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ORIGINAL PAPER

Sexual Side Effects of Antidepressant Medications: An Informed Consent Accountability Gap

Audrey S. Bahrick · Mark M. Harris

Abstract Sexual side effects of antidepressant medications are far more common than initially reported, and their scope, quality, and duration remain poorly captured in the literature. Antidepressant treatment emergent sexual dysfunctions may decrease clients' quality of life, complicate psychotherapy, and damage the treatment alliance. Potential damage to the treatment alliance is greatest when clients have not been adequately informed of risks related to sexual side effects. It had previously been assumed that sexual side effects always resolve shortly after medications are discontinued. Emerging evidence, however, suggests that in some individuals, sexual dysfunction side effects may persist indefinitely. The authors argue that all psychologists should be well-informed about sexual side effects risks of antidepressant medications, should routinely conduct a pre-medication baseline assessment of sexual functioning, and take an active role in the informed consent process.

Keywords Antidepressant sexual side effects · SSRIs · Sexual dysfunction · Iatrogenic · Informed consent

Professional psychologists have long been involved, either directly or indirectly, in patients' decision-making process regarding psychotropic medications. A recent survey indicated that approximately 43% of the clients of psychologists take psychotropic medications adjunctively to psychotherapy, and virtually all practicing psychologists make recommendations for medication evaluations, engage in consultations with prescribing professionals regarding psychotropic medications, and discuss medication-related issues with their patients in individual psychotherapy (VandenBos and Williams 2000). Barnett and Neel (2000) take the stance that knowledge about psychotropic medication effects and side effects has become a necessary professional competency and ethical obligation held by all psychologists who practice or supervise, and aids in our ability to best meet patients' needs, provide appropriate informed consent in the presentation of treatment alternatives, and to do no harm.

Antidepressants are currently the most commonly prescribed class of medications of all (Burt et al. 2007), with recent estimates of one in eight adult American having taken or taking an SSRI over the last ten years (Raz 2005), and 11 million prescriptions written for children and adolescents during 2002 (Goode 2004). The present article is concerned with sexual side effects of antidepressant medications including the Selective Serotonin Reuptake Inhibitors fluoxetine (Prozac), paroxetine (Paxil), sertraline (Zoloft), citalopram (Celexa), escitalopram (Lexapro), and fluvoxamine (Luvox), and the Serotonin Norepinephrine Reuptake Inhibitor (SNRI)[1] venlafaxine (Effexor). Sexual dysfunctions associated with antidepressants are acknowledged as a significant treatment risk (Rivas-Vasquez et al. 2000). Yet the existing literature, which is heavily focused on prevalence rates and treatment compliance, poorly captures the scope, quality, and potential impact of the sexual side effects (Bahrick 2006; Bahrick 2008; Michels

A. S. Bahrick (✉) · M. M. Harris
University Counseling Service, The University of Iowa, 3223 Westlawn S., Iowa City, IA 52242-1100, USA
e-mail: audrey-bahrick@uiowa.edu

[1] SNRIs include venlafaxine (Effexor), desvenlafaxine (Pristiq) and duloxetine (Cymbalta). Sexual side effects of desvenlafaxine and duloxetine are less well studied and are not a specific focus of the present article. However as desvenlafaxine is the major metabolite of venlafaxine, the medications are likely to prove to have similar sexual side effect profiles.

1999). Little attention has been focused on the ways that the addition of a new sexual dysfunction to a client's presenting problem may complicate and confuse the clinical picture, exacerbate the client's distress, destabilize intimate relationships, weaken the treatment alliance, and create mistrust in mental health professionals, especially if the client has not been adequately informed of sexual side effect risks. The current article explores these themes and seeks to raise clinicians' awareness of client welfare issues related to antidepressant sexual side effects. Challenges are raised about the psychologists' role in the informed consent process, and recommendations are made for training.

Antidepressant Sexual Side Effects

No clinically meaningful differences have been established in the tendency of the various SSRIs and venlafaxine to cause sexual dysfunction (Montgomery et al. 2002), and no reliable remedies established (Balon 2006). Because no clinically significant differences in efficacy are recognized among the medications (American Psychiatric Association 2000), the choice of which medication to prescribe is often based on the medication's known side effect profile. The current drug insert literature for all of the SSRIs includes acknowledgement that the 2–16% listed rates of sexual side effects may be an underestimate. Indeed, large prospective studies in which participants report no sexual dysfunctions at baseline, have shown that between 30 and 73% of adult patients experience SSRI and venlafaxine -emergent sexual dysfunctions (Montejo-Gonzalez et al. 1997; Montejo et al. 2001).

SSRIs and/or SNRIs are approved and considered first line treatments for depressive disorders, generalized anxiety disorder, panic disorder, social phobia, obsessive-compulsive disorder, bulimia, premenstrual dysphoric disorder, post traumatic stress disorder, and diabetic peripheral neuropathic pain: issues with which a large number of our clients present. Increasingly, the medications are also prescribed off-label (Chen et al. 2006) to treat conditions such as perimenopausal hot flashes, chronic fatigue syndrome, chronic pain syndromes, premature ejaculation (i.e. see Waldinger 2007) and paraphilias (i.e. see Kafka 1996). In the later two conditions, the sexual side effects are intended as the primary desirable therapeutic effect, with SSRIs reported to be the most common first line treatment for premature ejaculation among urologists (Shindel et al. 2007). Given the frequency with which the medications are prescribed, and the pervasiveness with which they may affect all phases of the sexual response cycle (Clayton et al. 2002; Clayton et al. 2006; Montejo-Gonzalez et al. 1997; Montejo et al. 2001), psychologists should be well-informed about the potential for the medications to impact sexual functioning.

Antidepressant-emergent sexual difficulties noted by men include decreased nocturnal and morning erections, difficulty achieving or maintaining an erection sufficient for penetration, ejaculatory delay or anorgasmia, difficulty with arousal, and decreased libido. Women report delayed orgasm or anorgasmia, difficulty with arousal, lubrication problems, and decreased libido. Ejaculatory delay in men, and anorgasmia in woman are the problems believed to be unequivocally medication-induced (Balon 2006). Loss of genital tactile sensitivity and diminished intensity of orgasm, or pleasureless orgasm, are also not uncommon in both men and women (Zajecka et al. 1997), but are often missed by assessment instruments (Bahrick 2006, 2008). Serotonergic medications are known to decrease genital sensitivity, probably by way of interference with nitric oxide function (Clayton and Montejo 2006), which is integral to penile and clitoral tumescence. Genital anesthesia and pleasureless orgasm are not known in the general population and are unassociated with the conditions for which the medications are prescribed, thus these symptoms provide a clear link to the treatment rather than the condition being treated (Bahrick 2008).

The lack information about the impact of antidepressant sexual side effects on the psychosexual development of adolescents and children is especially troubling. Yet little concern has been raised, and no studies have been conducted with the aim of determining the impact and long term outcome of SSRIs on adolescents' and children's psychosexual development. While adolescents may be presumed to experience sexual side effects at rates similar to adults (Sharko 2004), and while the medications' sexual side effects are intended as the primary therapeutic effect in off-label treatment of paraphilias in adolescents (e.g. Aguirre 1999; Galli et al. 1998), no age-appropriate instruments have been developed to assess sexual side effects in adolescents, and the area remains ignored in current research (Sharko 2004).

Post Medication Persistence of Sexual Side Effects

Antidepressant sexual side effects persist in most individuals who experience them for at least as long as they take the medications (Montejo et al. 2001; Landen et al. 2005). The conventional wisdom holds that the side effects resolve shortly after discontinuing the medications. The research literature, however, has failed to include systematic follow-up in support of this assumption. While it is likely that sexual side effects resolve for most individuals, of particular concern to this inquiry are indications that for some individuals, antidepressant-emergent sexual dysfunctions do not always resolve upon discontinuation of the medications, and may persist indefinitely (see Bahrick

2008 for a review). Signs from recent case reports (Bolton et al. 2006; Csoka et al. 2008; Csoka and Shipko 2006; Kauffman and Murdock 2007); Internet based consumer reports (http://health.groups.yahoo.com/group/SSRIsex/), and findings of post SSRI persistence of ejaculation delay in men treated for premature ejaculation (Arafa and Shamloul 2006; Safarinejad 2007; Safarinejad and Hosseini 2006), converge to point to an emergent problem.

In all the case reports noted above, the presenting problems have long resolved, however the antidepressant-emergent sexual dysfunctions have persisted for years beyond medication discontinuation, and no alternative etiologies for the persistent symptoms could be found. The SSRIsex Internet group membership of over 1600 individuals has generated more than 12,000 postings of consumer experiences of persistent post- antidepressant sexual side effects (accessed June 14, 2008). These postings provide an alternative database of qualitative information not capturable within current research paradigms, and not encompassed by existing post market pharmacovigalence mechanisms. The present authors urge attentiveness to such signals of emerging problems.

Empirical evidence of the persistence of SSRI-emergent sexual side effects well beyond medication discontinuation is found in the literature related to premature ejaculation (PE). Three, random assignment, placebo controlled studies of healthy men treated for PE (Arafa and Shamloul 2006; Safarinejad 2007; Safarinejad and Hosseini 2006;) with sertraline ($n = 147$), escitalopram ($n = 276$), and citalopram ($n = 58$) respectively, all found robust evidence of continuation of the benefit of medication-emergent delayed ejaculation over a six month post-treatment assessment period. Yet none of the researchers raised concerns about medication-induced delayed ejaculation in men being treated for reasons other than PE and for whom delayed ejaculation may not be a desirable treatment or post-treatment effect. Neither were questions raised about possible post-treatment persistence of other sexual side effects that both men and women may find far less desirable. When SSRIs are used to treat premature ejaculation, it is an irony that in this instance it is advantageous to industry to acknowledge the robustness of treatment induced sexual side effects, and also to emphasize a lasting post-treatment effect.

Given the lack of qualitative information in the literature, the absence of systematic follow-up, the limited scope and aims of current research paradigms, the lack of inclusiveness of consumer voices in the post market pharmacovigalence system, and the many ways in which industry financial and marketing motives result in misleading information regarding risks vs. benefits (i.e. Antonuccio et al. 2003; Pachter et al. 2007), it is not surprising that there remain significant gaps in knowledge about SSRI/SNRI sexual side effects. These gaps may be of public health significance, particularly when they involve iatrogenic sexual dysfunctions that persist beyond treatment discontinuation, and when the side effects impact the psychosexual development of adolescents and children. If post-medication aberrations of normal sexual response persist even in a small number of people, such findings should come to light (Kauffman 2008). The literature has failed to consider the ways in which medication-related sexual side effects may complicate the efforts of individuals who take them to improve their lives as well as their moods. Further, the literature appears to entirely miss the possibility that, in some cases, the treatment-emergent sexual side effects may be worse than the condition for which treatment has been sought, and even become a cause of long term anguish. Given limits of knowledge, psychologists should be especially attentive to client-reported medication experiences as a credible and worthy source of information about the impact of antidepressant sexual side effects. Psychologists, by virtue of our frequent regular contact with patients, are in an optimal position to assess and monitor emergent medication effects and to help clients formulate a response to concerns in this area of functioning.

Problems with Informed Consent

The doctrine of informed consent requires that health professionals provide sufficient information so that a reasonable person may decide whether or not to accept the treatment in question. While (non-prescribing) psychologists function primarily in an advisory and referral role with regards to medication decisions, they hold responsibility for protecting client welfare. Clients must trust psychologists to protect their best interests and to ensure that all risks for harm are minimized (Barnett 2007). The amount and type of information deemed adequate to constitute full disclosure is a matter of some debate, however the process of providing ongoing and current information relevant to the client's situation is the critical aspect of informed consent to which psychologists must aspire (Johnson-Greene 2007). Moreover, research involving psychiatric residents (Rutherford et al. 2007) and psychiatric nurses (Higgins et al. 2006), indicates that informed consent is often inadequate, particularly with regards to sexual side effects (Higgins et al. 2006), and that patients are specifically dissatisfied with the information they receive about the impact of medications on sexual functioning (Happell et al. 2004).

Higgins et al. (2006) studied how psychiatric nurses approached providing information about possible sexual side effects in the informed consent process with patients.

These registered nurses acknowledged that their responsibilities included providing education about and monitoring of medication effects, and that this commitment was in keeping with the rights of consumers to make informed treatment decisions. The researchers found that despite positive aspirations regarding informed consent, in practice, information about drug-related sexual side effects was relegated to the bottom of a hierarchy of information, rarely proactively verbally disclosed at drug initiation, and rarely directly inquired about once patients were taking the medications. This hierarchy was based on nurses' perception that disclosure about possible sexual side effects could lead to a high risk of medication non-compliance, their personal unease talking about sexual side effects, as well as their (mis)perception of the prevalence of sexual side effects.

In cases where patients spontaneously initiated complaints about the medication's effect on sexual functioning, Higgins et al. (2006) describe the nurses as acting out their role in relation to medication in paternalistic and compliance terms: that is by providing their professional perspective regarding the importance of remaining on the medication, a disinclination to hear about the quality-of-life impact of the sexual problems, and a desire to achieve the predetermined outcome of medication compliance. Nurses' assumptions about the impact of sexual side effects differed depending on gender of the patient. Male patients tended to initiate complaints about medication-induced sexual dysfunction more often than women and were viewed as more concerned about performance and the erect penis as a center of male sexual expressiveness. Women were viewed as being less concerned with sexual performance and therefore assumed to be more willing to silently tolerate the sexual dysfunctions.

Are problems with informed consent and the compliance-based interactions described by Higgins et al. (2006) reflective more generally of prescribing practices beyond this community? The authors indicate that that the nurses veiling of sexual side effects information mirrors their training, role-modeling, and socialization into the culture of psychiatry and psychiatric nursing practice, where if and when sexual side effects were mentioned, they were "quite far down the list" (p. 441).

A recent study of the informed consent practices of psychiatric residents would seem as well to support and extend Higgins' et al.'s (2006) conclusions. Rutherford et al. (2007) found that psychiatric residents failed to appreciate that it is the physicians' responsibility to initiate an informed consent discussion. Instead of initiating informed consent discussions with hypothetical patients, residents reported that they would provide appropriate information when asked by the patient. No significant differences were found in the adequacy of information provided among residents based on year of residency. While Rutherford et al. note that the degree to which adequate informed consent occurs in the community is unclear, they question how psychiatrists would learn to obtain informed consent, if not during residency.

Adults are presumed capable of making informed consent decisions if given reliable and understandable information upon which to base a decision. Adults may have a clear appreciation of sexual changes and losses associated with medication use, and therefore are capable of weighing potential risks against possible therapeutic benefits in their treatment decisions. Indications are that only a small minority of antidepressant-treated patients (3% of 5356 patients surveyed) consider sexual functioning not at all important, and that the vast majority of patients are willing to talk about sexual functioning (Clayton et al. 2002). As evidenced by the large discrepancy, up to 60% (Balon 2006), between sexual side effect rates obtained by spontaneous patient report vs. via direct inquiry, it cannot be assumed that patients experiencing them, and who are willing to discuss them, will initiate such discussion.

The question of SSRI informed consent for adolescents and children is considerably more problematic. From what basis may adolescents and children, or their parents in their behalf, evaluate the current or potential future meaning and impact of medication induced changes in sexual functioning? As previously noted, sexual side effects can be expected to occur in adolescents at rates similar to those in adults (Sharko 2004). With little or no stable baseline from which to assess sexual changes, how would children, adolescents, their parents, or prescribing professionals become aware of the medications having an impact on sexual functioning or development? Case reports of persistent post-medication sexual dysfunction, evidence of SSRI-linked growth suppression in children (Weintraub et al. 2002), and animal studies in which early exposure to SSRIs persistently negatively impacts adolescent and adult sexual behavior (deJong et al. 2006; Maciag et al. 2006; Gouvêa et al. 2008) raise concern that antidepressants could alter pubertal development in adolescents. As noted by Antonuccio (2007) children are essentially "involuntary patients" who are compelled by parents to take their medicine. Thus he argues that treatment decisions should be guided by a stringent "first do no harm" approach. Given the indications of potential harm along with the inestimable value of future sexual health, it is the present authors' position that until reliable long-term safety data become available, neither children nor adolescents are capable of providing informed consent for treatment with SSRIs, nor can their parents provide it competently in their behalf.

Based on the above discussion, and in the context of continued underestimation of sexual side effects by

psychiatrists (Osvath et al. 2003); primary care physicians (Clayton et al. 2002; Hu et al. 2004), and psychiatric nurses (Higgins et al. 2006), there are reasonable grounds for asking questions about the degree to which patients considering taking antidepressant medications are being adequately informed about the known risk of sexual side effects. Beyond the more easily remediable underestimation by prescribing professionals of sexual dysfunction rates are process issues more challenging to address. These may include: discomfort with initiating discussion about sexual functioning; presumption of patient discomfort; lack of professional training in sexuality issues; assumption that sexual functioning is unimportant due to client level of distress or other client variables such as age, gender or partner status; lack of awareness that initiating such a discussion is the prescribing professional's responsibility; time pressures; and, in a misconstrual of the doctrine of informed consent, apparently also the concern that the information may lead to medication non-compliance. An accountability gap arises from the inadequacies inherent in the literature, the unevenness with which prescribers proactively inform patients about the possibility of sexual side effects, along with the failure of manufacturers to update SSRI/SNRI product information. How do psychologists best proceed when there is reason to believe that clients are inadequately informed of sexual dysfunction risks of antidepressant treatment?

Case Scenarios and Implications for Psychotherapy

When clients are not proactively informed about sexual side effects, treatment emergent sexual dysfunctions may be poorly understood as medication-related by both patients and prescribers (Osvath et al. 2003). This is especially true if no baseline assessment of sexual functioning was conducted. Consider the following three hypothetical but in our own clinical experience, not uncommon case scenarios. In each, psychotherapy clients' medication-emergent sexual side effects create new difficulties which may be challenging to interpret in light of presenting issues, and that may even work in direct opposition to the goals the client came in to address in psychotherapy. In each scenario, the psychologists' role may vary from having urged the client to consider pharmacotherapy, to having suggested pharmacotherapy as one of several viable options, to the client having initiated pharmacotherapy outside of the psychotherapy relationship.

1 A depressed, albeit sexually active and sexually functional young woman begins SSRI treatment. She feels better on the medication, but develops sexual side effects that lead to sexual disinterest and withdrawal, destabilizing an important intimate partnership and major source of support, and leading to new and unexpected relational conflict, stress, or even loss. Her mood, previously buoyed by the medication, begins to gradually return to near baseline levels of distress. Session time that had been devoted to focusing on her depressive symptoms now gradually begins to shift toward a focus on emergent relationship concerns. Some of the previously made gains in therapy are lost, and confusion is added regarding the meaning of the absence of physical longing or sexual interest in her partner.
2 A socially anxious young man's anxiety has prohibited him from meeting potential romantic partners. His frustration and loneliness finally motivate him to endure the social discomfort of psychotherapy itself. Treated with an SSRI, his anxiety decreases but he develops medication-induced anorgasmia and erectile dysfunction. These symptoms create new anxieties and vulnerability about adequacy to engage in a romantic partnership, perhaps contributing as well to perceived sexual failure experiences if attempted. In turn, such experiences raise new, potentially even more challenging anxieties which further entrench his avoidant behavior as his concerns about adequacy grow even more profound.
3 A young man seeks counseling with depressive symptoms related to a lack of meaningful intimacy. While clear about same sex attractions, internalized homophobia and concern about family disapproval have been barriers to acting on his attractions. An SSRI has a positive impact on depressive symptoms, and psychotherapy helps him to affirm a more positive gay identity. He experiences increased energy to pursue a longstanding same sex attraction. Once with a potential partner, however, he finds the physical arousal is difficult to maintain, leading him to confusion and return to earlier sexual identity questions he believed he had resolved.

In all the scenarios noted, it is preferable for psychologists to be in a position of having proactively discussed the possibility of sexual dysfunction directly with clients as a psychotherapy treatment issue, rather than to assume that accurate or complete information was provided by the prescribing professional. Providing information or confirming that the client is aware of the possibility of sexual side effects signals openness to addressing the concern collaboratively with the client if it arises, is likely to preserve the psychotherapy treatment alliance, and increases the likelihood that symptoms may be accurately interpreted. It should be emphasized that ongoing and transparent collaboration with the prescribing professional regarding medication concerns is equally essential to

promote client welfare, and that clients should of course be encouraged to raise concerns regarding medication effects directly with prescribers. When appropriate, and with client permission, psychologists' roles may also include advocating for our clients about possible changes to a medication regimen based on concerns about observed client responses.

Sorting out the meaning of new, treatment-emergent sexual dysfunctions with clients can be challenging and delicate. This task is facilitated by ensuring an adequate and ongoing informed consent process, and by routinely attending to baseline sexual functioning and history at the outset of treatment. Our role is to raise the possibilities, and in collaboration with the client hypothesize about the relative impact of contributing factors. In the first case, libido was not affected at baseline during the depressive episode, thus, the medication may be suspected as having impacted libido. The relational conflict itself, however, may contribute to lowered libido and sexual withdrawal, leaving a puzzling circularity. In the second and third cases, medication rather than a psychological basis for the sexual changes may be strongly suspected if the individual is also newly unable to masturbate to satisfaction, as few individuals will experience performance anxiety while masturbating. Initiating exploration regarding the emergence of "markers" of medication exposure (Bahrick 2008), including decreased genital sensitivity or genital anesthesia, and decreased orgasmic intensity or pleasureless orgasm may provide further support for clarifying the contribution of medication vs. psychological factors.

Well-informed psychologists are aware of the pervasiveness of sexual side effects of antidepressant medications, and given this awareness, cannot then ethically justify withholding the information from clients. Instead, they must grapple with tone and content of delivery, and with consideration for an existing treatment alliance with a prescribing professional when one is already in place. Such conversations with clients require that psychologists be knowledgable about medication side effects as well as competent in exploring and addressing sexuality issues. Information about sexual side effects to share with adult clients contemplating taking antidepressant medications might be provided as follows: "You may already be aware that the medication you are considering taking is associated with a considerably higher level of sexual side effects than was known at the time of marketing and which are listed in the product leaflet. Prior to your starting the medication, I would like for us to explore your current sexual functioning and history of any sexual problems and concerns, so that if you do begin to notice sexual changes once on the medication, you and I, in collaboration with your prescriber, can more confidently attribute them to medication vs. psychological factors. I would like for you to be aware in your decision-making that the long term impact of this class of medications on sexual functioning is unknown and has not been studied systematically. While most individuals who experience sexual side effects return to baseline sexual functioning shortly after discontinuing the medications, a small number of reports have surfaced suggesting this is not the case for all."

It is of course possible that some clients may be suggestible regarding sexual side effects as a result of such information, that anxiety may be raised, and that clients may elect non-drug treatments. These possibilities, while real and significant, must be weighed against the potential for new-onset sexual dysfunctions to confound therapy, create confusion and distress in intimate relationships, damage the working alliance, and diminish client autonomy to choose treatment options based on accurate information, the hallmark of a truly *informed* consent. As argued by Wise (2007), if our agenda is to seek client agreement with our treatment plan rather than to genuinely engage in collaborative decision-making "we are arguably engaging in risk management rather than truly meeting the aspirational goal of informed consent" (p. 183).

An adequate informed consent for antidepressants and other psychotropic medications goes far beyond the provision of information about sexual side effects, and is beyond the scope of the present article. Informing patients about risks and benefits of medications has become a major challenge for health care providers (Berry 2006). The present authors have chosen to highlight sexual side effects because of their pervasiveness, underestimation in the product literature and by prescribing professionals, potential to confound therapy and decrease quality of life, and emerging indications that the side effects do not always resolve for all patients. Sorting out the responsibility of psychologists to respond to broader inadequacies of informed consent for psychotherapy patients who are taking or considering taking psychotropic medications is a highly challenging task and will require a dialog among psychologists. The reader is referred to Cohen and Jacobs' (2000) model consent form for psychotropic drug treatment. This consent form highlights the limits of knowledge regarding the use of psychotropic medications, and presents easily comprehensible information regarding somatic and psychological effects of drug use and drug withdrawal. The content may serve as a stimulus to help psychologists clarify a better-informed stance regarding participation in medication recommendations and referrals.

Recommendations for Training

Psychologists' training must keep pace with the changing demands of practice. Given the numbers of clients taking

psychotropic medications and our frequent influence in patient's decision-making regarding medication usage, all psychologists need to be well-informed about medication main effects and common side effects. Sexual side effects are only one of many potential adverse drug effects that clients under our care may experience; awareness about the impacts, side effects, and interactions among a range of common medications and substances is also necessary. The American Psychological Association (APA) has endorsed basic knowledge in psychopharmacology as imperative for all providers in psychology (American Psychological Association board of Educational Affairs 1995, p. ii). Barnett and Neel (2000) argue that that Level 1 training in psychopharmacology is the minimum requirement necessary to meet the standard of care and avoid doing harm. Many graduate programs have already incorporated such training, and a basic curriculum for professional psychology internships was proposed by Dunivin and Southwell (2000). Practicing psychologists should seek out training opportunities available as continuing education courses or graduate level university courses.

Basic, Level I training in psychopharmacology is not enough. Most psychologists will not become experts in psychopharmacology. All psychologists, however, can become educated, critical consumers of information about psychotropic medications. Ethical practice entails awareness of limits to competence. This includes awareness of limits to one's own professional repertoire as well awareness of the limits of the science upon which professional practices are based. As Cohen (2004) notes, all mental health professions must examine how they can minimize iatrogenic harm. The responsibility to do no harm requires careful consideration of which ideas and practices merit allegiance. Training programs must expose students to viewpoints other than the conventional: an alternative curriculum is needed which includes historical perspectives regarding psychiatric medications, critical perspectives regarding biological theories of mental illness and medication treatments, awareness of marketing influences in the science base and on prescribing practices, and the limits of pharmacovigilance systems. In short, this is an awareness of the nature of and reasons for the gap between widespread psychotropic medication usage and the tested evidence to justify it. Such a curriculum, intended to educate non-medical health professionals such as psychologists and social workers about evolving best practices with regards to serving clients taking or contemplating taking psychotropic medications, is available at Critical Think Rx: http://www.criticalthinkrx.org/. The program, developed by a team of health care professionals without financial conflicts of interest and funded by a settlement of consumer fraud claims against a pharmaceutical company, will be available as a 12 credit, on-line, continuing education course in the near future.

Conclusion

Sexual side effects occurring in response to taking antidepressant medications are more common than previously reported and may not always resolve once the medication has been discontinued. Informed consent regarding the use of these medications is most effectively accomplished when all professionals responsible for a patient's care are educated about these side effects and work collaboratively to educate patients, thus increasing their ability to make an informed choice. The frequency with which the medications are prescribed, the evidence that sexual side effects have been underestimated, and the deleterious effects that such medication side effects may have on treatment and patient functioning make it imperative that psychologists educate themselves in order to best help those whom they serve. This entails a necessary expansion of psychologists' knowledge base and scope of practice. Current efforts at informed consent are most likely inadequate, particularly for the treatment of children and adolescents, and leave a void that psychologists, given our often more frequent contact with patients, are particularly suited to fill.

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