

Compulsive sexual behavior: A review of the literature

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Background and aims: Compulsive sexual behavior (CSB) is a common disorder featuring repetitive, intrusive and distressing sexual thoughts, urges and behaviors that negatively affect many aspects of an individual's life. This article reviews the clinical characteristics of CSB, cognitive aspects of the behaviors, and treatment options. *Methods:* We reviewed the literature regarding the clinical aspects of CSB and treatment approaches. *Results:* The literature review of the clinical aspects of CSB demonstrates that there is likely a substantial heterogeneity within the disorder. In addition, the treatment literature lacks sufficient evidence-based approaches to develop a clear treatment algorithm. *Conclusions:* Although discussed in the psychological literature for years, CSB continues to defy easy categorization within mental health. Further research needs to be completed to understand where CSB falls within the psychiatric nosology.

Keywords: compulsivity, sex, impulsivity, addiction, treatment

INTRODUCTION

Compulsive sexual behavior (CSB), also known as sex addiction, hypersexuality, excessive sexuality, or problematic sexual behavior, is characterized by repetitive and intense preoccupations with sexual fantasies, urges, and behaviors that are distressing to the individual and/or result in psychosocial impairment (Fong, Reid & Parhami, 2012). Compulsive sexual behavior can generally be divided into two categories: Paraphilic and nonparaphilic (Coleman, Raymond & McBean, 2003). Paraphilias are typically considered to be behaviors that have been deemed socially unacceptable that involve non-human objects, suffering of one's self or a partner, children or a non-consenting person (for example, fetishism, exhibitionism, and pedophilia) (American Psychiatric Association, 2013). Nonparaphilic CSB, which is characterized by more typical sexual desires, include compulsive sexual acts with multiple partners, constant fixation on a partner that may be considered unobtainable, compulsive masturbation, compulsive use of pornography, and compulsive sex and sexual acts within a consensual relationship (Coleman, 1992).

Nonparaphilic CSB is currently not recognized in the DSM-5 but during the DSM revision process, diagnostic criteria were proposed for CSB (referred to as Hypersexuality Disorder) (Reid et al., 2012). In addition, during the DSM-5 process there was considerable debate concerning the relationship of CSB to substance addictions (Grant, Potenza, Weinstein & Gorelick, 2010; Goodman, 1992; Fong et al., 2012; Kor, Fogel, Reid & Potenza, 2013), and in fact, the proposed diagnostic criteria for DSM-5 Hypersexuality Disorder (for the purposes of this manuscript, CSB will be used interchangeably with Hypersexuality Disorder or just hypersexuality) seemed to reflect criteria used for substance use disorders (Appendix) (Kafka, 2010). With the exclusion of CSB from the DSM-5, the issue of how best to conceptualize CSB continues to remain unresolved (Barth & Kinder, 1987; Carnes, 1992; Grant et al., 2014; Levine & Troiden, 1988).

This article will review the clinical aspects of CSB and treatment approaches to the disorder. Conceptualization of CSB will be examined.

BACKGROUND

Although it is difficult to compare possible historical notions of CSB to what we currently think of as the behavior (due to the ever changing characterizations and terminologies for problematic sex behavior), some form of CSB appears to date back centuries. In his book *Nymphomania or a Dissertation Concerning the Furor Uterinus*, D.T. de Bienville (translated into English in 1775) asserted that overstimulation of a woman's nerves, through impure thoughts, too much chocolate and rich food, or reading novels, might all result in excessive sexual desire (de Bienville, 1775). Nymphomania was diagnosed in women who exhibited "premarital intercourse, erotic fantasies, seductiveness, obscene language and orgasmic excitement" (Showalter, 1980). As a method of "curing" the disease, doctors would go as far as performing a clitoridectomy or removal of the labia, claiming that they had never seen a reoccurrence of the excess sexual desires after this procedure (Showalter, 1980). The concept of nymphomania demonstrates how our understanding of sexual behavior has been complicated by sociocultural values, morality and gender politics.

P. Henry Chavasse, in his book *Physical Life of Men and Women, or Advice to Both Sexes* (1871), argued that extreme sexual restraint in either men or women may result in nymphomania and satyriasis (Chavasse, 1871). Jean-Etienne Dominique Esquirol asserted that nymphomania was not

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due to a lack of sexuality, but rather a physical disorder originating from the reproductive organs that affected the brain (translated from French) (Esquirol, 1845).

It was not until Richard von Krafft-Ebing wrote about sexual behavior in men that we had a description of sexual behavior that clearly mirrors our modern understanding of CSB: “sexual instinct...[which] permeates all his thoughts and feelings, allowing of no other aims in life, tumultuously, and in a rut-like fashion demanding gratification without granting the possibility of moral and righteous counter-presentations, and resolving itself into an impulsive, insatiable succession of sexual enjoyment” (translated from German) (Krafft-Ebing, 1886).

PREVALENCE AND CLINICAL DESCRIPTION

Although no large epidemiological studies have been performed, the estimated prevalence rate of CSB is approximately 3–6% in older literature (Coleman, 1992; Carnes, 1992). One recent study screening for impulse control disorders on a private college campus ($n = 791$) found that 3.7% of students reported symptoms consistent with current non-paraphilic CSB (Odlaug & Grant, 2010). Another study of 240 university students found that 17.4% of students had sexually addictive traits worthy of further evaluation and treatment, although rates of CSB were not explicitly reported (Seegers, 2003). A third study of 1,837 university students screened specifically for the criteria of CSB and found a prevalence of 2.0%. (3.0% for men, 1.2% for women) (Odlaug et al., 2013). Similar current rates (1.7% and 4.4%) have been reported in psychiatric inpatients (Grant, Levine, Kim & Potenza, 2005; Müller et al., 2011). A previous study of gay, lesbian, and bisexual individuals in a community sample ($n = 1543$) reported a CSB rate of 27.9%, but that study included both paraphilic and non-paraphilic sexual behavior in defining CSB (Kelly, Bimbi, Nanin, Izienicki & Parsons, 2009). Further studies have been conducted outside of the United States, one such recent study involving an assessment of Internet sexual addiction (2% for women and 5% for men; Ross, Månsson & Daneback, 2012). Other international studies have focused more on the severity of those with CSB, rather than the overall prevalence in the population (Scanavino et al., 2013). Evaluating the prevalence of CSB is difficult, due to the embarrassment and shame frequently reported by those with CSB (Black, Kehrborg, Flumerfelt & Schlosser, 1997), as well as its lack of awareness in society or perceived prevalence, unlike more major psychiatric conditions such as depression or general anxiety. As illustrated above, it has become a difficult task to try to solidify a prevalence rate for CSB across the world. Without conducting a large epidemiological study, the exact prevalence rate may continue to be speculative.

Based on small clinical samples, it appears that the majority of treatment-seeking individuals with CSB are males (Black et al., 1997; Carnes, 1992; Raymond, Coleman & Miner, 2003) with a primary onset of compulsive sexual behaviors during late adolescence (Black et al., 1997; Kafka, 1997). Due to the sensitive nature of sex behavior, however, many have argued that the prevalence of CSB may be underreported in the general population and that females may be underrepresented in these clinical samples (Grant, 2008).

In fact, a study of 102 adolescents hospitalized for psychiatric reasons found that CSB was more common in females (8.9% compared to 0% in males) (Grant, Williams & Potenza, 2007). A recent study found that 3.1% of women who responded to an online survey were characterized as hypersexual on the Hypersexual Behavior Inventory, a measure of overall control of sexual thoughts, urges and behaviors, the consequences of hypersexual behaviors and the use of sex as a coping strategy (Klein, Rettenberger & Briken, 2014; Reid, Garos & Carpenter, 2011). Another found that 5% of women reported having some problems with Problematic Sexual Internet Use and 2% having serious problems, compared with men at 13% and 5%, respectively (Ross et al., 2012). These studies highlight the importance of evaluating women for CSB and addressing issues of compulsive sexual behaviors or hypersexuality in women. This is further warranted by a recent study finding that men and women with hypersexuality exhibit very similar behaviors and characteristics, suggesting less differences than previously thought (Reid, Dhuffar, Parhami & Fong, 2012). Whether gender plays a role in treatment response in CSB, and whether treatment needs differ based on gender, necessitates further inquiry.

CSB can be subdivided into three clinical elements: repeated sexual fantasies, repeated sexual urges and repeated sexual behaviors (Christenson et al., 1994). One study found that 42% of their sample had trouble controlling their sexual fantasies, 67% reported difficulties with sexual urges, and 67% engaged in repeated sexual behaviors that they felt were out of control (Black et al., 1997). Although a high percentage of people report gratification from the sexual behavior (e.g., 70% felt gratification from the behavior and 83% felt a release of tension afterwards; Raymond et al., 2003), guilt or remorse often follows these behaviors (Barth & Kinder, 1987). CSB may be understood as an extreme form of behavior along a continuum of sexual behavior and it may be important to recognize the symptoms, even if the patient does not meet the full clinical description.

CSB does not appear to reflect just one type of problematic sexual behavior. Instead, individuals with CSB have, on average, multiple behaviors that they see as compulsive (Augustine Fellowship, 1986; Schneider & Schneider, 1996). The most commonly reported compulsive sexual behaviors are masturbation (17–75%) (Black et al., 1997; Briken, Habermann, Berner & Hill, 2007; Kafka & Hennen, 1999; Raymond et al., 2003; Reid, Carpenter & Lloyd, 2009; Wines, 1997), compulsive use of pornography (48.7–54%) (Black et al., 1997; Briken et al., 2007; Kafka & Hennen, 1999; Reid et al., 2009), and protracted promiscuity/compulsive cruising and multiple relationships (22–76%) (Black et al., 1997; Briken et al., 2007; Kafka & Hennen, 1999; Raymond et al., 2003; Reid et al., 2009). It is important to note that though certain behaviors generally appear to be more common in those with CSB, there can be a wide range of behaviors that may co-occur and no list is exhaustive of these behaviors.

Individuals with CSB report specific mood states often triggering their sexual behavior (96%), most commonly sadness or depression (67%), happiness (54%), or loneliness (46%) (Black et al., 1997). In addition, psychiatric comorbidities are common with CSB with one study ($n = 25$ with 24 completing testing for axis-I disorders) finding that

100% of their sample had a lifetime diagnosis of an Axis-I disorder with two of the most common being major depression (58%) and sexual dysfunctions (46%) (Raymond et al., 2003). Between 34% and 71% of individuals with CSB have co-occurring lifetime substance use disorders (Black et al., 1997; Raymond et al., 2003; Kafka & Hennen, 1999; Wines, 1997). CSB can also be comorbid with impulse control disorders (pathological gambling [9.4%–30.9%], compulsive buying [14%–24.5%]) (Black et al., 1997; Grant & Kim, 2003; Grant & Steinberg, 2005; Kausch, 2003). Smaller studies have suggested ranges of 4–11% for pathological gambling and 13–26% for compulsive buying (Freimuth et al., 2008).

In terms of family history, substance abuse is common in the relatives of individuals with CSB. In a survey of 76 individuals recovering from sexual addiction (84% male), most participants (81%) had experienced at least one addiction in their family: 40% reported at least one chemically dependent parent, 36% one sexually addicted parent, 30% had a parent with an eating disorder, and 7% reported having at least one parent with compulsive gambling (Schneider & Schneider, 1996). Patrick Carnes (2001) reported that only 13% of sexual addicts come from a family without any addictions.

Research suggests that the majority of individuals with CSB come from dysfunctional families (86.8% and 77% were from disengaged and rigid families, respectively) (Augustine Fellowship, 1986). One theory concerning CSB and dysfunctional family interactions suggests that as a child, the sexual addicts' needs were not met either because of parental rigidity or lack of follow through, resulting in the child believing that people are unreliable and can, therefore, only depend on themselves. Sex therefore becomes a source of well-being to these individuals (Carnes, 1989). Other research suggests that those with CSB have a history of childhood physical (22%) or sexual (31%) abuse (Black et al., 1997), which is overall higher compared to rates in the general public of childhood abuse (18.3%) and especially of childhood sexual abuse (9.3%) (US Department of Health and Human Services, 2013). Although causality between adult CSB and childhood experiences has not been established, an assessment of CSB may also warrant further investigation into an individual's familial relations and developmental background.

The effects of CSB can be very troubling to those afflicted and can interfere with many different areas of an individual's life. Due to the sexual behavior, many individuals with CSB may experience a variety of medical problems including, but not limited to, unwanted pregnancies, sexually transmitted infections, HIV/AIDS, and physical injuries due to repetitive sexual activities (for example, anal and vaginal trauma) (Augustine Fellowship, 1986; Coleman, 1992; Coleman et al., 2003; Miner & Coleman, 2013). Sexual compulsivity is related to more unprotected sexual acts, a greater number of sexual partners (Benotsch, Kalichman & Kelly, 1999; Kalichman, Greenberg & Abel, 1997; Kalichman & Rompa, 1995), and multiple sexually transmitted infections (Kalichman & Cain, 2004). In homosexual men with CSB, a higher percentage were HIV positive compared to a general sample of homosexual men (10.7% vs. 7.2%) (Valleroy et al., 2000; Wainberg et al., 2006). Of this sample, 78.6% had also contracted a sexually transmitted

infection other than HIV (Wainberg et al., 2006). Individuals with CSB also appear to be at higher risk for attempting suicide than the general population (19% vs. 4.6%) (Black et al., 1997; Kessler, Borges & Walters, 1999). Approximately half of those with CSB also reported that their thoughts, urges and behavior negatively affect other areas of their lives as well, such as marriage and important relationships, work, and social activities (Black et al., 1997). The high prevalence of comorbid health problems indicates a range of problems that crosses many fields of medicine and therefore involves more than those involved with psychiatric treatment of those with CSB.

Two recent studies on hypersexuality suggest that there may be cognitive dysfunction in those who struggle with CSB. Pachankis and colleagues found maladaptive cognitive processes and perceptions about sex in a population of homosexual and bisexual men (i.e. a behavioral self-efficacy model that reinforces that one is not in control of one's own sexual behavior) (Pachankis, Rendina, Ventuneac, Grov & Parsons, 2014). Another recent study with heterosexual, homosexual and bisexual men found additional potential cognitive differences where mindfulness (being present in the moment of a negative experience) was inversely related to hypersexuality, which generated higher level of impulsiveness and negative emotions (Reid, Bramen, Anderson & Cohen, 2014).

TREATMENT

The first step in treatment begins with accurate diagnosis. To make an accurate diagnosis, it is important first to rule out medical causes of the hypersexuality. Certain neurological disorders can cause an individual to act inappropriately and possibly cause hypersexuality as a result. Some of the most common examples are Alzheimer's Disease (sexual disinhibition due to the effects of the disease on the frontal and temporal lobes, with a prevalence of 4.3%–9.0% of patients; Cooper et al., 2009; Callesen, Weintraub, Damholdt & Møller, 2014), Pick's Disease (impairs the regulation of socially acceptable behaviors) and Kleine-Levin Syndrome (causing hypersomnia, which can cause abnormal behavior such as hypersexuality) (Callesen et al., 2014; Cooper et al., 2009; Dhikav, Anand & Aggarwal, 2007; Gadoth, Kesler, Vainstein, Peled & Lavie, 2001; Mendez, Selwood, Mastri & Frey, 1993). In addition, certain types of medications or illicit drugs can also cause an increased sexual drive such as dopamine agonists used to treat Parkinson's disease or cocaine, GHB, and methamphetamine (Smith, 2007).

PSYCHOLOGICAL TREATMENT

Psychodynamic therapy (Cooper, Putnam, Planchon & Boises, 1999; Goodman, 1998) and cognitive behavioral therapies (McConaghy, Armstrong & Blaszczyński, 1985; Sbraga & O'Donohue, 2003) have both shown some promise in small case reports or series for individuals struggling with CSB. We could find only one randomized trial of psychotherapy for CSB in the published literature. McConaghy and colleagues (1985) randomized 20 individuals with CSB to receive either imaginal desensitization or covert sensitiza-

tion, and found that both interventions reduced compulsive sexual behaviors at the one-month and one-year follow-up visits.

Group therapy has been suggested as a method of therapeutic treatment, as it helps individuals feel less isolated and helps individuals reduce feelings of shame (Schreiber, Odlaug & Grant, 2011). Group therapy has been recommended to be paired with individual therapy and family therapy to address concerns specific to the individual and to address issues surrounding the family of the individual with CSB (Schreiber et al., 2011).

Due to the negative impact of CSB on intimate relationships, couple's therapy may offer both the individual with CSB and their partner guidance on dealing with this disorder.

For a more detailed description of treatment goals and approaches, please see Coleman, 2011.

PHARMACOLOGICAL TREATMENT

There is also limited research concerning pharmacotherapy for CSB. In one 12-week, double-blind, placebo-controlled study, citalopram resulted in significant reductions in the desire for sex, frequency of masturbation, and hours of pornography use per week in a sample of 28 gay and bisexual men compared to placebo. There was no significant effect, however, on the number of sexual partners that the subjects had (Wainberg et al., 2006).

Another treatment option that has been explored is the use of naltrexone, which has been found to be effective in reducing other impulses in similar disorders such as pathological gambling and kleptomania and also reduced relapse in alcohol and opiate dependence (Comer et al., 2006; Grant & Kim, 2002; Kim, Grant, Adson & Shin, 2001; Volpicelli, Alterman, Hayashida & O'Brien, 1992). Naltrexone, when added to an SSRI treatment, successfully helped to reduce an individual's behaviors related to CSB (Raymond, Grant & Coleman, 2010).

SUPPORT GROUPS

Sex Addicts Anonymous (SAA) is one such example of a support group whose purpose is to help others with sex addiction find recovery. This organization operates similarly to Alcoholics Anonymous (AA) in that its focus is on the Twelve Step program. Another support group available to individuals is Sex and Love Addicts Anonymous (SLAA), which is also similar to both SAA and AA with the idea of the Twelve Step program.

CONCLUSIONS

There is an ongoing discussion about the proper categorization of CSB. Some believe that CSB should be treated with an addiction perspective while others consider CSB most properly fits within the category of sexual disorders or impulse control disorders. With the exclusion of CSB from the DSM-5 and the ongoing debate about its classification, new research will most likely begin to emerge in an attempt to find its correct position within psychiatric disorders.

The debate over what CSB should be characterized will most probably await more definitive pathophysiological research. What is known currently, however, is that CSB is a relatively common disorder that has significant personal and public health ramifications. Although there are a variety of psychosocial and pharmacological treatments which have shown early promise in the treatment of CSB, more evidence-based treatment options are needed. Education regarding sexual compulsivity may advance the understanding of this often disabling disorder.

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APPENDIX

DSM-5 proposed criteria for hypersexual disorder

- A. Over a period of at least 6 months, recurrent and intense sexual fantasies, sexual urges, and sexual behavior in association with four or more of the following five criteria:
 - 1. Excessive time is consumed by sexual fantasies and urges, and by planning for and engaging in sexual behavior.
 - 2. Repetitively engaging in these sexual fantasies, urges, and behavior in response to dysphoric mood states (e.g., anxiety, depression, boredom, and irritability).
 - 3. Repetitively engaging in sexual fantasies, urges, and behavior in response to stressful life events.
 - 4. Repetitive but unsuccessful efforts to control or significantly reduce these sexual fantasies, urges, and behavior.
 - 5. Repetitively engaging in sexual behavior while disregarding the risk for physical or emotional harm to self or others.
- B. There is clinically significant personal distress or impairment in social, occupational, or other important areas of functioning associated with the frequency and intensity of these sexual fantasies, urges, and behavior.
- C. These sexual fantasies, urges, and behavior are not due to direct physiological effects of exogenous substances (e.g., drugs of abuse or medications), a co-occurring general medical condition, or to manic episodes.
- D. The person is at least 18 years of age.
 - Specify if masturbation, pornography, sexual behavior with consenting adults, cybersex, telephone sex, and strip clubs.

Source: Kafka, M. P. (2010). Hypersexual disorder: A proposed diagnosis for DSM-V. *Archives of Sexual Behavior*, 39(2), 377–400.