



# Attention deficit/hyperactivity disorder (TDAH): analysis of brazilian scientific production (2011-2022)

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**ABSTRACT.** This article aims at presenting the results of a literature integrative review on ADHD, that is, attention deficit hyperactivity disorder, to gather information about the Brazilian scientific literature production on ADHD and its relations with teaching, learning, and medicalization in the school context. The study included 64 works, out of which eight were theses and dissertations and 56 were articles organized in four categories according to the thematic content analysis proposed by Bardin (2016) as follows: a) ADHD and learning medicalization; b) contributions of the Historical-Cultural theory to the ADHD understanding; c) literature review focusing on the Brazilian production on ADHD; and d) pedagogical strategies and ADHD students. The results showed that ADHD is one of the most controversial medical categories in child psychiatry in general, determined from the child's school entrance and resulting from multiple factors, namely, social, political, economic, educational, and biomedical. In addition, studies conducted by researchers in the human and social sciences presented relevant contributions to the criticism of the biological determinism that impacts diagnosed children or those presenting ADHD-like symptoms.

**Keywords:** learning; school; medicalization; review; ADHD.

## Transtorno do Déficit de Atenção/Hiperatividade (TDAH): análise da produção científica brasileira (2011-2022)

**RESUMO.** O objetivo deste artigo é apresentar os resultados de uma revisão integrativa de literatura sobre o TDAH, transtorno do déficit de atenção/hiperatividade, a fim de informar o que está sendo produzido pela literatura científica brasileira sobre o TDAH na sua relação com o ensino, a aprendizagem e o processo de medicalização no âmbito da escola. O estudo incluiu 64 trabalhos: oito teses e dissertações e 56 artigos organizados em quatro categorias, conforme a Análise de Conteúdo temática proposta por Bardin (2016): a) TDAH e medicalização da aprendizagem; b) contribuições da Teoria Histórico-Cultural para a compreensão do TDAH; c) revisão de literatura da produção brasileira sobre o TDAH; e d) estratégias pedagógicas para estudantes com TDAH. Os resultados mostraram que o TDAH é uma das categorias médicas mais controversas da psiquiatria infantil, de um modo geral, determinado a partir da entrada da criança na escola e decorrente de múltiplos fatores – social, político, econômico, educacional e biomédico; além disso, os estudos conduzidos por pesquisadores das áreas das ciências humanas e sociais apresentaram importantes contribuições para a crítica aos determinismos biológicos que incidem sobre as crianças diagnosticadas ou que apresentam sinais considerados sintomas do TDAH.

**Palavras-chave:** aprendizagem; escola; medicalização; revisão. TDAH.

## Trastorno por déficit de atención/hiperactividad (TDAH): análisis de la producción científica brasileña (2011-2022)

**RESUMEN.** El objetivo de este artículo es presentar los resultados de una revisión integrativa de la literatura sobre el TDAH, trastorno por déficit de atención con hiperactividad, con el fin de informar lo que está siendo producido por la literatura científica brasileña sobre el TDAH en su relación con la enseñanza, el aprendizaje y el proceso de medicalización dentro de la escuela. El estudio incluyó 64 trabajos: ocho tesis y disertaciones y 56 artículos organizados en cuatro categorías, según el Análisis de Contenido temático propuesto por Bardin (2016): a) TDAH y medicalización del aprendizaje; b) aportes de la Teoría Histórico Cultural para la comprensión del TDAH; c) revisión de literatura de la producción brasileña sobre TDAH; y d) estrategias pedagógicas para estudiantes con TDAH. Los resultados revelaron que el TDAH es una de las categorías

médicas más controvertidas de la psiquiatría infantil, de modo general, determinado a partir del ingreso del niño en la escuela y resultante de múltiples factores: social, político, económico, educativo y biomédico; además, los estudios encabezados por investigadores de las áreas de ciencias humanas y sociales han presentado grandes contribuciones a la crítica a los determinismos biológicos que inciden sobre los niños diagnosticados o que presentan señales que se consideran síntomas de TDAH.

**Palabras clave:** aprendizaje; escuela; medicalización; revisión; TDAH.

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## Introduction

This work is part of a doctoral research, which approaches the social representations the school workers and the families of children diagnosed with ADHD have about the disorder. In the scope of this article, we present the results of an integrative literature review, a method which involves research, evaluation, reflection and synthesis of the knowledge produced on the phenomenon which is intended to be investigated (Mendes et al., 2008). Its purpose is answering the following research question: what do the Brazilian scientific productions inform about ADHD in its relation to teaching, learning and the medicalization process in the scope of the school?

Characterized as a “ [...] persistent pattern of inattention and/or hyperactivity-impulsivity [...]” which appears in the childhood and follows the individual for the entire life (Associação Americana de Psiquiatria [APA], 2014, p. 61), ADHD is one of the most controversial disorders of child psychiatry, being due to the increasing consumption of methylphenidate hydrochloride, better known as Ritalin and Concerta, considered their first choices of treatment, indicated to children in physical and psychical development which side effects affect all the systems of the organism, being due to the manner the diagnosis is done, by means of a questionnaire crossed by cultural values, or, yet, for being related to the medicalization process, which turns everyday questions in pathologies.

For the medical approach, it is about an organic dysfunction with genetic causes and, in face of their prevalence around the world, is considered, from this perspective, a common condition to tall cultures (Barkley, 2002; Mattos, 2020; Pinochet-Quiroz et al., 2020). From a more biological view, it is characterized by the recurrent usage of biological explanations to describe phenomena which are not found in the Biology domain, with the displacement of the societal analysis to the individual and from the individual to its organism (Meira, 2011), ADHD is understood as the result of a biochemical imbalance in the brain: a deficit in the level of neurotransmitters concentration, in special of dopamine, which causes problems in attention and behavior, regulated with the usage of psychostimulant medication.

Along a history of more than a century, this diagnosis suffered many alterations in its name and was already called a ‘mental deficiency’, ‘flaw in moral behavior’, ‘residuals of lethargic encephalitis’, ‘minimal brain lesion’, ‘minimal brain dysfunction’, ‘hyperkinetic reaction’, ‘hyperkinetic child syndrome’, ‘hyperactive child syndrome’, ‘hyperactivity’, ‘attention deficit disorder’ and ‘attention deficit and hyperactivity disorder’, until reaching its current concept, established in the fourth edition of the DSM — Manual Diagnóstico e Estatístico de Transtornos Mentais (APA, 2002). Even in the face of the effort to find biological markings which might endorse the increased number of disorders presented in the psychiatric manuals, and despite all the genetic studies and neuroimaging techniques, there is not a consensus of the ADHD origin yet (Hora et al., 2015).

On the other hand, the historical-cultural approach understands the indicative signs of this disorder from the social, familiar and educational contexts in which they emerge. Without denying the problem, and considering the existence of children who are hyperactive and inattentive at school — characteristics which might lead them to present difficulties in the learning process — the researchers aligned to this perspective question the reductionism with which the schooling problems, very complex, have been treated. This approach, which understands ADHD as part of the process of medicalization of life, has been reporting the naturalization of human development, in special of attention and voluntary behaviours, defining criteria of the diagnostic, and questioning their implications for the subjectivity and for the social and school trajectories of the medicated children.

Medicalization has been occurring on a large scale in the West. By means of it, life, history and society are naturalized, a process in which each individual becomes the sole responsible for their successes and failures.

In the scope of school, the medicalization manifests in the entrance of biological explanations for the “diseases” of what not to learn and how not to behave, and the difficulties in schooling become medical problems, allegedly solved by pharmacological products which would act in determined brain areas. This process is contemporary to the age of disorders, characterized by the silencing of conflicts, such as those existing in the school and familiar daily lives, and for the increasing escalation of diagnoses, in a context which naturalizes life and destroys human rights and subjectivities, in which we are each time more depossessed of ourselves, captured and submitted to a web of diagnoses, old and new (Moysés & Collares, 2013).

Here, we are able to situate ADHD and the critics which have been directed to it, the banalization of this diagnostic and what is intended to be justified with it: the school failure and the difficulties in the learning process — as once was searched to be done with the theory of cultural lack (Patto, 2015) or with malnutrition (Collares & Moysés, 1996; Moysés & Collares, 1997), equally presented as explicative sources for not learning. ADHD is one of the most frequent psychiatric diagnoses more frequently attributed to children and teenagers in their connections to the school, taking Brazil to occupy the second position of countries in the world which prescribes and consumes methylphenidate hydrochloride the most. This board suggests the existence of an epidemic of diagnostics in the country (Meira, 2012; Martinhago, 2018), a situation which has caught the attention of the society and government organs.

From these reflections and the implications of ADHD for the people involved with it, school professionals, families and, mainly, the children, of the ethical discussions and the polemics it raises, this article reviewed the Brazilian scientific production about this disorder in order to map the contributions to the understanding of this subject, in special in relation to teaching, learning and the process of medicalization in the scope of the school. In the sequence, the text presents the methodology and the results of the review, organized according to other four categories of analysis: a) ADHD and the medicalization of learning; b) contributions of the Historical-Cultural Theory for the understanding of ADHD; c) literature review of the Brazilian production about ADHD; and d) pedagogical strategies for students with ADHD.

## Methodology

The article represents an integrative review of the Brazilian scientific literature about ADHD. For its realization, were considered the stages presented by Mendes et al. (2008): identification of the question of the research; establishment of inclusion and exclusion criteria; categorization of the publications according to the information extracted from them; evaluation of the studies comprehended in the review; interpretation of the results; and presentation of the synthesis of the knowledge, stages which contributed for the following research question to be answered: what do the Brazilian productions inform about ADHD in its relation to teaching, learning and the medicalization process in the scope of the school?

The reviewed articles were searched in the Os artigos revisados foram buscados nas indexing bases of *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (LILACS) and of Scientific Electronic Library Online (SciELO), the *Portal de Periódicos da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* with access through the *Comunidade Acadêmica Federada* (CAFe/CAPES), and thesis and dissertations at *Biblioteca Digital de Teses e Dissertações* (BDTD). The defined time frame, from 2011 to 2022, followed the texts published from the launch of the Forum on the medicalization of education and society, realized in São Paulo, in November of 2010, during the 1º International Seminar The Medicalized Education: Dyslexia, ADHD and other alleged disorders, an event which constituted on an important mark for the increment of critical productions to the different expressions of medicalization of life, with special highlight to those which affect the school.

The research, conducted between the months of January and February of 2023, was realized from eight combinations of keywords, considered pertinent to the defined research question: ‘ADHD’ + ‘school’ + ‘learning’; ‘ADHD’ + ‘school’ + ‘medicalization’; ‘ADHD’ + ‘school’ + ‘social representations’; ‘ADHD’ + ‘school’ + ‘pathologization’; ‘ADHD’ + ‘medicalization’; ‘ADHD’ + ‘learning’; ‘ADHD’ + ‘social representations’; and ‘ADHD’ + ‘pathologization’, to restrict or widen the research, in every search indexes.

ADHD is not a learning disorder, but its characteristics impact the process of schooling and are, in a general manner, firstly perceived at school. Although the official speech separates ADHD and the learning disorders as different nosological entities, both are part of the same theoretical reference which associates organic alterations to learning difficulties and behavioral issues (Moysés & Collares, 2011), which justifies the choice of such keywords.

Were located 15 thesis and dissertations and 127 articles, and, from this guiding question, it was defined through the inclusion of those which: a) treated ADHD in the scope of Elementary School, which answers to kids from six to ten years old — age with larger prevalence of ADHD — or offered contributions to the problematization of this disorder in its relation to school; b) were produced from concluded or ongoing research; e c) treated about the Brazilian case.

After reading the abstracts of the articles, those which did not fulfill the criteria defined above were excluded: studies which focused on ADHD in Higher Education (six); in other countries (two) and in adults (five); which presented reports of their own experience (six); reviews (two); works which approached the ADHD exclusively from the point of view of health professionals (three); clinical essay (one); interviews (two); studies which also treated about autism, high abilities, bipolar disorder or dyslexia (nine); linguistic processing (three); and articles in which ADHD tangented the text or was taken as an example to treat correlate subjects such as pharmaceutical assistance, phone audiological service, concept of risk, dispensing policies, social assistance activities, off-label uses of methylphenidate hydrochloride, motor development in children with ADHD, pharmaceutical industry, marketing and medicalization of everyday life (twenty-four), besides six studies which were not found as a whole, with 56 remaining articles contemplated in the review.

About the thesis and dissertations, were excluded those which approach ADHD in Higher Education (two), of the trajectory of Ritalin for neuroenhancement practices (one); realized exclusively with health professionals (two); and which are characterized as clinical essays (two), remaining eight productions. After reading the texts included in the review, the material was organized in categories of analysis, according to the Thematic Content Analysis proposed by Bardin (2016). Such categories, built from the information extracted from the selected studies, express their recurring subjects, inform about the trends and approaches of the research about ADHD and offer a wider view of their results.

## Results and discussion

From the selected texts, 35 proposed to understand ADHD by means of field research, and 21 of them indicated submission to ethics committees in research involving human beings (CEPs), denoting concern and higher qualification of the researchers about ethical referrals among the participant people. These works utilized different instruments of data gathering, such as interviews, observation, questionnaires, case studies, phonoaudiological evaluation, recreational activities and document analysis, among others.

The 64 productions were organized in four categories: a) ADHD and the medicalization of learning, with 26 works which approach the manner this disorder reinforces the medicalization of learning; b) contributions of the Historical-Cultural Theory for the understanding of ADHD, with 20 texts which question the naturalization of human development, in special of the functions of attention and voluntary behaviours; c) literature review of Brazilian production about ADHD, composed by seven works; and d) pedagogical strategies for students with ADHD, which gathered 11 texts with referrals to support diagnosed students.

The selected texts can be contemplated in more than one category, given the scopes of the works. We stress that, in the group of publications, there was one concern in building a critic to the biologization of learning, to the increased number of diagnoses of ADHD and the consequent prescription and the dispensing of methylphenidate hydrochloride — first choice of treatment to correct the neurochemical imbalance considered responsible for inattentive, hyperactive and impulsive behaviors.

### ADHD and the medicalization of education

Were selected 26 works which treated the subject of medicalization and their expressions in the scope of school, all of them produced from a critical perspective. The origins of this concept can be found since the years 1960, to refer to the appropriation of everyday life problems by the Medicine, in which social, cultural, political and economical questions are individualized, displaced to the medical field and pathologized. In the scope of the school, this term is used to problematize the reception of concepts and pretense medical solutions for the learning and behavioral problems considered inadequate (Vizotto & Ferrazza, 2018; Manfre, 2018a; 2018b; Santos et al., 2018; Brzozowski, 2020), context in which a technical and instrumentalizing reason imposes itself to the pedagogical practices and pass to classify the students which escape the previously established norms (Manfre, 2018a, 2018b). Brzozowski (2020) reminds us the first psychiatric classifications emerged in asylums, but were not restricted to these spaces, because, currently, the school identifies behaviours considered symptoms of mental disorders according to psychiatric manuals.

The second half of the 20<sup>th</sup> century represents a mark in the academic interest for the medicalization of the childhood in Brazil, motivated by the publication of the fourth edition of the DSM, in 1994, and for the approval and regulation for the selling of methylphenidate, in 1998 (Garbarino, 2020). This period also knew the expansion of pharmaceutical laboratories, the development of a new psychiatry — grounded in the biologization of mental disorders — the discoveries of new psychotropic drugs and the expansion of the neuroscientific field (Ferrazza & Rocha, 2011; Brzozowski, 2020), aspects which amplify the medicalization process.

Martinhago (2018) clarified the medicalization of childhood as a subject in evidence, in face of an epidemic of mental disorders — with emphasis on ADHD — in which the increase in methylphenidate consumption has warned of the need of studying this phenomenon and its relation to learning. For Garbarino (2020, p. 139), this disorder “[...] constitutes the the flagship of controversies and academic debates on education and medicalization [...]”, while Ferrazza and Rocha (2011, p. 244) evaluate it as “[...]the latest trend in the psychologizing approach to childhood”. Other authors (Colombani et al., 2014; Vizotto & Ferrazza, 2017, 2018; Freitas & Baptista, 2019) also pointed to ADHD as one of the psychiatric diagnoses more determined to children in the school age group.

In general, the articles in this category indicated that school professionals have been the main demanders of diagnostics as a solution to schooling problems in children considered inattentive and agitated. Sorbara (2012, 2016) evaluated the ADHD diagnosis can be done under different conditions, but the entrance of the child in the school is a mark which highlights the emergence of the disorder. For Garbarino (2020), the school problems are the main reason for the referral of children from six to ten years old to health services, justified by the realization of a pre-diagnostics by the teachers, which allows electing medicalization as a relevant subject in the school environment. For Santos and Araújo (2019, p. 883), “The school today is the first and main messenger of diagnosis in the childhood [...]” and, in this logic, this institution has transformed into a space which propagates medicalization and a privileged place for the selection of children liable of being medicalized (Cruz et al., 2016b).

By means of the identification and analysis of the meaning of ADHD, and from the mother's and father's reports of students from public schools and of a private clinic specialized in the treatment of this diagnostic, Araújo (2017) also concluded the school is the main agent referring children to health services and, in a general manner, the families did not question the diagnostic decision nor the usage of medication for the learning and behavioral problems. Andrade (2014), although not having treated the concept of medicalization in a sharper manner, highlighted the psychopedagogical care for children considered inattentive, many of which were diagnosed with ADHD or pre-diagnosed at school, and the proliferation and banalization of this disorder. Based on the general theory of care, it was assessed that inattention, in a general manner treated as a pathology, might be directly related to the lack of adult attention to the real conditions and needs of the children.

In a research realized with 121 medical records of children referred to a mental health service with school complaints, Vizotto and Ferrazza (2018) concluded the behaviors seemed as inadequate — those who escape the rules of conduct established by the school and other institutions — were considered symptoms and regrouped in pathological conditions. Of the total of the analyzed medical records, the research found that, in most cases, 80% of them, there was description of ADHD diagnosis, and although in the other 20% there were not determinations of any other diagnoses, all the children and teenagers were medicated with some psychopharmaceutical, with exception of a child who did not return to the clinic. In another article (Vizotto & Ferrazza, 2017), the researchers approached the trajectory run by these children and teenagers, who, in very rare cases, were referred to psychotherapeutic treatments. Besides this, 97% of the cases received the diagnosis and the medicinal prescription already in the first consultation.

Araujo et al. (2020) proposed a reflection about the diagnostic determination to which the children who do not correspond to the school's expectations. The authors assessed it is not about criticizing, in an absolute manner, the referrals for the evaluation by professionals of other areas, but of question how and for what reasons they are realized, in measure that the school and the family make decisions together and which are the objectives of this evaluation, what might be helping the child to advance in the learning process or responsabilize for what cannot be done alone. In the same sense, Freitas and Baptista (2019) did not deny the importance of the diagnosis, but punctuated its excess and its consequence, as the classification and the potential exclusion of children and teenagers.

Medicalization is correlated to biological explanations which are proposed to legitimize and justify the medical interventions about the matters of life — in the field of school, those related to the impasses in schooling (Ferrazza & Rocha, 2011; Moraes, 2012; Colombani et al., 2014; Schicotti et al., 2014; Cruz et al.,

2016b; Vizotto & Ferrazza, 2017, 2018; Manfre, 2018a; Santos et al., 2018; Santos & Araújo, 2019; Freitas & Baptista, 2019; Carneiro & Silva, 2020; Garbarino, 2020; Rocha et al., 2020; Brzozowski, 2020). Such explanations support the argument that ADHD is an organic disorder, characterized by some brain imbalance, treated with medication. Coherent to this critic, Brzozowski (2020) problematized the “disease-centered model” for drug effects in psychiatry, which reduces, or even neglects, the psychosocial dynamics, patient-centered, and considers the psychostimulant normalizes the brain activities and, consequently, the behaviors.

The expansion of the pharmaceutical industries, the financing and the influence of these industries in the clinical researches about ADHD and indicated medication for this disorder, their strict relation with the medical professionals, as well as the techniques and marketing strategies for the commercialization of drugs, are also part of the debates about ADHD and the spread of medicalization (Ferrazza & Rocha, 2011; Cruz et al., 2016a; Vizotto & Ferrazza, 2017; Martinhago, 2018; Moraes, 2012; Brzozowski, 2020).

Manfre (2018a, p. 23) evaluated that it is each time more recurrent “[...] saying a child does not learn and does not behave properly at school due to neurological disorders which affect the cognitive field, understood as fundamental for the process of teaching and learning”. In this logic, Vizotto and Ferrazza (2017, 2018) assessed that medicine, grounded on biological speech about neurochemical imbalance, has been appropriating from the childhood and the school environment, produced classifications about behaviors — which passed to be characterized as pathological — and established strategies of medicalization for the diseases of not learning and not behaving, terms used by Collares and Moysés to report the artificial transformation of matters proper to the school into diseases which needed to be diagnosed and treated.

For Garbarino (2020, p. 136), to whom “The causal reductionism of biologization of the school impasses stains the contemporary teaching act [...]”, the biologization of education is correlated to the massification of learning and behaviour disorders. This bias, in relation to the manners of being, is not recent, but it was with the publication of the third edition of the DSM, in the decade of 1980, which the biological psychiatry gained strength and passed to interpret the mental disorders by means of a neurochemical imbalance of the behavior presented by the individual (Cruz et al., 2016b).

Santos and Araújo (2019) discussed the school failure and the ADHD in relation to the medical-psychiatric speech and of the neurosciences, which articulate themselves to the biologization of everyday life, including of education, and pointed out this disorder must be seen as a symptom, as it is understood by psychoanalysis, as something that speaks about the children and their singularities. As reported by Schicotti et al. (2014), the acceptance of everyday life biologization can be noticed in the observation of the statistics which show the considerable increase in the consumption of medication prescribed for the disturbances related to learning and to ADHD. This movement, which disregards the school and all the experience accumulated by their professionals and grants to Medicine a pretense competence to deal with questions which are pertinent to the school context, it is called by Moysés and Collares as medicalization of the teaching-learning process (Manfre, 2018a; Garbarino, 2020).

Materialized in pedagogical practices, the biologization of learning was observed by Cordeiro et al. (2018) in research which aimed to characterize the social representations of 14 teachers about ADHD and medicalization. The study concluded the participants assessed this disorder affects learning, but, except for a professional, all the others reported medication as the best form of intervention. In this sense, Schicotti et al. (2014) found that medicalization is naturalized by the professionals of education, which are fixed in pathologies to deal with school behavior problems and consider it indispensable to the promotion of learning.

Sorbara (2012, 2016) understood ADHD in its relation to the process of medicalization of everyday life and disciplinarization of the body, as a symptom of the current society, marked by semi-formation processes arising from the presence of media apparatus, of which the subjects are exposed in excess. In this context, which the child is overstimulated, the shock of images broadcasted by such apparatus exercises an aesthetic fascination. by providing new images which establish a mind space in regimen of full attention. For the author, ADHD is found in a space in which the child with attention deficit is the child of the current culture, which naturalizes medication and artificializes behaviours.

Some works pointed to the hygienist movement, marked by the intervention of the health sectors in the school environment, as precursor of the identification of possible medical problems and referral of the children with learning and behavioral issues to the health services (Colombani et al., 2014; Cruz et al., 2016b; Vizotto & Ferrazza, 2018; Moraes, 2012; Rocha et al., 2020; Brzozowski, 2020). Nowadays, this process has served as a justification to school failure, of the learning difficulties, of the behavioral problems and of all the complexity which involves the school environment (Colombani et al., 2014; Cruz et al., 2016a; Vectore et al.,

2018; Vizotto & Ferrazza, 2018; Cordeiro et al., 2018; Manfre, 2018a, 2018b; Santos et al., 2018; Araujo et al., 2020; Carneiro & Silva, 2020; Garbarino, 2020; Brzozowski, 2020), logic which individualized such problems, which pass to be assessed as intrinsic to the students (Colombani et al., 2014; Ferrazza & Rocha, 2011; Schicotti et al., 2014; Cruz et al., 2016b; Vizotto & Ferrazza, 2018; Manfre, 2018a, 2018b; Araujo et al., 2020; Garbarino, 2020; Santos et al., 2018; Rocha et al., 2020).

Among the texts which dealt about medicalization, we highlight two productions. Costa and Jahnke (2017) signaled the increase in the number of diagnostics to ADHD and the medicinal intervention in the interface of the children and teenagers rights, from the Federal Constitution and the Law n. 8.069/90, which instituted the *Estatuto da Criança e do Adolescente* (ECA). Moraes (2012), supported in the Foucauldian perspective and in the speech analysis, treated how the medicalizing speech and the medical-scientific view produce effects of power over the bodies, transforming the lack of attention and the excess of activities in mental disorders. By analyzing ADHD as an empirical object to problematize the psychiatric devices which transform different behaviours in pathologies, the author evaluated that, even with the resistance movements, the child medicalization process has been triumphing in Brazil.

### Contributions of the Historical-Cultural Theory to the understanding of ADHD

Historical-Cultural Theory, HCT, elaborated from the studies by Vygotski, Leontiev and Luria, which, “[...] in opposition to the innatist conception understands that the man is constituted in their social relations” (Szymanski & Teixeira, 2022, p. 6), was adopted by 20 works to problematize the so called learning and behavioral diseases, with emphasis to the ADHD diagnostic. Grounded on the historical-dialectic materialism, the HCT understands the individual is born with elemental functions, common to other animals, and is humanized from social relations which allow them developing the psychological functions properly human by means of joint and collective learning (Meira, 2012; Santos et al., 2016; Santos & Tuleski, 2020; Szymanski & Teixeira, 2022). Among such relations, school education is evidenced, because it is that which has the role of ensuring the subject appropriate from human production, material and symbolic, realized in cultural signs, realizing in it a cultural and psychical development qualitatively superior (Santos et al., 2016; Tuleski et al., 2019; Santos & Tuleski, 2020; Leonardo & Silva, 2022; Szymanski & Teixeira, 2022). The studies which were grounded in the HCT questioned the existence of ADHD as a phenomenon exclusively organic and treated the Os estudos que se fundamentaram na THC questionaram a existência do TDAH como um fenômeno exclusivamente orgânico e dealt with the pathologizing and medicalizing logic in the scope of the school.

The critic to the naturalizing and biologizing concepts of attention, of behavior and of learning was contemplated by Pereira and Silva (2011), Meira (2012), Asbahr and Meira (2014), Eidt et al. (2014), Signor and Santana (2015), Ribeiro and Viégas (2016), Santos et al. (2016), Ribeiro et al. (2019), Tuleski et al. (2019); Franco et al. (2020), Santos and Tuleski (2020), Silva and Batista (2020), Leonardo and Silva (2022) and Szymanski and Teixeira (2022). Pereira and Silva (2011) pointed that the superior psychological functions, firstly, exist as an interpsychological activity and, only then, are internalized by the subjects, that is, are products of concrete social relations. That said, attention is not an innate ability, as it is understood by the pathologizing speech, but resulting from a dialectical relationship between a biological organism and its socio-historical environment. According to Meira (2012), voluntary attention is constituted of a long process of development and consolidation since childhood, and depends on the quality of the cultural mediators. Eidt et al. (2014) pointed it is not possible supposing a child of five or seven years old present voluntary attention already consolidated and Tuleski et al. (2019, p. 159) clarified the voluntary attention is not “[...] a pre-requirement for the appropriation of school contents, but a psychological function which becomes voluntary along the child’s natural process”.

Signor (2013) drew attention to the fact that there should be no confusion between pathological states and the instabilities of attention, a case which might be overcome by a voluntary effort by the subject, which does not occur in face of the pathologies. The student’s demotivation in face of the school activities might be the source of most of the presented symptoms, that is, the inattention and the hyperactivity produced in the classroom are social constructs and are part of the framework of attentional instabilities. In this manner, two distinct manifestations of the same phenomena were found: the behavioral pathologies of behavior and of attention originated from injuries of the brain and the social ADHD, built from the inadequate pedagogical practices.

For Santos et al. (2016), attention and behaviour are important for the schooling process, but, in a society which tends to naturalization and individualization of social problems, the partial development of the psychological functions is explained in reason of the disorders of organic origin, such as ADHD, when, in fact,

they would be partial appropriations of the cultural mediations responsible for their development. According to Szymanski and Teixeira (2022, p. 7-8), “[...] the teacher has the fundamental role in the student’s appropriation of cultural behaviours and scientific concepts taught in the scope of schools [...]”, and it is this understanding which makes it possible the biologizing concepts of human development are faced.

The inseparability of the biological-social relationship for understanding ADHD was addressed by Santos (2017), in a research realized with the education workers and of basic health aid, which analyzed the meanings about the diagnostic and treatment of the disorder, which results highlighted the biological conceptions have been referenced by both the professionals in relation to the reception of the children considered hyperactive, impulsive and inattentive. Leonardo and Silva (2022) question the naturalization of human learning by means of studies which understand the brain in its cultural/biological unity, and Tuleski et al. (2019) evaluated that one of the consequences of the logic which naturalizes and biologizes voluntary attention is the referral of children to medical evaluation. These authors treated written language acquisition from this research which involved eight municipalities from Paraná and investigated the relation between the appropriation of this ability and the number of diagnosed children. The data pointed to the increase in the number of diagnostics, predominantly of ADHD, in the passage from the second to the third grade, which, along with the fourth, are those which have more medicalized children, considering these numbers decrease in the passage from the fourth to the fifth grade, that is, there is an increase of medicalization in the period of literacy.

Some texts (Ribeiro, 2015; Ribeiro & Viégas, 2016; Ribeiro et al., 2019; Szymanski & Teixeira, 2022) warned the ADHD classification perceives it from the elemental functions, when the superior psychological functions should be considered, built during the development and learning by the subject. Thus, “By attaching to the apparent similarity between voluntary and involuntary attention, we focus only the natural, biological, organic characters, producing a superficial analysis of the complex relation between cultural and biological in the human” (Ribeiro & Viégas, 2016, p. 162).

A considerable number of publications pointed to the importance of considering the social, familiar and educational contexts in which the children are inserted for the understanding of the different factors related to the ADHD diagnostic (Pereira & Silva, 2011; Meira, 2012; Asbahr & Meira, 2014; Eidt et al., 2014; Beltrame et al., 2015; Santos et al. 2016; Signor et al., 2017; Ribeiro et al., 2019; Silva & Batista, 2020; Szymanski & Teixeira, 2022). For Signor (2013), Signor and Santana (2015, 2020) and Signor et al. (2017), the disorder is constructed in the scope of the schooled practices, in which the unfavorable discourse and insertion of children in decontextualized pedagogical dynamics and producers of suffering take to the constitution of symptoms. Santos et al. (2016) assessed that, in face of an each time more technical formation, the teachers do not know how to handle concrete students, inserted in specific contexts, classes and social configurations, and end doing a work not very critical and reproducing diffuse conceptions, when, for example, even in a non intentional manner, cooperate to the medicalization process and of the learning difficulties.

Meira (2012) proposed the understanding of how the contexts produce indiscipline, because, in this manner, it would be possible to perceive what might be motivating determined way of how the children present themselves at school, as situations of violence and poverty to which they are exposed, inadequate pedagogical proposals, lack of interest for what it offers, oppressive social relationships and precarization of school environments. In inverse sense to the dominant logic which mischaracterizes the context and the hearing of the children, Ribeiro (2015) and Ribeiro et al. (2019) searched to listen to what six children diagnosed with ADHD had to say about 18 items listed in the SNAP IV questionnaire, and concluded that, for each symptom, there is a concrete condition in which the behaviours are given and which compose the historical-cultural reality in which they are inserted. The work by Eidt et al. (2014) drew on studies on the periodization of human development to analyze the constitution of attention and highlighted the need of understanding the phenomenon of non-learning from the concrete conditions of the subjects’ lives.

These articles did not deny that some children present learning difficulties and behavioral issues at school, but in a general manner, questioned the existence of ADHD as a neurobiological condition of the subject and conceived it as a complex and *aram a existência do TDAH como uma condição neurobiológica do sujeito e o conceberam como a complex and multidetermined phenomenon*, crossed by different elements which impact the learning process (Meira, 2012; Signor, 2013; Pereira & Silva, 2011; Asbahr & Meira, 2014; Eidt et al., 2014; Signor & Santana, 2015; Ribeiro & Viégas, 2016; Signor et al., 2017; Ribeiro et al., 2019; Silva & Baptista, 2020; Leonardo & Silva, 2022). Szymanski and Teixeira (2022) pointed that the social-historical laws are more determining to human development than the biological laws, and one of the aspects of this understanding refers to the manner the learning process occurs, which determines this development. Leonardo and Silva



(2022) clarified it is not about denying the existence of inattentive or hyperactive children with schooling difficulties, but the criticism is given in relation to the understanding that such questions are intrinsic to them and arising from diseases, comprehension which exempts the school and the wider context. In this sense, according to Meira (2012), it is not about denying the biological basis of human behaviour, but of making a contraposition to the attempts of transforming the problems of living in symptoms of the disease.

The stigmatization and the implication of the diagnostic for the subjectivity of the children considered inattentive or hyperactive were considered in some works. For Signor (2013), Signor and Santana (2015, 2020) and Signor et al. (2017), the internalization of stigmatizing speech brings implications for learning, socialization and subjetification of the child considered as pathologic, inside and outside of the school. In this manner, it is needed to consider the sense the diagnostic brings to the subject who receives it (Signor & Santana, 2015). For Signor et al. (2017), the classification of the children as inattentive and bad readers and writers, many times announced early by the school, make them unmotivated and uninterested, impacting their development and leading to difficulties of schooling. Ribeiro (2015) and Beltrame et al. (2015), from the research with children and teenagers diagnosed with ADHD, evidenced they acknowledge themselves by means of the agitation and of what the others say about them.

About the use of methylphenidate, Signor (2013) and Signor et al. (2017) remembered that, even making usage of a medication with the aim of normalizing the attention and the behavior, part of the children do not learn, being inattentive and uninterested, which regards the fact the problem is not in the defective genes, but in a complexity of factors. According to Santos and Tuleski (2020), the medication does not promote the development of the superior psychological functions and, once removed, the schools will not have built resources to face this problem. Leonardo and Silva (2022), By approaching the interfunctionality of such functions, they understand a medication which acts to activate an specific area of the brain is not enough for the children to stop being inattentive or hyperactive, because the mind process involves interconnected complex functional systems. Beltrame et al. (2015) raised a question which refers to the periodicity of the usage of methylphenidate, because, from the medical point of view, ADHD is a chronic neurological disorder, and it is important to clarify why its usage is discontinued in the vacation period.

Some works suggested possibilities for the development of demedicalizing practices and of resistance to the biologization of plural and diverse children and teenagers (Pereira & Silva, 2011; Signor, 2013; Asbahr & Meira, 2014; Eidt et al., 2014; Signor & Santana, 2015, 2020; Santos et al., 2016; Ribeiro & Viégas, 2016; Signor et al. 2017; Ribeiro et al., 2019; Tuleski et al., 2019; Leonardo & Silva, 2022; Szymanski & Teixeira, 2022). Leonardo and Silva (2022) defended a developmental, non-pathologizing school education, with systematic and intentional teaching for the constitution of the human in the individual, aiming to quality education, and Pereira and Silva (2011) indicated the importance of the studies about ADHD being grounded in critical approaches which evidence the multiple factors involved in their production and maintenance, breaking with reductionist views.

Signor and Santana (2015) talked about the empowering of education professionals to break with the medicalizing processes and suggested the initial and continuing teacher training encourage the debate on diversity in the schools. Eidt et al. (2014) consider urgent the conduction of systematized studies for the overcoming of ideological practices which attributes the causes of non-learning only to the child, takes social inequalities as natural and misconsiders the social-historical context of the problem. Santos et al. (2016) highlighted the strangeness in relation to Ritalin — made natural for the school performance — and the problematization and the investment in teacher training, many times precarious and fragmented, as a form of reverse or minimize the medicalizing practices. Franco et al. (2020) suggested the realization of formative processes and the constitution of discussion forums with the participation of professionals from the health and education sectors, focused on preventing aspects considered symptoms of ADHD. The non-medicalizing practical recommendations for professionals from health and education services, published by the Forum about Medicalization of Education and of Society, were pointed by Ribeiro (2015) and Ribeiro et al. (2019) for the constitution of the school as a space of hearing, acceptance and learning, with sights to the overcoming of the medicalizing logic.

### **Literature review of the Brazilian production about ADHD**

This category contemplates seven texts which realized literature reviews about the subject of ADHD or which results pointed to this disorder. Some works were presented as reviews, but which did not express their methodologies, were placed in other categories. On the other hand, the work by Paiano et al. (2019), which

presented a systematic review of the literature about intervention in ADHD realized in the school context, was inserted in the category Pedagogical Strategies for Students with ADHD. In its turn the work by Coãs (2016), grounded in the HCT and in the field research, was inserted in this category due to its contributions to the gathering of productions realized by São Paulo University (USP) about the learning disorders, with focus on ADHD, one of the objectives of the work.

Beltrame et al. (2019) reviewed the production of medicalization in the scope of education. Between the five identified categories – the transitivity of the medicalization concept; the medicalization of school failure; ADHD; the conflicts and the interests of the pharmaceutical industry; and the non-medicalizing – 13 publications approached the subject of medicalization with a problem which affects the educational system and the process of teaching-learning. The authors considered there is a trend of treating behavioral and learning issues and, in this manner, questions which might be from the school scope and the educational politics are displaced to the health area and considered from a conception which mischaracterizes the human plurality.

Benedetti and Anache (2014) gathered the academic productions which approached ADHD, published between 1999 and 2013. The material was organized in three axes: the hegemonic strand about ADHD, present in 76% of the analyzed productions; the psychoanalytic strand; and the historical-cultural strand – the last two considered critical to the first. The authors concluded there is not a consensus about the subject and that the methodology, as well as the epistemological bases utilized by the researchers, influence and define their theoretical positions, ethical conducts, treatment options and convictions about the disorder.

With the objective of verifying how biological explanations have been used and diffused by the scientific speech to explain mental disorders, such as ADHD, Brzozowski and Caponi (2017) analyzed 81 journalistic articles published in the newspapers *Folha de S. Paulo* and *O Globo*, between 2010 and 2014. The articles were organized in three categories: the increase in the number of diagnostics and the medicalization of life; drug treatment; and the psychiatric clinic, criteria and diagnostics. The authors highlighted the simplification of the scientific speech to make it more intelligible and noted that, in a general manner, the news which presented a critical view of ADHD did not offer deeper texts or with more grounded criticism about the biologization of mental disorders.

Coutinho and Araujo (2018) presented a contribution of national and Latin-American authors to the critics of the medicalization of life and the teaching-learning process from the complaints of attention deficit and hyperactivity in the school environment. The authors pointed that, in the school scope, the medicalization is expressed in the search for the causes of the learning difficulties in characteristics inherent to the student, displacing the political-pedagogical discussion to allegedly medical causes and solutions. In this context, permeated by biological determinism, the disorders capture the teachers, turning them into an extension of the medical specialties.

The analysis of the perceptions and practices of the educators in face of ADHD was realized by Bezerra and Ribeiro (2020) in review of the articles published between 2011 and 2017. The work was organized in three categories: the hegemonic view of ADHD, of biomedical basis; the historical-cultural view, which proposes the idea of a social ADHD; and the conceptions and practices of the teachers in face of the disorder. The authors pointed out limits in the two main views of ADHD, because, while the first decontextualizes the subject of its social reality, the second tends to detail its organic aspect. The review evidenced that most of the teachers understand ADHD as a problem of neurological nature and of genetic origin, in face of how pedagogical practices are frequently neglected, in the middle of a debate marked by ideological positions.

Tavares and Rodrigues (2022) mapped the Brazilian production about the usage of psychotropics in children. The authors selected 32 articles, which contributions were organized in three categories: school; health services; and demedicalization proposals. The main subject identified in the reviewed studies was school failure associated with learning difficulties and the indicative usage of psychotropics as a form of treatment for this matter. The triad school/ADHD/psychotropics, intertwined in all the studies, was considered an expression of child medicalization. The article did not present a wide criticism to medicalization, but it problematized the expansion and banalization of the usage of psychotropic medicine in children.

The work by Colaço (2016) has as objective understanding the phenomenon of medicalization and problematized the existing contradictions between diagnostic and prescriptive practices for the learning disorders and the production of knowledge in the areas of Medicine, Education and Psychology at USP. The study presented a historical profile of ADHD along the DSM editions and a review of research done at this university about learning disorders, with highlights on ADHD, in an interval of 10 years, from 2005 to 2014. As result, were discussed contributions of critical authors to the medicalization of education, with emphasis

in studies of the area of Psychology, problematizes possible disconnections between the scientific production and the actuation of professionals in the school context, besides pointing out contributions of the latest to the training of teachers.

### **Pedagogical strategies for students with ADHD**

Eleven publications pointed to the need of differentiated pedagogical referrals for the support and promotion of learning by students with ADHD. In a general manner, these articles were not grounded in a critical view in relation to the diagnostic criteria, to the increase in the indexes of prevalence or to the usage of medication indicated to this disorder. In contrary, they shared a biomedical perspective, treating ADHD as something natural and expected in face of a dysfunction in the production of neurotransmitters (Silva & Dias, 2014; Souza, 2016; Benício & Menezes, 2017; Nogueira & Menezes, 2021), of a malfunction of the brain neurochemistry (Souza, 2016), or still as a disturbance due to a neurological, genetic or of the neurodevelopment (Côas, 2016; Dacroce, 2016; Gonçalves & Volk, 2016; Souza, 2016; Benício & Menezes, 2017; Cunha & Santos, 2017; Paiano et al., 2019; Nogueira & Menezes, 2021), of specific genes or some dysfunction of the Central Nervous System (Silva, 2015).

Some works suggested the possibility the teachers contribute to the ADHD diagnostic and its treatment (Silva, 2015; Souza, 2016; Benício & Menezes, 2017; Cunha & Santos, 2017) and highlighted the importance of its early realization for the best conduction of therapeutic orientations or pedagogical actions (Cunha & Santos, 2017; Benício & Menezes, 2017; Paiano et al., 2019; Nogueira & Menezes, 2021). In this aspect, for Cunha and Santos (2017), it is not the role of the teacher giving the diagnostic, although considered as an promoting agent of health; and, for Benício and Menezes (2017), since three or four years old it would be possible identifying behaviours characteristic to ADHD in the children. In some cases (Côas, 2016; Silva & Dias, 2014; Dacroce, 2016; Gonçalves & Volk, 2016; Benício & Menezes, 2017; Cunha & Santos, 2017), the term “beared” was utilized to refer to the student or hyperactive and/or inattentive child, which denotes the understanding it is an intrinsic dysfunction to those who present its characteristics; in others, it was emphasized its chronicity (Dacroce, 2016; Gonçalves & Volk, 2016; Souza, 2016; Benício & Menezes, 2017; Paiano et al., 2019; Nogueira & Menezes, 2021).

The difficulties and/or learning issues caused by ADHD symptoms were highlighted by most of the works in this section (Silva & Dias, 2014; Côas, 2016; Dacroce, 2016; Souza, 2016; Benício & Menezes, 2017; Cunha & Santos, 2017; Inácio et al., 2017; Paiano et al., 2019; Nogueira & Menezes, 2021). For Silva and Dias (2014), although students with ADHD have the necessary attention to develop pedagogical activities, the disorder interferes in their learning process. Inácio et al. (2017) stressed that ADHD is not a specific disorder, but that the diagnosed children have the academic development compromised in face of the behaviours which characterize it.

The consequences of teachers' incipient knowledge regarding this disorder, such as difficulties in dealing with children who present it, were highlighted by Silva and Dias (2014), Silva (2015), Gonçalves and Volk (2016), Souza (2016), Benício and Menezes (2017), Cunha and Santos (2017), Inácio et al. (2017) and Nogueira and Menezes (2021). In face of these difficulties, all the eleven articles indicated the importance or described differentiated pedagogical methodologies, strategies and practices which might be adopted by educators for the promotion of learning by the students with ADHD. Cunha and Santos (2017) presented a group of actions understood as adequation of the teaching environment, usage of behavioral strategies, partnership with the families, phonic method and artistic and playful activities. In their turn Silva and Dias (2014) highlighted the joint work between the teacher from the resources room and the classroom, associated to stimulate and motivate students, enabling a positive and enjoyable form of school inclusion for children with ADHD.

By their turn, the work by Inácio et al. (2017) presented strategies utilized by their students diagnosed with ADHD — as underlining, taking notes, researching, reading again and asking for help — as well as the conceptions of the teachers about intellectual styles for effective learning. The article by Paiano et al. (2019) evidenced that a significant part of the research developed to subsidize intervention actions to the children diagnosed was directed only to the clinical application. The author pointed out the employment of computerized activities, individual and group tasks, training for the parents and teachers and psychosocial interventions as pedagogical strategies.

Although Gonçalves and Volk (2016) had presented actions and methodologies directed to teachers who work with children with ADHD, they emphasize the importance of the medical report and drug intervention for children with hyperactivity, as a manner to promote learning and cognitive development. Cunha and

Santos (2017) highlighted being necessary that the child has already been diagnosed and a treatment for these strategies are conducted, because, in contrast, there is a considerable chance of failure in the implementation of any pedagogical strategy. Benício and Menezes (2017) pointed out many children with ADHD are not diagnosed and, therefore, do not receive adequate support. The involvement and the partnership of the family, fundamental for the success of the pedagogical actions and for the development of the learning by the student who presents ADHD, were observed by Silva and Dias (2014), Gonçalves and Volk (2016), Benício and Menezes (2017), Cunha and Santos (2017) and Inácio et al. (2017).

Côas (2016) problematized teaching knowledge in their professional work with students “with” ADHD, enrolled in public schools in the municipality of Paranaguá. Although with educational focus, the research was grounded on a medical understanding of the disorder, and its results evidenced the teachers presented superficial knowledge of the subject. The difficulties in dealing with students with signs of ADHD were attributed to a deficient university formation, which justifies the limitation in the elaboration of methodologies which aid the teaching-learning process. The author concluded the need of new studies in the school environment itself to foment the capacity of the education professionals to assist diagnosed students.

## Final considerations

The objective of this article was presenting the results of an integrative literature review about ADHD, with the intent of evidencing what is being produced by Brazilian scientific literature about this disorder in its relation to teaching, learning and the process of medicalization in the scope of schools. Mainly, the selected texts organized in four categories — ADHD and medicalization of learning; the contributions of Historical-Cultural Theory for the understanding of ADHD; literature review of the Brazilian production about ADHD; and pedagogical strategies for students with ADHD — evidenced the controversies which involve this diagnosis. As part of this polemic, it is highlighted the existence of different approaches for its comprehension: medical, hegemonic, and social, of critical fundament, which catches attention for the reductionism with which this disorder has been interpreted.

In a general manner, it is at school the characteristics considered indications of ADHD pass to be seen as bothering, becoming the space in which the referral of children to the health services is presented as a possibility of accommodating conflicts. Although in an unintentional manner, the school professionals cooperate for the medicalization of children. In this context, there occurs a displacement of questions proper to the educational scope to the medical area, to which is attributed the responsibility of treating the children with a disorder which would affect, exclusively, brain areas related to learning and behaviour.

As presented in the introduction, this article is part of a wider research, whose objective is understanding the social representations the school professionals and the families of children diagnosed with ADHD have about this disorder. It caught our attention that only two texts explained the definition through the Theory of Social Representations (Moscovici, 2012). Considering that, in a general manner, the characteristics of inattention and of hyperactivity/impulsiveness are perceived as symptomatic of ADHD from the view of the school, and that, under a historical-critical perspective, these manifestations might be better understood in the sociocultural contexts where they occur, it becomes relevant knowing the social representations and the actors involved — as the families and teachers — construct about the disorder and the difficulties of schooling the children. These representations articulate both the diagnosis and medicalization process and the possibilities of reception, being able to, thus, favoring new family and pedagogical approaches. In the same manner, the social representations of the students themselves about the meaning of school and the school activities must be included in these reflections.

In face of the contributions of the reviewed texts, it fits us deepening the reflections and referrals ahead to the organic approaches about ADHD, which reduce the complexity of learning to exclusively biological aspects. It is also needed to problematize the challenges the process of medicalization imposes in the educational scenario, as the urgency in the proposal of non-medicalizant educational practices, still not very explored in the Brazilian productions. Such practices pass through the resumption of the centrality of the school and its legitimacy in face of the aspects of pedagogical order, so we remember the sayings by Arroyo (2001), as well as through the consideration of the non organic deficits which trespass the school environment — as classrooms with an inadequate number of students, precarious physical infrastructure, scarcity of didactic materials and the social devaluation of the teachers and their professional careers. Beyond this, it is needed to face the pathologization and medicalization processes which, each time more insidious, transfer to

the children, and, in the limit, to their families, the responsibility for not learning and for not behaving, exempting the school system of any implications in this process.

One of the spaces to be highlighted for the construction of demedicalizing practices are the initial and continuing education courses, which need to approach the concept of medicalization and the biologizing concepts which are predominant at school. This discussion must occur at every level, from the teaching practices to educational politics, having in sight the promotion of educational processes committed to human development.

As it has been shown by the THC assumptions, it is by means of the intentional school teaching the child appropriates from the signs and the cultural instruments and learns the capacity of self regulating and, in this aspect, the teachers need to evaluate their pedagogical referrals and question how their practices might contribute to the manifestation of the inattentive and misbehaved characteristics. Besides Education, it is important the Psychology and Social Assistance areas, alongside the families get closer to discuss this subject.

Without being exhaustive, this review presented critics about the entrance of medical explanations in the scope of Education, which tutors the children, the families and the pedagogical practices. In face of the range of these questions and the effects of medicalization on the students and their social and educational trajectories, we consider legitimate this subject being appropriated by school professionals and contemplated by theories of the Education area.

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