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Problematic Hypersexuality: A Review of Conceptualization and Diagnosis

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Abstract

There has been considerable debate regarding the conceptualization and diagnosis of individuals exhibiting problematic hypersexuality. Various terms such as sexual addiction, sexual compulsivity, and sexual impulsivity have been applied based predominantly on the perceived psychopathological mechanisms guiding the behavior. Unfortunately, such descriptive diversity has inhibited adequate conceptualization and current diagnostic practices, which in turn, have negatively impacted treatment design. This paper critically reviews the extant literature regarding the conceptualization and diagnosis of problematic hypersexuality. Additionally, this review highlights the utility of a relatively new conceptualization of problematic hypersexuality, the Sexual Desire Disorders model, which accounts for many of the limitations inherent in previous explanatory models. Finally, diagnostic, conceptual, and treatment implications are discussed.

Problematic Hypersexuality: A Review of Conceptualization and Diagnosis

Problematic hypersexuality (PH) is a clinical syndrome characterized by a loss of control over sexual fantasies, urges and behaviors, which are accompanied by adverse consequences and/or personal distress (Gold & Heffner, 1998; Kafka, 2001).

Historically, such behavior received substantial clinical attention (Krafft-Ebing, 1812/1988; Rush, 1812/1988), although focus has predominantly shifted to disorders of inhibited, rather than disinhibited, sexual response given the relatively high prevalence rates of sexual dysfunctions in both men and women (see Simons & Carey, 2001).

Nevertheless, PH has been identified in approximately 3% - 6% of the general population (Black, 2000; Carnes, 1989; Coleman, 1992; Goodman, 1993), and higher rates are indicated in specific populations, such as sexual offenders (Blanchard, 1990; Marshall & Marshall, 2006) and individuals with HIV (Kalichman, & Rompa, 2001). Moreover, such behavior has been consistently linked with a variety of emotional and physical problems, including depression, relationship instability, and sexually transmitted infections (Kafka, 2007; Kalichman, & Rompa, 2001; Långström & Hanson, 2006; Schneider, 2004).

Despite the prevalence of PH and associated negative consequences, there has been a lack of consensus regarding terminology, definitional properties, symptomatology, and appropriate classification of this syndrome. This paper reviews the extant literature pertaining to the current conceptualization of PH and provides a critical review of current perspectives regarding diagnosis and taxonomic methodologies. Furthermore, this paper provides support for a newly proposed model of PH, which accounts for many of the

limitations inherent in previous models. Finally, diagnostic, conceptual, and treatment implications are discussed.

Defining Problematic Hypersexuality

PH has proven to be a controversial and elusive concept to define and measure (Rinehart & McCabe, 1997) and considerable controversy remains regarding the existence of such a disorder (Giles, 2006; Gold & Heffner, 1998; Levine & Troiden, 1988). Historical descriptors used to define excessive sexual behavior have included nymphomania, Don Juanism, and erotomania, and have coincided with predominant sociocultural attitudes of the time (Finlayson, Sealy, & Martin, 2001; Rinehart & McCabe, 1997). More recent labels have included sexual compulsivity and sexual addiction and were based on the perceived psychopathological mechanisms guiding behavior (Kafka, 2007). Despite such descriptive diversity, there is some agreement on the essential features of PH, such as impaired control and the continuation of such behavior despite adverse consequences (Marshall & Marshall, 2006; Rinehart & McCabe, 1997).

The idea that hypersexual behavior represents a psychopathological condition is most commonly associated with Carnes' (1983) book *Out of the Shadows: Understanding Sexual Addiction*. According to this conceptualization, sexual addiction was defined as a pathological relationship with a mood altering experience (Carnes, 1983, 1989). Since Carnes' early conceptualization of PH, a constellation of behavioral, cognitive, emotional, and personal distress features have been subsumed within this construct (Gold & Heffner, 1998).

The behavioral indicators of PH generally include frequency of sexual activity and time consumed while engaged in the sexual act. Initially, Kinsey, Pomeroy, and Martin (1948) described a quantifiable index of sexual frequency, termed total sexual outlet (TSO), which was defined as the number of orgasms achieved through any combination of methods (e.g., intercourse, masturbation) during a specific week. Using this index, several studies have indicated that few males (5%-10%) report a sexual outlet of seven or more times per week, and that this level of sexual activity is rarely sustained over time (e.g., Janus & Janus, 1993; Kinsey et al., 1948). Based on such evidence, Kafka (1997) proposed that hypersexuality be characterized by TSO's of at least seven times per week, over a period of at least six months, and that individuals would spend an average of one to two hours per day engaged in such activities.

Number of sexual outlets experienced per week is an easily quantifiable index of sexual activity and studies have utilized this measure with paraphilic populations. In a recent study, Kafka and Hennen (2003) investigated TSO's among 120 individuals with varying paraphilic disorders. Results indicated that 80.6% of individuals reported their TSO to be greater than seven times per week and engaged in sexual behavior for a significant period of time (approximately 1-2 hours per day), thus satisfying Kafka's (1997) definition for hypersexuality. Importantly, this rate was drastically higher than typically found in large community samples (3% - 6%; Kinsey et al., 1948; Laumann, Gagnon, Michael, & Michaels, 1994).

While this definition permits the categorization of statistically infrequent behavior, several problems are evident. First, there is dissension among researchers regarding the pathological classification of frequent orgasms, suggesting that this

endeavor is no more than attempts at classifying appropriate behavior as disordered (e.g., Giles, 2006). Additionally, it has been suggested that a definition considering only number of orgasms is relatively simplistic and neglects to differentiate among various forms of sexual activity. For example, both Långström and Hanson (2006) and Laumann et al. (1994), revealed that high rates of sexual activity with a partner (e.g., sexual intercourse) were associated with positive emotional states, whereas high rates of impersonal sexual activity (e.g., masturbation) were associated with negative emotional states, suggesting that type of sexual outlet may be an important factor to consider in sexuality research. Another problem pertains to the applicability of this criterion to women (Hyde, DeLamater, & Byers, 2004), as research has demonstrated that many women experience difficulty when attempting to achieve orgasm, especially during intercourse (Laumann et al., 1994). While frequent orgasms might indicate the presence of PH, it is clearly not sufficient, as many individuals undoubtedly have frequent sexual activity without experiencing adverse consequences and some might be unable to experience orgasm but still engage in behavior consistent with PH.

In addition to the behavioral criteria mentioned above, several cognitive (e.g., recurrent/persistent thoughts), emotional (e.g., negative emotional states), and personal distress indicators of PH have been identified (Gold & Heffner, 1998). These features have been subsumed within various conceptual perspectives, as well as current nosological systems, and will be described in greater detail below.

Diagnostic Assessment and Conceptualization

Currently, two nosological systems are available, which provide taxonomic classification for sexual disorders: the *International Classification of Diseases* (ICD-10;

World Health Organization [WHO], 1992) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000). While several deviations from normative sexual behavior are noted in these systems, there is only minimal reference made to disorders marked by hypersexuality.

The ICD-10 provides a diagnostic category representing PH, termed *excessive sexual drive*. This syndrome is separated into classifications of Satyriasis and Nymphomania, based entirely on whether the patient is male or female, respectively. Unfortunately, no consensus has been reached regarding specified criteria for this disorder (Manley & Koehler, 2001; WHO, 1992) and evaluators considering such a diagnosis are advised to formulate their own criteria of excessive sexual drive (P. Briken, personal communication, July 17th, 2007). Given divergent views regarding the overall conceptualization and relevant features of PH (e.g., Goodman, 1993; Kafka & Hennen, 2003), it is not surprising to find disparity among evaluators utilizing this classification system for such a diagnosis. In fact, a recent study (Briken, Habermann, Berner, & Hill, 2007) using ICD-10 revealed that a significant majority of therapists were reluctant to apply a diagnosis of excessive sexual drive in patients presenting with behavioral indicators consistent with the diagnosis, and that they often classified such behavior under other psychiatric conditions.

In contrast to the ICD-10, the DSM-IV-TR does not provide a formal diagnosis of PH and, as such, individuals presenting with characteristics associated with this syndrome have been classified under other diagnoses (e.g., affective disorders, delusional disorders) based on observed clinical characteristics and/or theoretical mechanisms perceived to underlie excessive sexual behavior (Bancroft & Vukadinovic, 2004;

Rinehart & McCabe, 1997; Schneider & Irons, 1996). However, PH has also been diagnosed according to criteria outlined within the sexual and gender identity disorders: as either a paraphilia or sexual disorder, not otherwise specified (NOS; Schneider, 2004).

Sexual Disorders

Using current nosology, individuals presenting with PH are often diagnosed with either a particular paraphilia or sexual disorder (NOS; Schneider & Irons, 1996). According to the DSM-IV-TR, paraphilias are predominantly male sexual disorders marked by recurrent and intense sexually arousing fantasies, urges and behaviors involving either nonhuman objects (i.e., fetishism), the suffering or humiliation of oneself or one's partner (e.g., sexual masochism, sexual sadism; Kingston & Yates, 2008), or children/nonconsenting partners (e.g., exhibitionism, pedophilia, voyeurism; APA, 2000; Firestone, Kingston, Wexler, & Bradford, 2006; Kafka, 1997; Kingston, Firestone, Moulden, & Bradford, 2007). Paraphilias, according to Carnes (1989), are demonstrative of an underlying sexual addictive pathology. However, it is important to note that a single incident of paraphilic behavior is not diagnostic of PH, but when the behavior demonstrates criteria consistent with the paraphilias (i.e., recurrent fantasies, urges and behaviors and subsequent personal distress or adverse consequences), it may be indicative of PH, at least with a socially unacceptable outlet of sexual expression (Carnes, 1983, 1989).

In contrast, increasing attention has focused on repetitive sexual fantasies, urges, or activities involving conventional and normative sexual expression with accompanying volitional impairment and distress (e.g., interpersonal, occupational, and social; Kafka, 2001, 2003; Schwartz & Abramowitz, 2003, 2005). Clearly, classifying PH within the

paraphilias neglects to account for behaviors, which are excessive, yet culturally sanctioned (Kafka, 2001). These types of behaviors involving normative sexual outlets have been recently referred to as the paraphilia-related disorders (PRDs; Kafka, 2001, 2007; Kafka & Hennen, 1999).

Several PRDs have been described in the literature, including; compulsive masturbation, protracted promiscuity, pornography dependence, telephone sex dependence, cybersex, and severe sexual desire incompatibility (see Kafka, 2001, 2007 for descriptions). In a recent examination, Kafka and Hennen (2003) reported prevalence rates for specific PRDs among 120 males presenting with a variety of diagnosed paraphilias. The three most common PRDs evident within this sample were compulsive masturbation (72.5%), pornography dependence (47.5%), and protracted promiscuity (44.1%). Other PRDs, such as telephone sex dependence and severe sexual desire incompatibility were identified in a smaller subset of the population (25% and 13.3%, respectively).

Within the sexual disorders nosological system, PRDs, while demonstrative of an underlying hypersexual pathology, can only be classified within the NOS diagnostic category, which accounts for clinical presentations inconsistent with current diagnostic nomenclature (i.e., sexual disorder, sexual dysfunction, or a paraphilia). Of relevance to this syndrome, is the example of “distress about a pattern of repeated sexual relationships involving a succession of lovers who are experienced by the individual as things to be used” (APA, 2000, p. 582), which is similar to the concept of protracted promiscuity described by Kafka (2007). Of note, while other PRDs are not indicated in this example, all PRDs could be classified within this nomenclature (Schneider, 2004).

Importantly, while the paraphilias and PRDs are highly comorbid (Kafka & Hennen, 2003; Långström & Hanson, 2006), paraphilic individuals may not exhibit behavior consistent with a PRD and some individuals displaying PRDs may not satisfy criteria for a specific paraphilia. Given the somewhat orthogonal nature of these constructs, it is problematic that such behavior is not well represented in diagnostic systems.

In addition to the sexual disorders, several classification models have been posited to describe the underlying pathology of PH in general and PRDs in particular based predominantly on similarities between pre-existing nosological criteria and underlying mechanisms and symptomatology exhibited during PH. Predominant concepts and descriptive models have included sexual addiction (Carnes, 1983, 1991; Goodman, 1993; Schneider, 2004), as well as disorders marked by either sexual compulsivity or impulsivity (Coleman, 1987, 1992; Schwartz & Abramowitz, 2003, 2005).

Conceptual Perspectives

Sexual Addiction

The contemporary formulation of addiction describes a maladaptive pattern of substance use and impaired control over such behavior with associated adverse consequences (Potenza, 2006). Importantly, there is a distinct but poorly understood difference between substance use and addiction. The transition has been conceptualized as a progression from a state which is positive and rewarding, often associated with impulsivity, toward egodystonic experiences of compulsivity, associated with preoccupation, compulsive intoxication, and symptoms of withdrawal (Koob, 2006). Addictive states incorporate elements of physiological dependence on a particular

substance characterized by tolerance (i.e., the need to use greater amounts of a substance to obtain the desired effect) and/or symptoms of withdrawal (e.g., insomnia) upon removal of the substance. Moreover, psychological dependence has been emphasized and describes intense craving, compulsive behavior directed toward obtaining the substance, and loss of control (Lubman, Yücel, & Pantelis, 2004).

The current nosology of addiction¹ emphasizes the elements described above and outlines the following criteria, three of which are required for a diagnosis of dependence (APA, 2000): (a) the need for increased amounts of the substance to achieve the desired effect; (b) manifesting withdrawal symptoms when deprived of the substance; (c) the substance is taken in larger amounts or over longer periods than originally intended; (d) a persistent desire or unsuccessful attempts to control use; (e) a significant period of time is spent engaging in activities associated with the substance; (f) important activities (e.g., social engagements) are discontinued because of the substance; and, (g) substance use is continued despite knowledge of having persistent physical or psychological problems associated with the substance.

The essence of addiction has been elucidated through identification of neural circuits involving the regulation of reward processes and was initially developed from animal models of addictive behavior (Koob, Sanna, & Bloom, 1998; Plant & Plant, 2003). Results have implicated several important neurological pathways responsible for mediating reward associated with addictive states (Insel, 2003; Schmitz, 2005). Various pathways connecting the ventral tegmental area and nucleus accumbens, such as the medial forebrain bundle and other sites innervating limbic and cortical areas of the brain

¹ Substance dependence is the descriptor used in the DSM-IV-TR to describe addiction but the two terms are, at least in this context, synonymous (APA, 2000; O'Brien, Volkow, & Li, 2006).

are examples of important reward pathways (Koob, 2006; Plant & Plant, 2003).

Moreover, several neurotransmitters are implicated within these reward pathways (e.g., gamma-aminobutyric acid, opioid peptides) but specifically, it is the dopaminergic pathway, referred to as the mesolimbic dopamine pathway, most closely implicated in mediating reward (Koob, 2006). It is well-known that several drugs of abuse exert primary influence on the reward pathways by directly increasing dopamine levels within the nucleus accumbens and other areas of the brain (Koob et al., 1998; Schmitz, 2005).

Predominant focus on the neurological mechanisms of addiction, as noted earlier, has promoted discussions regarding an overarching structure or underlying addictive process among several disorders (Keane, 2004). Indeed, there has been a recent shift away from regarding addictive disorders as purely substance-based, toward a broader category of potentially addictive disorders (Goodman, 1993; Keane, 2004; Peele, 1998; Potenza, 2006). According to this broad conceptualization, any behavior used to regulate emotional states, which satisfies criteria for addiction, including associated features and underlying neuroanatomical structure, are potential behavioral manifestations of addiction.

Recently, Schmitz (2005) described several neurological similarities among substance-based disorders and behavioral disorders marked by compulsive and impulsive traits (e.g., compulsive buying, pathological gambling, kleptomania, and binge-eating disorder). Similarly, Joranby, Pineda, and Gold (2005) noted similar neurological characteristics between substance use disorders and eating disorders. Specifically, the role of dopamine in mediating reward pathways in both substance-based addictions and eating disorders was highlighted.

The essential elements of substance dependence described above have been extrapolated and applied to sexual behavior to support the inclusion of this behavior as potentially addictive (Goodman, 1993; Potenza, 2006; Schneider & Irons, 1996; Shaffer, 1994). Specifically, the term *sexual behavior* has been applied to each criterion indicated in the diagnosis of substance dependence in order to formulate an adequate conceptualization of sexual addiction (Gold & Heffner, 1998; Goodman, 1993).

Similarities between neurological substrates of addiction (e.g., dopaminergic dysregulation) and sexual appetitive behavior have been identified to support the inclusion of sexual activity as a behavioral manifestation of addiction (Keane, 2004). While neurological processes underlying human sexual behavior are still relatively unexplored, it is generally acknowledged that androgenic hormones, neuropeptides, and neurotransmitters, particularly dopamine and serotonin, play a role in sexually appetitive behavior (Kafka, 2003).

Similar to the neurobiological model of addiction described above, dopamine is one of the primary neurotransmitters involved in facilitating both the appetitive and consummatory phase of sexual functioning (Hull, Muschamp, & Sato, 2004; Schulz et al., 2003). In animal studies, selective D₂/D₃ dopamine agonists have both facilitated and restored mounting behaviors in rats, in addition to psychogenic erections and sexual motivation (Beck, Bialy, & Kostowski, 2002), whereas dopamine antagonists decreased the number of mounts, intromissions, and ejaculations (Dominguez & Hull, 2005). In humans, much of the evidence for dopamine's role in sexual behavior has come from pharmacological interventions, particularly pertaining to the alleviation of Parkinson's disease, and has demonstrated similar facilitative effects on sexual activity. Interestingly,

two recent case reports (Shapiro, Chang, Munson, Okun, & Fernandez, 2006; Solla, Floris, Tacconi, & Cannas, 2006) have described instances where increasing levels of dopamine in Parkinsonian patients were associated with the emergence of both nonparaphilic and paraphilic expressions of hypersexuality. Of note, one case description (Solla et al., 2006) reported that subsequent reductions in dopamine were associated with the disappearance of the identified paraphilia.

In addition to the neurological mechanisms identified above, the emergence of co-morbid addictions within an individual has been used to promote the argument for the underlying addictive process relevant for substance and behavioral addictions. While one study failed to demonstrate an association between PH and substance based addictions (Marshall & Marshall, 2006), most studies have demonstrated such a relationship. Carnes (1991), for example, surveyed 289 sexual addicts and found that fewer than 17% presented with only one addiction and slightly less than half of the sample reported chemical dependency as their primary concurrent addiction. More recently, Black, Kehrberg, Flumerfelt, and Schlosser (1997) found a 64% lifetime prevalence rate of substance use disorders among 36 individuals experiencing PH, whereas Raymond et al. (2003) reported an even higher lifetime prevalence rate between substance use disorders and PH (71%).

Evidence for common neural reward pathways among several behavioral and substance-based addictions and the predominant co-morbid existence of such disorders within individuals has facilitated the argument promoted by Carnes (1989) and others (e.g., Goodman, 1998) that PH should be included within an overarching conceptual framework of addiction (Keane, 2004). Despite the movement toward understanding PH

as a behavioral manifestation of addiction, several criticisms of this perspective have been advanced.

The movement toward categorizing behaviors, such as sexual behavior, under a singular model of addiction has been challenged (Coleman, 1990, 1992; Keane, 2004) given the tendency for expansive models to oversimplify complex phenomena and to obscure key differences between disorders. While identifying commonalities across chemical and non-chemical addictions promotes heuristic utility, such conceptual expansion is associated with decreased clinical utility, as it neglects to elucidate key mechanisms within particular disorders. Indeed, Coleman (1990) suggested that the expansive model of addiction failed to differentiate between addiction and compulsion and that each term has been used interchangeably in the literature. Unfortunately, confusing these terms has important implications for determining effective treatment, especially when treatment designed for a particular conceptual model (e.g., addiction) is inappropriately applied to another construct (e.g., compulsive behavior).

Important differences between treatment protocols for addictions and other behavioral disorders have been provided in order to elucidate the inappropriate application of the addiction model (Gold & Heffner, 1998). Coleman (1990, 1992), for example, noted the success of medication, particularly selective serotonin reuptake inhibitors (SSRIs) in the treatment of both OCD and PH. He further suggested that medical treatment, such as the use of SSRI's, was virtually ignored by both Carnes (1989) and in the general addiction literature, which instead focused predominantly on spiritual recovery programs (i.e., twelve-step programs).

Twelve-step programs, initially designed for substance-based addictions, are non-sectarian spiritual programs emphasizing the role of a higher spiritual being and the acknowledged loss of personal control over the addictive substance (or behavior). While such programs designed for PH closely adhere to the principles outlined for substance-based addictions, there is one fundamental difference with regard to the degree of abstinence, such that abstinence is not a stated goal of the program, although celibacy contracts are often recommended, while an individual addresses initial treatment targets (Carnes, 1989).

Several researchers have criticized the utility of the twelve-step approach for both substance-based addictions and other addictions (e.g., Walters, 2002). In particular, Coleman (1990) and Keane (2004) have suggested that problems identified within the twelve-step treatment approach for PH are indicative of the inappropriate adaptation of the addiction model to out-of-control sexual behavior. With regard to the adapted twelve-step approach for PH, one predominant concern identified pertained to the utilization of celibacy contracts in the initial phases of treatment. In addition to being viewed as restrictive and moralistic, the focus on abstinence may be potentially problematic and not consistent with positive approaches to healthy sexuality. That is, requiring individuals to refrain from sexual activity may reinforce negative and maladaptive attitudes toward sexuality (e.g., sex is inherently bad). Another predominant concern with the twelve-step approach pertains to the notion of rejecting personal control. This perspective diametrically opposes empirically validated cognitive-behavioral treatment in general and specific models of rehabilitation, in particular.

The Good Lives Model (GLM; Ward & Stewart, 2003), for example, is a recently developed rehabilitation model used primarily with sexual offenders, some of whom present with PH. The GLM is a strength-based approach to treatment and shares many features with positive psychology, such that emphasis is placed on promoting human capabilities, rather than focusing on psychological deficits (Ward, Polaschek, & Beech, 2006). In other words, effective treatment models should allocate significant resources on instilling positive traits in clients with a de-emphasized focus on removing a person's symptoms and/or risk factors (Ward, Yates, & Long, 2006). As such, the GLM stresses the importance of developing and utilizing internal capabilities to achieve a variety of primary human needs, such as adaptive functioning and intimate relationships. Clearly, many features of twelve-step programs are focused on removing risk factors associated with the problematic behavior, as demonstrated by rejecting personal control and utilizing celibacy contracts. Unfortunately, this emphasis contrasts to the principles of positive psychology and the GLM, as indicated above.

While several problems pertaining to the adaptation of traditional addiction treatment to other behavioral disorders are indicated, it is important to note several limitations to the criticisms noted above. Taken together, the predominant criticisms revolve around inconsistent treatment approaches between substance-based addictions and PH. Regarding psychotropic medication, however, several researchers (Carnes, 1996; Schneider, 2004) have identified the utility of pharmacological agents, including SSRIs, with substance-based addictions and while other medications are more frequently used in such treatment (e.g., Naltrexone for alcohol addiction), SSRIs have shown recent promise (e.g., Naranjo & Knoke, 2001). Additionally, other treatment models designed

for substance-based addictions (e.g., relapse prevention; Marlatt, 1982, 1985) have also been identified, which could more readily apply to behavioral addictions in general and PH in particular.

It is important to note that despite several conceptual problems with the twelve-step approach, concerns with such programs are not indicative of an inappropriate conceptual model *per se* but the way the model has been adapted and applied in a treatment context. This is particularly relevant for the utility of the addiction model, as none of the essential features or theoretical mechanisms inherent in addiction necessitate using the twelve-step approach. Despite the limited empirical evidence and theoretical problems, it is important to note that existing investigations have found that the twelve-step approach is an effective treatment approach with substance-dependence (e.g., Ståhlbrandt, Johnsson, & Berglund, 2007) and PH (e.g., Carnes, 1991), although some methodological concerns have been identified in such studies (Kafka, 2007).

Defining Compulsivity and Impulsivity

Given the problems identified with the addiction model, some individuals have conceptualized PH as either a compulsive or impulsive behavior. The phenomenological features of PH have been investigated and disparate conceptualizations have been posited reflecting mechanisms of either compulsivity (Coleman, 1987, 1992) or impulsivity (Schwartz & Abramowitz, 2003, 2005). Despite increasing attention focused on essential phenomenological features of PH, there is considerable debate regarding conceptualizing such behavior as either an obsessive-compulsive disorder (OCD) or impulse-control disorder (ICD; Rinehart & McCabe, 1997; Kafka, 2007).

While the terms compulsivity and impulsivity are often used interchangeably, the driving mechanisms are fundamentally different (Hollander & Rosen, 2002). Although each construct is characterized by repetitive behavior reflecting disinhibition, several differences between constructs have been noted throughout the literature and include, for example, response to pharmacological interventions and neuroimaging (Ferrão, Almeida, Bedin, Rosa and Busnello, 2006). Another important distinguishing feature pertains to motivational mechanisms guiding behavior, such that compulsive individuals are often hypervigilant and desire to avoid harm and reduce anxiety, whereas impulsive individuals are risk seekers who desire to maximize pleasure and gratification (Claes, Vandereycken, & Vertommen, 2002).

Disorders marked by compulsivity are most often diagnosed as anxiety disorders, such as OCD. According to the DSM-IV-TR, the essential features of OCD are: (1) obsessions, defined as persistent thoughts, impulses, or images which are repeatedly experienced as inappropriate and distressing and, (2) compulsions, defined as repetitive behaviors, which individuals are compelled to perform in response to the previous obsessions and are intended to reduce anxiety associated with the obsession. In contrast, impulsive disorders are most often diagnosed according to criteria outlined in the ICD disorders, not otherwise specified section of the DSM-IV-TR (Claes et al., 2002). ICD disorders are characterized by the failure to resist an impulse, drive, or temptation to perform a specific act which is considered harmful. Individuals diagnosed with an ICD typically experience tension prior to the act, pleasure or satisfaction during the behavior, and subsequent guilt following the specified behavior (APA, 2000; Moeller et al., 2001). ICD disorders include intermittent explosive disorder, kleptomania, pyromania,

pathological gambling, trichotillomania, and an NOS category, which includes disorders not better classified under another diagnostic label.

Compulsive Sexual Behavior

Coleman (1987, 1990, 1992) has been one of the primary advocates for conceptualizing PH as an OCD, based on shared phenomenological features between the two disorders. In terms of these features, obsessions characterizing both OCD and PH are intrusive, repeatedly experienced, and often associated with anxiety or tension (Black et al., 1997). Moreover, the behavior evident in both disorders, while initially resisted, is enacted to reduce feelings of anxiety and is often followed by feelings of distress (Coleman, 1992; Raymond et al., 2003). In an investigation of the clinical characteristics of 36 individuals presenting with features consistent with PH, Black et al. (1997) found 42% of individuals reported experiencing intrusive and repetitive sexual fantasies that were extremely distressful in nature. Moreover, 67% of participants engaged in repetitive sexual behavior, which was initially resisted and was followed by negative self-evaluation. Moreover, several individuals reported engaging in sexual behavior in response to specific negative emotional states (e.g., anxiety). Raymond et al. (2003) reported similar results, such that a significant proportion of individuals exhibiting PH attempted to resist sexual thoughts and urges and that behavioral action was intended to provide temporary relief from anxiety and tension.

The results indicated above demonstrate important similarities between PH and OCD, in terms of shared clinical features, which have led some to argue that the former is guided primarily by compulsivity (Claes et al., 2002). However, there has been contrasting evidence with regard to the predominant symptomatology exhibited by

individuals with PH. For example, several investigators noted earlier have found that the repetitive sexual thoughts and fantasies were distressful to individuals experiencing PH, others (e.g., Schwartz & Abramowitz, 2003, 2005) have suggested that the urges and fantasies are actually perceived as exciting and positive. Indeed, as reported in the study by Black et al. (1997), positive emotions were reported as significant precipitants to excessive sexual behavior in a significant proportion of individuals presenting with PH.

Another inconsistency between OCD and PH pertains to the behavioral component of the disorders, such that with PH, the behavior is a purposeful emulation of the prior cognition, where the individual specifically and willingly acts out the prior sexual fantasy. In contrast, compulsive rituals in OCD are initially resisted and typically are not behavioral representations of the prior thought but instead represent neutralizations using some other method of action (Schwartz & Abramowitz, 2005). Indeed, given that individuals with OCD rarely engage in the behavior demonstrative of the thought, the syndrome has been described as avoidance-based. In contrast, PH is marked by behavioral action suggesting that it is predominantly driven by sensation-seeking.

In addition to shared phenomenological features, advocates for conceptualizing PH as an OCD have highlighted both the significant comorbidity rates between disorders and similar response to treatment (Hollander, Friedberg, Wasserman, Yeh, & Iyengar, 2005; Hollander & Rosen, 2002). Recent studies investigating the comorbidity between PH and OCD, however, have not supported the OCD conceptualization. In fact, most recent studies have indicated a low lifetime and current comorbidity rate between OCD

and PH, with rates typically below 15% (Jaisoorya, Reddy, & Srinath, 2003; Kafka, 2001; Raymond et al., 2003).

Regarding treatment approach, Coleman (1990) suggested that treatments for both disorders were similar and involved “presynaptic serotonergic drugs combined with psychological treatment that encompasses psychodynamic, behavioral, and client-centered therapeutic models” (p. 13). Current empirically validated treatment of OCD, however, involves cognitive restructuring, exposure techniques, and response prevention (Antony & Barlow, 2002). From a cognitive perspective, treatment for sexual obsessions in OCD would involve normalizing and challenging thoughts in addition to establishing behavioral exercises to convince the individual that they would not act on their cognitions. Clearly, individuals with PH would benefit little from this treatment, as they do act on their obsessions (Schwartz & Abramowitz, 2003, 2005). Some of the discrepancies between OCD and PH (e.g., sensation-seeking), have led to another conceptualization focused on disorders of impulse control.

Impulsive Sexual Behavior

The evidence against the OCD model has been used by advocates arguing for an ICD conceptualization of PH (Barth & Kinder, 1987; Schwartz & Abramowitz, 2005). As indicated above, ICDs are characterized by the failure to resist an impulse, drive, or temptation to commit an act that is harmful to self or others (APA, 2000). There is often an increased sense of tension or arousal prior to the behavior, a sense of gratification or relief during the behavior, and feelings of guilt following the act.

Among the ICD disorders indicated above, pathological gambling has received the most empirical investigation. The current criteria for pathological gambling include:

(a) a preoccupation with gambling; (b) a need to spend increasing amounts of money to achieve the desired excitement; (c) repeated, unsuccessful attempts to stop or cut back the behavior; (d) attempts to cut down produce feelings of restlessness; (e) gambling functions to regulate negative emotional states; (f) the individual continues to gamble in order to regain monetary losses; (g) the individual conceals the extent of the problem; (h) the individual engages in illegal activity to support the problem; (i) the gambling behavior has resulted in significant social or interpersonal losses; and, (j) there is a reliance on others to finance the gambling behavior (APA, 2000, p. 674)².

The criteria indicated above have been extrapolated and applied to out-of-control sexual behavior (Barth & Kinder, 1987; Finlayson et al., 2001; Rinehart & McCabe, 1997). According to Barth and Kinder (1987), such individuals demonstrate a failure to resist an impulse for sexual activity, upon which they experience transient relief from negative emotional states and subsequent distress resulting from the behavior and, as such, would satisfy DSM criteria for an ICD (NOS), as long as the primary sexual preference is non-paraphilic (APA, 2000).

Barth and Kinder (1987) posited the sexual impulsivity model based, in part, on a study comparing self-identified hypersexual individuals to a control group (see Quadland, 1985). Results indicated that the hypersexual group reported more sexual partners per month than the control group but no group differences were evident with respect to number of desired partners. From this, it was hypothesized that PH was driven by disinhibition rather than increased sexual drive. Several methodological problems have been identified with Quadland's study (e.g., sample characteristics; Rinehart & McCabe,

² Despite the nosological categorization of pathological gambling (PG) as an ICD, the predominant features have been equated with addiction (see Schneider & Irons, 1996). Certain elements of addiction (e.g., preoccupation and tolerance) can be applied to several criteria for PG.

1997) but most importantly, evidence of disinhibited behavior is not indicative of impulsivity, as opposed to compulsivity (given that each construct shares this feature; Hollander, 1998). Instead, it would have been important to investigate whether the behavior was utilized in an attempt to avoid distress or maximize pleasure but, unfortunately, this aspect was not investigated.

More recent studies have explored motivational mechanisms but results have been inconsistent. Black et al. (1997), for example, found that negative emotional states (e.g., depression) were most often cited as reasons for engaging in sexual activity and that prior urges were distressful and unwanted. In contrast, Schwartz and Abramowitz (2003) revealed that individuals with PH deliberately acted on their sexual urges in order to promote sexual gratification and that such behavior was associated with positive, albeit transient, emotional states. In addition to comparisons across samples, such contradictions in motivational states have been indicated within samples. For example, Raymond et al. (2003) indicated one third of participants in their sample found their thoughts to be intrusive and that 87% attempted to resist such urges, which was evidence for compulsivity. However, mean scores on the impulsivity subscale of the Minnesota Personality Questionnaire (Tellegen, 1992) were indicative of higher levels of impulsivity when compared to normative samples. In sum, this suggests that both impulsive and compulsive traits can be evident in a sample of individuals with PH.

In addition to the clinical and phenomenological characteristics described above, comorbidity studies have generally indicated a significant relationship between various ICDs and PH. In an earlier study, Black et al. (1997) found a 6% prevalence rate between lifetime pathological gambling and PH, although more recently, higher rates

have been indicated. Raymond et al. (2003), for example, found that 38% ($N = 25$) of individuals with PH were, at some point in their life, diagnosed with a co-morbid ICD. Moreover, Grant and Steinberg (2005) investigated the prevalence rates of PH in a sample of individuals satisfying criteria for pathological gambling ($N = 225$) and found that 19.6% demonstrated behaviors consistent with PH. Comparisons of the prevalence rates indicated above and those found in the general population are informative as to whether the association is of significant importance to underlying mechanisms but, unfortunately, most of the ICD disorders have limited epidemiological data. With pathological gambling, however, evidence suggests lower lifetime prevalence rates in the general population (0.4% to 3.4%; APA, 2000), compared to the examples provided above involving individuals with PH.

Conceptualizing Problematic Hypersexuality

The research described above highlights three broad conceptualizations of PH based on models of addiction, OCD, and ICD (sexual addiction, sexual compulsivity, and sexual impulsivity, respectively), each of which has been developed to explain etiological mechanisms and to formulate effective treatment. While several differences across these descriptions have been noted, there are significant features that overlap, suggesting that these constructs are not mutually exclusive (Rinehart & McCabe, 1997).

For example, each description includes the criterion for clinical significance (Spitzer & Wakefield, 1999), emphasizing the role of personal distress and/or impairment in functioning. This criterion is critical in determining the existence of many disorders in current nosology, as it minimizes the potential for false positive diagnoses. This is particularly important for determining the presence of PH, given concerns regarding

pathologizing varying sexual practices (Giles, 2004; Levine & Troiden, 1988). In addition to personal distress and impairment in functioning, PH, regardless of conceptualization, is clearly demonstrative of disinhibited sexual behavior and is acted upon to regulate various emotional states.

The ability to regulate emotions has received considerable attention in behavioral disorders in general (Abramowitz & Berenbaum, 2007) and PH, in particular (Barth & Kinder, 1987; Carnes, 1989, 1989; Coleman, 1990). Indeed, many behaviors demonstrate the ability to regulate emotions and, in fact, this was one of the primary arguments for expanding the addiction model to include non-substance related conditions. Related to emotion regulation, conceptual models have posited diverse motivational mechanisms underlying behavioral disorders -- that is, whether the behavior was intended to increase pleasure or reduce negative affect.

Theoretical models based on addiction, compulsivity, or impulsivity have identified the predominant motivational states driving behavior. With regard to the latter two models, compulsivity is characterized by hypervigilance with a desire to avoid harm and reduce anxiety, whereas impulsivity is associated with rapidly planned, sensation-seeking behavior, with an expressed motivation to increase pleasure (Claes et al., 2002; Rinehart & McCabe, 1997). This distinction has been generally supported throughout the psychopathological literature. In a recent study, for example, Abramowitz and Berenbaum (2007) investigated trait impulsivity and obsessive-compulsive symptoms among 189 undergraduate students and correlated such findings with various positive or negative emotional triggers precipitating the criterion behavior. Results indicated a positive association between trait impulsivity and positive affect ($r = .22$) and a positive

relationship between obsessive-compulsive symptoms and various negative emotions, including dysphoria ($r = .29$), anger ($r = .19$), and, anxiety ($r = .35$). Similarly, Ferrão et al. (2006) compared phenomenological characteristics among 40 individuals diagnosed with either an OCD or ICD, and results supported the hypothesized symptom profiles of each disorder, such that individuals with ICD generally felt their behavior was unplanned and that they experienced less guilt during the behavior, as compared to OCD patients.

The orthogonal nature of compulsivity versus impulsivity has been reflected among studies investigating PH, depending on whether the theoretical focus of the paper was conceptualized within an OCD or ICD framework. Unfortunately, the literature has produced equivocal results on predominant motivations guiding out-of-control sexual behavior, precluding definitive statements regarding appropriate classification. From the research summarized above, it is clear that some individuals with PH engage in such behavior in order to alleviate negative emotional states (e.g., anxiety; Black et al., 1997; Coleman, 1992; Raymond et al., 2003), whereas others have found contradictory results; that is, individuals engage in PH to enhance positive emotional states (e.g., pleasure; Abramowitz & Berenbaum, 2007; Schwartz & Abramowitz, 2003).

Most studies have focused on compulsivity and impulsivity and their associated motivational mechanisms as separate constructs and this is evident throughout the literature investigating PH. Recent research on other behavioral disorders, however, has focused on the co-occurrence of both constructs. For example, although Anorexia Nervosa (restrictive type) and Bulimia Nervosa have historically been equated with either obsessive-compulsive symptoms or trait impulsivity, respectively (Claes et al., 2002), there has been recent evidence indicating a more complex relationship. In other words,

some individuals with Bulimia Nervosa have exhibited compulsive traits, whereas some Anorectics have demonstrated impulsive traits (Claes, Nederkoom, Vandereycken, Guerrieri, & Vertommen, 2006).

Further support for the interrelationship between compulsivity and impulsivity has been demonstrated in other disorders. In a recent review, Grant and Potenza (2006) described several conditions, traditionally considered impulsive (i.e., pathological gambling, trichotillomania, kleptomania) and demonstrated that several features of compulsivity were evident in such disorders. Similarly, Matsunaga et al. (2005) investigated the existence of impulsive features among 153 Japanese adult patients diagnosed with OCD. Results indicated that a significant proportion of the sample (29%) presented with impulsive traits, suggesting that OCD and ICD are not entirely distinct constructs and an individual with a particular disorder may evidence both compulsive and impulsive features.

In addition to the research noted above, several investigations have pointed to an integrated continuum of impulsive and compulsive features (Abramowitz & Berenbaum, 2007; Oldham, Hollander, & Skodol, 1996). Indeed, this conceptualization has been described within the obsessive-compulsive spectrum disorders model (OCSDs; Hollander, Friedberg, Wasserman, Yeh, & Iyengar, 2005; Hollander & Rosen, 2002). Specifically, this model describes several disorders, placed along a continuum, based on perceived similarities with OCD, such as symptom profile, etiology, family history, and treatment response. The continuum includes *pure* compulsive behaviors (e.g., body dysmorphic disorder) at the one extreme end of the spectrum and *pure* impulsive behaviors (e.g., pathological gambling) at the other end (Stein & Lochner, 2006).

According to the OCSD model, PH is generally regarded as a disorder at the impulsive end of the spectrum (Hollander & Rosen, 2002), which is consistent with some studies suggesting a predominantly sensation-seeking motivational mechanism driving such behavior (e.g., Abramowitz & Berenbaum, 2007; Schwartz & Abramowitz, 2003) but is clearly inconsistent with other research (e.g., Coleman, 1990). Additionally, several criticisms have been directed at the OCSD model (e.g., Swerdlow, 2002), which have typically focused on whether the disorders have been adequately classified along the spectrum and the degree to which disorders share a similar treatment response. Indeed, as indicated above, PH would benefit little from treatment applied to other disorders on the spectrum (e.g., response prevention, as utilized with OCD).

However, despite the predominant focus of PH along the impulsive side of the spectrum and the problems arising from the OCD conceptual influence, the OCSD model advances a useful concept in understanding the heterogeneous presentation of PH. That is, the model suggests that compulsivity and impulsivity may co-occur, either simultaneously or at different times, within a particular disorder (Grant & Potenza, 2006). As indicated, this hypothesis has received some empirical support, both with regard to behavioral disorders in general (e.g., eating disorders) and with PH, in particular.

Clearly, based on existing data, an adequate conceptualization of PH must allow for the inclusion of impulsive and/or compulsive features. While the OCSD model allows for such symptom heterogeneity within a particular disorder, several limitations remain (Swerdlow, 2002). As indicated above, these problems include, for example, the tendency to classify PH along the impulsive end of the spectrum, the conceptual

influence of the OCD model, and the degree to which treatments are similar for disorders included on the spectrum.

Interestingly, although not often recognized, the addiction model adequately accounts for such duality (i.e., impulsivity and compulsivity). In fact, in one of the original definitions of PH based on the addiction model, Goodman (1993) stated that the function of excessive sexual behavior was both to produce pleasure and provide escape from pain, which highlighted the divergent motivations underlying such behavior. More recently, Koob (2006), in his model of drug addiction, described addictive behavior as a progression from impulsivity (i.e., using the substance for pleasure) to compulsivity (i.e., using the substance to escape from negative emotional states). The progression from impulsivity to compulsivity may occur among individuals experiencing PH but research addressing this issue is needed. Despite the potential utility of the addiction model as a conceptual model for PH, several problems have been reviewed above, including the widespread and ambiguous use of the term *addiction* and the application of treatment models which conflict with recent theoretically informed rehabilitation models (e.g., the Good Lives Model; Ward & Gannon, 2006; Ward & Stewart, 2003).

The Sexual Desire Disorders Model and Problematic Hypersexuality

Given the problematic application of current conceptual models to the heterogeneous presentation of PH, a consistent diagnostic and conceptual framework is needed. Recently, Kafka (2001, 2007) has proposed an alternative model of PH focused on culturally normative sexual outlets (i.e., Paraphilia Related Disorders or PRDs). As indicated earlier, PRDs exhibit many similar features with paraphilias (e.g., persistence of fantasies and clinical manifestation) but differ in that the former are generally culturally

acceptable modes of sexual expression. Importantly, individuals with PRDs do not necessarily exhibit paraphilic behaviors and individuals with the latter do not always demonstrate PRDs.

Kafka has provided three criteria, consistent with DSM nomenclature, which can be used to operationally define this construct. Specifically, Criterion A requires that, over a period of six months, the individual has experienced recurrent, intense sexually arousing fantasies, sexual urges, or behaviors involving culturally normative aspects of sexual expression that increase in frequency or intensity so as to significantly interfere with the expression of the capacity for reciprocal, affectionate activity. Criterion B states that these fantasies, sexual urges, or behaviors cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. Lastly, Criterion C requires that the fantasies, urges, or activities do not occur exclusively during an episode of another primary Axis I psychiatric condition, psychoactive substance abuse, or a general medical condition.

Based on the current review, there are several advantages of the sexual desire disorder model of PH, as compared to current conceptualizations. For example, the model provides considerable detail with regard to specific sexual behaviors characterizing PH, which are noticeably absent within current nosological systems and such behaviors have received increasing empirical support (Kafka, 2001, 2007). Additionally, and most importantly, Kafka's conceptualization is not bound to current explanatory models (i.e., models based on addiction, compulsivity, or impulsivity) with predetermined etiological mechanisms underlying the behavior and motivational drive states guiding the individual. As indicated earlier, current data pertaining to motivational

states underlying PH have demonstrated complexity both between and within clinical samples and the application of one-dimensional models precludes an adequate description of the disorder. Despite these advantages, it should be noted that the research investigating the phenomenological characteristics of PH is preliminary and future research may indicate the utility of previous conceptualizations, or models which have yet to be described.

Diagnostic Implications

Given that accurate conceptualization and adequate diagnosis of psychological disorders informs effective treatment, it is unfortunate that such discrepancy is evident throughout the literature pertaining to PH. Moreover, individuals with PH experience a variety of adverse social, physical, and legal consequences (Kafka, 2007; Långström & Hanson, 2006) and thus, an adequate conceptualization of this syndrome is necessary.

Currently, evaluators are presented with several diagnostic options related to PH but have limited information pertaining to appropriate classification. Importantly, several disorders are often associated with excessive sexual behavior and/or sexual themes and therefore, must be considered when formulating diagnoses. For example, bipolar disorder, cyclothymic disorder, and substance-induced mood disorder have all been associated with sexual excess but in such cases, a *diagnosis* of PH would not be warranted (Schneider & Irons, 1996). Also of note, a diagnosis of OCD, although considered by some to be an adequate conceptualization of PH, is not a sufficient diagnosis, as the current nosology (APA, 2000) states that: “Some activities, such as....sexual behavior (e.g., paraphilias)....when engaged in excessively, have been

referred to as 'compulsive'. However, these activities are not considered to be compulsions as defined in this manual..." (p. 461-462).

As indicated earlier, individuals presenting with PH are diagnosed within one of three taxonomies (Paraphilias, Sexual Disorders (NOS), or ICD (NOS)). If the recurrent/intense sexually arousing fantasies, urges, or behaviors characteristic of PH are focused on nonhuman objects, the suffering or humiliation of oneself or one's partner, or children/nonconsenting partners then a diagnosis of the relevant paraphilia is indicated. However, if individuals engage in behavior, which is culturally normative, albeit excessive (i.e., PRDs; Kafka, 2007), then an evaluator is left with the other two diagnostic options. First, the sexual disorder (NOS) diagnostic category, accounting for clinical presentations inconsistent with current diagnostic nomenclature, allows for such an inclusion but so too, does the NOS category within the Impulse-Control Disorders, Not Elsewhere Classified section of the DSM-IV-TR. Unfortunately, the DSM provides no guidance on which of the latter two classifications is most appropriate.

This present review has highlighted several problems in applying the ICD model. Clearly, utilizing an ICD (NOS) diagnosis with individuals presenting with PRDs assumes a one-dimensional perspective of motivational drive-states, which are not entirely supported in the literature. As such, it is suggested that evaluators utilizing the DSM-IV-TR apply a diagnosis of sexual disorder (NOS) and use the descriptor *paraphilia-related disorder* along with the type of PRD (e.g., protracted promiscuity) in order to explicate the relevant mental disorder.

Most recently, Briken et al. (2007) have taken Kafka's formulation and proposed a diagnostic algorithm which differentiates between paraphilic and nonparaphilic sexual

disorders. First, clinicians determine the presence of three criteria: (a) recurrent, volitional impairment involving sexual fantasies, urges, or behaviors, over a period of 6 months; (b) criterion for clinical significance; and, (c) the disturbance is not better accounted for by another mental disorder or medical condition. Following this, a distinction is made between culturally normative sexual outlets (e.g., masturbation, pornography use) and paraphilic sexual outlets (i.e., sexual behavior involving nonhuman objects, the suffering or humiliation of oneself or one's partner or children/nonconsenting partners), which identifies the presence of a PRD or paraphilia, respectively. Finally, comorbidity is indicated only if the two modes of sexual expression are independent and not indicative of symptomatic progression.

Briken and colleagues algorithm successfully highlights the importance of differentiating non-paraphilic and paraphilic hypersexuality; however, there are some limitations. In particular, Criterion B emphasizes clinical distress but does not include necessarily acting on the sexual urges/fantasies. Problems resulting from this have been reviewed elsewhere (see Kingston et al., 2007; Marshall, 1997) and include, for example, neglecting individuals (e.g., pedophiles) who have acted on their urges without accompanying distress.

Based on this review, the evidence now justifies a refinement in the classification of PH for future editions of DSM. Specifically, individuals who experience disinhibited sexual urges, fantasies and/or behaviors involving culturally normative aspects of sexual expression should be accounted for in future nosological systems in order to facilitate effective treatment. As indicated, Kafka's criteria are best suited to account for such clinical presentations.

Treatment Implications

A comprehensive review of treatment modalities for PH is beyond the scope of this paper (see Adams & Robinson, 2001; Carnes, 1989; Kafka, 2007); however, treatment is formulated from theoretical mechanisms hypothesized to underlie such behavior and, as such, Kafka's sexual disorders model offers several advantages. Primarily, evaluators using this conceptualization are not bound to one-dimensional explanatory models, which have shown to be inadequate, and thus the model allows for the possible existence of impulsive and/or compulsive traits in individuals exhibiting PH.

Differentiating compulsive and impulsive motivational mechanisms among individuals with PH has important treatment implications. Impulsivity, in particular, is a trait associated with decreased treatment efficacy, which is most likely due to the difficulty in motivating such individuals to stop pleasurable activity (Moeller & Dougherty, 2002; Oldham et al., 1996). Recently, Maccallum, Blaszczyński, Ladouceur, and Nower (2007) provided support for the negative association between impulsivity and treatment success in an examination of 60 pathological gamblers attending treatment. Results indicated that lower levels of impulsivity was associated with better treatment response in addition to a non-significant trend toward treatment completion, when compared to individuals with higher levels of impulsivity.

The above research suggests that compulsive and impulsive features evident within individuals are important treatment considerations. That is, individuals predominantly driven by impulsivity would benefit substantially, and perhaps require, intensive motivational interviewing techniques in order to facilitate both treatment completion and successful treatment outcome, whereas individuals guided by

compulsivity may benefit little from this approach. Clearly, an explanatory model allowing for the inclusion of either (or both) motivational driving mechanisms is important for understanding and treating individuals suffering from PH.

Conclusions

Classification systems are intended to elucidate etiological mechanisms, symptom profile, and facilitate effective treatment. Unfortunately, several contradictory explanatory models have been utilized to explain PH and clinicians and researchers have typically adopted one descriptive model and have applied it to all individuals presenting with PH. Consequently, it is not surprising that there is a lack of consensus regarding definition and symptom presentation. Specifically, OCD and ICD descriptions offer a one-dimensional perspective on motivational mechanisms, which contrasts with recent data indicating an inter-relationship among compulsive and impulsive components. Although the addiction model accounts for such diversity, the limitations noted earlier in the present review, preclude the uncritical acceptance of this conceptual perspective.

As such, Kafka (1997, 2007) and Briken et al. (2007) have pointed to the utility of the sexual desire disorders model, as the most applicable conceptualization for PH. Kafka, in particular, has provided criteria for individuals exhibiting disinhibited sexual behavior with accompanying distress surrounding culturally normative sexual outlets. This paper argues that future editions of DSM include these criteria to allow adequate classification of such individuals, who have previously been inconsistently allocated to inadequate diagnostic categories. The benefits for such allocation were discussed and specifically allow for the assessment of motivational drive-states important for the design and implementation of treatment.

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