Diagnosed with ADHD: what now teacher?

ABSTRACT | The main aim of the paper is to understand the importance of knowing ADHD and knowing how the teacher can act when realizing that the child has been diagnosed with ADHD. As specific objectives, describe the history of ADHD, conceptualize, diagnose, and address ADHD at school and describe physical education as an intervention for ADHD in children aged 9 to 11 years. It is a reflective study based on published studies and the opinion of each author regarding the topic. The general approach of the text concludes that more studies are needed on the attention deficit and hyperactivity disorder at school and, specifically, its relationship with the ways of learning and experiencing body practices in Physical Education classes, as it is a very reality present in schools. Only then will we have a better teaching quality for our ADHD students.

Keywords: ADHD; Students; Education; Development.

RESUMEN | El objetivo general del trabajo es comprender la importancia de conocer el TDAH y saber cómo puede actuar el maestro cuando se da cuenta de que el niño ha sido diagnosticado con TDAH. Como objetivos específicos, describa la historia del TDAH, conceptualice, diagnostique y aborde el TDAH en la escuela y describa la educación física como una intervención para el TDAH en niños de 9 a 11 años. Es un estudio reflexivo basado en estudios publicados y la opinión de cada autor con respecto al tema. El enfoque general del texto concluye que se necesitan más estudios sobre el trastorno por déficit de atención e hiperactividad en la escuela y, específicamente, su relación con las formas de aprender y experimentar las prácticas corporales en las clases de Educación Física, ya que es una realidad muy real. presente en las escuelas. Solo entonces tendremos una mejor calidad de enseñanza para nuestros estudiantes con TDAH.

Descritores: TDAH; Estudiantes; Educación; Desarrollo.

RESUMO | O objetivo geral do trabalho é compreender a importância em se conhecer o TDAH e saber como o professor pode agir ao perceber que a criança foi diagnosticada com o TDAH. Como objetivos específicos, descrever a história do TDAH, conceituar, diagnosticar e abordar o TDAH na escola e descrever a educação física como intervenção ao TDAH em crianças de 9 a 11 anos. Trata-se de um estudo reflexivo com base em estudos publicados e o parecer de cada autor em relação ao tema. A abordagem geral do texto conclui que são necessários mais estudos sobre o transtorno e déficit de atenção e hiperatividade na escola e, especificamente, suas relações com os modos de aprender e vivenciar práticas corporais nas aulas de Educação Física, pois se trata de uma realidade muito presente nas escolas. Somente assim teremos uma qualidade de ensino melhor aos nossos alunos TDAH.

Palavras-chaves: TDAH; Alunos; Educação; Desenvolvimento.

INTRODUCTION

For a long time, attention deficit disorder (ADHD) has been mistakenly understood as a diagnosis with few references in the lives of patients. Often, the child was evaluated by someone without a specialty and treated based only on the complaints of hyperactivity and impulsiveness to make the diagnosis, mentioned by the teachers or parents, continuing the belief in the remission of symptoms at puberty.

To this day, the belief that this disorder mainly affects boys with behavioral problems is widespread. In recent years, however, both clinical experience and neuropsychology and neuroimaging have contributed to a drastic change in the way of understanding ADHD.

In this time of increasing discredit among education professionals, strengthening education professionals is more than necessary. The challenge becomes more interesting with the possibility of integrating knowledge and techniques of cognitive behavioral approaches to the universe of pedagogy and education in general.

The recognition of the effectiveness of cognitive therapies in Brazil and in the world has increased the popularity of these approaches, however the application in the school context is still timid and constitutes a challenge.

It is intended to address the following problem: How can the cog-
nitive behavioral approach provide, within schools, interventions that generate changes and favor learning?

The scarcity of scientific studies makes cognitive behavioral approaches strategies for the construction of evidence-based practices that respond to the demands present in the school context.

METHODOLOGY

This is a reflective and descriptive study, based on theoretical references from studies with children with Attention Deficit Hyperactivity Disorder (ADHD), such as: Gallahue, Mazzoni, Craft, Brzozowski, Caliman and Belli. The bibliography search was carried out in December 2018 in two online databases: Scientific Electronic Library Online (SciELO) and Google Scholar.

A critical view was presented between the triad child with ADHD, the school universe and health, with the main objective of the child’s well-being and his due assistance, whether by the health with diagnosis and treatment and by the school in terms of acceptability and capacity of professionals from the school universe to meet their demands and carry out the educational process in the best possible way, together with science.

DISCUSSION

Attention Deficit Hyperactivity Disorder has received numerous nominations and interpretations over time. According to study(1), In 1902, George Fredrick Still gave several lectures on aggressive, challenging, resistant to discipline, excessively emotional and passionate children, who had difficulty following rules, were inattentive and hyperactive. These characteristics presented by Still are up to date compared to those known today and there was no term that gave this name to this behavior.

In an analysis by Barkley, Still was the one who first linked the attention disorder to a defect in the inhibitory will. At that time, it was believed that the disorder was exclusively related to the child’s behavior, morals and will. “Still was one among many others who postulated the existence of a specific moral pathology, marked by disobedience to the rules and social consensus”

According to authors(2), after the First World War, which occurred between July 28, 1914 and November 11, 1918, the surviving children began to show changes in conduct with characteristics similar to those presented by Still. In 1934, they were described by Kahn and Cohen as organically driven. Subsequently, this type of behavior was called infantile hyperactivity, a term used by Laufer in 1957 and by Stella Chess in 1960.

“Laufer believed that the syndrome would be a pathology exclusive to male children and would have its remission throughout the individual’s natural growth.” “For Chess, the causes would be more of biological and genetic origins than the influence of the environment. So he used the term Hyperactive Child Syndrome”

In 1960, it was highlighted that the causes for this behavior, not yet named as ADHD, would be of genetic and biological origin.

Still in the 1960s, other explanations emerged: “In 1962 Clement and Peters created a new concept ‘minimal brain dysfunction’, arising from poor coordination, learning disabilities, emotional instability, without showing specific neurological injuries”

Hyperkinetic Childhood Reaction was the term used by the American Psychiatric Association (APA) in 1968(1). From 1970, a study(1) cites the contribution of studies by Virginia Douglas, who started to defend the idea that the deficit in maintaining attention could arise under conditions in which there was no hyperactivity. Thus, he highlighted the attention deficit that was not widely considered previously.

The authors who devoted themselves to studying this behavior came to similar conclusions, Caliman (2), highlights that:

In the history of ADHD, the English physician George Still, at the beginning of the century, and Virginia Douglas, at the end of the 70s, defended a similar point of view. Still, Douglas and Barkley have in common at least one aspect that, for Barkley, is the central point of the theoretical and historical analysis of ADHD: in their analysis, what determines the attention and hyperactivity disorder is the link between a neurophysiological defect of the inhibitory system, the deficit of morals and will. We will see that Barkley links the moral problem to the inhibitory deficit. In his opinion, Still and Douglas had reached the same conclusion.

According to authors(3), the American Psychiatric Association in 1980 with its Diagnostic and Statistical Manual on Mental Illness III (DSM III) renamed attention deficit disorder with or without hyperactivity, and in 1987 DSM III-R (1987) changed the terminology to attention deficit due to hyperactivity. Caliman (2) shows that in 1994 the diagnosis of Attention Deficit Hyperactivity Disorder, as described today by the neurobiological discourse, was included in DSM IV.

The Brazilian nomenclature used is Attention Deficit Hyperactivity Disorder(4,5). The term ADHD has now become very common worldwide and study(2) reports that several questions were raised as to the existence of the disorder or whether it could be really defined as a pathology. Nowadays, the
discussion persists and there are those who defend ADHD and there are those who believe in a certain exaggeration in the diagnoses or that is nonexistent.

**CONCEPTING ADHD**

People in general, and even health and education professionals, are unaware of Attention Deficit Hyperactivity Disorder and children receive some labels such as: “badly educated”, “spoiled”, “without limits” and “irresponsible” (4). Study (2) also highlights other labels, such as: “lazy”, “disinterested”, “live in the world of the moon”, “crazy”, “problematic” and “cheeky”.

According to the definitions of studies, it was highlighted that this disorder is it is mainly characterized by inattention, hyperactivity, and impulsivity; its cause can be genetic, biological, and/or social. While Belli (7) believed ADHD to be a disorder caused by chemical imbalances in certain regions of the brain, Seno (8) classified ADHD as a syndrome related to genetic, biological and psychosocial factors, with early onset and that does not harm that person’s life; Belli (7) shows that there are problems for the individual’s daily life. The person with ADHD has instability in brain regions that command wakefulness, attention, and control of emotions.

The signs can be seen in childhood and often continue into adulthood. According to Goldstein, it was not long ago believed that ADHD symptoms disappeared in early adolescence and, currently, research reveals that most children with the disorder reach adulthood with the same behaviors as childhood (6).

For Rohde and colleagues, ADHD is considered a developmental disorder and has already been understood as a disorder behavioral behavior of boys. Currently, it is often diagnosed as present in girls, adolescents, and adults. There are no certainties about the causes of ADHD, and authors highlight some hypotheses, such as: hereditary, neurochemical and psychosocial factors that, when associated, acquire greater strength in determining the condition (7).

There are several factors that can contribute to the disorder, and Castroviejo defends the multifactorial concept of causes of ADHD, being related to social, educational, family and health aspects. It must be considered that these same aspects that can be the causes of the disorder, are the areas of the individual seen in a negative way (4, 6).

Belli (7) demonstrates that currently ADHD can be classified into three different types: combined type, these people have trouble concentrating and are also overly active (ADHD with hyperactivity); those who are predominantly inattentive are not restless or rowdy, but have trouble concentrating on tasks, maintaining attention and organizing and finishing things (ADD without hyperactivity); and those with a predominantly hyperactive-impulsive type are children aged 4 to 5 years, in which the inattention feature is difficult to diagnose.

Phelan points out eight characteristics that accompany ADHD: inattention or tendency to distraction, impulsivity, difficulty waiting to be attended, hyperactivity, emotional overexcitation, disobedience, social problems, and disorganization. The child may have all or just some of these characteristics. It is necessary that people who live with this child and know these characteristics to help positively (9).

**DIAGNOSIS OF ADHD**

Attention Deficit Hyperactivity Disorder has been diagnosed frequently in children. Andrade and Scheuer point out that the average prevalence rate found was 3.6 to 5% of the school population (10, 11), however Vasconcelos and collaborators (12) report that some studies indicate that 4 to 12% of the general population of children from 6 to 12 years of age have a confirmed diagnosis.

It is important to make the correct diagnosis of children who show different behavior, since those who show signs of inattention and hyperactivity need some intervention. Barkley reports that the first characteristics appear early in life, such as problems with motor restlessness and reduced attention spans, which are not compatible with the child’s age (6).

Regarding how to diagnose ADHD, Silva emphasizes that there is no medical examination or psychological test to detect ADHD, but physical examination and recent pediatric history are important to diagnose and treat a possible ADHD. Blood tests measure dopamine and norepinephrine, serotonin and neuroimaging of the prefrontal cortex can be added to the diagnosis (7).

Rohde and Halpemp (13) state that “DSM-IV proposes the need for at least six symptoms of inattention and/or hyperactivity/impulsivity for the diagnosis of ADHD”, which should be done by a multidisciplinary team with specialist doctors, psychologists, pedagogues, teachers and parents; in a serious and appropriate way, since authors (9) point out that there is no physical, neurological or that can prove its existence, that is, only physical exams will not offer a reliable diagnosis.

Currently, professionals use interviews with parents and the child to try to diagnose any disorder. Consult teacher notes with an emphasis on reporting characteristic behaviors. Jerusalemsky believes that the proposed methodology could never be considered clinical, since it is a counting of phenomena, that is, the verification of the presence or absence of certain behaviors (9).

Providing a diagnosis in which there are no tests that present consistent results is a great risk, since it can compromise a child’s life, considering that his learning can be profoundly im-
ADHD is not a simple task. It is at school that the first signs of ADHD are noticed, since it is in this environment that the student needs concentration, attention to develop tasks, pay attention to the teacher’s explanations and, thus, learn [14].

Araújo also points out that when entering school that symptoms become more evident, “mainly because they are harmful and less tolerated in this environment” [15]. Diagnosing ADHD is not a simple task.

The authors expose some uncertainties that permeate the diagnosis of behavioral disorders. For years, people have dedicated themselves to studies to prove the existence of a neurobiological disease, however, science needs more consistent information.

After being diagnosed with ADHD, some interventions can be made therapeutic treatment, drug treatment and the help of the school and family. As the first signs of ADHD are usually perceived at school, “in the context of psychosocial interventions, the first step must be educational, through clear and accurate information to the family about the disorder” [8].

The use of medication has been the most commented topic when addressing the treatment of ADHD. Silva defends drug treatment as necessary and supports medicalization as a way of seeking an improvement in quality of life [2].

The treatment of ADHD involves a multiple approach, encompassing psychosocial and psychopharmacological interventions, where the use of drugs alleviates motor symptoms, impulsivity and inattention, improving the quality of social interactions and academic performance [4, 13].

Thus, in the medicalizing view, students will find it easier to perform their tasks, demonstrate to be more obedient, less aggressive and comply with the proposed rules. Stimulant medications improve attention and decrease hyperactivity, the most recommended of which are psychostimulants, the most prescribed is methylphenidate marketed as Ritalin. “Ritalin is a stimulant that has a paradoxical effect of calming the nervous system and increasing the child’s ability to pay attention, stimulating the production of dopamine and norepinephrine. Only 3% of ADHD cannot use these drugs” [7].

In a survey carried out it pointed out that 100% of the doctors interviewed recommend the use of medications for the treatment of ADHD, both neurologists and psychiatrists. The psychologists interviewed pointed to psychotherapy as one of the main forms of treatment for ADHD; however, only 20% did not recommend medication [16].

In Brazil, the only psychostimulant available is Methylphenidate, (Ritalina® and Concerta®), considering that the short-term medication is Ritalin presenting in 10 mg, with a duration of 3 to 4 hours, Ritalin LA®, has three presentations 20 mg, 30 mg and 40 mg, lasting 6 to 8 hours. Methylphenidate marketed as Concerta® has a longer action time than Ritalin LA®, 18 mg, 36 mg and 54 mg presentation, has an action time of 10 to 12 hours [5].

The presence of the medicine has been common, as Monteiro says: “it is currently not uncommon to find in school bags a box of Ritalin dividing the space with snacks, notebooks and pens, giving us the impression that, naturally, they are part of school supplies”. Knowing these adverse reactions caused by Ritalin and being so common to find it in children’s backpacks as something natural, it is possible to say that the school environment easily accepts medication, mainly because Ritalin is named by some authors as the obedience drug [17].

In view of the excess of medication, some authors decided to review ADHD, considering that children can experience different situations that lead them to behave similarly to ADHD. Authors like Pasquini and Velásquez believe that children can be in a difficult time [14].

As Brzozowski and Caponi report [13], even with all the scientific discourse, most teachers and parents are resistant to the use of the medication. Even with a medical prescription, they reject the proposed treatment or do it against their own will. This shows that there is a part of society that is against the use of prescription drugs in children.

The reactions caused by methylphenidate is one of the main reasons for some scholars to take a stand against medicalization. It is a controlled use medicine and study [18] cites this need for control, according to Ordinance SVS/MS No. 344, 12/5/98, and RDC No. 22, 2/15/2001, methylphenidate was placed on list A3 (psychotropic substances), but subject to prescription notification A. This list contains substances such as methamphetamine (“ice”), phencyclidine (“angel powder”) and drolabinol (hallucinogenic principle of marijuana).

Patients without an accurate diagnosis should not be treated with Ritalin, because the long-term safety and efficacy data on the use of Ritalin are not completely known, and it is emphasized that attention is needed as it can cause physical or psychological dependence. According to the Federal Council of Psychology (CFP), the sale of methylphenidate rose from 70,000 cases sold in 2000 to two million cases in 2010, making Brazil the second largest consumer of this drug in the world, second only to the United States [19, 20].

ADHD AND SCHOOL

In view of the increase in students who are unable to learn, those involved, especially teachers, seek the reasons for this learning that does not occur, and one of the justifications is...
the ADHD that is present in schools. Study emphasizes that a traditionalist view associates discipline with obedience and that certain schools and teachers facing the same behavior may consider it as indiscipline or not, and even classify them as ADHD\(^{(21)}\).

For Andrade, teachers are overwhelmed and cannot deal with this issue. Classes have at least 30 students, deal with various problems leaving an ADHD student excluded. Phelan cites the case of Ann Weltch, a special education teacher in the United States who addresses two basic rules to be applied in a classroom: the first is that children are at school to learn and there is work to be done and second is that the child’s behavior cannot interfere with the work to be done, which is learning\(^{(15)}\).

It is essential for educators to think that the child is in school to learn and, many times, factors that are independent of them harm them: most children with ADHD want to have a good school performance like other children; however, the difficulty of concentration and motivation combined with an inadequate school structure for these students hinder their performance, normally leaving them to conflicts with teachers and classmates\(^{(9)}\).

The school institution has a program to fulfill, there is a curriculum that the student must learn in a certain period. Luengo\(^{(17)}\) says that children with differentiated behavior or who do not live up to expectations become the biggest complaint of the educator who starts to see them as different. The author also states that in the school context, ADHD appears as a justification for failure and, having this view, failure ceases to be school and becomes the schools. Thus, treating the problem as an individual.

There are countless reasons why a student does not have the expected performance, it may be related to issues of behavior as well as the methodology used. However, what is worrying in this growing medicalization is the excess of students with ADHD; it is to associate any unexpected signal with a type of disorder.

Providing the student with a structured environment is an alternative that does not need medicalization. Authors\(^{(15)}\) present some necessary conditions for the teacher to live with an ADHD student. Children with ADHD need help to find pleasure in being in the classroom, the teacher needs to understand the emotional state of these students; these children seek limits, it is essential to establish rules. The teacher can make lists or tables that serve as a reference, they need the information to be repeated several times. Having a schedule makes the student more secure and, in the case of changes, the teacher must prepare him in advance, he needs to be flexible; allow moments to play and relax. For the child with ADHD it is important to subdivide the task, in larger tasks he may feel unable to perform them, in short, he needs praise, simplified instructions, moments of responsibility and encouragement.

The teacher must consider each student as a being with different needs, developing at their own pace, after all, there are no homogeneous classes. Study\(^{(15)}\) addresses the action of the teacher in this process, stating that the way they deal with these difficult situations is crucial for the psychological development of students and for the growth of the school community. They still suggest that the ADHD theme needs space in the training of these teachers so that they can reflect, discuss, and share experiences.

### PHYSICAL EDUCATION AS INTERVENTION TO ADHD IN CHILDREN 9 TO 11 YEARS

Physical education and psychomotricity are based on the needs of children, their goal is to stimulate movement at all stages of the child’s motor development. Both collaborate for the structuring and formation of the body scheme, which facilitates spatial orientation. Physical education aims to work with natural movements and spontaneous (walking, running, jumping, rolling, crawling, flexing, suspending, tilting, etc.).

The basic psychomotor structures are composed of locomotion, ocular segment coordination, laterality, rhythm, relaxation, and balance; these are bases developed by children during physical education classes, even in psychomotricity sessions. The physical education teacher must adapt activities in his classes that develop basic structures in children. Psychomotor education is a pedagogical and psychological action that, through physical education, uses means to normalize or improve child’s behavior\(^{(8)}\).

Usually physical education classes are pleasant and, with that, keep students more active, which does not mean that at the specific moment the student does not show hyperactivity and inattention. Everyone knows the importance of regular physical activity for anyone, even better for children and adolescents with this disorder. Physical activities make the child’s development easy, as it is a methodological resource that provides spontaneous and natural learning. Being a stimulus to criticism, creativity, curiosity and sociability, is recognized as one of the activities that has enormous significance through pedagogical, physical and social content\(^{(8)}\).

### CONCLUSION

Currently, there is no universally specific approach that can say, teachers work with that type of approach that will be positive in their classes. There are three types of approaches most used, which are: behavior control, multisensory and multifaceted.
Behavior control is related to strategies that are done through punishment to improve behavior; Multisensory approach: emphasizes teaching through the teaching areas that the student masters, using the sensory channels (visual, auditory, synesthetic and tactile); and Multifaceted approach: it is the use of several approaches, aiming to facilitate the student’s learning with ADHD.

In contrast, authors believe that only two approaches can achieve good results in physical education classes, which are: Psychomotoric, aims to increase the individual’s ability to interact with the environment through motor skills, in which the child discovers his limits, difficulties and abilities, maintaining self-control and learning to live in society; and Relaxation Techniques: essential in the routine of an ADHD student, because just leaving the room and going to the court often becomes a disorder, which is nothing more than the famous “return to calm”.

The Physical Education teacher with this information becomes the fundamental “piece” in the teaching-learning process, as he plans in his classes and outlines pedagogical strategies, with the objective of improving the motor part, self-esteem and the confidence of this student. Therefore, Physical Education is an important discipline and helps in the learning intervention of students with ADHD.

It is a great challenge for physical education teachers to work with students with the disorder and attention deficit/hyperactivity disorder because one does not leave Universities specialized in teaching children with this disorder. Much has been seen that they are usually children considered undisciplined; teachers often label students who generally behave inappropriately as “hyperactive”, without even studying the case in depth. Working with psychomotoric with ADHD children has been one of the paths that some teachers are taking. Since psychomotoricity shows the relationship between brain and affective/emotional processes with the motor act, that is, body and mind must be in tune during activities. The body reacts to mental stimuli by giving body expression to the sense of assimilated knowledge, that is, external information enters the organs of perception and enables the central nervous system to receive and seek subsidies to re-elaborate this information and express it through movement.

Physical Education is fundamental in this process, as it has an open, differentiated “classroom” that, if well used, can contribute positively to the development of student learning. There are several different causes for ADHD, consequently there are several ways to teach a child with this disorder.

References