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Review Essay

PAUL MCCRONE*

The ADHD Explosion: Myths, Medication, Money, and Today's Push for Performance by Stephen P. Hinshaw and Richard M. Scheffler

Most mental health problems are formally identified according to an assessment of clinical symptoms, rather than by taking blood tests, scans, etc. As such, particular care in arriving at a diagnosis is required if these or similar symptoms can to some extent occur in the general population. Such symptoms may of course be influenced by societal factors, which would be less likely with physical health problems and it is probably safe to say that we have now reached a consensus that genes, personal circumstances and the environment each play a part in the manifestation of most psychiatric disorders. Stephen Hinshaw and Richard Scheffler in *The ADHD Explosion* focus on the contentious issues surrounding this particular condition, particularly those to do with recognition and treatment.

Attention-deficit hyperactivity disorder (ADHD) is clearly a controversial concept and this book does not shy away from the controversy. It is written by a psychologist (Hinshaw) and an economist (Scheffler) – on the face of it very different disciplines, but it can be argued that they are closer than we might think (Rabin, 1998). Although the debate about the existence, nature and treatment of ADHD can polarise people, this book does state as an intention its desire to strike a balance. However, even in the early pages it is apparent that much of the material will be contested. A major theme running through the book is the extent to which ADHD has been noticed because of the education system leading "children … to attend school and perform tasks that human brains and minds never evolved to do, like learning to read". Whether engaging in formal education flies in the face of evolutionary progress and thereby results in the emergence of attention problems is certainly a hypothesis worthy of testing and a key question is therefore whether this book goes on to achieve that. The book is accessible and nicely presented with a mixture of case studies and empirical data. It does not claim to show whether ADHD is indeed a 'real' problem – by default it assumes it is and also suggests that it causes clear personal and societal suffering. There is a hint at the outset that the book will address issues such as whether treatment for ADHD could be rolled out to the wider population in order to enhance well-being. Such an extension of treatment is of course controversial, particularly as the mainstay one is the use of stimulants. There are parallels elsewhere, for example,

*Correspondence to: Paul McCrone, Centre for the Economics of Mental and Physical Health, King's College London, De Crespigny Park, London SE5 8AF, UK. E-mail: paul.mccrone@kcl.ac.uk

mindfulness therapy (a brief intervention with roots in Buddhism that is helpful for depression) is used by many without recognised clinical problems. If the main purpose is to prevent full-blown ADHD then that is rather different to attention enhancement for those not at risk, which is more acceptable is open to debate.

It should be said at this point that I write this review as a health economist with no clinical training. I came to write the review with some degree of scepticism that drug treatments for ADHD are necessarily effective and safe and my fears about this have been only marginally allayed. It is fairly evident that an increasingly globalised pharmaceutical industry stands to benefit from an increase in the rate of ADHD and this key issue receives scant critical analysis.

The book begins by presenting a historical review of ADHD, which is somewhat heavy going (the first table extends to five pages). It is apparent that the authors do not hold the antipsychiatry movement or scientology (both fierce critics of the concept of ADHD) in particularly high regard. It is claimed that 'understanding relevant historical background may prevent past mistakes from recurring', but this opening chapter does not really indicate what these mistakes may have been (other than a denial about the validity of ADHD as a concept) and I have to say that my understanding of the different issues was not particularly enhanced. Although the book did make me think more about the historical debate about the biological basis for ADHD as opposed to a belief that it just represents extreme behaviour, a more thorough discussion of the divergent opinions may have been warranted.

The vast costs of ADHD are highlighted early on in the book. Are these true costs and to what extent is the diagnosis of ADHD a 'trigger' for increased spending? The bulk of the costs appear to be owing to lost production and welfare payments. Caution is required here. Economists would generally exclude welfare payments from cost of illness studies because they represent transfer payments rather than reflecting real production effects. There is also a risk of double counting if welfare payments are added to cost of lost output or income. Another issue that may mean the costs are questionable is that the authors have adopted the 'human capital approach', whereby it is assumed that the illness does indeed lead to lost output. Given the existence of unemployment in the economy, it may be that such losses are potential rather than real. None of this though is intended to cast doubt on the fact that ADHD exists and results in a heavy economic burden. Given this, effective treatments could indeed have an economic as well as a clinical pay-off.

The chapter on the nature and possible causes of ADHD starts off with the first of a series of interesting case studies based on real situations. This is a particularly attractive feature of the book which, while they are of course not meant to be representative, do instil a sense of reality about the concepts being discussed. The authors state that "it becomes impossible to believe that ADHD is a made-up phenomenon", which brings me to a concern I had throughout the book. Is the existence of ADHD really that contested these days? Some will no doubt question

its very existence, but I would have thought that the majority dissenting view is that there is uncertainty about the cause of ADHD and the effectiveness of available treatments particularly in the long term. If ADHD is clearly a biological condition then would we expect so much variation in its appearance and recognition? If it is just down to differences in education systems causing it to be less hidden in some places then that is quite staggering.

There is quite rightly an emphasis in the book in conducting accurate and thorough assessments of those with suspected ADHD. It is suggested that medical or neurological examinations are not usually necessary, but this does seem to weaken the case that we are looking at an essentially biological disorder. The authors state that "[f]or decades, families were explicitly blamed by mental health professionals for producing their offspring's ADHD (as well as nearly all other mental conditions)". In some quarters this is no doubt the case, but this is rather an extreme view. I do not consider the debate to be as polarised as is implied – as before those who question certain tenets of ADHD do not by definition then blame the parents.

One theme that begins to emerge in this overview is that of the effectiveness of medication, particular stimulants, which the authors do generally accept. This continues with a case study of Ralph who has 'a clear case of ADHD, uncomplicated by other conditions', although earlier it was implied that comorbidities are the rule with ADHD and other conditions. The big increase in ADHD medication prescribing is discussed and it is apparent that that there is a strong evidence base behind the use of stimulants, although long-term data are lacking. The side effects associated with administering stimulants to young children necessitate an in-depth investigation and the authors do touch on this but with greater emphasis placed on the behavioural changes resulting from treatment. With regard to growth, for example, it is stated that "[f]or many families, a centimetre or two of reduced height may be a small price to pay for improved behaviour and enhanced performance". Would the children have the same view? It is further asserted that dependency can be avoided for those 'children with legitimate ADHD under close medical supervision'. I guess many would fall out of these criteria. There are many who have offered substantive critiques of the role of medication in treating mental health problems (e.g. Whitaker, 2010) and reference to these may have been warranted.

If we agree with the view that ADHD is essentially biological in nature then what accounts for differences in reported prevalence between areas? The authors have examined rates across the United States and choose to compare North Carolina, which has relatively high rates, with California, which ranks particularly low, in terms of gender, ethnic or schooling differences. This is interesting, but it would have been more robust to have presented analyses for all states – presumably data are available for all in terms of ethnic composition and educational policies and so simple regression analyses would have been possible. If one were to select specific states, then in terms of prevalence comparing North

Carolina with states in the same region but with different rates (e.g. Georgia or Mississippi) would have been more intriguing. Most of the discussion does concern prevalence with little emphasis on why treatment rates are so different – can school policies really account for this?

A natural argument, particularly given the disciplines of the authors, is that if the ADHD treatment gap (particularly high for adults) can be reduced then there may be economic savings to society. Yes, there will be increases in direct costs but successful treatment will reduce indirect costs. This all rests on two key assumptions. First, that those not receiving treatment would actually benefit from it. Some clearly will but it may well be that a decision has been made not to use medication or other treatments, particularly if the condition is not so severe. This is perhaps a bit pedantic of me – it assumes that such an assessment has been made and as we know from other areas there is definite under-treatment of mental health problems. Second, it is assumed that in the absence of ADHD, or if it were reduced, then the individual would get into work. As suggested earlier, given existing levels of unemployment it is unlikely that this would be achieved. The authors do make the very important point that even in the absence of cost savings it is still good to provide care. However, it is not clear that everyone with ADHD needs the full array of treatment.

The authors go on to describe the portrayal of ADHD in the media and the role of advertising, particularly by the pharmaceutical industry. Again, this does at times seem quite polarised – if you question the levels of ADHD then it seems that you are stigmatising people with it and being cautious about the effectiveness of medication is not to be welcomed. Surely, it is possible to believe that ADHD exists and that treatment can help, but that increases in prevalence and treatment may be as a result of clever marketing and the desire for a quick fix. The section on advertising was very uncritical of industry methods, which – maybe mainly in other countries – have been heavily criticised.

This book is written largely from a US perspective and Chapter 8 looks beyond that country to see how ADHD is viewed and treated elsewhere. The authors refer to the findings of a well-conducted meta-regression that found that international differences in prevalence rates can be largely put down to methodological differences. Nine different countries are subsequently the subject of further discussion. In my opinion this was not particularly satisfactory. I am sure that the authors did not intend this, but the tone does appear a bit paternalistic with the situation in the United States being regarded as a gold standard against which others are compared. When economies are as developed as the United States one, then will they have the same rates of prevalence and treatment? Part of the apparent catch-up could be down to an increasingly global pharmaceutical industry and this does not receive sufficient attention. In many countries there is a very strong tradition of psychoanalytical treatment. There is some allusion to this, but a more thorough discussion would have been helpful. There are some rather strange assertions here as well. For example, on a couple of occasions it is

suggested that in Brazil the low rates of ADHD are associated with its turbulent militaristic past. Why this is so is not explained and while an interesting hypothesis it demands far greater investigation than offered here. Some countries that have educational systems where rote learning and other quite-structured methods predominate (e.g. South Korea and Singapore) are also very successful in economic terms. Some discussion of ADHD rates in these settings would be of interest.

The penultimate chapter focuses on groups, which do not fit the stereotypical mould of ADHD. This is important. Clearly, adults, females and those from non-white ethnic backgrounds will experience ADHD and it is important to provide appropriate diagnoses and treatment. The authors also suggest that pre-schoolers can also be at risk, although they recognise that it is hard to separate this out from general conduct problems. They do though suggest that medicating these very young children may be beneficial. This is alarming – do we really wish to see three and four-year olds receive stimulants?

In summing up, the authors state that "busting relevant myths has been a core motivation for writing this book". I am not convinced this has been achieved. There has been an underlying message that if you don't buy the arguments set out here then you are stigmatising people diagnosed with ADHD. I doubt that many professionals concerned with possible over diagnosis and with the long-term effects of stimulants do hold such a view. All in all this was an informative piece of work but one that left me with perhaps more questions than when I started reading it.

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