adults
Cognitive Behavioral Therapy	Cognitive Behavioral Therapy
TDAH	ADHD

Source: Self Made.

The search was carried out in the databases: Scopus, Sciencedirect, Hinari, Dialnet, Scielo, EBSCOhost, Web of Science, PubMed and through Google Scholar, advanced search fields were used in two languages: English and Spanish. The combination of the keywords was used: Attention deficit in older adults, ADHD, Cognitive Behavioral Therapy, Brain Waves, Brain Areas. The importance of the research question is also considered.

Search criteria:

- Nature of its contents: statistical, bibliographic.
- Updating its contents.
- Specialization level.
- Authenticity
- Academically oriented articles were searched.
- Format: textual, multimedia, graphic.
- Languages: English and Spanish.
- Text type: Empirical.
- Year of publication: From 2016 onwards, the last 5 years.
- The inclusion and exclusion criteria applied are argued below:
- Inclusion criteria:
 - Search for empirical articles on ADHD in adults.
 - Published in indexed journals.
 - Evidence-based treatments (EBT).
 - Studies that do not have duplication in databases.
- Exclusion criteria:
 - Search for empirical articles on ADHD in children and/or adolescents.

- Research with pharmacological treatments.
- Studies on disorders such as: moderate or major depressive episode, bipolar I disorder, history of psychotic disorders, generalized anxiety or panic disorder.

Data extraction strategies:

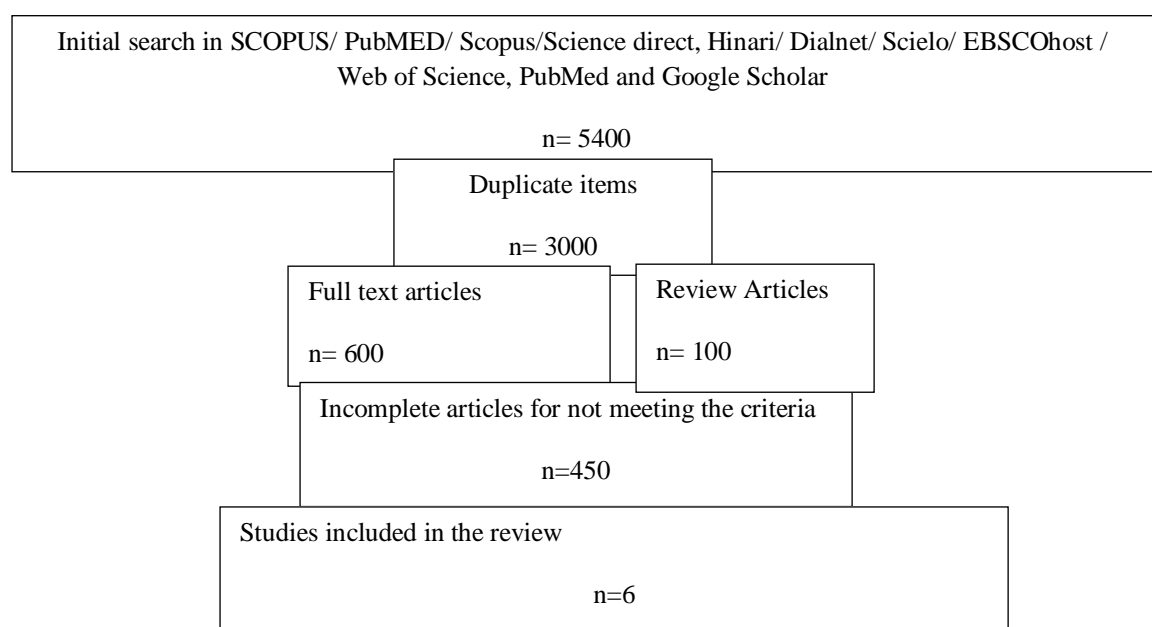
Results were filtered so that only research published from 2016 onwards was shown. Of the total number of articles found in the initial search, which was 59,400 results, duplicates were discarded. Then, a screening was done based on keywords, eliminating unrelated studies, that is, those that focus on children and adolescents. Afterwards, the studies were selected by evaluating their titles and abstracts to verify that their content was adjusted to the objectives of the review, for which inclusion and exclusion criteria were used.

Results:

5,400 articles were identified, 3,000 were discarded due to duplication in information retrieval, 1,000 excluded for being incomplete, 550 systematic review articles. In this sense, the unit of analysis for this study was 100 scientific articles.

Below is detailed:

Figure 1. Selection of Articles



Therapeutic approaches present in the reviewed articles: Cognitive-Behavioral Therapy

Most effective approach to treatment:

- Dialectical Behavior Therapy
- Mindfulness
- Group Interpersonal Therapy

Table 2. Articles reviewed.

YEAR	AUTHORS	SUBJECT	CONCLUSIONS
2017	Dittner, A., Hodsoll, J., Rimes, K., Russell, A., & Chalder, T	Cognitive-behavioural therapy for adult attention-deficit hyperactivity disorder: A proof of concept randomised controlled trial	Adding formula-based CBT to TAU for ADHD significantly improved ADHD symptoms on the Barkley Current Symptom Scale and Social and Occupational Adjustment Scale scores. The adjusted effect sizes (ES) were 1.31 and 0.82, respectively.
2015	Eddy, L., Canu, W., Broman-Fulks, J., & Michael, K.	Brief cognitive behavioral therapy for college students with ADHD: a case series report	The current study tested a brief eight-session cognitive-behavioral protocol in a case series design with four college students with ADHD. Participants completed measures on ADHD symptoms, anxiety, depression, and general impairment in academic, social, and work domains. The findings indicate that the protocol may be useful as a short-term treatment option for college students with ADHD, warranting further study in controlled trials.
2015	Huang, F., Qian, Q., & Wang, Y.	Cognitive behavioral therapy for adults with attention deficit hyperactivity disorder: study protocol for a randomized controlled trial	In conclusion, future studies could explore CBT with booster sessions in a more representative sample with common comorbidities and from various centers and should include a control group to avoid the placebo effect. Such a study could further demonstrate the efficacy of CBT for ADHD in adults in China, and evidence of the efficacy of the booster session would also benefit our clinical practice.
2015	LaCount, P., Hartung, C. M., Shelton, C., Clapp, J., & Clapp, T	Preliminary Evaluation of a Combined Group and Individual Treatment for University Students with Attention Deficit Hyperactivity Disorder	The aim of the present study was to investigate the preliminary effects of a CBT intervention, designed for adults with ADHD (Safren, Perlman, et al., 2005), adapted to a combined group and individual format for college students with ADHD. Participants included undergraduate and graduate students with a final sample consisting of 12 completers and 5 non-completers. The efficacy of treatment was examined comparing changes in baseline and post-treatment levels of ADHD symptoms and functional impairment for these college students who received individual and group CBT. For this preliminary study, there was no comparison group. The tailored intervention resulted in significantly lower levels of inattentive symptoms in completers. Additionally, completers reported significant improvement in functioning at school and work.
2017	Hirvikoski, T., Lindström, T., Carlsson, J., Waaler, E., Jokinen, J., & Bölte, S	Psychoeducational groups for adults with ADHD and their loved ones (PEGASUS): a pragmatic, multicenter,	PEGASUS group-based structured psychoeducation for adults with ADHD and their loved ones is a feasible, effective, and effective treatment option for increasing ADHD knowledge and overall life satisfaction in psychiatric outpatient care.

		randomized controlled trial	
2014	Pettersson, R., Söderström, S., Edlund-Söderström, K., & Nilsson, K. W	Internet-based cognitive behavioral therapy for adults with ADHD in outpatient psychiatric care	The results show that an Internet-delivered CBT treatment program may be a promising treatment for ADHD in adults. Limitations of the study design and directions for future research are discussed.

Source: Self Made.

Study scope:

Some studies evidenced diverse investigative results. In the article called "Quality of life in adults with attention deficit hyperactivity disorder (ADHD)", it states that attention deficit hyperactivity disorder or ADHD is a neurodevelopmental disorder that has its onset in childhood and develops throughout life, persisting into adulthood in 60% of those affected. It is characterized by a pattern of three core symptoms of inattention, hyperactivity and impulsivity, inappropriate for age and by the presence of associated comorbidities that interfere with the development and functioning of the person (González, 2018).

In this sense, within the study "Attention deficit hyperactivity disorder: some considerations on its etiopathogenesis and treatment" state that "Attention deficit hyperactivity disorder constitutes a persistent or continuous pattern of inattention and/or hyperactivity and impulsivity, that impedes daily activities or typical development, causing difficulties in maintaining attention, executive function, and working memory. Due to its impact on both children and adults, it is currently a topic of great interest on which many studies are carried out worldwide." (Sabari et al, 2016).

In that same context, the authors Del Rio, et al. (2016) expose in the research called "Relationship between behaviors associated with attention deficit hyperactivity disorder and parenting styles from the appreciation of adults" whose results were regarding the prevalence of behaviors associated with the diagnosis of ADHD the data seem to coincide with those of investigations such as that of Cáceres et al. (2011) in which the teachers show a greater number of cases considered with the presence of the disorder unlike the parents, with respect to these data a difference of 26% was observed between the number of cases reported by the parents and the number of cases reported by the teachers, which could be associated with the scenario in which the behaviors are presented, differing between those exercised at home and those exercised at school, a criterion to be taken into consideration for the adequate diagnosis of ADHD according to the literature (De la Peña, Palacio and Barragán, 2007; APA, 2013).

II. CONCLUSION

According to the studies considered in this systematic review, the treatment used by most of these investigations is Cognitive-Behavioral Therapy; 55% of the articles reviewed address that adults with ADHD often present difficulties in daily life, which have a significant impact in the social, work, family and couple areas, among others, becoming reasons for consultation to mental health specialists. 45% of the articles conclude that some symptoms that may occur are distraction with irrelevant thoughts, difficulties listening and reading instructions, problems remembering childhood events, difficulties waiting and staying alert in unstimulating activities. and difficulties starting tasks.

Therefore, the significant relationship on the neural basis of selective attention in adults is shown, providing a useful framework to consider the effects of selective attention on academic bases during development; therefore, three important areas are considered for their study and understanding; the first investigates how selective attention, once implemented, modulates information processing; the second focuses on the mechanisms by which selective attention is deployed, including neural networks that direct attention to particular aspects of the environment; Finally, a third way analyzes a set of questions that is related to the neural mechanisms that actively manage the competition of irrelevant stimuli, particularly when these are more

prominent than the target itself (Stevens & Bavelier, 2011).

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