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PERSPECTIVES

Antidepressants and Advertising: Psychopharmaceuticals in Crisis

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As the efficacy and science of psychopharmaceuticals has become increasingly uncertain, marketing of these drugs to both physicians and consumers continues to be a central part of a multi-billion dollar per year industry in the United States. We explore how such drug marketing portrays idealized scientific relationships between psychopharmaceuticals and depression; how multiple stakeholders, including scientists, regulatory agencies, and patient advocacy groups, negotiate neurobiological explanations of mental illness; and how the placebo effect has become a critical issue in these debates, including the possible role of drug advertising to influence the placebo effect directly. We argue that if and how antidepressants “work” is not a straightforward objective question, but rather a larger social contest involving scientific debate, the political history of the pharmaceutical industry, cultural discourses surrounding the role of drugs in society, and the interpretive flexibility of personal experience.

INTRODUCTION

Psychopharmaceuticals are currently in crisis, and the science of depression has become a contest between scientists, pharmaceutical marketing, physicians, professional medical organizations, regulatory agencies, and patients. Public controversies and medical uncertainties concerning antidepressants have become the norm [1,2,3]. Since

direct-to-consumer (DTC†) advertising was approved by the FDA in 1997 [4], pharmaceutical companies have been accused of exaggerating claims of drug efficacy [5], downplaying the health risks of antidepressant use [6,7,8], and hiding behind smoke-screen public relations slogans of medical “awareness campaigns,” while slyly growing drug markets by over-medicalizing

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†Abbreviations: DTC, direct-to-consumer; SSRI, selective serotonin reuptake inhibitor; FDA, Food and Drug Administration; FCC, Federal Communications Commission; PMDD, premenstrual dysphoric disorder.

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everyday experiences such as sadness, anxiety, and shyness [9,10]. In this controversial arena, the science of antidepressants has become uncertain, and physicians, policymakers, and consumers are left with few brute facts about if and how antidepressants work. Yet physicians want effective medicines, patients and policymakers want clarity of information, and pharmaceutical companies need to appear to be providing both. To provide a better understanding of the current predicament around psychopharmaceuticals, this article will look at three issues: 1) How pharmaceutical advertisements and professional marketing literature portray an idealized and simplistic relationship between medications and psychiatric illness; 2) how other stakeholders (patients, scientists, physicians, regulatory agencies, professional societies) accept or challenge a simple neurobiology of mental illness; and 3) how the placebo effect has become an increasingly important issue in these debates, including the new role of drug advertising to influence the placebo effect directly.

SELLING SCIENCE

Over the past decade, drug companies have launched extensive physician-directed and direct-to-consumer advertising campaigns to disseminate putative neuroscientific theories about mental illness. These ads are designed to convince doctors and patients that psychopharmaceuticals have an obvious, objective, and scientific relationship to the symptoms they are supposed to treat. Shortly after its FDA approval in 1987 [11], the first Prozac (fluoxetine) ads that appeared in medical journals claimed, "There is considerable evidence that serotonergic function may be reduced in the brains of depressed patients," introducing Prozac as "a *specifically*-different antidepressant . . . Its distinctive chemistry means greater specificity." The advertisement never claimed that Prozac would be any more efficacious than any other antidepressant. Rather, it focused on how the drug was chemically distinct from others, emphasizing that it had comparatively more specific action on neu-

rochemical receptors. However, the rhetorical effect of using neuroscience in drug advertising is precisely to imply that pharmacological specificity translates into a more efficacious psychopharmaceutical. Since the original Prozac campaign, the medical image of psychopharmacological specificity has become increasingly fine-grained. A 2005 physician-directed ad for Remeron (mirtazapine) asked, "What's the difference between SSRIs [selective serotonin reuptake inhibitors] and Remeron?" The answer: "SSRIs . . . Somewhat Selective; Remeron . . . Downright Picky. [Remeron offers] novel nonadrenergic and serotonergic pharmacological action." This campaign capitalizes on the original "magic bullet" image of the SSRI, depicting how mirtazapine binds to a single subtype of the serotonin receptor. Just like the earlier Prozac ad, the Remeron ad does not promise greater efficacy, but rather more exact science.

Drug advertising seeks to fill in an explanatory gap between the bench science of psychopharmacology and the palpable or measurable real-world effects of antidepressants. While the pharmaceutical industry uses placebo-controlled clinical trials to establish that a given antidepressant is effective, these trials are neither designed nor intended to show why an antidepressant might work at all. Do patients experience symptom relief because their drug acts on a distinct underlying disease pathology (as pharmaceutical ads imply) or because their drug induces a psychoactive state (e.g., sedation, stimulation, or altered sense perception) [12]? There's a lot at stake in deciding between these explanatory frameworks, since the science of mental illness and psychopharmaceuticals is contentious [13]. Not only do neuroscientists debate the most basic of biological mechanisms that may be involved in depression, but some recent analyses of clinical trial data suggest that, overall, SSRI antidepressants like Prozac and Effexor (venlafaxine) do not work much better than placebos [14,15,16]. Despite such broad uncertainty over both the scientific explanations and efficacy of antidepressants, DTC

advertising is still a nearly 5 billion dollar per year industry (and practically unique to the United States, as no other country except New Zealand allows it) [17]. And antidepressants remain one of the most heavily advertised prescription drug categories [18].

Drug marketing gets recruited to do what science itself cannot: give meaning to scientific results. In an industry magazine editorial, one drug-marketing expert urged fellow marketers to “[t]ell the truth. Seriously, nothing sells like verisimilitude. Precise language and specific visuals, such as those that show the size of the pill, the mechanism of action or the genuine outcome of faithful compliance help create a reasonable semblance of ‘truth’” [19]. This marketer’s easy slippage from “truth” to “verisimilitude” to “reasonable semblance of truth” suggests that the very idea that neuroscience offers the truth of depression or anxiety is split between claims that the science is known and that it is unknown. In the middle is a rhetorical gray area of imputation, suggestion, and belief on the part of scientists, psychiatrists, and consumer-patients alike. In this middle comes the opportunity for companies to market the unknown to the Food and Drug Administration (FDA) and to the public, to repeat the possibility of neuroscience so that it becomes common sense.

The idea that neuroscience offers the “truth” of depression has gained remarkable popular culture cache in recent years, shaping our assumptions about the relationship between mind, body, and brain. One recent study concluded that neuroscience has a “seductive allure,” after showing that college students find theories of psychological phenomena more credible if they include neuroscientific terms, irrespective of whether neuroscience is actually relevant to the theories in question [20]. This finding resonates with how drug marketers reflect on their own advertising strategies: “Pharmaceutical companies need to realize that consumers do not care about your internal research. They do not ask for your drug because it is well researched. They ask because something you said in the 35 seconds made them interested. That is the end goal . . . Unfortunately, in the

scientific world of drug companies, ‘I think’ is not allowed. ‘I know, I proved’ is the language rewarded” [21]. This quote comes from a 2002 article in the industry journal *DTC Perspectives*, published in the midst of the first DTC blitz. It warns that the drug advertisement development process should not mirror the drug development process. Since the advent of DTC, drug marketers have been honing how to give science market-driven meaning. Their professional literature encourages marketers to fantasize how to communicate to a market, before the drug is even developed: “This point is counter-intuitive to many companies. Doesn’t the science lead the way? Well, yes and no. Without the science, there is no product at all. But here’s what happens all too often with companies who overemphasize the science at the expense of the messages: they may develop very elegant answers to irrelevant questions” [22]. The article continues to explain how “market perceptions and needs” need to guide the science, not the other way around.

A BRIEF SOCIOPOLITICAL HISTORY OF ANTIDEPRESSANTS

The science of psychopharmaceuticals is also contested by a variety of social groups, who fight over representations of neuroscience in advertising. On the one hand, patient advocacy groups have either embraced or resisted neuroscientific theories in drug advertising, depending on whether they interpret them as socially vindicating (biological explanations as exculpatory for stigmatized illnesses, such as premenstrual dysphoric disorder or post-traumatic stress disorder) or as socially constraining (biological explanations as oversimplified reductions of cultural or psychological complexity). On the other hand, advocacy groups, some including psychiatrists, have even filed complaints with the FDA and Federal Communications Commission (FCC), arguing that cartoons of SSRIs acting on neurochemical receptors (featured in Zoloft [sertraline] ads) are ultimately fraudulent claims about depression and its underlying biological pathology, because the

science is still contentious. These controversies demonstrate what social scientists have observed concerning how seemingly objective things, like scientific fact, actually require a great deal of social work to be produced, circulated, and maintained.

Critiques over the neuroscience of antidepressants are caught up in larger sociomedical quandaries over what counts as proper medical uses of these drugs and how psychiatric illness should be defined and diagnosed in the first place. Early television commercials for Sarafem (fluoxetine hydrochloride, previously marketed as Prozac, which, at the time, had just gone off-patent) for premenstrual dysphoric disorder (PMDD) depicted frustrated women looking for lost car keys or trying to extract shopping carts at grocery stores. The FDA criticized these ads for not clearly distinguishing between PMDD and premenstrual syndrome (PMS) and for “trivializing the seriousness of PMDD.” The increased regulatory scrutiny over DTC has made pharmaceutical companies more strategic in how they tow the line. As one marketer put it: “Ad agencies have to be more creative than ever to create truly effective communications that are also responsible and do not overpromise” [23].

The current debates over the science, marketing, and uses of antidepressants are born out of a unique history of the role of drug therapy in psychiatric medicine [24]. Historically, American psychiatry has been at the center of broader social tensions between mainstream social institutions, countercultural movements, and civil rights. In the 1960s and 1970s, antipsychiatry groups challenged the cultural authority of organized medicine, especially psychiatry, arguing that it was an institution of social control. During this time, licit psychopharmaceuticals were vilified as “chemical straightjackets,” while illicit drugs that could only be obtained without a physician’s blessing were celebrated as countercultural expressions of pleasure, mind expansion, and self-exploration, as epitomized by people like Ken Kesey and Timothy Leary. Benzodiazepines (such as Valium and Miltown) were the first psychiatric drugs to occupy a social middle ground between the two per-

ceptions; they were prescription medications for the treatment of anxiety, but they were also pleasurable and consumed recreationally. But by the 1980s, prominent American media outlets, including *The New York Times*, were reporting that Valium was overprescribed and overconsumed and that people were becoming addicted to the drug. The sociomedical boundary of licit versus illicit got blurred in both directions.

Ever since the scandals surrounding the (mis)uses of benzodiazepines, the pharmaceutical industry has been deeply invested in the legal distinction between licit and illicit drugs, with its accompanying discourses of health and normality versus pleasure and dependency. One of the first DTC pamphlets for Prozac claimed that “Prozac doesn’t artificially alter your mood and it is not addictive. It can only make you feel more like yourself by treating the imbalance that causes depression.” Illicit versus licit; pleasure versus illness-healing; changing-self versus real-self: These are all distinctions that pharmaceutical marketing and its regulatory environment demand. But they also express social ambivalence over wanting drugs, yet fearing they will overstep medical, ethical, or philosophical boundaries to change a patient’s core personality or self.

The social ambivalence toward psychopharmaceuticals in the age of direct-to-consumer advertising takes the form of constant demand for more promises about the relationship between illness and science versus the equally difficult attempt to regulate those promises to conform to science. When Prozac first became commercially available in the late 1980s, it was not supposed to be inherently pleasurable, nor was it supposed to be addictive, and it was used for a widening range of depression and anxiety symptoms. With its growing use and popularization came new questions — no longer about the use of antidepressants to cope with everyday stress and anxiety, but about the use of antidepressants to shape one’s personality and identity. Peter Kramer famously articulated these questions in his 1993 book, *Listening to Prozac* [25]. In this bestseller, Kramer expressed a new willing-

ness to use Prozac to tinker with his patients' sense of self. Given the apparent safety of the drug, Kramer didn't see this as medical bravado so much as a perfectly reasonable experiment made possible by the newest generation of psychopharmacology. He asked rhetorically about a typical encounter with one of his patients, "Who was I to withhold from her the bounties of science?"

In the last 15 years, such romanticized notions of SSRI antidepressants as safe opportunities to tweak a patient's sense of self with the latest science have received greater public and regulatory scrutiny, from controversies over their questionable efficacy to dramatically reduced uses in children and adolescents to the possible increased risk of suicide from their use. And, as we have seen, the rudimentary science of psychopharmaceuticals has itself been more fundamentally critiqued.

SCIENCE AND SYMPTOMS

While there is no standard definition of "the placebo effect," it is broadly used to designate symptom relief (e.g., pain, fatigue, anxiety, depression) that occurs due to such non-pharmacological components of a medical intervention as patient expectation or encouraging a supportive doctor-patient relationship [26]. The placebo effect has been especially troublesome for pharmaceutical companies trying to demonstrate the efficacy of antidepressants in clinical trials [14,15,27]. And yet, while this has led to the accusation that the drug industry promotes psychopharmaceuticals with questionable efficacy, the situation has become more complicated, as some drug marketers are now defending DTC advertising as a way to *enhance* the placebo effect, leading to better medication compliance: "[A]dvertising strategies [that depict obvious patient relief] not only create consumer demand for the advertised products, but may also create the emotionally conditioned responses and expectancies instrumental to enhancing a placebo effect that occurs when the medication is taken" [28].

Coincidentally or not, with the rise of DTC marketing, some argue that the placebo

effect in depression has increased in recent years [29]. But given such efforts on the part of drug marketers to use advertising to bolster the placebo effect, it is striking that the clinical trial — which is what the FDA demands of pharmaceutical companies to connect their drugs to specific illness and prove that their drugs work as advertised — deliberately avoids accounting for marketing itself. Clinical trial participants are typically not told brand names of experimental drugs, and they are not shown advertisements that provide biological explanations of the drugs and depict symptom relief. On the contrary, drug companies worry about the placebo effect as a kind of psychological problematic that must be reduced, not enhanced, and they have gone so far as to screen out so-called "placebo responders" in sham "placebo washout" pre-trials, in which all participants are placed on a placebo antidepressant, and those who experience it as efficacious are discarded from the real clinical trial [30,31]. Here we see a profound disconnect between the protocol of a randomized double-blind control trial that attempts to isolate a drug's real effect in the clinical trial, in part by removing any advertising messages, versus the attempt to actively generate and leverage the placebo effect through marketing.

CONCLUSIONS

Psychopharmaceutical marketing participates directly in debates over what is scientifically known about mental illness, with important ramifications for doctor-patient interaction, and patient experiences with antidepressants. Right now, antidepressant advertising propagates narrowly biological explanations of depression (especially the seductive notion of simple neurochemical imbalance or deficiency) and leaves out any mention of how often symptom relief may occur because of non-pharmacological interventions. At the same time, it would seem that drug companies are using advertising precisely to inflate such non-pharmacological effects, with the goal of attracting consumers to antidepressants, and then keeping them on them. This disconnect between at-

tempts to eliminate the placebo effect in the clinical trial versus attempts to bolster it through advertising indicates a severe tension in a society that privileges medicalized and scientific narratives about pharmaceuticals on the one hand, but which on the other hand is deeply ambivalent about understanding our relationship to psychotropic drugs. Indeed, if and how antidepressants work is not a straightforward objective question, but rather a larger social contest involving scientific debate, the political history of the pharmaceutical industry, cultural discourses surrounding the role of drugs in society, and the interpretive flexibility of personal experience. Therefore, we need to be open to interpretations of psychopharmaceutical action that acknowledge them as psychologically wily substances whose effects are both socially and pharmacologically determined. Drug advertising most certainly does not take these complexities into account, so it is currently in the hands of consumers and medical and policy decision-makers to do so.

REFERENCES

- Singer N. Forest, Maker of Celexa, to Pay More Than \$313 Million to Settle Marketing Case. *New York Times*. 2010 Sept 16;B2.
- Carey B. Popular Drugs May Benefit Only Severe Depression, New Study Says. *New York Times*. 2010 Jan 6;A12.
- Horgan J. Are psychiatric medications making us sicker? *The Chronicle of Higher Education*. 2011 Sept 18.
- Palumbo FB, Mullins CD. The development of direct-to-consumer prescription drug advertising regulation. *Food and Drug Law Journal*. 2002;57(3):423-43.
- Devlin H. Talking therapies are more effective than Prozac-type drugs, says scientist; Serotonin enhancers 'offer only a placebo effect.' *The Times (London)*. 2010 June 14;p.13.
- Breggin P. *Medication Madness: The Role of Psychiatric Drugs in Cases of Violence, Suicide, and Crime*. New York: St. Martin's Griffin; 2009.
- MacRae F. Drug firm that covered up Seroxat dangers is let off. *Daily Mail (London)*. 2008 Mar 7.
- Lawyers USA Staff. U.S. District Court in Pennsylvania rules wrongful death claim against Paxil maker can proceed. *Lawyers Weekly USA*. 2008 Sept 22.
- Moncrieff J. *The Myth of the Chemical Cure: A Critique of Psychiatric Drug Treatment*. New York: Palgrave Macmillan; 2009.
- Menand L. Head case: Can psychiatry be a science? *The New Yorker*. 2010;86(2):68.
- U.S. Food and Drug Administration. Fluoxetine hydrochloride prescribing information [Internet]. Accessed 2011 18 Oct. Available from: http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/018936s091bl.pdf.
- Moncrieff J, Cohen D. How do psychiatric drugs work? *BMJ*. 2009;338:b1963.
- Lacasse, JR, Leo J. Serotonin and depression: a disconnect between the advertisements and the scientific literature. *PLoS Medicine*. 2005;2(12):e392.
- Fournier JC, DeRubeis RJ, Hollon SD, Dimidjian S, Amsterdam JD, Shelton RC, et al. Antidepressant drug effects and depression severity: a patient-level meta-analysis. *JAMA*. 2010;303(1):47-53.
- Turner EH, Matthews AM, Linardatos E, Tell RA, Rosenthal R. Selective publication of antidepressant trials and its influence on apparent efficacy. *New Engl J Med*. 2008;358(3):252-60.
- Kirsch I. Antidepressants and the placebo response. *Epidemiol Psychiatr Soc*. 2009;18(4):318-22.
- Donohue JM, Cevasco M, Rosenthal MB. A decade of direct-to-consumer advertising of prescription drugs. *New Engl J Med*. 2007;357(7):673-81.
- McDevitt C. The Big Money: Depression and the Recession. *The Washington Post*. 2009 Aug. 30.
- Erskine K. The Power of Positive Branding. *DTC Perspectives*. 2002 March-April;16.
- McCabe DP, Castel AD. Seeing is believing: the effect of brain images on judgments of scientific reasoning. *Cognition*. 2008;107(1):343-52.
- Ehrlich R. 35 Seconds to DTC Success. *DTC Perspectives*. 2002.
- Daly R, Kolassa M. Start Earlier, Sell More, Sell Longer. *Pharmaceutical Executive*. 2004 Mar 1.
- Med Ad News. 2006 May 1.
- Healy D. *The Creation of Psychopharmacology*. Cambridge, MA: Harvard University Press; 2002.
- Kramer P. *Listening to Prozac*. New York: Penguin; 1993.
- Miller FG, Colloca L, Kaptchuk TJ. The placebo effect: illness and interpersonal healing. *Perspectives in Biology and Medicine*. 2009;52(4):518.
- Kirsch I. Antidepressants and the placebo response. *Epidemiol Psychiatr Soc*. 2009;18(4):318-22.
- Almasi EA, Stafford RS, Kravitz RL, Mansfield PR. What Are the Public Health Effects of Direct-to-Consumer Drug Advertising? *PLoS Med*. 2006;3(3):e145.
- Walsh BT, Seidman SN, Sysko N, Gould M. Placebo Response in Studies of Major Depression: Variable, Substantial and Growing. *JAMA*. 2002;287:1840-7.
- Fava M, Evins AE, Dorer DJ, Schoenfeld DA. The problem of the placebo response in clinical trials for psychiatric disorders: culprits, possible remedies, and a novel study design approach. *Psychoth and Psychosom*. 2003;72:115-27.
- Faries DE, Heiligenstein JH, Tollefson GD, Potter WZ. The double-blind variable placebo lead-in period: results from two antidepressant clinical trials. *J Clin Psychopharmacol*. 2001;21:561-68.