

GLOBAL MEDICALIZATION, ADHD AND CHILDHOOD. A STUDY OF THE MEDIA IN 7 COUNTRIES

MEDICALIZAÇÃO GLOBAL, TDAH E INFÂNCIAS. UM ESTUDO NA MÍDIA DE 7 PAÍSES

MEDICALIZACIÓN GLOBAL, TDAH Y NIÑECES. UN ESTUDIO EN MEDIOS DE COMUNICACIÓN DE 7 PAÍSES

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ABSTRACT: The aim is to analyze research results in seven countries in Asia, America, Europe and Oceania, to know which social actors are represented in the media on ADHD, in what ways and with what effects. We support the argument in three axes: ADHD as a paradigmatic example of the medicalization of children's mental health; ADHD in childhood as a global diagnosis; and the media as a relevant non-medical actor in the globalization of ADHD diagnosis. A corpus of 28 pieces of specific bibliography (books, book chapters and scientific articles) was formed. We consider the contributions of the medicalization of society as a theoretical-conceptual reference. The multiplicity of media discourses about ADHD in children, and the articulation of non-medical social actors in the processes of global medicalization of ADHD are discuss.

KEYWORDS: Medicalization. Childhood. Attention deficit hyperactivity disorder. Media.

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RESUMO: O objetivo é analisar os resultados da pesquisa em sete países da Ásia, América, Europa e Oceania, para saber quais atores sociais estão representados na mídia sobre TDAH, de que forma e com quais efeitos. Apoiamos o argumento em três eixos: TDAH como exemplo paradigmático da medicalização da saúde mental das crianças; TDAH na infância como diagnóstico global; e a mídia como um ator não médico relevante na globalização do diagnóstico de TDAH. Foi formado um corpus de 28 peças de bibliografia específica (livros, capítulos de livros e artigos científicos). Tomamos como referência teórico-conceitual as contribuições da corrente da medicalização da sociedade. Discute a multiplicidade de discursos midiáticos sobre TDAH em crianças, e sobre a articulação de atores sociais não médicos nos processos de medicalização global do TDAH.

PALAVRAS-CHAVE: Medicalização. Infâncias. Transtorno de déficit de atenção e hiperatividade. Mídia.

RESUMEN: El objetivo es analizar resultados de investigaciones en siete países de Asia, América, Europa y Oceanía, para conocer qué actores sociales aparecen representados en los medios de comunicación sobre el TDAH, de qué maneras y con qué efectos. Sustentamos la argumentación en tres ejes: el TDAH como ejemplo paradigmático de la medicalización de la salud mental infantil; el TDAH en la infancia como diagnóstico global; y los medios de comunicación como actor no médico relevante en la globalización del diagnóstico de TDAH. Se conformó un corpus de 28 piezas de bibliografía específica (libros, capítulos de libros y artículos científicos). Tomamos como referencia teórico-conceptual los aportes de la corriente de la medicalización de la sociedad. Se discute acerca de la multiplicidad de discursos mediáticos acerca del TDAH en las niñeces, y sobre la articulación de actores sociales no médicos en los procesos de medicalización global del TDAH.

PALABRAS CLAVE: Medicalización. Niñeces. Trastorno por déficit de atención e hiperactividad. Medios de comunicación.

Introduction

In this article we present the results of a line of research developed in an interdisciplinary team on the relationship between globalization of medicalization, media and mental health in children. (ARIZAGA; FARAONE, 2008; FARAONE *et al.*, 2010; BIANCHI *et al.*, 2016; BIANCHI *et al.*, 2017; BARCALA; BIANCHI; POVERENE, 2017; FARAONE; BIANCHI, 2018; BIANCHI *et al.*, 2020).

The objective of the article is to expose and analyze some findings and results of research carried out in seven countries in Asia, America, Europe and Oceania, in order to know which social actors appear in the media about ADHD, in what ways and with what effects.

With this, we seek to contribute to a panoramic reading of these phenomena, attending to an area of vacancy in social studies in this sense. We support the argument along three axes: ADHD as a paradigmatic example of the medicalization of child mental health (CONRAD;



SCHNEIDER, 1992; CONRAD, 2007); ADHD in childhood as a global diagnosis (CONRAD; BERGEY, 2014; BERGEY *et al.*, 2018); and the media as a relevant non-medical actor in the globalization of ADHD diagnosis (CONRAD; BERGEY, 2014; BERGEY *et al.*, 2018; GONON *et al.*, 2012; BEMPORAD; PRINCE; WILENS, 2009).

Based on these axes, we collected specific bibliography on seven national experiences. For the analysis, we took as a theoretical-conceptual reference the contributions of exponents of the current of medicalization of society.

The materials cover different countries, periods, types of media, objectives, methodologies and results; however, and following Foucault (2002), they present a regularity in their dispersion: they compose a series of written academic productions that analyze the relationship between childhood, ADHD and the media.

We discuss two discursive regularities that are verified in the materials: 1. In the analyzed media, different discourses about ADHD in childhood are expressed; 2. Non-medical social actors, and among them, notably, the media, are articulated in the processes of globalization of the medicalization of ADHD.

Theoretical aspects: medicalization of ADHD and discursive formations.

The theoretical framework articulates two axes: the medicalization of ADHD, mainly through the studies of Peter Conrad (2007; 2005; 1982; 1975), and the rule of object formation, proposed by Foucault (1991; 1985) for the study of discursive formations.

First, what was then called hyperkinesis became an early object of empirical interest in social studies on deviant behavior, the different agents of social control and the medicalization of society (CONRAD, 1975). Already in the 1980s, under the name of hyperactivity, ADHD was approached as an example of the medicalization of abnormality, and a map of the social actors that, to this day, are linked to the problem was outlined: doctors, schools, families and pharmaceutical companies (CONRAD, 1982). In the 1990s, the study of ADHD was analyzed together with other phenomena, such as delinquency and child abuse, giving rise to a hierarchy of childhood medicalization, considered especially at risk of being involved in these processes (CONRAD; SCHNEIDER, 1992).

For the 21st century, and secondly, studies were published that documented the growth of the diagnosis of ADHD in adults (CONRAD; POTTER, 2003; CONRAD, 2007), and its extension to countries other than the United States (POLANCYK *et al.*, 2007; CONRAD; BERGEY, 2014; SINGH *et al.*, 2013). These studies marked a transformation in previous



approaches, which considered ADHD as a primarily childhood condition (CDC, 2022) and mainly within the United States (FARAONE *et al.*, 2003).

These changes in focus led to readings that raised the so-called “imminent globalization of ADHD” beyond the United States (CONRAD; BERGEY, 2014; BERGEY *et al.*, 2018). According to Bergey and Filipe (2018), the international expansion of the diagnosis of ADHD began in the 1990s. Its distinguishing characteristics include the increase in the global prevalence of the diagnosis of ADHD (POLANCEYK *et al.*, 2007; 2014), and an increase in the use of ADHD medications, particularly methylphenidate, in a wide range of countries (INCB, 2014; 2015; 2020).

Among the factors that contribute to the international expansion of ADHD, Conrad and Bergey (2014) highlight the growing incidence of non-medical actors (in particular, transnational pharmaceutical companies and the media) and emphasize the importance of considering the particularities of the processes in each country in order to better understand how ADHD is disseminated, implemented and interpreted globally.

Third, the globalization of ADHD diagnosis positions the media as a relevant non-medical actor in the process. (CONRAD; BERGEY, 2014; BERGEY; FILIPE, 2018; CONRAD; SINGH, 2018; GONON *et al.*, 2012; BEMPORAD; PRINCE; WILENS, 2009).

As emerges from the analyzed materials, there is still little history of studies that, from the social sciences, analyze the place and characteristics given to ADHD in different media, both as a non-medical actor and, more specifically, in relation to other social actors, doctors and non-physicians.

Second, we refer to different productions by Foucault (1985; 1991; 2002) in which he focuses on the particularities of analyzing a discursive formation, and emphasizes the analysis of materials considering regularity in dispersion. To that end, he establishes four criteria for recognizing discursive units in terms of formations, each of which allows the description of utterances (FOUCAULT, 1985). From these four criteria, we take what is called an object formation rule.

In general terms, one of the peculiarities of Foucault's (1985) approach lies in the fact that, in his opinion, it is not the unity of the objects of analysis that makes a discursive formation specific. According to his proposal, the unity of discourses is not based on the existence of an object that precedes them and that they come to name, describe, delimit, judge, cut, code etc. This alleged unitary object is for Foucault a permanently separate and dispersed object, which is in perpetual non-coincidence with itself, which differs from itself over time, and which is the result of multiple fractures.



Thus, the analysis from the object formation rule focuses on the description of these dispersions, these ruptures, these transformations. By applying it, it is possible to establish a reference. The frame of reference defines the conditions and field of emergence, the possibilities of appearance and delimitation (the prescriptions and proscriptions of the discourses) and the instances of differentiation of the utterances. Also, the states of affairs and the relationships that unfold in this utterance, which give it its meaning and its truth value (FOUCAULT, 2002), the magma of practices in which this object of knowledge arises and is transformed.

Claiming that the different materials tracked refer to the same discursive formation on ADHD in childhood implies paying attention to two elements pointed out by Foucault (2002): emergence and dispersion, more than the permanence and continuity of discourses. Different discourses can be described as part of the same discursive formation, if they appeared in a given period (simultaneously or successively), if they are outlined in a common space, if they have a similar historical conjuncture; whether they respond to the same concerns, interests or problems; that is, if they have the same emergence surface. In fact, Rose (1998) emphasizes this aspect of the condensation of spaces of difficulties or problems, when referring to the Foucauldian notion of emergence surface.

However, and although it is important that discourses appear and coexist, it is also necessary to pay attention to their transformation, their discontinuities and dispersions, the interstices and distances that separate them, and the ways in which they are implied or excluded, establishing a field of strategic possibilities, "which allow the activation of incompatible themes, or even the incorporation of the same theme to different groups" (FOUCAULT, 2002, p. 61, our translation). And yet, to their eventual incompatibilities and ruptures.

A discursive formation can have different surfaces of emergence (FOUCAULT, 2002). Regarding the emergence surface of the materials analyzed here, the time in which they emerged varies from 2009 to 2020, in countries on four continents: America (United States, Brazil and Argentina), Asia (Taiwan), Europe (France and the United Kingdom) and Oceania (Australia).

Finally, the object formation rule implies locating fields of differentiation, distances, discontinuities and thresholds, and finding the possibilities of delimiting its domain, of defining what it confers the status of object, which allows it to become descriptive. Therefore, it is necessary to describe these delimitation instances, which comprise different regulated institutions, with their body of professionals, knowledge and practices, and with their own



notions and socially recognized competences. These instances are in permanent play, fighting for the formation of the object.

In the case of the analyzed materials, we form a plexus of delimitation instances that combine in each case:

- Actors and social forces of a medical and non-medical nature, and especially the voices of boys and girls in the first person.
- State institutions and organizations in their different jurisdictions and civil society.
- Media types.
- Policies, programs and plans aimed at the diagnosis and treatment of ADHD in childhood.
- Discourses, arguments, evaluations, discussions, debates and controversies, both from a professional and lay perspective.
- Legislation and regulations, protocols or other references to diagnostic classifications related to childhood ADHD.
- Therapeutic, psychopharmacological or other, related to childhood ADHD.

These elements work as coordinates that allow us to locate similar characteristics and specificities in different national experiences and to know the approaches carried out by research teams in the study of ADHD, as well as the incidence of medical and non-medical social actors in the medicalization of ADHD. ADHD: diagnostic and treatment processes for such classification in childhood.

With these elements as a platform, and in line with the proposal of the Dossier, we hope to contribute to a dynamic, comprehensive and systematic mapping of the experiences and processes that make up the global situation of ADHD in childhood. Additionally, we seek to contribute to the understanding of how the modalities, particularities and similarities of the diagnosis and pharmacological treatment of ADHD are migrating in different regions of the world (CONRAD; BERGEY, 2014; BIANCHI *et al.*, 2016; BIANCHI *et al.*, 2017; FARAONE; BIANCHI, 2018; BIANCHI *et al.*, 2020). Given that some of the materials analyzed are part of the team's previous publications, this article is also an opportunity to dialogue and discuss the results obtained in our investigations, in relation to those obtained by other studies.



Methodology

Conrad and Bergey (2014) highlighted the possibility of carrying out analyzes that take into account the conjunction of local particularities and global consonances of medicalization, and in our research we endorse this premise. Therefore, a descriptive, qualitative, flexible methodological design was followed for the article, supported by analytical-interpretative methods of specific bibliography (KORNBLIT, 2007; FLICK, 2007; VALLES, 2000; MARRADI; ARCHENTI; PIOVANI, 2007; DE GIALDINO, 2006). This design resumes the strategy that other investigations adopted (BERGEY *et al.*, 2018; BIANCHI *et al.*, 2020) and expresses the restrictions that are frequent in this type of approach, in terms of obtaining, systematizing and comparing information resulting from national research (BIANCHI; FARAONE; TORRICELLI, 2021).

The set of 28 materials was composed from two types of writing: 13 books and book chapters and 15 articles published in scientific journals. It was an intentional non-probabilistic sampling (CEA D'ANCONA, 1998), in different stages and with different inclusion criteria. In a first step, books that compiled studies on ADHD from different countries were selected. In the second stage, the search for books and scientific articles online on ADHD, media and discourses was specified, in catalogs and databases of university libraries (Scielo, Redalyc and PubMed), with a focus on social science research. The search keywords at this stage (in Spanish and English) were ADHD, hyperactivity, media, newspapers, magazines, online media.

For the inclusion criteria of these articles and books, we prioritize: i. that the studies were from countries on which we already had information from the first stage of the research; ii. who were researchers or teams different from those surveyed in the first stage, even when the studies corresponded to the same country. In a third step, articles and book chapters were selected that referred to the general theme of ADHD, childhood and the media, not anchored in any specific national experience. At the same time, and because we work with flexible designs, we kept our attention to emerging ones, both in materials and themes.

Below, we summarize the main features of the corpus.



Table 1 – Main Features of *Corpus*

Country	No.	LoC ⁵ / ARC ⁶	Ano pub.	Type of communication medium analyzed	Analysis period
<i>General</i>	1	ARC	2009	Case reports, with issues related to ADHD as a fashion diagnosis and its expression in the media. How this affects recommendations for those attending psychiatric consultation.	2009
	2	ARC	2012	47 scientific publications on ADHD and the impact they had on 347 journal articles.	1990-2011
	3	ARC	2014	Outreach article by the main association on ADHD in the United States, discusses how the press represents the diagnosis.	1995-2010
	4	LoC	2018	Broader reference to medical and non-medical actors in the processes of globalization of ADHD diagnosis and treatment	1980-2015
	5	LoC	2018	Reference to critical media reports on the rise in diagnosis.	1995-2015
<i>Argentina</i>	6	LoC	2009	Journalistic notes published by Clarin and La Nación.	2002-2007
	7	LoC	2018	230 journalistic articles in the online written press, with national, regional and local coverage.	2001-2017
	8	LoC	2018	General reference to newspaper articles.	2007-2012
	9	ARC	2020	236 articles online from national and provincial Argentine newspapers.	2001-2017
<i>Australia</i>	10	LoC	2018	Internet discussion forums, radio, news, newspapers, television, popular music and other entertainment media.	1970-2015
	11	ARC	2017	453 articles published in the national and metropolitan press.	1999-2009
<i>Brazil</i>	12	ARC	2010	Scientific publications in the main psychiatric journals and reports in newspapers and magazines aimed at the general public.	1998-2008
	13	ARC	2013	High-circulation scientific and media publications on Ritalin© aimed at the lay public.	1998-2008
	14	ARC	2017	Journalistic articles from nationally circulated newspapers, available on the internet.	2010-2014
	15	LoC	2018	Reports published in major newspapers and magazines, articles in psychiatric magazines about the uses of Ritalin, newspapers and magazines aimed at the general public with greater circulation.	1998-2008
	16	LoC	2018	Specialized publications in medical sciences and psychiatry, publications by professional associations, open letters in newspapers, academic studies published on the web and in academic journals, newspapers and magazines of mass circulation.	1998-2008
<i>United States</i>	17	ARC	2009	Media coverage of mental disorders, especially ADHD, in magazine articles.	1995-2008
	18	LoC	2018	Mass media, TV shows, articles in popular magazines.	Mid 1990s – 2012
<i>France</i>	19	ARC	2015	Television coverage of the issue of ADHD from 1995 to 2010, through 60 television programs,	1995-2010

⁵ Book or Book Chapter.⁶ Article in Scientific Journal.

				including news, talk shows and debates. Excludes fiction programs.	
	20	ARC	2017	159 articles from nine French newspapers with data and opinions on ADHD.	1995-2015
	21	LoC	2018	Official reports, national scientific journals, websites of mothers of children with ADHD, books and newspaper articles on hyperactivity and attention deficit published in the national press.	1987-2014
	22	ARC	2019	TV shows and non-specialized press, websites.	1995-2015
<i>United Kingdom</i>	23	ARC	2011	Articles in national newspapers with three or more references to hyperactivity and ADHD.	2000-2009
	24	ARC	2012	Articles in national newspapers about ADHD and gender.	2009-2011
	25	LoC	2018	Review of articles and books on media representations of ADHD discourse in the UK and other countries (Australia, USA, France, etc.). The influence of the internet stands out, as well as the narratives of fathers and mothers.	1985-2018
	26	LoC	2018	Newspaper articles and, in some cases, their electronic versions.	2008-2012
<i>Taiwan</i>	27	ARC	2015	Widespread negative media coverage during January 2010 as a basis and trigger for the analysis of outpatient claims submitted to Taiwan's National Health Insurance Research Database.	2000-2011
	28	LoC	2018	Local newspaper articles on hyperactivity in children since the 1950s, relevant medical and educational research, popular literature, government documents and regulations, pamphlets produced by parent organizations, discussions of ADHD in parent forums on websites, medical and parenting journals from the second half of the 1980s, books written mainly by psychiatrists, aimed at school teachers and parents, mass media, newspaper serials, newspaper articles about students with ADHD.	Historical sources: since 1950. Field research: 2013-2015

Source: Organized by the authors during the investigation.

Recording, gridding, filtering and data systematization techniques were used. Based on criteria and search and processing tools conceived and used in previous research, a data matrix was developed and the aspects were categorized that allow the different materials to be contrasted. Estimates of the regularity of emerging themes and partial processing of information were made. The analysis was illustrative and not exhaustive.

The questions that guided the analysis are: What types of discourses about ADHD are expressed in the media in different countries? How do the media and other non-medical actors articulate with medical actors in relation to the processes of diagnosis and treatment of ADHD in childhood in different countries? And what effects did this articulation produce?

Discussion and results

For this article, we retrieve two discussions of findings that emerge from the processing and connect with the research questions. They are part of a broader discussion, which concerns the place of the media as a source of scientific information for the lay public and, more specifically, of information on the health sciences. The variability in the accuracy of published information drives these discussions, and ADHD has been assiduously studied. This discussion ranges from the impact factor of scientific publications that are used for the preparation of journalistic articles, to the journalistic publication of updated scientific findings from studies on ADHD (GONON *et al.*, 2012).

Furthermore, as Ponnou, Haliday and Gonon (2019) point out, research on how the mass media portray ADHD has focused mainly on the study of journalistic articles, and only a minority have examined television programs, even fiction, focused on ADHD as a medical condition.

In line with the importance of the Internet in the globalization processes of the medicalization of ADHD (CONRAD; BERGEY, 2014), websites have been the subject of research. Ponnou, Haliday and Gonon (2019) reported that, in general, some important information is missing from the websites, such as authorship mentions, explanations about the disorder or the different possible treatments. They also referred to research that established that, even on the most popular websites, the information that does exist about ADHD has rarely been written by academics or supported by scientific references. This is especially relevant, given the role played by scientific journalism, which in the mass media acts as a translator of technical information, later published in publications of the most read newspapers (BRZOZOWSKI; CAPONI, 2017).

Montoya *et al.* (2013), Reavley and Jorm (2011) Ahmed *et al.* (2014) and Akram *et al.* (2008) documented that studies evaluating ADHD websites unanimously found the information to be low quality, basic, and incomplete. Ponnou, Haliday and Gonon (2019) establish that the representations of ADHD in television and press programs aimed at the lay public are an expression of the deep discrepancies between the information circulating in the mass media and the scientific consensus, the latter also crossed by large-caliber discrepancies.



First discussion: the multiplicity of social actors

Taking this context into account, the first discussion stems from the fact that, in the media analyzed in the articles, multiple and different professional and lay discourses about ADHD are presented, which also place different positions regarding the state of the clinical condition, its etiology, its diagnostic process and its treatment.

The diverse and non-convergent nature of the discourses that appear in the media about ADHD is a recurring finding in the different materials analyzed. As an illustration of this situation, for Argentina (FARAONE; BIANCHI, 2018; BIANCHI *et al.*, 2020) it has been documented that, in the period 2001-2008, medical and scientific approaches predominated in graphic media and, to a lesser extent, mental health and/or education. As for the social actors, the notes refer to the multiplicity of those involved in the problem. On the one hand, professionals and specialists, especially doctors of different specialties and mental health professionals (mainly psychologists).

Other actors mentioned belong to the educational field (teachers, teachers and the school as an institution), and to families (fathers and mothers). For the period 2008-2017, national written online media, provincial and local media were researched, with findings similar to the first period regarding the actors represented, with references to medical professionals (psychiatry, neurology, pediatrics) and mental health (psychology, psychopedagogy). With nuances, these actors appear in materials from the rest of the countries. In turn, teachers and family members, in this period, occupy a central place in the notes, as recipients of activities or organized around associations and foundations that gained relevance especially in the local media. This multiplicity of discourses and actors that appear in the Argentine media is consistent with the rest of the studies analyzed, for the other six countries, with similar characteristics and functions. Other studies include school counselors (HARTWOOD *et al.*, 2017), pharmaceutical laboratories and pharmaceutical industry related to marketing (BRZOWSKI; CAPONI, 2017; CONRAD; SINGH, 2018; HORTON-SALWAY; DAVIS, 2018; PONNOU; HALIDAY; GONON, 2019; BIANCHI *et al.*, 2020).

Additionally, and as a result of this first discussion, we found in the materials that the voices of boys and girls appear very laterally, or do not appear in the form of testimonies. In studies from several countries, the general absence of their first-person voices, which expose their positions, has been documented. Some examples are Argentina (FARAONE; BIANCHI, 2018; BIANCHI *et al.*, 2020), where it was found that boys and girls were only referred to as objects of the problem or as passive protagonists of different cases presented; and also France



(PONNOU; HALIDAY; GONON, 2019) and Australia (HARTWOOD *et al.*, 2017), where it is mentioned that descriptions of children appear in the analyzed media, but not their voices.

Likewise, different studies have documented changes in approaches to media discourse on ADHD. A study from Brazil (ITABORAHY; ORTEGA, 2013) indicates that over the years there has been a shift in focus, both in the description and presentation of debates on the existence of ADHD, and the questioning of the use of Ritalin©. They also mention the strong influence of foreign articles on publications, something that, although not so pronounced, was also documented in an investigation for Argentina (FARAONE; BIANCHI, 2018).

In the case of France, Ponnou, Haliday and Gonon (2019) conclude that, at the end of the analyzed period, the French media, instead of promoting the disease (mercantilist diseases), seems to have played a role in the resistance to the medicalization of ADHD. This becomes more relevant in the context that Akrich and Rabeharisoa (2018) place for France. The authors reconstruct that, in addition to the persistence of tensions between psychodynamically trained psychiatrists and other specialists, the landscape of ADHD in France has changed substantially since the beginning of the 21st century. Their analysis showed that, in the period 1998-2004, two-thirds of the articles published expressed doubts about the reality of ADHD, unequivocally associating it with American culture. On the contrary, in the period 2005-2012, three quarters of the articles failed to rule out the existence of ADHD, often exposing a neurobiological perspective to consolidate it.

For Taiwan, Tseng (2018) has also documented a shift in the way ADHD is presented in mass media, dating from the period 1998-2018. From a previous link with misbehavior, it moved from the media to an association with poor student performance. Thus, at the end of the studied period, ADHD is portrayed more as an academic issue than a disciplinary one.

Tseng (2018) concludes that this transformation can be understood as one of the effects of the publication of the DSM-IV in 1994. This version involved, among other changes, the reformulation of ADHD in terms of the establishment of the inattentive subtype, without hyperactivity and impulsivity. The influence of the DSM on the globalization of ADHD is an element that Conrad and Bergey (2014) mark as a vehicle for the globalization of ADHD, which has been studied in terms of epistemological and technological unlocking (BIANCHI, 2014), and which is present as a virtually unanimous allusion in the analyzed corpus.

Returning to the case of Taiwan, another actor that he mentions and that is also a recurring reference in the materials studied are pharmaceutical companies, another of the vehicles for the globalization of ADHD identified by Conrad and Bergey (2014). Tseng (2018) analyzes them in their role as sponsors in academic contests for children diagnosed with ADHD,



associating pharmacological treatment with increased chances of being chosen. In this sense, Tseng (2018) highlights the ambiguity of, on the one hand, the destigmatizing effect of these contests, and their coexistence with the media presentation of the diagnosis, which continues to be referred to as a pure neurological disorder, and descriptions of the "miracles" attributed to the drugs.

The place of transnational pharmaceutical laboratories as sponsors has also been studied in Brazil (ITABORAHY; ORTEGA, 2013), where this role has been documented on the websites of non-profit entities that aim to spread knowledge about ADHD. An example is the Brazilian Attention Deficit Association (ABDA), created in 1999, which on its website lists the sponsorship of Novartis and Shire laboratories, along with other professional associations, federations and national and international companies, and contributions from associates (BIANCHI *et al.*, 2016).

Second discussion: the articulation of social actors

The second discussion is related to the articulation of non-medical actors in the processes of globalization of ADHD. Conrad (2005) stated that medicalization saw its critical potential renewed by incorporating technologies as one of the shifting engines of the process in the 21st century, to the detriment of medical professionals as the main actors in the medicalization of society. Subsequently, to this line of previous transformations in medicalization, Conrad and Bergey (2014) added the globalization of diagnosis, taking ADHD as a paradigmatic example.

The basic assumption that guides this discussion, then, is, first of all, that the multiplicity of non-medical social actors that are present in the processes of globalization of ADHD is not disintegrated or isolated, but that there are areas of articulation between their agendas, goals and interests. And, secondly, that the media plays a relevant role in articulating non-medical social actors in these processes.

The results of the analysis of the materials show that, in all countries, articulations between non-medical social actors are documented. In line with what Bianchi, Faraone and Torricelli (2021) propose, when the globalization of a diagnosis becomes evident in a given region or country, it is possible to identify both global consonances that can be tracked on a global scale, and local specificities that make different political, economic, cultural, social etc. More broadly, this is linked to the fact that medicalization is not a univocal, homogeneous or general process (BIANCHI *et al.* 2016).



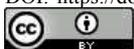
Therefore, these articulations that are part of the processes of globalization of ADHD have some actors in common in most national cases, and in other cases they have unique characteristics, in a double link typical of these processes, already documented in relation to seasonality and trends in dispensing of methylphenidate and atomoxetine in Argentina (BIANCHI; FARAONE; TORRICELLI, 2021).

As a result of the analysis of the materials, we found that the most articulated social actors are the media, pharmaceutical laboratories (with pharmaceutical marketing campaigns as a prominent element), associations of parents and teachers. Less frequent are the allusions to public policies or assistance programs, regulations or legislative projects to sanction specific laws. An exhaustive exposition of the different articulations of the actors would go beyond the objectives of this article, which is why we present below some examples of articulations in Brazil, the United States and Argentina.

For Brazil, Itaborahy and Ortega (2013) documented the association between the main research centers that promote knowledge about ADHD, patient support groups and pharmaceutical laboratories. These form an important pole for disseminating the official discourse on the diagnosis. In the study, they point out that an important specialized journal includes advertisements for specific drugs, and publishes works by Study Groups financed by laboratories, and the conflict of interests resulting from this articulation was not always made explicit in the journal. As for the associations and groups of patients and caregivers, these are made up, in addition to family members and diagnosed people, by medical professionals and specialized researchers internationally recognized, the latter with a strong presence in the groups.

The most relevant national group (which emerged in 1999) is the Brazilian Attention Deficit Association (ABDA). The website of this non-profit entity is published in several journals and periodical scientific publications, and has an average of 200,000 hits per month. One thing to keep in mind is that the mixed composition of ABDA makes it a relevant medium for laypeople and professionals alike in the dissemination of the biomedical discourse on ADHD in the country (ORTEGA; CONÇALVES; ZORZANELLI, 2018). The above allows us to conclude that the articulation between research centers, patient groups and pharmaceutical laboratories in Brazil constitutes a complex network for the formation and dissemination of biomedical knowledge about ADHD.

In the United States, on the other hand, Bergey *et al.* (2018) list a series of concomitant factors with the media, as other vehicles for the expansion of the diagnosis of ADHD to the adult population. They cite a broad coalition of medical professionals along with other non-



medical actors such as anti-poverty activists, advocates for the health and well-being of children and children with disabilities.

According to Bergey *et al.* (2018), in the United States, since the 1990s, the media has functioned as a vehicle for the popularization of conceptions that imply the expansion of the diagnosis of ADHD in childhood and adolescence, for a disorder that covers the whole life (although there was no clinical or epidemiological evidence). They mention both television shows and articles in popular magazines.

The aforementioned coalition of medical and non-medical actors lobbied and won, in 1990, the passage of the Americans with Disabilities Act (ADA), whose policy prohibits discrimination and guarantees equal opportunity for persons with disabilities in employment, in state and government services, adaptations in public facilities and transport. ADHD was included in this act as a physical or mental condition that could increase the level of disability. This policy helped establish adult ADHD as a legitimate condition.

Finally, for Argentina, two articulations of non-medical actors were found in which the media has a prominent role. The first was detected among the marketing strategies of the pharmaceutical industry, the publication of booklets and bulletins aimed at teachers, which are sold on newsstands, was documented. These publications contain advice for teachers and detailed information about medications used to treat ADHD, statistical data, and general advice for detecting the condition. The publication of articles touting medication for the treatment of ADHD has also been documented, which have been included in specialized journals for teachers and educational psychologists, sometimes devoting whole numbers to the subject. The authorship of the aforementioned articles and dossiers is usually by opinion makers linked to laboratories that produce the widely disseminated psychotropic drugs. Studies highlight that these types of advertising in the written media are not legally permitted in Argentina according to Law 16,463, which prohibits any form of advertising of prescription drugs (FARAONE *et al.*, 2010).

The second is more recently documented (BIANCHI *et al.*, 2020), and stems from conflicts arising from the overlap and tension of bills and regulations from different jurisdictions and scopes, which circulate around ADHD and other specific diagnoses (TEA, DEA). This occurs in a context of growing expansion at the international level of the so-called laws for pathologies and of the State's retraction in the coverage of health-related problems. In this case, the media, especially the local and regional online print media, and only in some cases aimed at a large national audience, reproduce such conflicts by incorporating the issue of specific legislation for the diagnosis and treatment of ADHD. The emergence of these notes is



consolidated from the mid-2010s, with no mention of legislation linked to these diagnoses prior to that period having been documented.

The study by Bianchi *et al.* (2020) also concludes that, in the processes of medicalization, and particularly in the case of ADHD in children, the Argentine press (national and provincial) has become a relevant non-medical actor both in the institutionalization of the problem and in the presentation of therapeutic approaches and in actions to promote specific legislation. The journalistic notes analyzed in the study show that the school and the family, and other non-medical professionals in the field of mental health, psychologists and psychopedagogues are the main references consulted, along with doctors (neurologists, psychiatrists and pediatricians).

The dynamics identified in Argentina are consistent with those documented in research in Brazil, the United States and France, outlining a picture that transcends national borders. However, in the study of journalistic notes from the online written press in Argentina, the presence of the pharmaceutical industry as a direct voice was not documented, nor an explicit link with associations or support groups for children with ADHD, and the fact that the associations and patient and family support groups do not reach the scale or coordination with the pharmaceutical companies they have in Brazil, the United States and other European countries (BIANCHI *et al.*, 2017).

One that emerges from this second discussion has to do with the scarce gender perspective in the analysis of the media as non-medical actors involved in the globalization of ADHD. As Riska (2010; 2015) has already argued, the first phase of medicalization studies was characterized in the 1970s by an alleged gender neutrality. However, most empirical studies, among which the current ADHD (then called hyperkinesia) stands out, focused on the study of male children (CONRAD, 1975). Subsequently, Conrad (2018) documented how the category in the 21st century has expanded in countries such as the United States, expanding to young children and to teenagers and adults. There is also mention to studies that refer to an approach centered on inattention and the inability to concentrate as main diagnostic criteria. This brings as a corollary an increase in the diagnosis in girls, and Conrad (2018) mentions a change in the relationship in the boy-girl diagnosis, originally with a strong imbalance in favor of boys, but in progressive reduction.

The situation raised in the analyzed materials presents a very different picture. Of the 28 materials surveyed, only one article analyzes how the media includes gender as a basis for causal attributions and identity constructions linked to ADHD (HORTON-SALWAY, 2012).



The study by Horton-Salway (2012) suggests that, in the UK media, ADHD is presented as a predominantly male phenomenon, and the media representations of ADHD are made through extreme stories, with adjectives linked to victims, villains and heroes, and male figures (boys and men) associated with marginality, exceptionality and dangerousness. Regarding families, Horton-Salway (2012) identifies mothers as spokespersons and caregivers of parenting and family health, while fathers become more invisible. This leads her to conclude that ADHD is constructed in the media with a wide range of gender stereotypes, based on cultural and family representations of Western societies (HORTON-SALWAY, 2012).

Final considerations

As final considerations, we first highlight some lines of research that can be fruitful to continue contributing to a panoramic reading of these phenomena. In this sense, it would be pertinent to expand the analysis materials from other countries, especially those from the African continent. On the other hand, an imminent line must be attentive to the current complex configuration of the infocommunication sphere, composed both by traditional media (radio, press and television) and by Internet-based (portals, platforms and social networks). Both modalities, articulated or not, imply different strategies for the production and circulation of social meanings that are worth considering.

Second, we consider the questions that guided this analysis. According to the results obtained, we can continue to affirm the non-homogeneity of the speeches about ADHD that are expressed in the media. However, an articulation of medical and non-medical actors is detected, which make up an economic, political, social and cultural alliance in relation to the foundation and promotion of diagnoses, and the predilection for certain therapies, which is reiterated in several countries.

As for the effects of this articulation, two are mainly detected. On the one hand, children's voices are silenced and, on the other hand, critical gender perspectives are made invisible. These effects are part of a broader strategy in which subjects, mainly recipients of these discourses and practices, appear subjectivized under silence or cover-up, to the detriment of other adult or specialist voices.

Highlighting these mechanisms, based on analyzes such as the one presented, allows us to understand the formation and circulation of social meanings, enable the production of other meanings from a rigorous critique and configure new alliances and articulations of social actors.



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