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SPECIAL SECTION

Clinical Implications of Ethical Concepts: Moral Self-Understandings in Children Taking Methylphenidate for ADHD

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ABSTRACT

Stimulant drug treatments for Attention Deficit/Hyperactivity Disorder (ADHD) have been a particular target of ethical controversy and debate. Bioethicists have raised concerns about the implications of stimulant drug treatment for child authenticity, individuality, and enhancement. There is at present little empirical evidence to support or deny these concerns. This article presents data from a pilot interview study that investigated children's moral self-understandings in relation to ADHD diagnosis and stimulant drug treatment, with a focus on children's understandings of their authentic selves. Stimulant drug treatment does not appear to undermine a child's sense of personal authenticity: In this study, children reported that they believed a core dimension of their 'real' selves was persistently 'bad', despite medication. This finding complicates two bioethical assumptions: That the authentic person is inherently good, and that there is inherent value in the experience of having access to a core, authentic dimension of oneself. Some important preliminary clinical implications of these findings are discussed.

KEYWORDS

Attention Deficit/Hyperactivity Disorder, authenticity, bioethics, methylphenidate, neuroethics, Ritalin, self-concept, stimulants

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IN 2003 MEMBERS of the United States President's Council on Bioethics published a controversial report summarizing the Council's discussions on the ethical implications of new biomedical technologies: *Beyond Therapy: Biotechnology and the Pursuit of Happiness*. In the section on psychotropic drugs, stimulant drug treatment for symptoms of Attention Deficit/Hyperactivity Disorder (ADHD) is used as a case study to understand the 'promise and peril' of current and future pharmacological means of improving children. The authors write:

What should concern us most are the implications of inserting novel and precedent-setting use of drugs into child-rearing and educational practices, and what this means for the character of childhood and the nature of responsible parenting . . . In all cases, the use of [behaviour-modifying drugs] raises serious questions concerning the liberty of children. (pp. 99–101)

The bioethics literature usually defines 'the liberty of children' in terms of common bioethical concerns, including personal authenticity, autonomy, the right to self-creation, and the rights of parents to shape the capacities of their children. For example, Brock (1998) has argued that as a unique individual, a child's 'character, capacities and life history should be permitted to unfold according to its own nature' (p. 62). Similarly, the President's Council (2003) worries that stimulant drugs can be used in a way that restricts the freedom of children, diminishes openness to diversity in cognitive and behavioural functioning in children, and indeed, alters 'the very character of childhood'. Others worry that stimulant drugs provide too much temptation to improve children, because of the drugs' demonstrated capacities to improve even 'normal' performance in some cognitive and behavioural domains (Rapoport et al., 1978). Fukuyama (2002) has argued that parents and teachers use Ritalin as a way to avoid their responsibilities to a child – a 'medical short-cut' (p. 49). Such practices also create a system in which children begin to be disadvantaged without Ritalin, because their peers are using the drug as a means of improving behaviour and cognitive performance.

A common reaction among UK clinicians to the public furor over stimulant drug use in children is to claim that overuse of stimulant drugs is an American problem. In the UK, psychotropic drugs are indicated as the first line of treatment for *severe* ADHD, a category which should encourage more rigorous diagnosis and evaluation of disability (Dobson, 2000; National Institutes of Clinical Excellence [NICE], 2000). From this perspective, the 700% increase in UK per capita consumption of methylphenidate between 1999 and 2003 (United Nations International Narcotics Control Board, 1999) could be legitimately explained by the argument that ADHD had been underdiagnosed in the UK, and that scepticism over psychiatric drug treatments had led to an under-utilization of effective medication.

However, as the President's Council Report points out, even rigorous concern with proper diagnostic guidelines for ADHD does not create a reliable or even a valid diagnosis. Because there is no biological marker for ADHD (as is the case for most psychiatric diseases), because of the ambiguity of symptoms, and because improved performance on drug treatment is not an indication of diagnostic accuracy, there is a distinct possibility that children will be incorrectly diagnosed and given drug treatment for ADHD. Moreover, because of the relative availability of stimulant drugs, their tolerable side effect profile, and their success in improving cognitive and behavioural performance in many children, it is also a distinct possibility that parents and/or teachers will advocate use of these drugs in children outside diagnostic guidelines. Clinicians do and will come under pressure to prescribe stimulant drugs and other cognition and performance enhancing drugs in borderline cases.

It is therefore important for clinicians to take seriously the ethical concerns that have been put forward about the use of stimulant drugs in children. One significant problem for clinical relevance is that there is no evidence base for ethical concerns raised specifically about stimulant drugs. The bioethics literature is grounded largely in philosophical methods of inquiry, which rarely involve gathering empirical evidence for claims through investigation among users. This does not mean that ethical concerns should be dismissed, rather that they need to be investigated empirically in order to test their validity and to generate a set of clear implications for clinical practice.

This article presents data from a pilot study which investigated children's experiences of methylphenidate treatment for ADHD. The study grew out of a larger project looking at parents' understandings of and experiences with ADHD diagnosis and methylphenidate treatment (Singh, 2003, 2004, 2005). The particular concerns with child authenticity embedded in parents' dosing dilemmas generated questions about children's own conceptions of their 'real' selves in relation to stimulant drug treatment.¹ The pilot study had the following aims:

- To explore the landscape of ADHD children's moral self-understandings in relation to stimulant drug treatment;
- To generate preliminary hypotheses about ADHD children's conceptions of the authentic self; and
- To pilot a range of research methods which would effectively and reliably elicit children's moral self-understandings in relation to stimulant drug treatment.

Ethical concepts and research with children

While there is a good deal of public and ethical concern about the implications for children of current and new biomedical technologies (particularly neuro- and genetic technologies), only a small body of research in this area involves children themselves as research participants. The lack of research is due in part to the existence of strongly held biases about the possibilities of empirical research with children. These biases have been organized largely around issues of children's lack of agency, self-understanding and reliability (Hogan, 2005).

When children have been involved in empirical ethics research related to medicine, the research questions have revolved largely around issues of capacity and consent (e.g. Alderson, 1993; Honig & Jaffa, 2000). Alderson's groundbreaking research demonstrated that young children could understand complex and emotionally disturbing medical information, and had capacity to give informed consent to surgical procedures. Going beyond the particulars of children's consent to surgical procedures, Alderson criticizes the assumption that children are not important or reliable participants in social and medical research: 'A powerful distorting pressure when assessing children's abilities is the tradition of the child negatively defined as not adult: not wise, informed or experienced and so assumed to be foolish, ignorant and perverse' (p. 193). This critique has been useful and is broadly valid; however, research with children should also take into account the developmental capacities of children to engage in research and to communicate experiences. Interpretations of interviews with children around complex beliefs and understandings need to incorporate a discussion of how children's cognitive capacities may structure what they express, and how they make sense of themselves, behaviours, and the world. This is not to impose developmental stage theory on children's interviews or to validate a particular stage theory; rather, engagement with developmental theory may produce more relevant and reliable outcomes from research with children.

For Alderson and others who research children's experiences, qualitative methods provide a way to think creatively about engaging a child in conversation about his/her world, thoughts, feelings, and experiences (Greene, 2005). Qualitative tools allow for complexity and complication, consideration of context as part of a child's set of experiences, and consideration of children's varied communicative abilities.

Methods

Twenty boys and 3 girls were interviewed in the pilot study. Despite efforts to recruit an ethnically diverse sample, all families who agreed to participate in the study were White. In order to obtain a socio-economically diverse sample, recruitment took place in southeast England NHS and private psychiatric clinics specializing in ADHD diagnosis and treatment. Appropriate ethics approvals for the study were obtained in all cases. Boys and girls between the ages of 8 and 12 who were taking stimulant drug treatment for a diagnosis of ADHD were eligible for the study. This age range was chosen because it represents a discrete developmental stage normally labelled 'middle-late childhood' in the developmental literature. ADHD is often comorbid with other conditions, particularly learning disabilities, and such comorbidity was represented in the sample. However, children with severe intellectual deficits (IQ below 80), severe comorbid psychiatric disease, and/or severe stressors such as documented physical or sexual abuse, were not included in the study.

Interviews

One–two-hour interviews took place in the children's homes; at least one parent was present in the home at the time of the interview, but not in the room in which the interview was taking place. A few weeks before the interview, children were sent disposable cameras and asked to take two sets of pictures in response to the following prompts: *This is what things are like for me when I take my tablets for ADHD. This is what things are like for me when I haven't taken my tablets for ADHD.* These photographs were used to guide an initial story-telling part of the interview which elicited children's subjective experiences of stimulant drug treatment.² Other sections of the interview included a list-making activity which elicited understanding of when and why they needed to take medication; standardized pictures, which elicited discussion about the capacity for control over behaviours and performance on and off medication; and an interview using a doll or toy from the child's collection which elicited discussion of self-conceptions in three areas: Improvement, authenticity, and relationship of self to disorder (see Appendix).

In general, children responded very well to the interviews; all children accomplished the task of taking photographs and bringing the film to their parents for development, with minimal input from parents. Children were eager to show their photos and engaged readily in the interview process. An interesting discovery was that these children (who were all medicated during the interview) sustained attention best when they were asked lots of questions in rather rapid succession, and they did not mind when these questions were essentially repetitive. As a result, the topic guide tended to grow over the period of the pilot, even as the topics and themes themselves were being refined. It would appear that a topic guide with fewer questions would not work as well with this population of children; when the researcher allowed more time to probe a single question, or allowed more silence in the conversation, children were more likely to become distracted (Singh, forthcoming).

Data analysis

The grounded theory approach to data collection and analysis was used in this study (Glaser, 1979; Strauss & Corbin, 1990). Grounded theory is increasingly used in psychology and in qualitative medical research (Henwood & Pidgeon, 2003). At the outset of the study, the method emphasizes broad research questions and a series of methodological steps that ensure active integration of emerging hypotheses, data collection and data analysis.

In the grounded theory approach, higher order descriptive and conceptual categories are developed systematically using rigorous coding procedures. Data collection and analysis occur simultaneously, such that data analysis informs ongoing data collection. Coded data are synthesized into a paradigm model, and steps are taken to validate emerging relationships and hypotheses in the data (Strauss & Corbin, 1990). Sampling new data on theoretical grounds extends the richness and scope of emerging theories, and diversifies the data set. Participant recruitment ceases when researchers feel the data are 'saturated', meaning that new concepts and categories are no longer arising from data analysis.

In the present study, interviews were transcribed by the researcher and a coding frame was developed during the open-coding stage of analysis. A preliminary list of codes was validated for internal reliability and consistency in a collaborative coding process that involved another researcher working with a subset of interviews. Subsequent coding occurred systematically using several analytical devices, including axial coding and constant comparison (Strauss & Corbin, 1990). In this process, key dimensions of children's conceptions of personal authenticity were coded, and organized into higher-order descriptive and conceptual categories. Some of these are elaborated in the discussion of findings below. Two primary hypotheses related to authenticity emerged from the analysis of early interviews: Children's conceptions of personal authenticity were organized around their experiences of stimulant drug treatment; and children retained a stable sense of inner badness despite stimulant drug intervention. These hypotheses were further tested and developed through additional sampling and data analysis. The present study could only confirm these hypotheses in a limited way. These limitations are discussed at the end of the article.

Discussion of findings

Photographs: Self-understandings on and off medication

Interviews began with children's discussion of their photographs. Children were invited to present their photos in any order they chose, and most children simply presented them in the order in which they happened to be stacked. Children's photographs often presented simple, binary understandings of themselves on and off medication. These presentations tended to be organized along several overlapping dimensions. Along the *moral-behavioural dimension*, children presented a good/bad binary when talking about themselves on and off medication. For example, on medication, they reported being able to 'play nicely', while off medication they reported fighting. On medication they reported being able to focus and listen to what was being asked of them; off medication they reported 'getting into trouble', 'breaking things' and 'scribbling outside the lines' of pictures they were drawing.

Children also reported acting more 'normal' on medication. Often they described acting 'normal' as a state of rest or peace in their bodies; as one boy put it while describing a photograph of himself on the sofa with his hands folded over his stomach and his

eyes closed, 'I feel completely normal . . . nothing's going to happen. All I do . . . is just blink, breathe . . . like, aaahhhhh [soothing sounds], like this'. This state was contrasted with 'acting crazy' or 'being really weird' when they were not on medication.

Along the *emotional dimension*, many children presented a basic happy/sad binary on and off medication. One boy presented a reverse binary to the majority of the sample: he reported feeling happier *off* medication and sad *on* medication.

Some children discussed one further dimension of physical behaviour: *Side effects of medication*. Here too, photographs yielded binary representations: Children reported that when on medication they had little or no appetite, had trouble sleeping, had headaches or tummy aches. Children reported having no such troubles when not taking medication.

These binary representations of the self/behaviour on and off medication make up one level of discussion in interviews with children. These representations are notable in that they appear to demonstrate a lack of cognitive sophistication in these children; the tendency to structure descriptions of the self and behaviour as unintegrated opposites is identified with the cognitive skills of 5–7-year-olds (Griffin, 1992; Harter, 1999). However, these representations should probably not be taken to reflect cognitive immaturity in these children; rather, they are better explained by the structure of the question children were responding to when taking their photographs: *Take five photographs that help us understand what things are like for you when you're on medication; take five photographs that help us understand what things are like for you when you're not on medication*. The question itself assumes that the differences in the child on and off medication are sufficiently differentiated that the child can organize two unique sets of visual responses. In this way, the questions support the construction of responses that represent unintegrated opposing representations.³

When children were supported in elaborating narratives around the photographs, they provided significantly more complex and more nuanced representations of experiences and self-understandings. In the following interview excerpt, both the initial self-representations and the emerging, more complex, self-understandings are evident around a discussion of self-control.

Tommy⁴ discusses a photograph he has taken which represents what he is like when not on medication:

T: That's me acting like a crazy monkey.

I: You're acting like a crazy monkey?

T: Yeah, like this . . . ahha ahhh [monkey sounds].

I: So is that when you've taken your tablets, or when you haven't taken your tablets?

T: Haven't. That's really fast.

I: And how does it feel to be this crazy monkey?

T: Really quick.

I: Really quick.

T: Ohhhahhha. Very movable, like that.

[Pause 6 seconds]

I: Hmm. Do you feel like you can control this crazy monkey that you've become?

T: Not quite . . . well, you can't really tell . . . if I'm going to be able to control it. Cos sometimes you can control it, and sometimes you can't. Sometimes when my mother says, 'Stop!' I can do it, and sometimes when my mom says, 'Stop!' I carry on doing it.

I: Why do you think that is, that you can stop sometimes and not others?

T: Cos I think your brain sends messages inside the body.

I: So your brain says . . .?

T: Carry on because I don't have any tablets.

I: Oh, your brain says, 'Carry on because you don't have any tablets'.

T: Yes.

I: Do the tablets stop your brain from making you behave that way?

T: Yes.

Initially, Tommy's photograph elicits a description of himself as 'crazy' off medication, implying a total lack of control over his behaviour. Many children in this study reported feeling that they did not trust themselves to be able to stop bad behaviour at appropriate times. However, as they began to elaborate more complex self-understandings in relation to medication, children did not completely disavow their ability to have control over their behaviours. Rather, children felt as Tommy did, that they could sometimes control their behaviour, and sometimes not. Tommy's explanation for his inability to control his behaviour – that his brain needs his methylphenidate tablets – was not the only explanation offered by children for their lack of control over behaviour. In fact, not one child in this study consistently attributed lack of control to a lack of medication. Within and across interviews, explanations varied from 'I guess I just don't care enough to stop' and 'I don't want to listen' to a lack of medication or insufficient medication. In this way, children consistently voiced an understanding of a moral dimension to behaviour and self-control, even as they attributed some of their lack of self-control to a lack of medication.

Beyond binaries: Doing bad and feeling good

Children's reports of their experiences of symptomatic behaviours further underline their essentially moral conceptions of these behaviours, and of their (out of control) bodies. In particular, children were able to communicate their ambivalence and confusion as they tried to reconcile the internal experiences of their bodies with the impact of their behaviours in the world. Many children talked about experiencing internal jumpiness or 'craziness': 'It's crazy, like there are lots of people inside me'. In reporting how they felt about this internal craziness, children were ambivalent; some felt it was exciting and good: 'There's always something happening', but these same children also shared a more pervasively felt experience of worry about their internal condition: 'I worry that I'm going to hurt someone because I get kind of out of control'. Children worried about not having control over their brains or their bodies, and these worries were further linked to concerns that they did not have control over friendships and their peers' perceptions of them. Children expressed fear, sadness and loneliness in relation to all these worries: 'I'm always in trouble because of how I behave and it makes me sad'. It is impossible, and probably not necessary, to know whether these worries are derived spontaneously out of children's own sensibilities, or imposed by carers' refrains

about the potential implications of out of control behaviours. The important point is that for many children in this study, their jumpy insides and difficult-to-control bodies were a site of complex and ambivalent self-understandings.⁵

This complexity and ambivalence expressed by children are important to explore further, in order to gain a rich understanding of the relationship of symptomatic behaviours and stimulant drug use to children's moral self-understandings. In order to focus this exploration, we can use a moral situation that children frequently reported on in interviews: *Doing bad and feeling good*. In the following example, Simon discusses this issue while responding to a standardized picture of a child being reprimanded by an adult:

I: So do you think if she [child in picture] had taken her tablets, she would care that she had done something wrong?

S: Yes.

I: When you've taken your tablets and you've done something wrong . . .

S: Yeah?

I: How do you feel inside?

S: Bad.

I: But when you haven't taken your tablets, and you do something wrong . . .

S: [interrupts] I feel good about it! [emphatic]

I: Do you like that feeling of feeling good inside?

S: Yeah. Wait. What do you mean by 'good'? Do you mean doing something bad and I feel good inside?

I: Yeah.

S: No, I don't like that. I feel bad about myself.

Here, Simon discusses how with tablets, he feels bad about wrong or hurtful actions towards others, while without tablets, he feels good about such actions. However, Simon goes on to interrupt his own narrative, and to caution the interviewer ('Wait. What do you mean by "good"?'). It becomes apparent that the good/bad binary on and off medication is a more superficial representation of Simon's experience; Simon does have experiences in which he feels joy or glee in his bad behaviour when not taking medication, but he also understands that these good feelings are not appropriate. Part of him doesn't like himself feeling this way; part of him feels 'bad' about himself.

Another child, Mark, elaborates a similar narrative about the relationship of medication to his good/bad self:

I: If you had taken your tablets and you hit someone and hurt them on purpose, would you be a bad person?

M: Mmmm. It would be a bit of both.

I: Bit of both . . . in what way?

M: Bad, and good then.

I: Oh, cos you said it makes you feel good when you hit someone?

M: No. I didn't say it made me feel good. It makes me feel bad. No, if you don't have anything good, it will make you feel good if you hurt someone. But the tablets make you good, so you'd be partly good, and partly bad. Not all bad.

Earlier in the interview, Mark had described hitting others and the feelings of power and energy that accompanied these actions. In this excerpt, Mark communicates more ambivalence about these positive feelings, and extends them to the discussion of the goodness or badness of the person who could feel good about hurting someone. People who hurt others and feel good (as Mark sometimes does), have nothing good inside them. Mark views his tablets as having the ability to change him, to 'make you good' – but only 'partly' good, or 'not all bad'.

Children in this study consistently expressed concerns about their partial goodness. They understood medication as something that helped them be good, and they were aware of, and worried about, the 'bad' part of them that could enjoy hurting or harming others. Children's narratives did contain expressions of pleasure over 'bad' behaviours, and children did not always immediately censor their expressions of pleasure over such behaviours. The majority of children in this study did however reflect at several points during the interview, that feeling pleasure over 'bad', 'naughty' or 'wrong' behaviour was wrong. A range of behaviours was captured in this category of 'wrong but pleasurable behaviours': Wildly scribbling outside the lines when drawing, dancing on furniture, physical fighting with siblings, acting crazily in a game of football, throwing things in the classroom.

While children expressed ambivalence over their enjoyment of the bad part of themselves, they were far less ambivalent about the relationship of this bad part to who they were as a person. In fact, children tended to identify the bad part as a relatively fixed, core dimension of themselves. The interview with Mark continues:

I: You're saying that there's a bad part of you that the tablets can't make good?

M: Yeah, inside I might be evil. I need the tablets to make me good but they can't take away all the evil.

I: So if I were to ask you what you think is the 'real' you – the bad part that the tablets can't make good, or the good part with the tablets . . .

M: Well of course I'm not real with the tablets!

I: So the real you is the bad you?

M: I think so.

I: How does that make you feel?

M: Ok. [pause . . . 3 seconds] As long as I have the tablets!

Children's conceptions of the authentic self

The philosopher Charles Taylor (1991) describes an 'ethics of authenticity' as the self's sense of its own uniqueness and individuality, and the desire to be true to this self (Abbey, 2000). Concerns that a child's authenticity may be undermined by stimulant drug use are based on an assumption that there is a pre-given, or innate dimension to the person – what Brock (1998) has called the 'natural' character of a child. These assumptions of a core aspect of the self can be viewed as theoretically analogous to arguments for a genetic basis to personality and temperament in the field of clinical genetics. However, the genetic research on personality strongly suggests a gene–environment

interaction: Genetic predispositions to temperament outcomes or to psychopathology can be triggered by environmental stressors; or the environment can have a protective function (Caspi et al., 2002). Some bioethical arguments have similarly engaged the environmental dimension of the authentic self. Scholars have argued that authenticity should be seen as part of a modern cultural ideal that does not necessarily describe a real core identity; rather the language of authenticity can be used to provide moral justifications for certain medical decisions (Elliot, 2003; Gergen, 1991; Singh, 2005).

If genetic predispositions interact with environmental factors to create distinct persons, then children's conceptions of core or stable aspects of themselves, as reported in this study, can be viewed as the expression of an emerging or developing sense of the authentic self. The developmental literature further supports the idea that children in middle/late childhood are able to form higher-order concepts that allow the child to begin to construct a 'more global evaluation of the self as a *person*, namely to formulate a representation of one's overall self-worth' (Harter, 1999: 54, emphasis in the original). ADHD diagnosis and stimulant drug treatment contribute to that emerging sense of the authentic self in children. It is an important finding of this pilot study that children's self-evaluations and moral self-understandings do appear to be structured by ADHD diagnosis, and by the on/off ritual of stimulant drug dosing. However, it is also important to note that diagnosis and drug treatment are not just external experiences imposed on the child by his/her social environment; these experiences are also expressed on the bio-genetic and physiological level through the complex mechanisms that regulate behavioural expression and inhibition, as well as drug intake and metabolism. In this way, the experience of symptomatic behaviours and drug treatment must be seen as fully embodied – meaning that these experiences exist in the body, which is the ground where nature (biology/genetics) and culture (social and cultural practices) meet.

In defending the rights of children to their authentic or natural character, bio-ethicists have tended to assume that an authentic self is something worth having, something valued. It is assumed that there is inherent good, both in the authentic person him or herself, and in the experience of having access to the core, authentic dimension of oneself. However, children in this study reported a rather different sense of their authentic selves, and they valued authenticity differently. A majority of children felt that at their core, there was persistent 'badness'. Medication could help to overcome badness, but not entirely. Therefore in this study, ethical concerns that stimulant drug use undermines children's personal authenticity were not supported empirically, when investigated in children's own reports of their authentic selves on and off medication.

Children's sense of themselves as bad at their core severely complicates the assumption that an ethical drug treatment should *not* undermine a child's sense of his or her own authentic self. Should children be encouraged to value their unique selves if they believe that self is at least in part a bad self? It may be important that children did report that this inner badness could make them feel good sometimes. Children's experiences of pleasure in 'doing bad and feeling good' potentially protect them against stronger feelings of personal inadequacy, shame, and self-hatred. If children's self-understandings on and off medication were to remain at the more simplistic binary level (good/bad), it is possible that they would develop a stronger psychological dependency on medication, as well as stronger negative feelings about themselves.

Clinical implications

Two important, and paradoxical, findings emerge from this pilot study. First, children's understandings of their authentic selves do not appear to be undermined by stimulant

drug treatment. Second, children's moral conceptions of their authentic selves are characterized by persistent badness, despite medication. If these findings were to be supported through further research and investigation, the clinical challenge would become one of balancing sensitivity towards the ideal of authenticity – not desiring to undermine a child's sense of individuality and uniqueness – with the need to encourage a child's feelings of moral self-worth. The developmental literature suggests that at this age, children begin to organize an awareness of their own behaviours and performances across multiple domains (and an awareness of others' responses to these) into higher order trait concepts. These trait concepts tend to be more resistant to change than domain-specific self-representations. Clinical support should aim to interrupt a process in which negative self-evaluations in the domain of moral self-worth (goodness/badness of the self) potentially become fixed as a negative trait concept (I am a bad person). Children in this study did not appear to believe that they could have 'bad brains' without being bad themselves. A clinical approach which attempts to separate behaviour from the person ('you're not bad, your behaviour is bad, and your behaviour is caused by a problem with your brain') may therefore be less helpful than a more directed discussion about what makes a person good and what makes a person bad, with input from the child. Parents, teachers and other carers could be supported in continuing these sorts of discussions at home.

Another potential clinical implication of this study is support for more consistent dosing of children diagnosed with ADHD, as opposed to dosing just during the week and not at weekends and school holidays. In interviews with parents of American children taking methylphenidate for ADHD, parents said that they did not medicate children at weekend because they wanted children to know their 'real' selves – the selves off medication (Singh, 2005). However, in the present study with UK children, parents were more likely to keep their children on medication at weekends and holidays, both because of clinical guidance and because they felt their children off medication were 'too naughty'. It may be that there is a differential cultural valuing of the child's 'real' self, and that clinical guidance on appropriate dosing practices needs to take into account whether a child's environmental message is one of the positive dimensions of being oneself (even if that self has behavioural and attentional problems), or whether the message is one that confirms a child's sense of him/herself as essentially bad or naughty.

A final clinical challenge emerging out of this pilot research is related to the pleasure children with symptoms of ADHD appear to feel in behaving 'badly'. How can clinical guidance to parents support children in feeling more pleasure over their authentic 'bad' selves? This is important if children are to maintain a balanced view of themselves, which integrates positive and negative self-representations, and resists the construction of higher-order negative trait concepts. Most clinicians are well aware that what counts as 'bad behaviour' in one context, for example scribbling, hitting, taking risks and acting impulsively, may not be as problematic in another context. It may therefore be possible to provide outlets for a child's pleasure over such activities that are less compromising to himself and to others. Parents frequently turn to organized sports for their children with ADHD; however, children with ADHD are quite often a hazard on the sports field, which may in turn further complicate their peer relationships. It may be more helpful for homes and schools to have a neutral space where a child who is having trouble controlling behaviour in the moment can go to unleash energy under positive supervision. The practice in schools of punishing children for misbehaviour by removing their free-play privilege has negative psychological and physical consequences for children. In contrast to this practice, one family in this study had installed boxing equipment in the cellar, where their son could go to kick and box when he felt the need to be active

in a 'bad' way. The boy reported using this outlet frequently, and feeling good about himself after his activities there.

Limitations and extensions

If ethical concerns about the possible consequences of neuroscientific technologies, including drugs, are to be taken seriously in the clinical realm, it is necessary to produce a body of evidence that can guide clinical practice. This study represents an initial research attempt to perform systematic indepth qualitative interviews with children themselves around issues of moral self-understandings and conceptions of authenticity, in relation to ADHD diagnosis and stimulant drug treatment. This article has focused particularly on children's qualitative assessments of their authentic selves; and while children did engage in discussion about other aspects of moral self-understanding, such as personal responsibility for behaviour and self-control, issues of authenticity were perhaps quite obviously most salient for children, and they motivated most of the talk during the interview.

Pilot study data must be taken as preliminary, even when the study is conducted rigorously and carefully. In addition, one must be careful about generalizing qualitative research findings beyond the particular set of cases that make up one study, even though key concepts are likely to be valid in a similar set of cases. There is a need to confirm and expand the present findings in a larger and more diverse sample. The following are factors which are important to investigate through further research:⁶

- Because all children in this study were already receiving stimulant drug treatment for a diagnosis of ADHD, this study cannot speak to the importance of stimulant drug treatment itself to children's experiences and self-understandings. It may be that the experience of being identified as a problem child is itself enough to produce these responses in children. Further study should attempt to disaggregate the importance of stimulant drug treatment and the experience of being identified as, or labelled, a 'problem child' to children's moral-self understandings and conceptions of authenticity.
- Boys make up 75–80% of ADHD cases; therefore it is more difficult to recruit girls into research on ADHD. The small number of girls in the current study (3) problematizes a gender analysis. However, the gender question may be particularly important to explore further, given that the developmental literature views gender as a critical component of self-understanding and self-appraisal (e.g. Gilligan et al., 1991). In order to adequately explore issues of gender, future research may need to over-sample girls.
- In addition, children's cultural settings may provide an important context for their developing moral self-understandings in relation to 'problem' behaviours and stimulant drug treatment. It may be that in a cultural setting such as the United States, where stimulant drug treatment is more widely practised and accepted, children's moral self-evaluations and conceptions of their authentic selves are less negative.

Notes

1. A related area of study in psychology concerns the implications of diagnosis and medication for ADHD children's self-esteem, self-perceptions, and locus of control (e.g. Bussing, Zima, & Perwien, 2000; Cooper & Shea, 1999; Hechtman et al., 2004; Hoza, Pelham, Milich, Pillow, & McBride, 1993; Hoza, Waschbusch, Pelham, Molina, & Milich,

- 2001). These studies have tended to focus usefully, by narrowly, on quantitative measures of child functioning; there is almost no research that systematically investigates qualitative dimensions of children's experiences with ADHD diagnosis/stimulant drug treatment.
2. Children's photographs often depicted the children themselves, their friends, and members of their family. Ethics approvals had been obtained for academic use of all these pictures, including publication, and all child participants in this study, and their parents, provided separate consent for use of these pictures. However, it was not sufficiently clear to the principal researcher that children or their parents fully understood the implications of using photographs of children in published accounts of the research. Therefore photographs of children themselves are not presented visually in this article (see Singh, forthcoming, for further discussion of this and other dilemmas involving qualitative research with ADHD children).
 3. Problems with the instructions for taking photographs are more fully elaborated in Singh (forthcoming).
 4. In order to assure anonymity, all names and some details have been altered.
 5. The small number of girls in the pilot study problematizes a gender analysis. However, it is worth noting in a preliminary way that girls did not differ substantially from boys in their internal experiences of symptomatic behaviours. Girls reported experiences of internal jumpiness, but they were less likely to talk about feelings of anger and aggression. Girls were more likely than boys to express concerns about the impact of their behaviour on their educational performance and on their mothers.
 6. The author has received funding from the Wellcome Trust to pursue a larger study in this area, which will involve up to 100 children in the USA and the UK. Further information about this study is available by contacting the author.

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Appendix: Selected subsections of the interview protocol

(A) Personal agency/creative identity

(B) Self-conceptions

A. Exploration of personal agency and creative identity

Standardized pictures

1. Child sitting quietly at a desk working;
2. Child looking wild – hair, clothes, etc. a mess;

3. Child playing happily with friends;
4. Child arm in arm with another child;
5. Child eating in a restaurant with family members;
6. Parent angry with child;
7. Child shooting a football goal with other children cheering;
8. Child getting a hug;
9. Child holding a paper with a star and a 'very good' written on it;
10. Child reading with mum;
11. Child isolated from a group of other children;
12. Teacher angry with child.

Flexible interview schedule

If you forgot to take your Ritalin tablets one morning for school, what would happen? What if you tried really really hard to do your best?

If you forgot to take your Ritalin tablets for homework time what would happen? What if you tried really really hard to do your best?

If you forgot to take your Ritalin tablets before a [*relevant social situation, i.e. game, party*] what would happen? What if you tried really really hard?

All the children in these pictures have ADHD, like you, and they take Ritalin tablets to help them. We're going to look at these pictures and I'm going to ask you some questions. This is a game; there are no right and wrong answers, so don't worry if you don't have answers sometimes.

Can you describe what this child (in each picture) is doing?

Do you think the child (in each picture) has taken his tablets or not?

How do you know (can say don't know)?

[*If child has taken Ritalin*]: Could this child do [activity in picture] without Ritalin too? Would anything be different?

[*In pictures where adult is angry and child has not taken tablets*]: Can this child help it that he did this?

Choose two pictures for comparison. If necessary do this several times with a different set of pictures:

Let's say that this child (in one picture) has taken his Ritalin tablets, but this child (in another picture) forgot to take his, but he's trying really really hard.

Will they both do well? Will one do better than the other one? Why or why not?

How do the children in these different pictures feel? Can you tell me their feelings?

What do other people think of these children (show contrasting pictures)? What words would they use to describe them? Do you think that's how people think about you?

Is it this child's fault [without Ritalin] that he is doing [activity in picture]? If no, why is he doing it?

Let's look at this picture [choose picture without Ritalin].

Is it at all important that this child can do [activity] without his tablets? Why?

Is it important to you to be able to do [activity] without your tablets?

(B) Self-conceptions

Flexible interview schedule

Introduction: Choose figure or doll from child's collection or bring one along. I'm going to ask you some questions about this doll, and they may be a bit silly. So this is a game, but I want to know what you really think. And remember there are no right or wrong answers. I just want to know what you think.

Also, I have some paper and some pens here, so if you can't say what you're thinking, sometimes it's easier to draw it.

This doll has to take the same Ritalin tablets that you do. So when she takes them how does she do it?

Can you tell me where the tablets go once she's swallowed them?

Is that where her problem is? Can you point to where the problem is that the tablets are helping?

When she takes the tablets do they change the [area where the problem is]?

When she takes the tablets do they change her? If yes, how?

Would you say that she is a different person when she takes her tablets?

If yes, what's different about her?

Do you feel like you're a different person when you take your Ritalin tablets?

Do you think other people see you as a different person when you've taken your tablets?

Can you describe to me what it feels like to be you before you take your tablets?

What does it feel like to be you after you've taken your tablets?

Can this doll decide that she doesn't want to take her Ritalin tablets?

What would happen if she did?

What would you say to her if she didn't want to take her tablets?

Do you ever think you don't need your tablets? If yes, when? Why?