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COMMENTARY

Response to Commentaries: Recognizing Hypersexuality as a Psychosexual Behavioral Problem and Advancing the Sexhavior Cycle of Hypersexuality

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We acknowledge the authors of the six commentaries on our Target Article, "Hypersexuality: A Critical Review and Introduction to the Sexhavior Cycle" (Walton, Cantor, Bhullar, & Lykins, 2017a), and value their contribution to advancing the clinical discussion on hypersexuality. As with many published literature reviews, there are likely to be areas of consensus and recognition, disagreement and criticism, and several observed limitations among colleagues.

We hope that discussion on the current Target Article may (1) inform readers, health professionals, and researchers about the diverse understanding, complexity, and heterogeneity of hypersexuality; (2) assist professionals to evaluate when presentations indicate either clinically relevant hypersexuality or normophilic behavior at the higher end of sexual functioning and arousal; (3) provide an update about advances in the research on hypersexuality as a distinct disorder, condition, or psychological problem and highlight mechanisms by which it variously occurs; and (4) enhance the assessment, management, and well-being of clients who continue to report psychological distress as a consequence of hypersexual-related behavior.

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Commentaries and New Research on Hypersexuality (Walton, Cantor, Bhullar, & Lykins, 2017b, c, d)

The first author recently conducted three studies on self-reported hypersexuality as part of his Ph.D. candidature at the University of New England, New South Wales, Australia. Specifically, Studies 1 and 2 comprised a sample of 1559 cisgender[1] men, cisgender women, transgender men, transgender women, and intersex participants who were recruited internationally using an online survey (Walton et al., 2017b, c). A total of 279 (17.9%) participants exhibited clinically relevant hypersexuality on Studies 1 and 2. Study 3 involved the recruitment of 31 self-reported "sex addicts" (19 cisgender men, 11 cisgender women, and 1 genderfluid participant) who completed online a 1-month daily diary of their sexual arousal/activity (Walton et al., 2017d). Several key findings on each of these studies are briefly reported in our discussion of the common themes identified by commentators.

Common Themes

Various common themes were identified among the commentaries and each is addressed in turn. These themes relate to (1) finding a parsimonious model of hypersexuality; (2) sex addiction; (3) diagnostic concerns; (4) differentiation; (5) clarification; (6) early investigation of the sexhavior cycle of hypersexuality; and (7) recognition of hypersexuality as a psychosexual behavioral problem.

[1] *Cisgender* refers to a person whose sense of personal identity and gender matches their birth sex.

Theme 1: Finding a Parsimonious Model of Hypersexuality

Commentators generally found the review of the various theories of hypersexuality useful to the discussion on how the problem has been variously conceptualized (Kingston, 2017; Ley & Grubbs, 2017; Prause, 2017; Reid & Grant, 2017). Terms such as sexual impulsivity and sexual compulsivity were recognized as metaphors that described features known to be associated with hypersexuality rather than indicating a parsimonious model that is scientifically falsifiable and clinically relevant (Prause, 2017; Reid & Grant, 2017). Additionally, the theories discussed did not consider the different life trajectories that may be associated with distinct dimensions of hypersexuality and underlying mechanisms (Knight & Graham, 2017). As such, multiple etiologies are likely to variously coexist/exist to explain the heterogeneity of hypersexuality (Finlayson, Sealy, & Martin, 2001; Kafka, 2010; Kingston & Firestone, 2008; Knight & Graham, 2017; Walton, Cantor, & Lykins, 2017e; Winters, Christoff, & Gorzalka, 2010).

We recognize the limitations of various conceptualizations of hypersexuality discussed, particularly given the heterogeneity and complexity of the condition. Further, we recognize that limited experimental research (including neuroscientific research) has rigorously tested these theories/metaphors of hypersexuality to either confirm or disprove their validity (Prause, 2017; Reid & Grant, 2017). Notwithstanding the observed limitations of the theories discussed, we suggest that diverse understandings of hypersexuality—including the newly proposed sexhavior cycle of hypersexuality—may inform research of relevant risk factors, symptoms, and predictive mechanisms. For example, research has consistently found that correlates of impulsivity, depression, and anxiety relate to hypersexuality and, as such, our conceptual understanding of hypersexuality (in part) as an impulsive- and/or compulsive-related condition may have assisted clinical research. Indeed, Walton et al.'s (2017b) Study 1 results found that 52 (18.6%) participants, who self-reported clinically relevant hypersexuality, characterized a distinct profile indicated by co-occurring features of clinical depression and anxiety, high impulsivity, and a high propensity for sexual excitation/arousal.

Theme 2: Sex Addiction

The sex addiction model continues to divide peers, with clinical opinions strongly expressed either for or against its scientific veracity. Indeed, during the extensive peer review process that occurred prior to publication of the Target Article, we received varied feedback about the validity of sexual behavior as an addiction. Carnes and Love (2017) also acknowledged that case presentations of hypersexuality are diverse and may include non-addiction-related conceptualizations, which underscores the importance of proper differential diagnosis.

To date, alcohol and various substances are recognized in the Substance-Related and Addictive Disorders Section of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), as is the behavior of gambling which is listed as a non-substance-related disorder (American Psychiatric Association, 2013). Additionally, in the Emerging Measures and Models Section of DSM-5, caffeine use disorder and internet gambling disorder are conditions designated for further study. Indeed, sexual behavior may be considered as an addictive disorder in a future revision of DSM or the *International Classification of Diseases* (ICD) (World Health Organization, 1992, 2016)

Prause (2017) reported that sufficient data existed to falsify the addiction model which had the "poorest empirical support" of the models discussed. In contrast, Carnes and Love (2017) stated that "chronic engagement in natural rewards, including sexual behaviors, can result in addiction-related alterations to the brain," for which there is "plentiful" empirical support. As such, Carnes and Love described that addiction is not "about sex," as people who struggle with sex and pornography addiction "are no more 'horny' than alcoholics are 'thirsty' or food addicts are 'hungry'"; it is about the neuroscience of addiction. Specifically, the American Society of Addiction Medicine (2011) defined addiction as:

> characterized by an inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.
>
> Addiction is a primary chronic disease of brain reward, motivation, memory, and related circuitry. Addiction affects neurotransmission and interactions within reward structures of the brain, including the nucleus accumbens, anterior cingulate cortex, basal forebrain, and amygdala, such that motivational hierarchies are altered… Addiction also affects neurotransmission and interactions between cortical and hippocampal circuits and brain reward structures, such that the memory of previous exposures to rewards (such as food, sex, alcohol, and other drugs) leads to a biological and behavioral response to external cues, in turn triggering craving and/or engagement in addictive behaviors.

The neurological focus on addiction is reported to revolve around the frontal lobes which are important in inhibiting impulsivity and assisting individuals to delay gratification. During adolescence and young adulthood, early exposure to rewards such as sex is reported to be a significant factor in the development of addiction as frontal lobe morphology, connectivity, and functioning are in

the process of maturation (American Society of Addiction Medicine, 2011).

Prause (2017) stated "The excuse Walton et al. [2017a] provided for covering un-falsifiable neurobabble is that it would be impossible to research 'ethically…the neurobiology of hypersexual persons when they are at peak levels of sexual arousal.'" The Oxford Living Dictionary defines the word "babble" as meaning to blither, blather, blabber, and run off at the mouth (Oxford University Press, 2017). We did not state that it was impossible to ethically research individuals at peak levels of sexual arousal, although we wrote:

> To date, the neurobiology of sex addiction has been difficult to empirically research and validate. For example, ethically, how do researchers explore the neurobiology of hypersexual persons when they are at peak levels of sexual arousal? In addition, it is unclear whether a repeated pattern of hypersexuality, for such individuals, is associated with neurological changes to the motivation-reward system and/or whether pre-existing reward sensitivity predisposes these individuals to poorly regulate their sexual behavior.

Hypersexual persons often experience high states of sexual arousal related to various stimuli and paraphilic and/or non-paraphilic sexual interests/behaviors. As such, it may be challenging for researchers to naturally and neurobiologically replicate peak states of arousal in a laboratory. Additionally, neurobiological assessment of individuals during high states of sexual arousal may be ethically problematic to conduct, for example, at a men's sex club, public sex beat, or swingers sex on premises venue.

Theme 3: Diagnostic Concerns

We suggested that by definition clinically relevant hypersexuality indicated a pattern of recurrent, intense, and excessive preoccupation with sexual fantasies, urges, and behaviors that individuals struggle to control and which is associated with significant psychological distress, impairment, and adverse consequences (Walton et al., 2017a). As such, hypersexuality as a clinical condition includes both observable symptoms (e.g., high frequency of sexual activity and arousal) and subjective symptoms (e.g., perception that one's sexual activities are uncontrollable).

Commentaries identified an ongoing difficulty with defining and measuring hypersexuality as a distinct disorder. A further difficulty in recognizing hypersexuality as a clinical disorder has been to reliably establish "How much sex is considered too much sex?" This question has continued to elude researchers with respect of constructing a continuum of sexual activity and establishing reliable cutoff scores that measure hypersexual-related behavior (Kingston, 2017). Research suggests that hypersexuality typically relates to higher sexual activity, in particular on masturbation and sexual fantasy compared to non-hypersexuality (Blum, Badgaiyan, & Gold, 2015; Griffee et al., 2012; Klein, Rettenberger, & Briken, 2014; Starks, Grov, & Parsons, 2013; Walton, Lykins, & Bhullar, 2016).

In contrast, Reid and Grant (2017) found that hypersexuality is not always indicated by high rates of sexual activity, although clinically significant personal distress or impairment is generally a core feature of the condition. Indeed, some hypersexual and non-hypersexual people exhibit similar patterns of sexual activity that quantitatively ranges from low to high in its sexual activity frequency, but about which non-hypersexual persons are mostly not overly distressed compared to hypersexual persons (Walton et al., 2016). To clarify, some hypersexual people may regularly engage in covert sexual encounters initiated online or procure escort services without the knowledge of their spouse/partner. Yet, for such hypersexual persons, their overall rate of sexual intercourse or masturbation is not overly concerning or dissimilar than non-hypersexual persons who are happily married and not engaged in extradyadic sexual activities. As such, when considering hypersexuality as a clinical condition, health professionals should assess clients' intensity and frequency of sexual arousal; underlying rates of sexual activity and related psychological distress; and the broader context in which sex occurs.

Evidence also suggests that some hypersexual persons engage in very high rates of sexual activity frequency and about which they are distressed. For example, in the pre-screening survey used in Study 3 (Walton et al., 2017d), a 19-year-old heterosexual cisgender male self-reported that he was receiving treatment for clinical depression. He also reported personal rates of masturbation and sexual fantasies on the basis of four or more times per day and regularly spent over 14 h each week engaging in solo masturbation and pornography use. Additionally, he further stated that his hypersexuality was most severe at 15 years of age when he would have up to "50 orgasms a day" while watching pornography. As such, we ask, is this young man's presentation indicated by hypersexuality, dysregulated sexual desire, addiction, or simply normophilic sexual behavior?

Braun-Harvey and Vigorito (2016) suggested that hypersexual-related behavior is more characteristic of a psychosexual behavioral problem, in which sexual urges, cognitions, and behaviors feel out of control, rather than an addiction process or sexual disorder. In this context, hypersexuality is primarily considered a behavioral problem that is heterogeneous in its origin and presentation, and exists within a normal range of sexual functioning to which a cluster of underlying risk factors differentially relate. Hypersexuality that is conceptualized as a psychosexual behavioral problem recognizes that some individuals require professional help to manage their sexual behavior and resolve associated distress rather than individuals receiving the gravitas of a diagnosis that indicates a hypersexual-related disorder (Cantor et al., 2013, Walton et al., 2017a). Recognition of hypersexuality as a psychosexual behavioral problem may overcome the clinical difficulty of interpreting potentially unreliable cutoff scores applicable to diagnosing the condition as a disorder, yet acknowl-

edges the psychological distress typically associated with the problem.

Prevalence is unclear when hypersexuality is conceptualized as a psychosexual behavioral problem; however, evidence suggests that presentations of hypersexuality are not 100% explainable as a behavioral problem. To date, there is clinical recognition that hypersexuality is symptomatic of various psychological disorders such as bipolar and related disorders; personality disorders (e.g., borderline personality disorder); neurocognitive disorders (e.g., Parkinson's disease); and to a lesser extent as a consequence of a medical condition or drug therapy (American Psychiatric Association, 2013; Grabowska-Grzyb, Naganska, & Wolanczyk, 2006; Kataoka, Shinkai, Inoue, & Satoshi, 2009; Metin, Ozmen, Ozkara, & Ozmen, 2013; Munhoz, Fabiani, Becker, Helio, & Teive, 2009; Shapiro, Chang, Munson, Okun, & Fernandez, 2006). Additionally, given that high rates of clinical depression and anxiety relate to hypersexuality, it is possible that hypersexuality is a diagnostic feature for some presentations of major depressive disorder and generalized anxiety disorder.

Mood disorders (e.g., major depressive disorder) and anxiety disorders (e.g., generalized anxiety disorder) are conditions consistently found to be associated with hypersexuality (Bancroft et al., 2003; Black, Kehrberg, Flumerfelt, & Schlosser, 1997; Kafka & Hennan, 2002; Kuzma & Black, 2008; Nair, Pawar, Kalra, & Shah, 2013; Raymond, Coleman, & Miner, 2003; Rooney, Tulloch, & Blashill, 2017). Specifically, a meta-analytic assessment of 19 studies ($N = 3783$) found a moderate positive correlation ($r = .34$) between non-paraphilic hypersexuality and depressive symptoms, and findings were also consistent irrespective of gender, sexual orientation, and age (Schultz, Hook, Davis, Penberthy, & Reid, 2014). More recently, Walton et al. (2017b) found in Study 1 that approximately 60 (21.5%) hypersexual participants exhibited severe depressed mood and 50 (17.9%) indicated severe anxiety. On average, all participants in Study 3 ($N = 31$) reported moderate depressed mood and anxiety.

Prause (2017) stated "Walton et al. [2017a] lament the exclusion of hypersexual disorder (HD) from DSM-5." We did not report that hypersexuality should have been included as a distinct sexual disorder in DSM-5, although substantial empirical evidence exists that suggests hypersexuality is a psychological problem, but probably not for all presentations. As such, we stated in the Target Article:

> We also suggest that further research is required to validate whether hypersexuality is a behavioral disorder (such as gambling), although some presentations of the condition appear to be symptomatic of a heterogeneous psychological problem that requires treatment.

Theme 4: Differentiating the Sexhavior Cycle of Hypersexuality and Sexual Response Cycle

Some commentators reported that the sexhavior cycle of hypersexuality is similar to the sexual response cycle (Carnes & Love, 2017; Prause, 2017; Reid & Grant, 2017). Specifically, Masters and Johnson (1966/2010) proposed a sexual response cycle which suggested that four physical phases occur sequentially when persons are sexually aroused to engage in sexual behavior (Fig. 1). These physical phases are known as excitement, plateau, orgasm, and resolution. The sexual response model suggests that one's pattern of sexual response typically fits the four physical stages described. To date, however, a sexual behavior model has not been developed for hypersexual persons to explain the maintenance cycle and neuropsychology of hypersexuality.

We suggested that hypersexuality may be better understood within the context of the sexhavior cycle of hypersexuality (Fig. 2) (Walton et al., 2017a). Indeed, for some people, the sexhavior cycle may help to explain a repeated pattern or cycle of sexual arousal and activity, the frequency and intensity of which is unique to the individual and may be experienced as hypersexuality. Specifically, the sexhavior cycle suggests that the cycle of sexual behavior comprises four distinct stages described as sexual urge, sexual behavior, sexual satiation, and post-sexual satiation. These stages in the sexhavior cycle are considered to sequentially occur unless the sexual urge is sometimes resisted, suppressed, or dissipated because daily circumstances or inhibition disrupts sexual arousal. Additionally, depending upon the intensity of one's sexual arousal and the circumstances in which it occurs, multiple sexhavior cycles may successively occur, which are separated by brief periods of time between post-sexual satiation and the onset of a new sexual urge.

The sexhavior cycle of hypersexuality also recognizes that cognitive, emotional, and biophysical processes occur concurrently during the described stages of the cycle and about which individuals may be variously aware or unaware. Cognitions, emotions, and biophysical symptoms that relate to hypersexu-

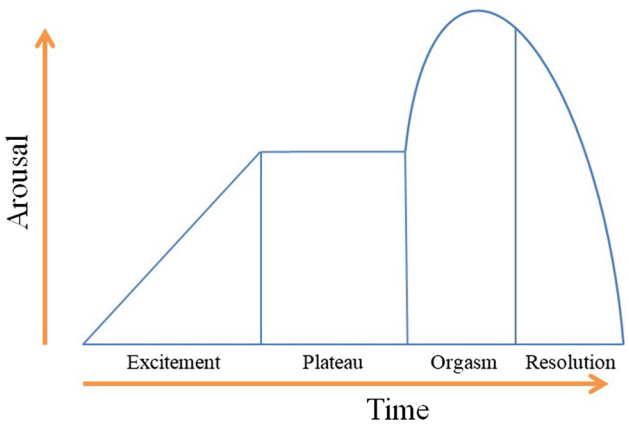

Fig. 1 Adapted version of the sexual response cycle (Masters & Johnson, 1966/2010)

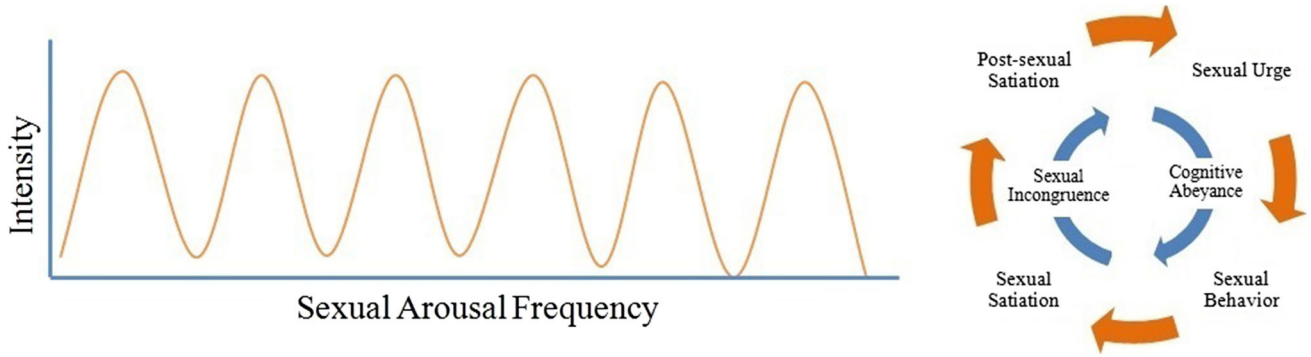

Fig. 2 Sexhavior cycle of hypersexuality (Walton, 2017)

ality are potentially distinct and experienced differently compared to people who do not report that their sexual behavior is hypersexual. The sexhavior cycle of hypersexuality also suggests that, for some people, high sexual arousal may temporarily and adversely impact cognitive processing (cognitive abeyance) and explain a repeated pattern of psychological distress when interpreting one's sexual behavior (sexual incongruence) (Walton et al., 2017a). The model also recognizes that sexual arousal/activity may vary among potential dimensions/sub-types of hypersexuality currently under investigation (Knight & Graham, 2017), whereas psychological distress is generally a consistent feature of the condition.

Taken together, we suggest that the sexhavior cycle of hypersexuality is different from the sexual response cycle. Specifically, the sexhavior cycle of hypersexuality (1) recognizes that individuals uniquely and differentially engage in sexual behavior within a cycle of sexual arousal that is often perceived and/or experienced as frequent and intense, and (2) is represented by a four-stage model of sexual urge, sexual behavior, sexual satiation, and post-sexual satiation. In contrast to the sexual response model, the sexhavior cycle of hypersexuality also recognizes that neurobiopsychological features co-occur within the four-stage cycle described. As such, the sexhavior cycle of hypersexuality represents a testable model and potentially useful clinical tool that may assist individuals to better understand and monitor their sexual behavior (Kingston, 2017).

Theme 5: Clarification of the Sexhavior Cycle of Hypersexuality

The sexhavior cycle of hypersexuality does not predict why a sexual urge variously occurs in people, given the heterogeneity of hypersexuality and while clinical dimensions remain under investigation. A revised version of the model could include mechanisms and dimensions of hypersexuality as they become empirically known. Indeed, Knight and Graham (2017) suggested that dimensions of hypersexuality could be mapped onto the sexhavior cycle of hypersexuality. Knight and Graham suggested that two dimensions of hypersexuality are high sex drive and problematic overuse of sexual behavior to regulate psychological distress. Additionally, we suggest that another dimension of hypersexuality may relate to imbalances in brain systems and chemistry that arise as a symptom of exogenous substances (e.g., drugs of abuse), a general medical condition or psychological disorder (e.g., bipolar), or various neurocognitive disorders (e.g., Parkinson's disease) (American Psychiatric Association, 2013; Metin et al., 2013; Politis et al., 2013; Weintraub et al., 2006, 2010).

Kingston (2017) noted that the sexhavior cycle of hypersexuality is conceptualized as substantively linear in its progression rather than a dynamic process. As such, Kingston suggested that some individuals may transition back and forth, particularly between the stages of sexual urge and sexual behavior, before they progress through the stage of sexual satiation and post-sexual satiation to complete the cycle. We suggest that for many individuals who experience successive orgasms, the time duration is compressed between sexual satiation and commencement of a new sexhavior cycle. For example, over the course of an evening, hypersexual people may have sex with multiple partners at a sex club and between the stage of sexual satiation and onset of a new sexual urge, these individuals may briefly intersperse their sexual activities with various non-sexual activities (e.g., smoking a cigarette).

Additionally, Kingston (2017) reported that there are instances whereby individuals exhibit reduced cognitive functioning during heightened states of sexual arousal. Kingston also reasonably indicated that hypersexuality involves some level of executive planning to execute hypersexual-related behavior (e.g., individuals who repetitively conceal their sexual encounters from others). Therefore, how is it that some individuals when in heightened states of sexual arousal can cognitively execute hypersexual-related behavior, yet also dismiss the potential risks and consequences of undertaking such activity, which typically they are later distressed about.

Cognitive abeyance suggests that during heightened states of sexual arousal some individuals experience inactivity, deferment, suspension, or diminution of logical cognitive processing (Walton et al., 2017a). As such, we suggest that during height-

ened states of sexual arousal, hypersexual persons frequently misappraise, dismiss, or fail to appropriately consider the risks, rewards, and consequences of their sexual behavior, i.e., past, present, or future. Indeed, when hypersexual persons are in a state of cognitive abeyance they are likely to operate from a euphoric or highly excited disposition. For some individuals, high states of sexual arousal may relate to cognitive attention that is selective and yet highly focused on responding to a sexual urge, which at times feels omnipresent and consuming (Bancroft & Vukadinovic, 2004; Carnes, 1983/2001; Phillips, Hajela, & Hilton, 2015; Walton et al., 2017d).

As such, cognitive research is required to reliably understand the role of cognitive processing (or lack thereof) while individuals are engaged in hypersexual-related activity. Indeed, Walton et al. (2017d) found that the primary cognitions (and emotions) of many self-reported "sex addicts" at the stage of sexual urge and sexual behavior related to sexual excitation/arousal and a perceived need for sex. Similarly, Pachankis, Rendina, Ventuneac, Grov, and Parsons (2014) found hypersexuality is associated with sexual cognitions related to a perceived need for sex.

Theme 6: Early Investigation of the Sexhavior Cycle of Hypersexuality

Walton et al. (2017b) performed a latent profile analysis (LPA) on Study 1 data and identified three distinct profiles of features of hypersexuality that each related to varying levels of sexual excitation/inhibition, personality, and mood variables. In particular, a high propensity for sexual excitation (arousal) featured consistently among the three profile groups identified.

It has also been posited that impulsivity may be a core feature for some presentations of hypersexuality (Kingston, 2017; Reid, Berlin, & Kingston, 2015; Walton et al., 2017e). Indeed, hypersexuality has been suggested for inclusion in the ICD-11 as an impulse control-related disorder (Grant et al., 2014). Walton et al.'s (2017b) Study 1 results found that a combination of high general impulsivity and sexual excitation featured on two of the three profiles identified by a LPA, which related to 188 (67.4%) individuals who self-reported clinically relevant hypersexuality ($N = 279$).

Findings from Study 2 indicated that hypersexuality typically related to higher sexual behavior and fantasy, and hypersexual participants' first developed an interest in sex at an earlier age than non-hypersexual participants (Walton et al., 2017c). In contrast, in Study 2, when comparing hypersexual and non-hypersexual participants who engaged in high rates of pornography use, the results were less significant on various measures of sexual activity frequency. The non-significant differences found in the rates of sexual activity among high users of pornography replicated the findings of Grubbs, Stauner, Exline, Pargament, and Lindberg (2015). Indeed, Grubbs et al. found that an individual's perceived addiction to online pornography uniquely predicted their psychological distress, whereas their level of pornography use did not.

Results based on Study 3 data found that many individuals exhibited cognitions, emotions, and biophysical symptoms that were consistent with high sexual arousal and the four-stage model conceptualized by the sexhavior cycle of hypersexuality (Walton et al., 2017d). Similarly, previous research has found that hypersexual individuals (particularly men) are prone to a higher propensity for sexual excitation/arousal compared to the general population (Bancroft et al., 2003, 2004; Kafka, 2003; Rettenberger, Klein, & Briken, 2016; Walton et al., 2017e; Winters et al., 2010). In his commentary, Kingston (2017) also reasonably queried about when does negative emotionality of guilt and shame feature in the sexhavior cycle of hypersexuality. Consistent with previous research, our findings based on Study 3 indicated that guilt and shame featured more strongly at post-sexual satiation, as did primary cognitions that related to negative emotionality (Walton et al., 2017d).

Research suggests that men are up to five times more likely than women to report hypersexual-related behavior (Black et al., 1997; Kaplan & Krueger, 2010; Kuzma & Black, 2008; Walton et al., 2017c), which in part may be attributable to men generally experiencing higher and more frequent sexual arousal than women. Indeed, sexual arousal is probably one of the underlying mechanisms related to hypersexuality, but when sexual arousal is interpreted in isolation from other factors, it may not adequately explain the condition. In Study 3, 19 cisgender men reported lower intensity of sexual arousal than 11 cisgender women over the 1-month daily diary study (Walton et al., 2017d). Participants' intensity of sexual arousal was recorded either on days when participants were sexually aroused and not engaged in sexual behavior or on days when their sexual arousal translated into sexual behavior. These results are consistent with the sexhavior cycle of hypersexuality which suggests that the neuropsychology and maintenance cycle of the condition is more complex than simply attributing hypersexuality to high sexual arousal.

Taken together, findings by Walton et al. (2017b, c, d) indicate that some aspects of the sexhavior cycle have validity in the conceptualization, assessment, and management of hypersexuality. Indeed, following participants completion of the daily diary, some individuals reported a greater self-awareness of their thoughts, emotions, and biophysical symptoms when sexually aroused and also had a better understanding of their sexual cues, triggers, and rates of sexual activity. However, as commentators have correctly indicated, further research is required to demonstrate empirical adequacy of the sexhavior cycle of hypersexuality, either in its present form or in a revised form (Kingston, 2017; Ley & Grubbs, 2017; Reid & Grant, 2017).

Theme 7: Recognition of Hypersexuality as a Psychosexual Behavioral Problem

Two studies by Walton et al. (2017b, e) found that 373 individuals (18%; $N = 279$, 17.9%; $N = 94$, 18.4%) self-reported clinically relevant hypersexuality as measured on the Hypersexual Behavior Inventory (HBI) (Reid, Garos, & Carpenter, 2011). That is, approximately 18% of respondents in two sample populations reported that (1) they regularly used sex as a coping strategy; (2) their sexual behavior felt out of control; and (3) adverse consequences arose from their sexual behavior. The results were remarkable because each of the two surveys was promoted as an opportunity to participate in an "Adult Sexual Behavior Survey" rather than an investigation of hypersexuality. In addition, the two surveys recruited diverse participants internationally and were conducted at separate time intervals in 2012 and 2015.

We suggest that clinically relevant hypersexuality in the general population is unlikely to be indicated by a prevalence rate of 18%. Respondents' scores on the HBI in Walton et al. (2017b, e) were more likely to indicate differential rates of unease and concern about one's sexual activity, either generally or at the time the surveys were completed. Ley and Grubbs (2017) indicated that this high prevalence potentially reflected an "important finding about human sexuality" that may have implications for modern sex education. Indeed, a significant proportion of the general population may have various subclinical sexuality issues, which in some cases are indicated by a psychosexual behavioral problem.

Additionally, many of the 18% of respondents who self-reported hypersexuality in our research were unlikely to have requested clinical assistance of the problem, particularly as prevalence of hypersexuality is variously estimated at 3–6% and barriers to accessing treatment are said exist (Carnes, 1991; Coleman, 1992; Dhuffar & Griffiths, 2016; Kuzma & Black, 2008; Odlaug et al., 2013). Indeed, people incur life challenges, relational problems, and psychological difficulties that they self-manage with varying degrees of resilience, proficiency, and success. In such circumstances, individuals' psychological concerns may range between subclinical and clinical rates of personal distress, which is either resolved or self-managed over time without a necessity for psychological intervention.

In contrast, assessments of hypersexuality are becoming more common in forensic contexts, but accepted diagnostic criteria and mandated referrals of offenders to empirically based treatments are somewhat lacking (Ley & Grubbs, 2017; Prause, 2017). Walton et al. (2017a) theorized that, for some people, cognitive abeyance exists to help explain the neuropsychology of hypersexuality. However, although high states of sexual arousal may adversely impact cognitive processing, we do not consider that typically an individual's sexual behavior is substantively beyond one's self-control. As such, the clinical profession has a responsibility to recognize that hypersexuality or sex addiction may be used as a legal defense to abrogate some clients of personal responsibility for sexual offenses that they have allegedly committed. Therefore, clinical assessments of hypersexuality, particularly those tendered in legal settings, should carefully consider the extent to which self-control exists during sexual arousal/activity. Indeed, further research is required to specifically evaluate individuals' cognitive behavioral processes and locus of self-control at the stage of sexual urge and sexual behavior. Research is also required to examine the extent to which individuals not only psychologically "perceive" but also neurobiogically "experience" sexual arousal/activity as hypersexual.

Codification of common behaviors in DSM-5 and ICD-11 is viewed by some sections of society as clinicians' unnecessarily pathologizing normal behavior (Balt, 2011). We are concerned, however, for those individuals whose hypersexuality is associated with clinically relevant psychological distress, risky sexual behavior, and who present for professional help. In the absence of hypersexuality being indicated as a symptom of an existing clinical disorder or medical condition, or acknowledged as a distinct hypersexual-related disorder, we suggest that clinically relevant hypersexuality should be recognized as a psychosexual behavior problem in DSM-5 and ICD-11. Recognition of hypersexuality as a psychosexual behavioral problem represents a sex-positive, non-judgmental, and non-pathologizing approach (Braun-Harvey & Vigorito, 2016) to compassionately working with individuals who experience an ongoing difficulty with regulating their sexual behavior.

In DSM-5, the status-quo of specifically limiting the recognition of hypersexuality as a symptom of an existing disorder is inadequate for the various presentations before clinicians. Indeed, it is improbable to consign all presentations of hypersexuality as a symptom of various disorders in DSM-5 and ICD-11, although it is likely that some forms of hypersexuality are indicated by subclinical expressions of recognized disorders such as bipolar. Taken together, before considering hypersexuality as a psychosexual behavioral problem, clinicians should assess hypersexuality as either a clinical or subclinical symptom of an existing psychological disorder.

Formal recognition of hypersexuality as a psychosexual behavioral problem in DSM-5 and ICD-11 does not preclude its future recognition as a distinct disorder for a nucleus of presentations. Indeed, acknowledgement of hypersexuality as a distinct disorder has historically been debated by advocates who are either for or against its clinical recognition. To recognize hypersexuality as a distinct disorder (Kafka, 2010; Reid et al., 2012) would diagnostically require empirical adequacy that an individual's sexual urges, fantasies, and behaviors (over a period of at least 6-months) are (1) repeatedly and excessively engaged; (2) related to repeated and unsuccessful efforts to moderate one's sexual behavior; (3) associated with significant psychological distress or impairment; (4) a risk of physical or emotional harm to self or others; and (5) not due to the direct physiological effects of exogenous substances, or a symptom of an existing disorder or medical condition.

Final Comments

We thank the *Archives of Sexual Behavior* for publishing the Target Article and peers who provided insightful, critical, and diversely researched commentaries on the topic of hypersexuality. Additionally, we thank participants involved in our research who shared personal stories about their ongoing struggles to manage hypersexual-related behavior. We suggest "it is time" that hypersexuality is recognized as a psychosexual behavioral problem in DSM-5 and ICD-11. Indeed, it is appropriate that the profession recognizes what clients have long known; that is, for a diverse range of reasons, some people report a clinical problem regulating their sexual activity and managing related psychological distress.

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