

Cognitive Enhancement in Healthy Children Will Not Close the Achievement Gap in Education

ACCEPTED VERSION

Published in:

The American Journal of Bioethics, 16(6): 39–56, 2016
Copyright © Taylor & Francis Group, LLC
ISSN: 1526-5161 print / 1536-0075 online
DOI: 10.1080/15265161.2016.1170240

Sebastian Sattler^{1,*}, Ilina Singh²

^a Institute for Sociology and Social Psychology, University of Cologne, Greinstrasse 2, 50939 Cologne, Germany, sattler@wiso.uni-koeln.de

^b Department of Psychiatry and Oxford Uehiro Centre, University of Oxford, Oxford, UK, ilina.singh@psych.ox.ac.uk

* Corresponding author: +49(0)221-470-6846

Acknowledgements

SS's research was supported by a grant from the John Templeton Foundation, via The Enhancing Life Project.

Conflict of Interest

None

Cognitive Enhancement in Healthy Children Will Not Close the Achievement Gap in Education

If the 62 world's richest people own as much as the half of the global poorest (Hardoon et al., 2016), this is more than worrying and socially unacceptable, especially given that many of this poorest half are children. Increasing educational access and achievement of these children (but also of the poor in general) – that are often powerless to defend themselves and to fight for their rights, might be one important leverage to increase their long-term opportunities. Education is known to influence health outcomes, job market entry, control over life, etc. as Keisha Ray (2016) argues convincingly. Education might be especially important for the multiply disadvantaged, e.g. children from several ethnic minorities. Thus, we strongly agree with Ray that society has a moral obligation to deliberate about all potential means to improve the conditions of disadvantaged individuals (with/without diseases) for the sake of justice.

Despite these agreements, however, we find ourselves rather baffled by the central proposal in this article. A basic source of confusion is the article's conceptual carelessness: Ray intermingles poverty, social disadvantage, genetic disadvantage, socio-economic disadvantage, poor parenting, bad teaching, and poor schooling, allowing the reader no precise grip on the individual or social factors that the proposed intervention of cognitive enhancement (CE) is meant to address. In this commentary we use the non-specific phrase “poor and disadvantaged children” to denote the highly generalized target of “opportunity maintenance.”

Problems with “opportunity maintenance”

Ray argues that socially disadvantaged children without diseases should be given CE-drugs in order to have better opportunities in life. She terms this ‘opportunity maintenance’. The term is unclear and potentially offensive. It is apparently an effort to avoid the treatment-enhancement distinction and thereby the accusation that this is a proposal to treat healthy children. But the term and the concept fail on several levels. First, the concept does not avoid the assumption that treatment is required; it just shifts the assumption from a medical reason to a social reason, categorizing (*all?*) disadvantaged (*how?*) children as “*not normal* in socially relevant ways” (p. 15, our emphasis). Ray argues that the term avoids “assigning pathologies” (p. 17), even while labelling poor and disadvantaged children as (socially) abnormal. This move perpetuates stigmatization of the poor and disadvantaged as an undifferentiated group, and rounds them up for institutionally sanctioned “opportunity maintenance” using drugs. One might predict that opportunity maintenance would in fact maintain (lack of) opportunity by reinforcing social exclusion and diminishing human dignity.

Ray suggests that opportunity maintenance supports a ‘social model’ of CE. This construction recalls the social model of disability (Shakespeare, 2013), with the major difference that the social model of disability does not identify the individual as the key target of intervention to promote social equality and justice. Surely targeting the individual in this way is a slippery slope to more draconian biomedical “tools” to ensure that individual children defeat the ‘bad hand’ they were dealt in birth.

Stimulant drugs are not a solution to social disadvantage and inequity

Ray argues that stimulants are a non-optimal solution to the problems of social, educational, parental, socio-economic and genetic disadvantage; but they are a better solution than maintaining the current unjust situation. In Ray’s view, “we as society [have] decided that we

are unwilling to pursue” (p. 11) major policy changes to correct these disadvantages. We disagree that CE-drugs offer a substantive solution to any of these problems.

It may be banal, but we want to underline the fact that the evidence for CE in healthy people using CE-drugs is slim (Ragan et al., 2013). As Ray points out, ‘smart drugs,’ used by students as study aids, have few proven cognitive enhancing capabilities, even if university students report benefits. We would add that there have been no clinical trials of stimulant drugs in healthy children for enhancement purposes. Risk-benefit analysis of cognitive enhancement using these drugs must take into account that the efficacy, safety and side-effect profile in this population lacks an evidence-base. Moreover, university students are young adults, not school children, and smart drugs show no educational benefit when measured in academic outcomes, despite what university students say (Arria and DuPont, 2010)., Nevertheless, Ray’s argument is based on the assumption that stimulants will allow “biologically normal” school children to squeeze some benefits out of a bad education.

Perhaps the aim of the article is to argue a philosophical point, but the argument comes at the expense of poor and disadvantaged children. Ray does not elaborate real solutions for a crucial set of practical issues: First and foremost: How will stimulants (which have questionable enhancing effects on cognition) enable improved educational progress or achievement (Ray treats these distinct factors as though they are the same thing) when the quality of education is still bad? Another concern is how students would be identified to prescribers for the opportunity maintenance scheme without threats to confidentiality, privacy and trust?

The lack of attention to the practical and health dimensions of stimulant drug use is ironic in an article that promotes equality of opportunity and child wellbeing. Since Ray cites one

sustainable development goal in her article (education), it is worth pointing out some others: early child development, race, social exclusion (<https://sustainabledevelopment.un.org/sdgs>). It makes little practical sense to pull out one social determinant and to ignore the rest. In addition, to being at increased risk of poor educational resources, poor children already receive less than adequate health care, which endangers early child development.

Who is the target of opportunity maintenance?

The racial dimensions of opportunity maintenance are played down in this article, when they need scrutiny and illumination. Ray notes that disadvantaged children in the U.S. include a disproportionate number of “marginalized populations of lower socio-economic status” (p. 9). To put it more precisely, poor children in the U.S. are disproportionately Black and Hispanic, with Black children at greatest risk of poverty. Between 1974 and 2014, 30% to 47% of American Black children lived below the poverty line (DeNavas-Walt et al., 2015).

Presumably, then, children from ethnic minority backgrounds would also make up a disproportionate number of children requiring opportunity maintenance. But Black Americans in particular have a difficult historical relationship with psychiatry. Poor access to mental health care, lack of cultural sensitivity among care providers, and unethical use of psychiatric diagnosis and drugs during the civil rights movement have motivated mistrust in the profession and its treatments (Singh et al., 2013). With these realities in mind, an unexamined expectation that these groups should accept psychotropic drug-based opportunity maintenance for their children could be construed as deeply insensitive. It makes little sense to argue that drug administration to healthy poor children is a moral obligation in the name of educational equity and social justice, when the practice itself potentially promotes social and racial exclusion and stigma.

Cognitive enhancement may make a bad educational situation worse

For an article focused on the problem of social disadvantage, the analysis is curiously disinterested in social dimensions of CE-drugs within schools; e.g. contagion effects, diversion, competition, and so forth (e.g., Forlini and Racine, 2009; Sattler et al., 2013; Sattler et al., 2014). The provision of CE-drugs to a group of healthy children (whilst it is still illegal for other children without a prescription) could easily lead to a kind of negative competition, in which parents with sufficient economic resources perceive drug provision to poor and disadvantaged children as a threat to their own children's opportunities, with the consequence that advantaged parents put more energy into upholding their children's privilege (with and without stimulants). Thus educational settings could become battlegrounds for who does or does not meet criteria for sanctioned psychotropic CE. Societal attention to the structural inequalities that caused the problem in the first place would give way to lawsuits. Increased stimulant-demand would benefit pharmaceutical companies. In this way, the advantaged would benefit from the ills of the disadvantaged, and still nothing would change for the better in the education of poor and disadvantaged children.

Furthermore, the use of CE-drugs to curb inequality in education could have the opposite effect of increasing inequality. If, parents become more sanguine about challenging inequalities, having been lulled by the promise of a quick leveling fix, then stimulant use might go from being a means of coping with a bad situation (a short-term reaction) to enabling adaptation to those conditions (a long-term reaction). Ray herself has little faith that we will "take the necessary action to remedy...negative aspects of our educational system." (p. 22).

Surely we are not yet so cynical that we would tackle educational inequities by targeting a group of healthy disadvantaged children for drug treatment, rather than enacting policies and practices that build competencies in teaching and schooling across social sectors. Good teachers and good schools can affect many poor and disadvantaged children for many years, while pills mainly affect one child at a time. Thus, by any analysis, drugs are a comparatively less efficient and sustainable tool to increase equity in education. We are not convinced that stimulants for healthy but socially disadvantaged children would be “a better practical and just solution in our current unjust situation” (p. 3).

Conclusion

Stimulants are unlikely to close the achievement gap in education, both because stimulants are largely ineffective in the healthy population and because that achievement gap is made up of myriad other factors that have nothing to do with an individual child’s ability or desire to focus and attend in class. The ethics of this proposal are questionable at best, given that it involves targeting, stigmatization and alienation of marginalized groups, and contains an implicit moral argument that ‘they’ ought to modify themselves using biological tools in order to maximize their chances for social mobility. A healthy child in disadvantaged circumstances should never be asked to shoulder the burden of societal failure and dysfunction, while we look on.

References

- Arria A and DuPont R. (2010) Nonmedical Prescription Stimulant Use among College Students: Why We Need To Do Something and What We Need To Do. *Journal of Addictive Diseases* 29: 417-426.
- DeNavas-Walt C, Proctor BD, Smith JC, et al. (2015) Current Population Reports, P60-252, Income and Poverty in the United States: 2014. *Current Population Reports*. Washington, DC: U.S. Government Printing Office.

- Forlini C and Racine E. (2009) Autonomy and coercion in academic “cognitive enhancement” using methylphenidate: perspectives of key stakeholders. *Neuroethics* 2: 163-177.
- Hardoon D, Fuentes-Nieva R and Ayele S. (2016) An Economy for the 1%: How privilege and power in the economy drive extreme inequality and how this can be stopped.
- Ragan C, Bard I and Singh I. (2013) What should we do about student use of cognitive enhancers? An analysis of current evidence. *Neuropharmacology* 64: 588-595.
- Ray K. (2016) Not Just 'Study Drugs' for the Rich: Stimulants as Moral Tools for Creating Opportunities for Socially Disadvantaged Students. *American Journal of Bioethics* (in press).
- Sattler S, Forlini C, Racine E, et al. (2013) Impact of contextual factors and substance characteristics on perspectives toward cognitive enhancement. *PLoS ONE* 8: e71452.
- Sattler S, Mehlkop G, Graeff P, et al. (2014) Evaluating the drivers of and obstacles to the willingness to use cognitive enhancement drugs: the influence of drug characteristics, social environment, and personal characteristics. *Substance Abuse Treatment, Prevention, and Policy* 9: 8.
- Shakespeare T. (2013) *Disability rights and wrongs revisited*: Routledge.
- Singh I, Filipe AM, Bard I, et al. (2013) Globalization and cognitive enhancement: emerging social and ethical challenges for ADHD clinicians. *Current psychiatry reports* 15: 1-9.