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"Learning how to deal with feelings differently": Psychotropic medications as vehicles of socialization in adolescence

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ABSTRACT

Drawing from ethnographic research among clinicians working with adolescents at a hospital psychiatric emergency department and outpatient clinic, and with interviews with adolescent psychiatric patients and their parents, we examine how psychiatric medicines function as socializing agents. Although psychiatric medications are thought to exert their main effects through direct biological action on neural circuitry, in fact, their use mobilizes specific kinds of moral discourse and social positioning that may have profound effects on sense of self, personhood, and psychological development. Specifically, our data reveal how clinical discourse around medications aims to enlist adolescents in becoming responsible, emotionally intelligent selves through learning to manage their medications. Among doctors, adolescents and their families, talk about psychiatric medications intertwines narratives of 'growing up' and 'getting well'. Our analysis of case studies from the clinic thus demonstrates that while psychiatric medications are explicitly designed to influence behavior by acting directly on the brain, they also act to structure adolescents' selves and social worlds through indirect, rather than direct causal pathways to the brain.

1. Introduction

Among the various technologies of the new brain sciences, psychopharmaceuticals have been most widely and pervasively integrated into everyday life and consequently, are perhaps, most influential in transforming our everyday notions of normality, explanations for behavior, modes of self-regulation, and sense of identity (Rose and Abi-Rached, 2013). In this paper, we focus on the experience of adolescents receiving psychiatric medications for mood, anxiety and attention disorders. Our aim is to explore how psychopharmaceuticals, although deployed as biological interventions, also work indirectly within psychiatric discourse and practice as socializing vehicles, encouraging adolescents to adopt specific modes of understanding, experiencing, and managing the self.

This study is part of a larger, ongoing research program on the "neurological adolescent," a social construct emerging with the increasing popularity of brain-based discourses and interventions on adolescent mental health and development (Choudhury et al., 2012). Adolescence has long been an important time for mental health interventions reflecting the developmental challenges of maturation and individuation, and the fact more than 50% of adult disorders first appear in adolescence (Kessler et al., 2005). With the emergence of developmental cognitive neuroscience, neuroimaging techniques have been used to chart brain maturation from childhood through adulthood, documenting the plasticity and distinct modes of functioning of the "adolescent brain". The popular model of the "teen brain" not only offers a new scientific explanation of developmental challenges but also provides a new vocabulary and set of metaphors that may be used by adults and young people themselves to frame and interpret developmental challenges arising from normal development as well as illness. The appeal of the neurobiology of adolescent development for translational applications is increasingly evident in areas of education (Ansari et al., 2012), psychiatry (Insel and Quirion, 2005) and, though controversial (Bonnie and Scott, 2013; Johnson et al., 2009) has been influential at the level of the US Supreme Court in the law (Steinberg, 2013). In most of these applications, there is a more or less explicit assumption that describing the effects of

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developmental processes, interventions or events on the brain serves as a basic, final or ultimate explanation of changes in behavior and experience. Our analysis of the discourse around psychotropic medications among adolescents in the clinic provides an opportunity to explore the ways in which changing conceptions of the brain embedded in psychiatric practice are influencing everyday conversations about "growing up" and "getting well". This work also responds to current trends in psychiatry—and the 'neuroscientific turn' in the humanities and social sciences—that look to neuroscience for understandings of human behavior that can guide public policy. In particular, we contribute to work that challenges the dominant psychiatric discourse that sees mental disorders as forms of brain dysfunction and medications as simply working to normalize this aberrant neurobiology (Kirmayer and Crafa, 2014).

1.1. Psychiatric formulations of adolescence

Adolescence is a particularly important site for studying the impact of psychiatric medications on experiences of self and social personhood for several reasons. Most adolescents in contemporary Western societies live through a prolonged transitional period between childhood and adulthood, constrained by a relative lack of power and caught at the intersection between vulnerability and dangerousness, "innocence" and "culpability" (Saltman, 2005). In this developmental trajectory, adolescence is commonly viewed as a period of ongoing identity formation and consolidation. Young people are entitled to special forms of care because they are viewed as more vulnerable than adults. The social challenges and psychological tasks of adolescence are the means by which the young person achieves the emotional and social intelligence, self-regulation, good planning and judgment, autonomy, and interdependence that characterize "healthy" adulthood in Western societies. Despite much counter-evidence, the "storm and stress" model of adolescence, presented in G. Stanley Hall's 1904 book, *Adolescence*, as emotionally labile, prone to delinquency, seeking intense sensations, liable to experiment with sex and alcohol, peer-oriented, and in constant conflict with parents (Arnett, 2006) continues to be reproduced in contemporary Western discourse. Recent neuroscience has reframed these characteristics as natural consequences of the asynchronous development of the brain, cognition and hormones during puberty and adolescence. A dilemma for parents, doctors, youth and educators inherent in this social construction of adolescence is whether an adolescent's emotional or behavioral issues are developmental—something they will outgrow—or pathological, and needing psychiatric treatment to resolve. Moreover, young people are engaged in the developmental task of reaching a reliable conception of what it is to feel "like themselves," (Sharpe, 2012; Carpenter-Song, 2009), and psychiatric medication consumption will be implicated in this process and may provoke intense self-scrutiny.

In the cognitive neuroscience literature, the obverse of this adolescent vulnerability is described as 'opportunity' (Dahl and Spear, 2004). Insofar as adolescence is conceived of as in transition toward becoming an adult, the future is already present in concerns about development. The adolescent brain's potentiality must be carefully guided to support the emergence of the capacities necessary for healthy, productive and adaptive futures. In effect, the struggles of moving through adolescence have a double temporality because the future adult brain is created during this period; thus, the future bears heavily on the present and whatever happens during adolescence counts toward the making of the future. While new neuroscience reinstates adolescence as a problematic period, it simultaneously rewrites older ideas of a moratorium into a period bound up with risk – of substance abuse, mental illness, problem behaviors – which if not managed now, may have lasting consequences in adulthood (Fricke and Choudhury, 2011). This temporal doubling heightens concerns about adolescents' experience with medication, as reflected in the observation that today's youth are "the first generation to grow up taking psychiatric medications" (Barnett, 2012a) and that these medications have shaped this generation's experiences and sense of self.

1.2. Targeting the developing brain in adolescence

The action and utility of psychiatric medications usually are explained by locating the origins of mind and behavior within the brain, even though psychiatric theory acknowledges that mental phenomena, including psychopathology, emerge from interactions between brain and environment (Kirmayer and Gold, 2012). Thus, psychiatric medications are thought to change behavior by direct neurochemical effects on pathways in the brain. For example, in the context of ADHD, although the disorder is understood to have multiple endophenotypes (Raz, 2004), the therapeutic actions of commonly used medications like methylphenidate (Ritalin) or dextroamphetamine (Adderall) are generally understood to occur through modulation of dopaminergic and noradrenergic pathways. Neuroimaging studies have identified structural and functional differences between the brains of stimulant-medicated and non-medicated young people (Giedd et al., 2001; Smith et al., 2013), which are interpreted as evidence that psychostimulant medications exert their therapeutic effects through modulation of pathophysiological processes in the developing brain (Czerniak et al., 2013). Evidence of the adolescent brain's developmental malleability supports the importance of early 'normalizing' interventions because of the potential of the developing brain to respond to 'corrective' interventions (Singh and Rose, 2009). Models of the 'teen brain' by neuroscientists describe an experience-dependent developmental period of neuroplasticity that peaks around puberty and ends around age twenty-five (Paus, 2005). Scientists understand this structural and functional plasticity as a 'sensitive period' for cognitive development in which environmental stimuli may have a powerful impact on shaping the adult brain.

Consistent with this developmental view, psychiatric medications for common mental disorders in adolescence are conceived as measures to preventive the later development of more serious or more chronic forms of mental illness, working as "normalizing" agents, or even "neuro-enhancers" (Levinson and McKinney, 2013). Of course, these medications could be negative influences for similar reasons: psychiatric medications might cause significant changes in the neural circuitry of the developing brains with lasting effects that are maladaptive (Vitiello, 1998; Raz, 2004; Kolb and Gibb, 2011). This risk may nevertheless may be justified if mental illness itself is viewed as a threat to the developing brain, a notion expressed on an U.S. NIMH website publication: "But keep in mind that serious untreated mental disorders themselves can harm brain development" (NIMH, 2009).

1.3. A clinical ethnographic study: medications as vehicles of socialization and social change

Previous studies of the experiences of youth receiving psychiatric medications for diverse disorders have made it clear that, while psychopharmaceuticals have particular biological effects on the nervous system, they also are socially meaningful symbols (e.g. Carpenter-Song, 2009; Ecks, 2010; Oldani, 2009; Singh, 2004; Floersch et al., 2009; Timimi and Taylor, 2004; McKinney and Greenfield, 2010; Weinberg, 1997; Barnett, 2012b). Psychiatric medications are both material and discursive agents As such, the use of medications is part of local processes of identity construction

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