revista brasileira de educação
rbe

https://doi.org/10.1590/S1413-24782026310033

Versão on-line ISSN: 1809-449X

Article

Between the normal and the pathological: inconsistencies of the SNAP-IV in ADHD evaluatio

Entre o normal e o patológico: inconsistências do SNAP-IV na avaliação do transtorno do déficit de atenção/hiperatividade

Entre lo normal y lo patológico: inconsistencias del SNAP-IV en la evaluación del TDAH

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ABSTRACT

Attention-Deficit/Hyperactivity Disorder (ADHD) is frequently associated with children's entry into school, where they are assessed according to expectations regarding behaviors and learning abilities. In a context where life and education are pathologized and medicalized, behaviors such as inattention and hyperactivity are considered medical symptoms, often leading school professionals to recommend that families seek specialized interventions. Among the aspects that can be addressed regarding this diagnosis, this article analyzes SNAP-IV, an instrument used by parents and teachers to evaluate the presence and intensity of ADHD symptoms. Although standardized, SNAP-IV is subjective and influenced by cultural values, expanding diagnoses, reinforcing pathologization, and quantitatively establishing a boundary between the normal and the pathological, which undermines educational processes and renders its use inappropriate, even as a screening tool.

Keywords: Biologization of Life. School. Medicalization. ADHD.

RESUMO

O Transtorno do Déficit de Atenção/Hiperatividade (TDAH) é frequentemente associado ao ingresso da criança na escola, espaço no qual ela passa a ser avaliada de acordo com expectativas relacionadas a comportamentos e aptidões para a aprendizagem. Em um contexto no qual a vida e a educação são patologizadas e medicalizadas, comportamentos como desatenção e agitação são interpretados como sintomas médicos, o que, muitas vezes, leva profissionais da escola a orientar as famílias a buscar intervenção especializada. Entre os elementos que podem ser problematizados em torno desse diagnóstico, este artigo analisa o SNAP-IV, instrumento utilizado por pais e professores para avaliar a presença e a intensidade dos sintomas do TDAH. Embora padronizado, o SNAP-IV apresenta caráter subjetivo e é influenciado por valores culturais, o que contribui para a ampliação de diagnósticos, reforça a patologização e estabelece, de forma quantitativa, uma fronteira entre o

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normal e o patológico, comprometendo os processos educacionais e tornando inadequado seu uso, inclusive como método de triagem.

Palavras-chave: Biologização da Vida. Escola. Medicalização. TDAH.

RESUMEN

El TDAH, Trastorno por Déficit de Atención/Hiperactividad, se asocia frecuentemente con la entrada de niños y niñas a la escuela, donde son evaluados/as según expectativas relacionadas con comportamientos y aptitudes para el aprendizaje. En un contexto en el que la vida y la educación están patologizadas y medicalizadas, comportamientos como la falta de atención y la hiperactividad se consideran síntomas médicos, lo que a menudo lleva a los/las profesionales escolares a recomendar a las familias que busquen intervenciones especializadas. Entre los aspectos que pueden abordarse en torno a este diagnóstico, este artículo analiza el SNAP-IV, un instrumento utilizado por padres y profesores/as para evaluar la presencia e intensidad de los síntomas del TDAH. Aunque estandarizado, el SNAP-IV es subjetivo y está influenciado por valores culturales, ampliando diagnósticos, reforzando la patologización y estableciendo cuantitativamente una frontera entre lo normal y lo patológico, lo que compromete los procesos educativos y hace inadecuado su uso, incluso como herramienta de cribado.

Palabras clave: Biologización de la Vida. Escuela. Medicalización. TDAH.

INTRODUCTION

This article analyzes SNAP-IV, a version of *Swanson, Nolan and Pelham Questionnaire* (SNAP), an instrument used by parents and teachers to evaluate presence, frequency and intensity of Attention Deficit and Hyperactivity Disorder (ADHD) in children and adolescents. The questionnaire consists of 18 items related to ADHD symptoms (items 1 to 18) and eight items related to Oppositional Defiant Disorder (ODD) (items 19 to 26), one of the most common commorbidities (Mattos *et al*., 2006; Pereira *et al*., 2012). This study focuses exclusively on the first 18 items, specifically for the evaluation of ADHD.

As the axis of discussion, the analysis addresses the phenomena of biologization and medicalization, which, when acting on life, society, and education, transform collective problems into individual issues, more specifically into biological matters, inherent to the subject and amenable to medical intervention. In the scope of school, these phenomena influence the teachers' expectations and their approach in relation to the different forms of learning and behavior of the kids. The conceptions between the normal and the pathological, initially approached by Canguilhem (2009), also offer contributions to this theme.

Considered a neurodevelopmental disorder, ADHD belongs to a group of conditions that manifest early, often before school entry. Its essential characteristic is a "persistent pattern of inattention and/or hyperactivity-impulsiveness which interferes in the functioning or in the development," affecting academic, family, professional, and social relationships and potentially accompanying the individual throughout life (APA, 2014, p. 61).

According to the medical literature, ADHD is present in all social groups, affecting children, men, and women regardless of socioeconomic, ethnic, or educational status (Barkley, 2002; Mattos, 2020). Its prevalence is estimated at 5% in children and 2.5% in adults (APA, 2014), although these figures vary significantly. In France, prevalence is reported as 0.05% (Silva and Batista, 2020),

whereas in Brazil it has reached 26.8% in some regions (BRATS, 2014). Although diagnosis may occur in different contexts, school entry is a decisive factor for the manifestation of symptoms, leading to their characterization as a pathology to be diagnosed, treated, and medicated in order to address learning and behavioral problems (Signor *et al*., 2017; Sorbara, 2017).

From an organic perspective, ADHD is described as resulting from dysfunction in dopaminergic and noradrenergic neurotransmission in specific brain areas (Couto, Melo-Junior and Gomes, 2010). This neurochemical imbalance gives rise to inattentive, hyperactive, and impulsive symptoms. The affected area is the orbitofrontal region, which plays an important role in the inhibition of behaviors and emotions, as well as in the regulation of attention. This region is rich in dopamine, and insufficient production of this neurotransmitter may be associated with the disorder.

Although ADHD was designated under this name in 1994 (APA, 2002) with the publication of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), its history spans more than a century. Over this period, it was identified as a defect of moral control, encephalitis lethargica (and its sequelae), brain injury, minimal brain dysfunction, cerebral palsy, hyperkinesia, hyperkinetic reaction, hyperkinetic child syndrome, hyperactivity, and attention deficit disorder, among other denominations.

According to some authors, these disturbances described a set of common symptoms, referred to as childhood deviations (Rafalovich, 2001; Brzozowski, 2020), which varied little from one category to another. Diagnoses were based on behaviors such as hyperactivity, inattention, aggressiveness, impulsivity, restlessness, sleep problems, and speech delay (Martinhago, 2018), as well as “bad performance at school, extreme extroversion, explosions of violent behavior, incapacity of remaining in a task, theft, disturbances in the sleeping patterns, morality inconsistent to the age and forgetfulness” (Rafalovich, 2001, p. 93).

The search for the etiology of ADHD has accompanied much of this history. In 1917, sequelae of encephalitis lethargica in surviving children drew medical attention to disorders that caused behavioral and attentional alterations. Based on a cause-and-effect hypothesis, it was assumed that if brain damage could affect behavior and attention, children who presented such symptoms from an early age would have congenital lesions (Moysés and Collares, 1992). This simplistic correlation contributed to the explanation of learning difficulties and behavioral problems through an organicist perspective.

Since then, a series of studies has been conducted with the aim of identifying biological markers of ADHD. These studies ultimately seek to establish its etiology and to conduct diagnosis in an objective manner, following an investigative model similar to that used for organic diseases in other areas of medicine, reflecting the longstanding aspiration within psychiatry, at least in its less biologized versions, for all mental disorders.

However, although ADHD is one of the most studied conditions in the neuropsychiatric field, research has not yet established a definitive biological basis, and diagnosis remains a mixed process involving interviews with parents and teachers, evaluation of school performance, and psychological tests. In practice, it constitutes a negotiation process in which the perspectives of the family, teachers, physicians, and the child are taken into account (Caliman, 2012).

In this context, SNAP-IV seeks to fulfill the promise of psychiatry by making ADHD diagnosis accurate and objective through observable, classifiable, and measurable criteria. It attempts to do so by using questions considered objective, whose answers are quantified to generate a score that could, in theory, indicate the need for further evaluation.

From this perspective, the present analysis problematizes the limits of SNAP-IV in the evaluation of ADHD. Examination of this instrument suggests that its presumed objectivity reflects norms and cultural values, as well as school expectations regarding children’s abilities and interests

in learning. In addition, the questions address behaviors that may be observed in any child, which may result in an excessive number of diagnoses. Its use may also contribute to a reductionist view of the challenges faced by children and adolescents in their learning processes and social contexts, by promoting a simplistic and decontextualized interpretation of human behavior.

The article is organized into three sections. The first addresses the relationship between the DSMs and the processes of biologization and medicalization of life. The second questions certain inconsistencies of SNAP-IV as a diagnostic and evaluative instrument for ADHD, even as a screening tool. Finally, the third section discusses how SNAP-IV may establish a quantitative boundary between the normal and the pathological.

THE DSMS IN TIMES OF MEDICALIZATION AND BIOLOGIZATION OF LIFE

In an interview with the newspaper *Folha de São Paulo*, the neuroscientist Eric Kandel (*apud* Garcia, 2011), Nobel laureate in Medicine in 2000, discussed the difficulties faced by psychiatry due to the lack of objectivity in diagnosis. He emphasized that this lack of objectivity has generated a crisis in the psychiatric field, considering that, unlike conditions such as diabetes and hypertension, for which physicians can rely on objective and independent measurements, psychiatrists "still" depend on patient-reported histories. According to Kandel, psychiatry "desperately needs good biological markers," without which it will not be possible to advance significantly in diagnostic objectivity and accuracy (*apud* Garcia, 2011).

Kandel's argument reflects a recurring theme in psychiatry since at least the 1970s, with direct impact on DSMs. These manuals ceased to be "small books" that few people read and that were considered of little importance, and became, beginning with the third edition, a "permanent best-seller" (Frances, 2016). Organized by the American Psychiatric Association (APA), the manuals are widely used worldwide, both by clinical professionals — especially psychiatrists — to diagnose and classify mental disorders, and by professionals in other fields, such as law, education, and organizational settings (Resende, Pontes and Calanzas, 2015). Moreover, in recent decades, information from the DSMs has increasingly been directed at the lay public, mainly through traditional media, social networks, and associations of people living with mental disorders.

Over a little more than seventy years of development, many changes have been implemented in the manuals to provide greater objectivity to diagnostic criteria, moving away from possibilities of subjective and contextualized understandings of human suffering. This search for objectivity raises questions regarding the extent to which the complexity of human experience can be translated as previously proposed. Furthermore, it leads to excessive medicalization, a process that both transforms collective issues into individual problems and promotes the classification and pathologization of experiences inherent to the human condition, rendering them liable to medicalization (Moysés and Collares, 2013).

The first two editions of the DSM, released in 1952 and 1968, respectively, predominantly reflected a psychoanalytic perspective, based on a psychosocial understanding of mental illness. However, the third edition, published in 1980, transformed psychopathological conditions into mental disorders. This edition emphasized the biological bases of mental illness, seeking to objectify symptoms and to clarify etiology as an essential step toward diagnosis, treatment, and more effective prevention strategies (Russo and Venâncio, 2006; Guarido, 2007; Freitas-Silva and Ortega, 2016).

By introducing a significant rupture with previous classifications, DSM-III redefined conceptions of normality and pathology, including the boundaries between normal and pathological states, as well as among different disorders, resulting in a superspecification of mental categories (Russo and Venâncio, 2006). In this sense, Frances (2016) argues that, by establishing such distinctions, the DSM acquired social relevance, as it came to determine issues that impact people's lives, such as who is

considered healthy or ill, who is eligible for social benefits, and who is entitled to special health and educational services.

This scenario reflects a growing biologization of life, in which biological explanations are used to describe phenomena that do not belong strictly to the domain of biology, displacing the analytical focus from society to the individual, and from the individual to the organism (Meira, 2019). In this context, results from genetic studies and neurological research — especially those related to brain functioning and mapping of the human genetic code — have been considered explanatory sources of behavior. These studies have also raised hypotheses regarding the influence of neurotransmitters on various behavioral, emotional, and cognitive aspects of individuals (Guarido, 2011).

Consequently, mental disorders came to be identified by means of specific groups of symptoms considered clear and objective, listed in the manuals. These symptoms are described as observable, evaluable, and measurable, present in an individual's life within defined time frames, and resulting from processes of biologization and objectification of mental suffering, thus becoming subject to medical intervention (Guarido, 2007; Frances, 2016).

This perspective weakened other forms of understanding such suffering, as biological determinisms — previously considered to have little or no influence — came to prevail. Furthermore, it questioned the legitimacy of psychoanalysis, psychology, social psychiatry, and sociology in explaining these phenomena (Freitas-Silva and Ortega, 2016). With the participation of the pharmaceutical industry, which was interested in the definition of diagnoses, DSM-III, while intending to be neutral and generalizable across time and place, ultimately contributed to the globalization of North American psychiatry (Russo and Venâncio, 2006).

In the field of ADHD, diagnostic objectivity and standardization were expected to be achieved through research aimed at identifying biological markers and determining etiology. As a result, the 1980s and 1990s were crucial decades for the acceptance of its neurobiological interpretation. The 1990s, described as the "Decade of the Brain," represented the peak of neuroscientific studies on the disorder, which came to be considered a neuropsychiatric condition with implications for executive brain functions. The existence and diagnostic validity of ADHD came to depend on the discovery of its organic bases, as well as on evidence of the damage it could cause and demonstrations that it was, in turn, caused by biological and neural factors (Caliman, 2012).

The objective of these studies was to demonstrate that the disorder was real because its biological factors had been identified, thus allowing it to be visualized, universalized, and communicated (*ibidem*). However, none of the promising biological discoveries was consolidated as a diagnostic test in psychiatry (Frances, 2016), and the APA has continued, in every manual published since the 1980s, to consider manifestations of inattentive, hyperactive, and impulsive symptoms as fundamental aspects of the disorder's definition, thereby maintaining a clinical basis for diagnosis.

Within this context, the SNAP questionnaires (SNAP-III, SNAP-IIIR, and SNAP-IV) were developed based on symptom lists for ADHD evaluation, as defined in DSM-III, DSM-IIIR (revised edition), and DSM-IV, respectively. Their purpose is to ensure, through sets of questions considered classifiable and measurable, diagnostic standardization and objectivity, aligning with the ideals of biological psychiatry.

Biologization is a process inseparable from medicalization, a term coined in the 1960s to describe the tendency to attribute a medical character to issues that previously lay outside the scope of medicine. The concept gained prominence in the 1970s through studies in health sociology, whose theorists began to question the incorporation of human plurality, conditions, and suffering into medicine (Illich, 1975), which transformed them into targets of classification manuals and clinical interventions.

Medicalization, however, has an irregular character, either due to the participation of non-medical actors or because some groups and behaviors are more subject to medicalization than others (Conrad, 1975). Given this breadth, the key to understanding the concept lies in its definition: medicalization "occurs when human problems or experiences pass to be defined as medical problems, often in terms of diseases, illnesses, or syndromes," with a medical framework for understanding them and medical interventions for treating them (Conrad and Barker, 2013, p. 204).

The DSMs contribute to this process by superspecifying disorders, which come to encompass nearly every human experience, thereby loosening diagnostic criteria. In this regard, Frances (2016) affirms that DSM-IV was responsible for at least three epidemics: ADHD, autism, and bipolar disorder. Moreover, diagnostic inaccuracy has resulted in the overprescription of medications, particularly psychiatric drugs.

In the field of education, medicalization invents and reinvents illnesses related to not learning and not behaving appropriately at school, while "medicine asserts that the serious — and chronic — problems of the educational system are due to diseases that it, medicine, would be capable of solving" (Moysés and Collares, 2011, p. 136). Thus, schooling problems are attributed to various diseases, insofar as they fulfill the objective of justifying school failure, displacing "the axis of a political-pedagogical discussion to pretensely medical causes and solutions, therefore inaccessible to Education" (Collares and Moysés, 1996, p. 28). In this scenario, "dyslexic, hyperactive, inattentive, questioning, and low-IQ brains" are invoked to justify problems in learning processes (Moysés and Collares, 2020, p. 34). Faced with such justifications, "every problem involving education becomes biological in nature, and solely the child's problem" (Sorbara, 2017, p. 60).

The end of the 20th century marked increased academic interest in the medicalization of education and childhood in Brazil, coinciding with the publication of the third and fourth editions of the DSM, the expansion of pharmaceutical laboratories, the development of biological psychiatry, and the growth of the neuroscientific field (Ferrazza and Rocha, 2011; Caliman, 2012; Brzozowski, 2020). Since the 1990s, discourses associating learning and behavioral difficulties at school with neurological problems have intensified and gained strength in educational contexts, and schooling difficulties have increasingly been attributed to disorders inherent to children.

Guarido (2007, p. 28-29) highlighted how biologizing resources with medicalizing effects are disseminated by the media to families and school professionals, often in simplistic and mythologized ways. Statements such as "Knowing how the brain stores information you will help the students to fix the contents studied in the classroom," "Teacher is educated to identify schizophrenia" or "Teenagers: understanding their heads as a key to obtaining a good learning" have resulted in an abundance of psychopathological diagnoses in childhood by asserting that indiscipline, behavior, and learning are directly associated with brain connections.

As a consequence, an increasing number of children have been referred to medical clinics to remedy symptoms, without consideration of the contexts in which they manifest or the singular and complex expressions of each subject. To the extent that such statements seek to explain all aspects of the subject, symptoms are interpreted as neurological deficits rather than, for example, effects of a psyche in formation (ibidem), representing a form of reductionism that has permeated contemporary educational practice (Garbarino, 2020).

From this perspective, medicine, based on discourses of neurochemical imbalance, has appropriated childhood and schooling through so-called learning disorders. It has assumed responsibility for classifying, labeling, and intervening in bodies and subjectivities based on individualizing, biologizing, and pathologizing understandings of human behavior, which are reflected in definitions of normal and abnormal, health and illness, norm and deviation (Moysés and Collares, 2013).

Biologized and removed from their real contexts, children have come to be viewed through dysfunctions that "interfere with areas considered prerequisites for learning, such as information perception and processing; use of cognitive strategies; motor skills; attention; language; mathematical reasoning; social skills, among others" (Meira, 2012, p. 137), whose intervention would lie beyond the competence of school professionals, despite their formal training in the educational domain.

SNAP-IV: INCONSISTENCY OF ITS UTILIZATION FOR THE EVALUATION OF ATTENTION DEFICIT AND HYPERACTIVITY DISORDER

The need of standardizing diagnostic criteria in the areas of Psychiatry and Mental Health, whether in clinical practice or research, has made evaluative instruments important tools for both areas. In the case of ADHD, the ADHD Rating Scale, Conners's Questionnaire, and SNAP-IV — successor to SNAP-III and SNAP-IIIR — are highlighted. These instruments were developed to screen for and assess the severity, frequency, and intensity of the symptoms of this disorder by means of quantitative scores for each evaluated item. Even acknowledging the complexity surrounding the application of these instruments in cultures different from those for which they were created, their cultural transposition has largely been limited to translation and back-translation, expert review of the versions, and pretesting in target populations (Mattos *et al*., 2006).

With regard to ADHD, SNAP-IV is based on the 18 symptoms described in the fourth edition of DSM-IV (APA, 2002) for this disorder, which were maintained in the fifth edition (APA, 2014). Translated into different languages, in Brazil it had its translation validated by the Study Group on Attention Deficit (*Grupo de Estudos do Déficit de Atenção* – GEDA)from Universidade Federal do Rio de Janeiro (UFRJ) and by the Childhood and Adolescent Psychiatry Service of Universidade Federal do Rio Grande do Sul (UFRGS). According to the evaluation by Sorbara (2017), SNAP-IV has been one of the most frequently used instruments by health professionals and laypersons, including teachers, for the diagnosis of ADHD.

Researchers who adopt an organicist approach to ADHD consider SNAP-IV to be a reliable, consistent, and accurate instrument for the classification of the disorder, due to its solid psychometric properties (Mattos *et al*., 2006; Costa *et al*., 2019). Marcon, Sardagna and Schussler (2016), in a bibliographic review aimed at identifying diagnostic tools that would allow education professionals to carry out a prediagnostic assessment of ADHD in children and adolescents in the school context, concluded that the use of SNAP-IV by pedagogues and psychopedagogues is "highly recommended" for the "early" detection of the disorder.

The website of the Brazilian Association of Attention Deficit (*Associação Brasileira do Déficit de Atenção* — ABDA) makes available a translated version of SNAP-IV for use in Brazil, ready to be printed by families and delivered "to be filled out by the teacher," emphasizing the importance of school professionals in clinical referral. In this version of SNAP-IV, the 18 questions related to inattention, hyperactivity, and impulsivity must be rated as "not even a little," "a little," "a lot," and "too much." The first nine questions refer to inattention, and the remaining ones to hyperactivity/impulsivity. If at least six items in each of these blocks are marked as "a lot" or "too much," there are more symptoms of inattention and hyperactivity/impulsivity, respectively, than expected (Chart 1).

SNAP-IV emphasizes ADHD as a disorder frequently observed in childhood and associated with a child's entry into school. Of the 18 listed symptoms, nine (items 1, 2, 4, 5, 6, 7, 9, 14 and 16) mention terms such as "schoolwork," "tasks," "homework," "school duties," "classroom," and "activities," establishing a direct relationship between behavior, school, and diagnosis.

Chart 1 – SNAP-IV/diagnostic-children.

NAME:				
GRADE: **AGE:**				
For each item, choose the column which better describes the student (MARK AN X):				
	Not even a little	**A little**	**A lot**	**Too much**
1. Cannot pay attention to details or makes mistakes for carelessness in school activities or tasks				
2. Has difficulty in maintaining attention in tasks or leisure activities				
3. Seems to not listen when is directly spoken to				
4. Does not follow instructions until the end and does not finish homework, tasks or obligations				
5. Has difficulty organizing tasks and activities				
6. Avoids, does not like or is involved against the will in tasks which involve prolonged mental effort				
7. Loses necessary things for the activities (ex: toys, homeworks, pencils or books)				
8. Gets distracted by external stimuli				
9. Is forgetful in daily activities				
10. Moves hands or feed or moves on the chair				
11. Leaves the sit in the classroom or in other situations in which expected to remain sit				
12. Runs from one place to another or climbs on things in situations it is inappropriate				
13. Has difficulty in playing or getting involved in leisure activities in a calm manner				
14. Does not stop or is frequently full of energy				
15. Speaks in excess				
16. Answers questions hastily before they have been finished				
17. Have difficulty waiting your turn				
18. Interrupts others or intrudes (e.g. butts into conversations/games)				

Source: ABDA (2017).

The other items also reinforce the idea that it is a disorder specific to the school environment, although in a less explicit way. In item 3, “seems to not listen when is directly spoken to”, it is possible to infer the interlocutor is the teacher. In item 8, “gets distracted by external stimuli,” the dynamics of the school — noises, interactions and movements characteristic of thi environment — are considered source of the distraction, which explains why medical reports often instruct teachers to keep diagnosed children away from doors and windows to reduce exposure to external stimuli in the classroom. In item 10, “moves hands or feed or moves on the chair,” it is assumed that the chair refers to a school chair. Items 14, 15, 17, and 12, respectively — “does not stop or is frequently full of energy,” “speaks in excess,” “have difficulty waiting your turn,” and “runs from one place to another

or climbs on things in situations it is inappropriate" — refer to behaviors considered inadequate for specific environments such as school, which demands silence, control, and organization as conditions for learning in accordance with the rules that must be observed in this space. Item 16, "answers questions hastily before they have been finished," points to classroom interactions in which questions are formulated by the teacher and directed to students. Finally, in item 18, "interrupts others or intrudes (*e.g*., butts into conversations/games)," it is possible to infer interruptions in the classrooom context, carried out by undisciplined children or those in the process of psychological development, who may not yet have learned the cultural norms of this space.

These symptoms are influenced by cultural values and reflect behaviors and attitudes that can be observed in any child, adolescent, or even adult, particularly in certain contexts. They may be considered normal under specific circumstances and are not necessarily indications of a disorder. Furthermore, since "rules are not scientifically dictated to life" (Canguilhem, 2009, p. 75), it is important to question the reasons for and consequences of applying questionnaires based on patterns considered normal to children who are known not to fit the desired standard. As stated by Sorbara (2017, p. 68), "in the search of defects, there are no interests, or even consideration for the diversity. [But yes] the transformation of social standards into biological, in criteria of neurological disease."

In addition, it is necessary to question whether the behaviors presented by these children can be objectively described, including those suggested in school reports sent to physicians. Based on these reports and the symptoms listed in SNAP-IV, it is not possible to simply infer such behaviors are normal or pathological, because, objectively, only differences are observed (Moysés, 2017). Lima (2021), when investigating notions of normality and pathology present in psychiatric classifications related to children, draws attention to the ambiguity of these concepts, particularly when they refer to the emotions and behaviors of children and adolescents, whose physical and psychological development is in constant change.

Within this logic, how can a diagnostic be established based on subjective, fluid, and even arbitrary criteria, uniformly applied to children who express themselves, behave, and learn in different ways? How can the perceptions of a child who "cannot pay attention to details or makes mistakes for carelessness in school activities or tasks," "*interrupts* or intrudes," "blurt out an answer" before a question is completed, has "difficulty in *maintaining the attention* in tasks or *recreational activities,*" "seems not to listen," "has difficulty in *playing* or getting involved in leisure activities in a *calm* manner" or "has *difficulty* organizing tasks and *activities*" be scientifically validated, as intended by Psychiatry?

How is frequency measured in terms such as "a lot," "too much," "not even a little," "not even a little bit," and "just a little?" If the issues concerns details, is it essential that children always pay attention to them? In a society in which competition is encouraged, often through school activities or children's programs, is it not expected that immediate responses will be sought? Why and how should children act calmly during playtime? In which situations do chldren fail to pay attention, and under what conditions does this occur? If attention can be sustained in activities such as digital games or artistic practices, are children organically inattentive? Can disorganization be considered a medical criterion, potentially addressed through medication, or is being organized a characteristic to be taught and learned?

If a child is inattentive at school and does not pay attention to the assigned homework at home, is the child considered inattentive in both environments, even though both contexts concern the same situation? If inattentive and hyperactive behaviors must be present in at least two environments, and physicians advise families to suspend medication use on weekends and during school vacations, does this imply that the child is sometimes biologically hyperactive and inattentive

and sometimes not? In this case, do medical recomendations for medication suspension, as well as evaluative criteria requiring symptom observation in at least two environments, not indicate that the problems are contextual and produced through concrete interactions?

According to Barkley (2002, p. 50-51, emphasis added), a representative of the organicist approach to ADHD, children with this behavior have a shorter attention span than expected, and sustaining attention for long periods is one of their most difficult tasks. They

> struggle, sometimes with tenacity, to maintain their attention in activities which are *longer* than usual, particularly those *duller*, *more repetitive* or *more tedious*. *Uninteresting* school tasks, *extensive* domestic activities and *long* lectures are problematic, as well as *extensive* readings, *uninteresting* tasks, paying attention to *uninteresting* subjects and finishing *extensive* projects.

In this section, Barkley (2002) presents some of the reasons that have made ADHD one of the most controversial diagnoses in child psychiatry. Certainly, children exposed to activities described as long, dull, tedious, repetitive, extensive, and uninteresting will experience difficulty performing them. This, however, does not necessarily indicate an organic disorder measured by mean of a standardized questionnaire, but rather that they are children in the process of psychological development, whose higher brain functions are not yet consolidated (Ribeiro and Viégas, 2016), or who simply do not perceive meaning or necessity in engaging in such activities. It should also be noted that "only with six positive answers, with only six positive responses, the diagnosis of a neurological disease is confirmed, which must be treated with psychotropics for the rest of the life" (Sorbara, 2017, p. 66).

Signor and Santana (2016) raise an equally important question: if a child is inattentive in one teacher's classroom and attentive in another's, moving frequently in the chair during the former's class in anticipatin of its eding, but remains calm in the latter's, which SNAP-IV questionnaire should be considered valid? If the child has only one teacher, how can it be determined whether the problem lies with the child or with the teaching strategies adopted by that teacher?

Given the way these symptoms are presented, it becomes practically inevitable that groups of children will be evaluated in favor of medical referral, since the symptoms are similar or interrelated and accumulate through their summation. Within this logic, the symptoms: cannot pay attention to details or makes careless mistakes in school activities or tasks; has difficulty maintaining attention in tasks or leisure activities; does not follow instructions through to completion and does not finish homework, tasks, or obligations; and avoids, dislikes, or is reluctant to engage in tasks that require prolonged mental effort could be summarized as one: *Has difficulty in maintaining attention in the realization of school activities, because of it makes mistakes, does not like and does not realize them until the end* — remaining faithful to the organicist interpretation of these symptoms — or, from the perspective of critical approaches to ADHD, *does not like school activities, therefore has difficulty in maintaining attention, makes mistakes and does not realize them until the end,* which would lead to quetioning what aspects of school cause some children to dislike this environment or the proposed activities.

Moreover, as questioned by Moysés and Collares (2013), what exactly constitutes "prolonged mental effort?" A child who plays video games for three consecutive hours may not consider this a prolonged mental effort, but may experience reading a book as such if the child does not enjoy reading or has difficulty doing so. The behaviors manifested by some children may express demotivation, disinterest, a lack of perceived need to sustain attention, or difficulties in learning processes, and not necessarily an organic disorder. Thus, whats is treated as an individual problem could again be understood as collective.

Symptoms has difficulty organizing tasks and activities; loses things necessary for activities (*e.g.*, toys, homeworks, pencils, or books); and is forgetful in daily activities may indicate that the child *has difficulty in organizing, therefore loses necessary things for such activities or forgets them,* or, *by not considering some activities as necessary, loses things for their realization.* In this case, the concern would be to understand why children do not consider certain activities necessary, pleasant, or attractive. It is possible that they do not perceive meaning in them, do not like the way they are conducted, or did not receive adequate instructions. Furthermore, it is possible to relate the loss of "things" or "daily" forgetfulness to a neurobiological dysfunction? Or does this again reflect a reductionist bias in which a secondary issue overshadows the complexity of the learning process?

Regarding symptoms seems not to listen when directly spoken to and gets distracted by external stimuli, these could be simplified as: *Seems not to listen when directly spoken to, because is inattentive or distracted* or, *by sustaining attention to a given object, person or a situation, presents distraction in relation to the environment.* Vigotsky (2003, p. 129), when addressing the relationship between attention and distraction, notes that distraction is generally considered the opposite of attention, since attentiveness involves an immediate and conscious response to stimuli, whereas distraction involves delayed or inadequate responses. From a psychological perspective, however, distraction has two irreconcilable aspects: distraction resulting from weak attention and distraction as "a necessary and useful companion of attention," with which teachers must learn to work.

According to Vigotsky (2003), concentrating on one thing leads to proportional distraction from others. Thus, there is no deficit per se, and schools could instead observe what forms and sustains children's attention. It is also important to identify the situations in which children seem not to listen, since every child who does not attend to what is expected is attending to something else, as it is not possible to attend to nothing (Moysés and Collares, 2013).

The subsequent symptoms — moves hands or feed or moves on the chair; leaves the seat in the classroom or in other situations where remaining seated is expected; runs about or climbs in situations where it is inappropriate; has difficulty playing or engaging in leisure activities calmly; and 14) does not stop or is frequently full of energy — could refer to a child who *moves, runs, or does not stay in places where he or she is expected to wait or in situations where such behavior is inappropriate* or, *Because he does not conform to some rules previously established by the school, he resists and opposes them.*

Although contemporary society emphasizes convenience, some school rules may make the environment hostile to children, particularly when they are imposed without explanation. Rules and norms are social constructions learned collectively through education. They are culturally specific, may be fluid, and can appear odd to some children. It cannot be expected that children arrive at school already knowing and naturally following these norms. Thus, to what extent can these characteristics be considered pathological?

Finally, symptoms speaks excessively; answers questions hastily before they have been finished; has difficulty waiting his or her turn; and interrupts others or intrudes may refer to a child who *has difficulty in waiting for the turn, and therefore presents answer in a hastily way, even interrupting other people* or, *by wishing to take part in interpersonal relations, prompts to answer what is asked*. Children are curious and inquisitive; they want to participate, take initiative, and demonstrate what they have learned. Again, waiting for one's turn is a behavior that must be taught.

At the same time, the context in which ADHD emerged imposes high demands, and under the ideology of meritocracy, productivity, competitiveness, and ambition are emphasized. In this context, there is little tolerance for inattention, understood as the opposite of what is demanded. As with adults, children are also embedded in this competitive society.

As pointed out by Meira (2019, p. 229), some situations presented in the questionnaire constitute a "true attack against science": how can an instrument that interprets everyday situations such as "avoids," "does not like," or "leaves the place" as signs of a disorder treatable with chemical substances be considered scientific? Moreover, there is a lack of clearly defined concepts that supposedly support the diagnosis — attention and behavior — and no space for problematizing the contexts in which children are embedded. The instrument simply assumes that children must be attentive and well behaved at school, regardless of subject matter or pedagogical practices. These are subjective questions in which, "under the algorithmic scientism of the child who does not learn and/or child with behavioral problems + normal physical exam + normal laboratorial exams, it is hidden, in fact, the child who botters" (Moysés and Collares, 2011, p. 80).

ATTENTION DEFICIT AND HYPERACTIVITY DISORDERS AND SNAP-IV: BETWEEN THE NORMAL AND THE PATHOLOGICAL

If behavior reveals something about the individual, diagnosis based on standardized and naturalized criteria, may conceal aspects pertinent to the context of the children's lives, including those related to diverse forms of suffering. Within the SNAP-IV framework, children are viewed as nonhistorical subjects, alien to the collectivity, and their behaviors are considered in isolation, disconnected from the sociocultural contexts in which they arise and manifest.

As pointed out by Moyses and Collares (2013; 2020), human behavior is not biologically determined. Although there is a biological basis, human beings are situated in time and space, and behaviors reflect the ways social, family, and educational experiences are lived. Beyond organic aspects, behaviors indicate whether something is going well or poorly; however, when taken as expressions of pathology, they are naturalized.

The symptoms that characterize ADHD are part of human nature, since everyone, to some degree, is inattentive, disorganized, impulsive, or agitated, particularly during childhood, which makes receiving a diagnosis possible. However, organicist theorists have equalized this assertion by considering such behaviors in quantitative rather than qualitative terms; that is, symptoms are evaluated by intensity and frequency, becoming abnormal in quantitative terms. In this sense, psychiatry privileges a quantitative analysis of human behavior or manifestations, as has occurred since the third edition of DSM: "For the diagnostic to be defined, the symptoms must be quantitatively abnormal, and what makes the pathology signs are their intensities" (Caliman, 2012, p. 228).

Canguilhem (2009, p. 10), in studying the relationship between the normal and the pathological, emphasizes that, despite scientific advances, the essence of medicine remains grounded in clinical practice and therapeutic application, a "technique of instauration and restoration of the normal, which cannot be entirely reduced to simple knowledge." Without the pretense of renewing medicine by incorporating metaphysics, Canguilhem (2009) focused on renewing certain methodological aspects, especially the concepts of normal and pathological, arguing against the thesis that pathological phenomena are, in essence, similar to their normal counterparts except for quantitative variations.

Modern medicine transformed health and illness into objective and quantifiable realities, a perspective in which pathological phenomena are explained in terms of quantitative variation — more or less — of physiological events considered normal. This perspective became "a kind of scientific dogma," and normality and pathology came to be considered elements of the same nature, differing only by excess or lack of organic materials: "Every disease has a corresponding normal function of which it is only the disturbed, exaggerated, diminished, or enlarged expression," such as blood glucose, "which is constant, permanent, both in diabetes, and out of this morbid state. Only it presents various degrees: blood glucose below 3 to 4% does not cause glycosuria" (Bernard, 1947 *apud* Canguilhem, 2009, p. 22).

The understanding that inattention, hyperactivity, and impulsivity are caused by abnormal dopanime levels reflects the principles of positivist medicine. However, irregularities, differences, and alterations do not confirm the presence of disease, but rather possible variations (Canguilhem, 2009). In this sense, "speaking of hyper(activity) and (attention) deficit demonstrates we are in the record of a disease understood as a quantitative variation" of the health state, a perspective aligned with ADHD diagnostic criteria, which indicate something measurable that can be excessive or deficient (Lima, 2021, p. 89). In this case, the deficit refers to decreased dopamine concentration levels in the frontal cortex, a condition that fits a pathological state semantically designated as "hyper" or "hypo" (Canguilhem, 2009, p. 12).

ADHD and the pathologies that precede it and are fused in its diagnosis express a complex intersection between what is considered normal and pathological, discipline and deviation, individual and social. This intersection manifests in the evaluation of symptoms presented in the SNAP-IV, which, theoretically, can be objectified, classified, and measured in children and adolescents who do not align with expected behavior or who deviate from the population average.

However, if the human body is a product of social activity, the constancy of certain traits revealed by an average depends on fidelity to certain norms, given that "in the human species, the statistical frequency does not translate only to a vital normality, but also to a social normality. A human treat would not be normal for being frequent; but would be frequent for being normal, that is, normative ina determined genre of life" (Canguilhem, 2009, p. 51). Normality is not absolute, but always related to values and dynamics shared by a social group. Some ADHD symptoms, such as inattention, hyperactivity, and impulsivity, may even be frequent and normal in an accelerated and media-saturated "genre of life" in which children are embedded.

Frances (2016) questioned the viability of using statistics in a simple and precise manner to measure normality, since it is not possible to identify the nature of anything with total precision. However, attempts to perform this measurement encounter the "beautiful symmetric form" of Gauss's curve, known as the normal distribution. This curve has a bell shape, with a central peak and tails extending to both sides, defined by the mean and standard deviation parameters. At the peak is the ideal measure, and the extremities are the least likely measurements.

This curve offers explanations for the functioning of life because, most of the time, forms are followed and deviations from the average occur in a predictable manner, providing a "prophetic power" in almost everything concerning the world and human beings. Diversity in physical, emotional, cognitive, and behavioral characteristics is not random, but "normally" distributed along the curve for every trait that manifests continuously in the population. Characteristics such as weight, height, and IQ, for example, concentrate around a central proportion at the top of the curve, while deviant values distribute symmetriccally at its extremes (Frances, 2016).

However, the values that define positions at the top of the curve or in its tails can be arbitrary and contextual, because they are not determined by the observer alone. If the normal curve describes the distribution of traits, and positions are located at the peak or tails based on prior definitions, the existence of a pattern to define who is normal or ill can be questioned, since the curve itself does not determine where normality ends and abnormality begins. In the case of ADHD, why would a child who forgets school materials or blurts out an answer be considered pathological if these behaviors could be normally distributed along the curve? And if some children do not play calmly because they are accustomed to varying, more or less intense movements, should they be represented at the peak or at the extremes of this curve?

The question of normality and abnormality has different historical layers, as emphasized by Patto (2022), who notes that this duality fulfilled at least two functions related to school throughout the 20th century: explaining the differences in performance among enrolled children and justifying unequal

access to more advanced levels of education, without undermining the ideology of meritocracy, within a climate of presumed equality of opportunity in industrialized capitalist countries. To achieve this, beyond attributes of (super)giftedness and (sub)giftedness and the application of intelligence tests in branches of psychology that privileged those already socioeconomically advantaged, physicians were tasked with addressing cases of learning difficulties.

The transition from the 19th to the 20th century was marked by major developments in the medical and biological sciences, particularly psychiatry. During this period, the first neurological and neuropsychiatric research emerged, much of it conducted in laboratories attached to asylums, along with the first classifications of abnormality. When learning difficulties began to emerge as a concern, some understanding already existed regarding the construction of special spaces for the "dull-headed" or "idiots," categories that had previously designated the insane. These classifications facilitated the transfer of the concept of abnormality from asylums to schools. Thus, "children who did not follow their colleagues in school learning passed to be designated school abnormal [and the] causes of their failure to some organic abnormality" (Patto, 2022, p. 89).

With the implementation of intelligence tests and instruments to measure natural aptitudes, the evaluation of the "school abnormal" became, in the first three decades of the 20th century, practically synonymous with intellectual assessment. In this context, IQ test results came to seal the educational destinies of contingents of children considered non-normal. Similaly, although more recent, SNAP-IV follows this logic by statistically classifying who are "normal" and "pathological" children, identifying them as bearers of a disorder frequently cited as responsible for school failure.

The inconsistencies and limitations of this instrument directly affect diagnostic and educational processes, reinforcing the pathologization of ADHD. As a filtering method, it is inadequate, particularly due to the influence of cultural norms and values on diagnosis and on the application of such tools. Furthermore, given that attempts to demonstrate ADHD through biological markers have not been successful, it is essential to seek other forms of disorder evaluation. Among these alternatives are a contextualized and individualized approach, a multidisciplinary focus, the use of qualitative assessment tools, consideration of cultural, family, and educational factors, review of the concept of ADHD, school monitoring, and ethical care.

This reflection on the limitations of diagnostic instruments leads to questioning the biologization and medicalization of life and education, multidetermined phenomena and objects of inquiry across different fields of knowledge. Such practices reveal particular views of the world, society, and education, inviting problematization: what are the implications of these processes in schools, which produce realities and guide classificatory practices and discourses? Whose interests are served by reducing human complexity to biological determinism? Is it viable to establish, by means of a questionnaire, a clear boundary between child normality and abnormality? What does a society express when swinging the feed is considered a symptom of neuropsychiatric dysfunction? How can it be determined, from a scientific standpoint, which children are "full of energy?"

FINAL CONSIDERATIONS

Frances (2016) argues that psychiatry will not rely on biological markers capable of establishing the boundaries between normality and mental disorders until the mechanisms that generate psychopathologies are understood, a process expected to occur gradually and slowly. This represents a disadvantage for the field, whose judgments are "still" based on subjective and fallible criteria. However, this disadvantage is believed to be compensated by the formulation of questionnaires considered objective. With regard to ADHD, the use of SNAP-IV, which theoretically substitutes the promised biological markers, allows the patient's history, mentioned by Kandel (*apud* Garcia, 2011), to be at least partially disregarded by psychiatry.

Among psychiatric disorders affecting children and adolescents, ADHD stands out as the most prominent, the "flagship" of discussions on medicalization and education (Garbarino, 2020). Frequently associated with the school context, where the first prediagnostic classifications occur, ADHD has been used, in many cases as a justification for school failure, as occurred with other medical dysfunctions in previous periods. This use of the disorder as an explanation for educational problems reflects an ongoing challenge for education. However, within a context of "hypermedicalization" (Conrad and Barker, 2013), the tendency to attribute problems intrinsic to children as causes of issues that affect the collectivity — such as social, political, economic, and cultural factors — has gained considerable proportions. Moreover, teachers have also been incorporated into this logic of medicalization, often uncritically accepting the idea that medical interventions are more effective in solving learning-related problems than pedagogical interventions.

The adoption of instruments such as SNAP-IV, by reinforcing a biologizing perspective and disregarding the contexts in which the children are embedded, supports processes of pathologization and medicalization that require broad questioning. A rupture with these practices has been proposed, not only through criticism of the inconsistencies and limitations of SNAP-IV, but also by indicating alternative paths for ADHD evaluation, based on ethical, contextual, and inclusive approaches. Beyond identifying "symptoms" in children, it is necessary to acknowledge the complex interactions among behavior, culture, and educational structures, promoting practices that respect the singularity of each child. The transition to this model is essential to overcome the limitations of the current paradigm, ensuring an inclusive education committed to the full development of children.

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How to cite this article: REDON, Silvano Aparecido; CARTAXO, Simone Regina Manosso. Between the normal and the pathological: inconsistencies of the SNAP-IV in ADHD evaluatio. **Revista Brasileira de Educação**, v. 31, e310032, 2026. https://doi.org/10.1590/S1413-24782026310032

Conflicts of interest: The authors declare that they have no commercial or associative interests that represent a conflict of interest in relation to the manuscript.

Funding: The study received no funding.

Authors' contributions: Writing – Initial Draft, Writing – Review and Editing: Redon, S. A. Supervision, Writing – Review and Editing: Cartaxo, S. R. M.

Data availability statement: No use of data was reported; no research data were used

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Received July 10, 2024
Revised November 27, 2024
Approved December 17, 2024

Responsible Editor: Terezinha Oliveira https://orcid.org/0000-0001-5349-1059