

The influence of the pharmacological industry on trends in the diagnosis and treatment of ADHD

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Abstract

The number of people diagnosed with ADHD has increased over the last decennium and so has the proportion of those with this diagnosis who receive biological treatments. This article reveals several ways in which the pharmaceutical industry is involved in these trends. The medicalization process of ADHD is discussed, as well as the influence of the pharmaceutical industry on the popularization of this disorder by advertising and support groups. Besides those influences that have led to an increasing number of diagnoses, it seems that the pharmaceutical industry has also played a role in the treatment process as well. In this connection, there is an unmistakable biological bias in the information provided by websites funded by the pharmaceutical industry as well as in the research of ADHD. A consequence of this is a tendency to biological rather than psychosocial treatment. In all these ways, the pharmaceutical industry influences the diagnosis and treatment of ADHD. Scientists as well as practitioners must be aware of those influences in order to avert the danger of misdiagnosis and unnecessary treatments of those who don't really suffer from the disorder.

Keywords: *Attention Deficit/Hyperactivity Disorder, ADHD, pharmaceutical industry, diagnosis, treatment*

Introduction

Over the past decade, the number of children diagnosed with psychiatric disorders has increased in most of the Western world (Timmi, 2008). One of the mental disorders that has received the most research attention is Attention Deficit/Hyperactivity Disorder (ADHD). This attention is not limited to scientific publications in the social sciences, but has extended also to mass media. An example of ADHD in the popular media is given in the NCRV Documentary *Rest, Ritalin and Purity* in which a girl is followed after she is diagnosed with ADHD. The documentary ends with the diagnosed girl at a hospital after having overdosed on her medication, which leads to a heated discussion about ADHD and its treatment.

The attention currently being paid to ADHD is of social interest, because ADHD is generally characterized as a chronic disorder (Lange, K. W., Reichl, Lange, K. M., Tucha L. & Tucha O., 2010). Therefore misdiagnoses could have a major long-term impact for an individual (Lange et al.). To prevent misdiagnoses and the resulting negative consequences, it is important to analyze how ADHD as a disorder is seen and what causes could underlie this disorder. This is socially relevant, because the number of children diagnosed with ADHD has increased, which has several consequences (Lakoff, 2000). On the one hand, labelling individuals with mental illness could result in stigmatizing them (Mitchel & Read, 2011). On the other hand, this has important consequences for the society as a whole, because of the increasing costs that follow from the growing demand for treatment (Martinez-Raga, Knecht, Szerman & Martinez, 2013). In this respect, the *Diagnostic and Statistical Manual of Mental Disorders* (4rth ed., text rev.; DSM-

IV-TR; American Psychiatric Association, 2000) is important, because this psychiatric manual is used in deciding which people get compensation for treatment. As a newer version of the DSM, the *DSM-V*, has recently been released, it is relevant to have a look at the current trends in ADHD (American Psychiatric Association, 2013). It is clear that this newer version “will not fundamentally change the concept of ADHD.” (Dalsgaard, 2012, p. 43). Specifically, the criteria for ADHD has not changed much since the appearance of ADHD in *DSM-III* in 1980 (Yoo, 2013). Therefore the hypothesis that changing DSM criteria over the past three decades are the main cause of the increase in the diagnosis and treatment of ADHD over the past three decades can be safely discarded (Yoo, 2013).

Thus, an alternative explanation must be sought. In this article, the focus will be on the industry that benefits from this increase in diagnosis and treatment: the pharmaceutical industry and specifically those large companies that manufacture medications designed to treat ADHD. The present article focuses on a single question: in which ways has the pharmacology industry influenced the current trends of ADHD toward more diagnoses and more biological treatments? To answer this question, the professional disagreement regarding ADHD needs first to be examined. Subsequently, several ways in which the increasing number of ADHD diagnoses is influenced by the pharmaceutical industry will be discussed. Afterwards the influence of the pharmaceutical industry on the trends toward medical treatments will be evaluated.

ADHD: A valid disorder?

Initially, different opinions on ADHD as a disorder must be considered. Controversy about the validity of ADHD as a diagnostic entity can be seen among both researchers and clinical practitioners (Singh, 2008; Timmi & Taylor, 2004). In order to receive a DSM diagnosis, an individual must meet certain presumably objective criteria. Even though one of the main goals of the DSM is to provide an objective standard for diagnosing a person with a psychological disorder, it is precisely this objectivity that is the subject of a heated debate. Furman (2005) assumes that the experience of the diagnostician plays an important role in deciding what kind of behavior is seen as abnormal. Berger (2011) follows this point of view and assumes that the diagnostic process of ADHD is one of the reasons for the discussion of the validity of this disorder. Only subjective judgments are used in the process of diagnosing, as there is no objective standard about the extent to which behavioral characteristics must be shown to be called inappropriate and maladaptive.

Thus, while the DSM criteria are, indeed, “objective” deciding whether a given individual meets a specific criterion essential for diagnosis requires an important element of subjectivity on the part of the clinician making the diagnosis. In this connection, cultural influences and trends in psychological and medical practice must be considered. Some researchers claim that it is the society that determines what is considered a “psychiatric disorder”, because it is culturally dependent what kind of behavior is seen as either appropriate or abnormal (Jacobson, 2002).

This point of view is quite problematic, because all disorders are to some extent constructed by culture and therefore at least partially represent social constructs (Singh, Filipe, Bard, Bergey & Baker, 2013). If such an argument were followed to its logical conclusion, no disorders at all would exist and tens of thousands of psychiatrists, psychologists and social workers would be out of jobs.

Conrad and Potter (2000) take a rather more measured stance on this topic. They focus on the influences of society in shaping disorders, but they do not assume that disorders do not exist. They instead base their arguments on “medicalization” theory. This theory holds that a medical

paradigm tends to be applied to problems that are essentially nonmedical in nature. According to Conrad and Potter (2000) this is the case with ADHD, in which a “problem behavior” has imperceptibly come to be defined and widely accepted as a medical disease. These authors further contend that behavior that does not really meet diagnostic criteria is routinely characterized as an expression of ADHD, and therefore as requiring medical treatment. This view might be most useful, because claiming ADHD doesn’t exist at all is probably too extreme, but meanwhile the influence of society can’t be denied.

Underlying reasons for the increased diagnosis of ADHD

Following the point of view that ADHD is a result of the interaction between *nature* and *nurture*, a lot of different possible reasons for the increasing number of ADHD diagnoses are discussed. The present article will specifically focus on the environmental aspect and particularly on the influence of the pharmaceutical industry.

Conrad and Potter (2000) attribute this increase to the extended boundaries of ADHD as a result of the medicalization process. Even though the *DSM-V* has retained the same criteria as proposed by the *DSM-IV-TR*, it has during the past 20 years become more common to diagnose adolescents and adults with ADHD (Dalsgaard, 2013). This inclusion of adults within the diagnostic category of ADHD clearly represents an expansion of the application of the diagnosis (Dalsgaard, 2013). One criterion for ADHD in *DSM-V* is “some impairment must occur in at least two settings.” In the context of children, these two settings are almost always limited to school and home. In the case of adults, however, the range of settings in which impairment is visible is not limited to those two settings, but could be expanded to work and recreational settings. Because almost everyone has a dysfunction in some settings compared to other settings, such a criterion might not be particularly useful for adults (Conrad & Potter, 2000).

This switch from ADHD as exclusively a child disorder into a broader disorder that is also present in adults, is an example of the medicalization process of ADHD resulting in an increasing prevalence of ADHD. But what is the motor behind this medicalization process? Conrad (1992) describes medicalization as the result of the collective action of doctors, insurance companies and patients themselves- as well as the pharmaceutical industry. Although it cannot be overlooked that these parties all play a role in the medicalization process, “child psychiatry is especially vulnerable to the influence of the pharmaceutical industry for a number of reasons.” (Timmi, 2008, p. 5). One of these reasons is that there are no objective tests that can be used to determine whether an individual has ADHD. Because of this lack of real objectivity, “the boundaries of normality and disorder can be easily manipulated.” (p. 5).

The pharmaceutical industry’s driving of the medicalization process of ADHD has logically led to the increased number of diagnoses of the disorder. All psychiatric disorders, including ADHD, are subject to “popularization” campaigns leading to increased diagnoses. Numerous popular self-help books are available for people who think they have ADHD and there are also many books for parents who believe their children are affected (Campbell & Smith, 2003). Television and internet play an important role in increasing awareness of ADHD (Edwards, Harvey & Wade, 2010). It is hard to not see the pharmaceutical industry as the major motor behind this. According to Edwards, Harvey and Wade (2010) the aim of the pharmaceutical industry to make the highest possible profits is achieved by a sequence of steps. The first step in this process is to make people aware of a certain disease via advertising campaigns. Governments impose rules on the marketing of medical products. One of these rules is the prohibition of asserting in an advertisement that someone has a disorder. The pharmaceutical industry has developed ways in which they can get around these rules in their

advertising. Thus, instead of claiming that someone has ADHD, they suggest that someone “might” have ADHD if they display certain symptoms. This type of advertising is legal and achieves the initial goal of making people aware of a particular disease. The next step is “personalizing the risk.” From the point of view of pharmaceutical companies, it is important to awaken concern regarding “their condition” on the part of viewers, readers, or listeners of advertising, so that they are motivated to do something about it. The overall result of the marketing process is that some non-patients come to see themselves as undiagnosed patients who then actively seek the help of a physician. Given that there is no objective test for ADHD available, the diagnostic process depends on subjective judgments. As the advertising of the pharmaceutical industry has exponentially increased over the past 50 years, this increasing awareness of ADHD may have been a cause for the increasing number of diagnoses (Edwards et al., 2010).

Besides this influence of the pharmaceutical industry on advertising, there are also more invisible and more indirect influences. One of these is the investment of the pharmaceutical industry in support groups (Timmi, 2008). According to Timmi (2008) the industry’s investment in those groups is based on a cost-benefit analysis. One of the reasons why this industry is interested in investing in support groups is the possibility of promoting their products in those groups. But this isn’t the whole picture. Investing in support groups can be beneficial for companies in the pharmaceutical industry, because those groups can increase the number of patients who go to doctors in the belief that they have a particular disorder. If the profits of this increasing number of diagnoses exceed the costs of their investment, then the pharmaceutical industry has discovered a viable revenue-generating strategy. This is the case with ADHD. A parent support group named Children and Adults with Attention Deficit Hyperactivity Disorder (CHADD) is sponsored by the pharmaceutical industry. Even though this organization claims to provide scientific and evidence-based information, the objectivity of this information could be doubted because of the financial support the organization receives from the pharmaceutical industry.

Reasons for the trend toward medical treatment

The influence of the pharmaceutical industry is not limited to the increasing number of diagnoses discussed above, but is also seen in the trends in ADHD treatment. The percentage of diagnosed people with ADHD treated with medication has increased in recent years (Martinez-Raga, Knecht, Szerman & Martinez, 2013). But in which ways does the pharmaceutical industry play a part in this trend toward more pharmaceutical treatments?

One means by which pharmaceutical companies could have influenced this treatment trend is by directly approaching physicians. Physicians often receive invitations for conferences, dinners and symposia funded by pharmaceutical companies. After visiting a symposium in which a specific medication is promoted, a significant increase in prescribing this medication is noticeable (Orlowski & Wateska, 1992). Also providing gifts and samples of medication is a common used marketing strategy (Brett, Burr & Moloo, 2003).

Another means by which the pharmaceutical industry influences treatment is the internet. The study of Mitchell and Read (2011) analyzed the 60 most popular websites, according to the top search engines, that provided information about causes and treatment possibilities for certain kinds of disorders. In the case of ADHD, they discovered that most websites funded by drug companies place relatively more emphasis on the biological etiology than the psychosocial causes of the disorder. Those websites often imply that the problem is mainly within the child. This is known as a biological bias, what goes hand in hand with preference for medication treatments

rather than psychosocial treatments. A quarter of the investigated websites in this study did not mention any of the known side-effects, such as potential higher risks for cardiovascular problems (Martinez-Raga et al., 2013). Neglecting possible side-effects leads to a more positive view of medical treatment.

Another way in which the pharmaceutical industry has an impact on the treatment trends of ADHD is choosing which research and researcher to support financially. It appears that especially disorders where medication is the first line of treatment are vulnerable to the financial support of the pharmaceutical industry (Lardizabal, 2012). This is the case with ADHD. Timmi (2008) discusses research in which the researchers were somehow linked to the pharmaceutical industry.

Discussion

This article reveals several ways in which the pharmaceutical industry is involved in the present trends of increasing number of diagnoses and biological treatments of ADHD. As there is no objective measurement of ADHD, the construct and diagnosis of this disorder is especially vulnerable to social influences. The pharmaceutical industry has influenced the current trends toward more ADHD diagnoses in several ways. First, this industry is involved in the medicalization process in which the boundaries of ADHD are expanded so far that more and more people fall into this diagnostic category. In addition, the pharmaceutical industry has invested more in advertising, which has resulted in growing awareness of ADHD as a disorder and therefore, at least potentially, in the possibility of overdiagnosing the disorder. Another way in which this popularization of ADHD has increased is via support groups funded by the pharmaceutical industry. A consequence of the growing awareness and popularization of ADHD is that many people become concerned about their children or themselves possibly having the disorder, and of visiting a physician. Given that the diagnostic process only relies on subjective judgments, it isn't surprising that the number of ADHD diagnoses has increased over the past 10 years (Visser et al., 2014). There are a number of possible negative consequences resulting from this increased frequency of diagnosis of ADHD. These include failing to attend to problems within a child's environment that may be at the root of behavioral problems, suffering potentially harmful side effects with little or no countervailing benefit, and engendering a general reliance on pills rather than on one's own inner resources to solve life's problems (Meijer, Faber, van den Ban & Tobi, 2009).

But the influences of the pharmaceutical industry and subsequent negative consequences are not limited to the diagnostic process. The increasing number of biological treatments can partly be attributed to the increasing influence of the pharmaceutical industry. This influence is noticeable in the way they approach physicians directly and on websites about psychological disorders. Most of these websites that are funded by the pharmaceutical industry have a biological bias, thus focusing on the putative biological etiology of the disorder. These websites rarely indicate potential side-effects of certain kinds of treatments. As a result of the biased information provided about ADHD on such websites, people are more tempted to ask their doctors for medical treatment. Another way in which the pharmaceutical industry plays a major role in the increasing number of biological treatments is that only research that is likely to be favorable for them receives financial support. This has likely led to results that present medical treatment as preferable to available psychosocial treatments. The increasing number of biological treatments has several consequences. One of these is that health care costs have increased. The trend toward prescribing long-acting medication instead of medication that should be taken each

day, will probably make the costs of ADHD treatment even higher in the future (Scheffler, Hinshaw, Modrek & Levine, 2007).

The influence of the pharmaceutical industry on diagnosis and treatment trends of ADHD cannot be denied, and naturally leads to the discussion as to the extent to which ADHD is the result of a cultural construct shaped to provide profits. Even though one of the main goals of research is providing empirically-based information, the extent to which this information is unbiased is the subject of legitimate debate when it is under influence of interested parties. This influence should be kept in mind in evaluating the present trends in ADHD toward more diagnoses and more medical treatments, because the extent to which these trends reflect a real change or an artificial change as a result of the increasing influence of the pharmaceutical industry is very much open to question.

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