


a program, discussions exploring the possibility have started as part of the current curriculum renewal process.⁸ As a business education is of value for physicians, undergraduate studies are an ideal time for students to obtain a basic level of understanding of this material.

“**For the current students thinking of a career in medicine, there are so many opportunities to diversify your university education, and many of them could make you a better medical student and physician.**”

When considering which undergraduate degree is most suitable prior to medical school, students must be aware that most Canadian universities, including UBC, do not have bias towards a particular academic background.² Thirty pre-requisite credits from a variety of science courses are necessary to apply to the program at UBC.² This leaves students with some options to fill the remaining 90 credits to round out four years of university studies, the average amount that students entering medical school have.² For many pre-medical students, this might be an unrecognized opportunity to absorb and practice lifelong skills needed in their daily medical practice

Having personally now completed a focused science degree and two years of medical school, I often reflect on how my undergraduate degree will help me during medical practice in the future. For the

current students thinking of a career in medicine, there are so many opportunities to diversify your university education, and many of them could make you a better medical student and physician. Start your training early by diversifying your undergraduate studies. 

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Cosmetic Psychopharmacology: The Ethics of Antidepressant Therapy

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ABSTRACT

Antidepressant medication, a commonly prescribed antidote for the depressed mood, continues to prove its value in primary and psychiatric health care. Its popularity in society requires its administrators and users to reflect on its function not only as a mood enhancer, but also as a modifier of the human self. Inspired by Peter Kramer's *Listening to Prozac*, this commentary on psychological materialism discusses the ethics of antidepressant therapy in the context of the idea of cosmetic psychopharmacology, the psychotherapeutic alternative, and the antidepressant placebo effect.

KEYWORDS: *antidepressants, ethics, depression, psychiatry, cosmetic psycho-pharmacology, cosmetic psychotherapy*

Listening to Prozac, Peter Kramer's chronicle of clinical encounters involving antidepressant therapy, offers insight into the innovation of pharmacological psychotherapeutics.

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An anecdotal exploration of the biological, psychological, and social implications of antidepressants, Kramer's collection of case studies questions whether these drugs medicate mood or alter an individual's sense of self. This issue engenders a discussion about mood enhancers as cosmetic agents and about their prescription in light of both the



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psychotherapeutic substitute and their placebo effect.

Originating from this bestseller, the term cosmetic psychopharmacology is a reflection of Kramer's clinical experiences with antidepressants as they relate to the variability of the human self. Cosmetic therapy can be described as an intervention in the absence of pathology, be it surgery for aesthetic enhancement, or in Kramer's

“ Are individual idiosyncrasies or even identities not at stake when psycho-enhancers are used to conform to society's standards of acceptance? ”

case, medication for patients without depression.² Such patients who received antidepressants became disinhibited,¹ an observation that calls into question the role of these medications as possible cosmetic enhancers of the psyche.

Kramer's support for fluoxetine (Prozac) stems from its value in improving social functioning by instilling self-assurance. It could be that this character change through antidepressant therapy represents the recovery of a person's natural personality. It is for this reason that he suggests “listening to Prozac”,¹ for this medication exposes the innate temperament from a shell that becomes damaged by stress. While antidepressants might offer inner purification, this effect begs further questioning regarding the implications of self-transformation.

Because successful interactions in today's social environments rely on an attitude of assertiveness, patients may turn to their doctors for help in acquiring this desired trait. Achieving an emotional boost through medication might, however, alter self-perception in individuals either “losing themselves” or “becoming themselves.”¹ Are individual idiosyncrasies or even identities³ at stake when psycho-enhancers are used to conform to society's standards of acceptance? While everyone is judged according to the social ideals at large, it seems wrong that these ideals should select emotions requiring chemical remedy. If sadness and anxiety are problems, then is psychological homogenization the solution?⁴

Despite their established role in mental illness, the use of antidepressants might reflect more than Kramer's attempt to undo the distortion of self-perception. Because sadness and anxiety are feelings fundamental to the human experience,⁵ antidepressant use might represent a method of numbing pain.³ If recreational drugs can also serve to numb pain,⁶ then where should antidepressants fall on society's moral compass? This question speaks to the standards of medication use in a society where the line between cosmetic and pathological repair is often ill-defined.⁷

Perhaps the concept of chemical dehumanization⁵ is the consequence of an overestimated value of antidepressants in the care of a depressed patient. Rather than recognizing difficult normal life experiences, antidepressants argue a biological etiology for depression. While medications require diagnosis, psychotherapy does not. It then becomes a matter of refuting the notion that pharmacotherapy treats disorders while psychotherapy only treats the self.⁸

Psychotherapy has only recently become competitive with

pharmacotherapy for the management of depression. Although psychotherapy requires more time, causes emotional pain, and can create conflicts, it represents the more authentic means of recovery because our culture values self-change through self-work.^{8,9} The introspective discovery of the unconditioned self through psychotherapy allows for a more easily upheld inner refinement than its pharmacologic rival. Instead of a chemical shortcut to mood enhancement,^{3,10} psychotherapy provides an understanding of the self by exploring feelings, behaviors, and thoughts. It is this journey unique to psychotherapy that gives meaning to the psychological outcome. Psychotherapy also empowers its patients through stressor control, while pharmacotherapy offers little motivation for lifestyle change. Antidepressants might, on the other hand, provide patients the confidence to overcome adverse situations.

Because psychotherapy and pharmacotherapy are not exclusive strategies, physicians must be aware of the treatment effect of antidepressants. It has been suggested that while these medications are beneficial, especially for severe depression,¹¹ they have an important placebo effect.¹²⁻¹⁴ The placebo effect is further underestimated by the presence of publication bias,¹⁵ and some authors have even suggested that antidepressants have no effect on mild depression.^{16,17} Despite being in a control group, patients receiving placebo in these trials found symptom relief due to nonspecific care from the research staff.¹⁸ Does the truth about their placebo effect sabotage the success of antidepressants? Uncovering this living myth could be unethical if it causes a loss of faith in pharmacotherapy.¹⁹ In spite of that, is it dishonest to advocate a dummy pill? While factors such as price and branding affect the success of all drugs in the marketplace,^{20,21} it seems particularly wrong for an industry to profit from an official placebo. If the antidepressant is indeed a placebo, then perhaps prescribing it should not be limited to health care practitioners. This placebo effect of antidepressants is also disconcerting given their associated side effects, which is important whether they are being used for medical or cosmetic reasons.

Antidepressant pharmacotherapy exemplifies the ethical considerations of drug prescription. Whether they could be considered as cosmetic enhancers for the psyche or as medications for psychological illness, the effects of antidepressants on society and on the human self remain open for discussion. With new antidepressants on the way, it will behoove both physicians and patients to contemplate matters such as the value of the psychotherapeutic alternative and their placebo effect. Not only will this reflection clarify the role of biological treatment in the “biological-psychological-social” approach to mental illness, it will also help answer questions like Peter Kramer's query, “How is it that taking a capsule for depression can so alter a person's sense of self?”¹

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The benefits of open source electronic medical record (EMR) systems: OSCAR McMaster as a case study

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KEYWORDS: *EMR, electronic medical record, open-source, software, OSCAR, technology*

As medicine continues to be revolutionized by computer technology, open source software (OSS) is playing an important role in making available innovative, cost-effective solutions for the medical community. Source code is the set of instructions that make up a computer program. "Open source" refers broadly to any program built from source code that is openly published and licensed. Such software can be adapted or used in its original form and is licensed for use for any purpose, including for-profit enterprise. It is typically available free of charge and maintained by a community of contributors who volunteer their time to create and improve it. Everyone benefits from open source as it continues to underpin the majority of the internet's web servers.¹ Much of the world's commercial software

products are built using open source languages, including Facebook² and many of Google's products, such as the Android operating system.³ In addition to its use in private industry, open source also provides a platform for programmers to produce free software, thereby enabling the creation of alternatives to commercial products for various applications. In medicine, one exciting example of this phenomenon is the electronic medical record (EMR) system.

In general terms, EMR systems are computer programs that physicians use in the patient care setting to record information about patients and encounters, typically using the SOAP note format (Subjective, Objective, Assessment, and Plan). EMR systems have many features, ranging from appointment scheduling to chronic disease management, but they act primarily as a computerized replacement for paper records.⁴ Because EMR systems are associated with increased efficiency and improved

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