

A Surprising Finding Related to Executive Control in a Patient Sample of Hypersexual Men

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ABSTRACT

Introduction. Patients seeking help for hypersexual behavior often exhibit features of impulsivity, cognitive rigidity, and poor judgment as well as deficits in emotion regulation and excessive preoccupation with sex. Some of these characteristics are also common among patients presenting with neurological pathology associated with executive dysfunction. Exploring relationships between dysregulated sexual behavior and executive deficits will enhance our understanding of hypersexuality.

Aim. This study sought to assess whether patients seeking help for hypersexual behavior exhibit executive deficits as measured by standardized neuropsychological tests of executive functioning when compared with healthy controls.

Methods. Executive deficits were assessed in a sample of male patients (N = 30) seeking help for hypersexual behavior compared with a nonhypersexual community sample of men (N = 30) using neuropsychological tests of executive functioning. Using multivariate statistics, differences between the groups were examined.

Main Outcome Measures. Sexual activity measured by the Hypersexual Behavior Inventory and the Compulsive Sexual Behavior Inventory. Executive functions measured through neuropsychological testing using several subtests of Delis–Kaplan Executive Function System: Color–Word Interference Test, the Tower Test, the Trail Making Test, the Verbal Fluency Test, as well as the Wisconsin Card Sorting Test. Psychopathology was assessed using the Mini International Neuropsychiatric Interview, and cognitive ability was assessed using the Wechsler Adult Intelligence Scale.

Results. Significant differences on measures of hypersexuality were observed. However, the groups failed to exhibit significant differences across neuropsychological tests of executive functioning even after controlling for cognitive ability.

Conclusions. These results contradict a previous finding of executive deficits among hypersexual men measured by self-report. The lack of executive deficits suggests that this population may exhibit domain-specific aspects of impulsivity, poor judgment, and risky behavior that are not generalizable to other domains of life. Furthermore, our findings fail to support a conceptualization of the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, proposed hypersexual disorder based on models of executive dysfunction. **Reid RC, Garos S, Carpenter BN, and Coleman E. A surprising finding related to executive control in a patient sample of hypersexual men. J Sex Med **;**,**:**_**.**

Key Words. Hypersexual Disorder; Sexual Compulsivity; Executive Functioning; Deficits in Emotion Regulation

Introduction

Hypersexuality is frequently discussed as a sequela of other medical conditions such as brain injury [1–3], degenerative disorders [4,5], or temporal lobe deficits such as epilepsy and Kluver–

Bucy syndrome [6,7]. Medication effects [8,9] and endocrinological factors [10] have also been implicated in the etiology of some manifestations of hypersexuality. However, there is mounting evidence suggesting that hypersexual behavior can exist as a primary condition independent of any

apparent medical etiology with consequences warranting both medical and psychological interventions [11–16].

The notion of excessive or uncontrolled sexual behavior has its historical roots in medicine, dating back to the early references to “hyperesthesia,” a condition characterized by Richard von Krafft-Ebing that involved abuse of one’s self and an abnormally increased and intense libido [17]. Krafft-Ebing coined the terms “satyriasis” and “nymphomania,” which remain in the sexual taxonomy of behavior in the International Classification of Diseases, 10th edition, under “sexual dysfunction, not caused by organic disorder or disease.” Although previous versions of the Diagnostic and Statistical Manual of Mental Disorders (DSM) included references to “sexual addiction” in the category of a nonparaphilic Sexual Disorder Not Otherwise Specified (DSM-III-R [18]), it was discontinued in subsequent manuals largely due to a lack of empirical research validating the phenomenon [19]. Over the past decade, however, a growing body of research about hypersexual behavior has emerged, leading to a renewed interest and proposed classification criteria for patterns of hypersexuality in the forthcoming DSM-V [13,14,20–22].

The proposed diagnostic criteria for the DSM-V characterize hypersexual disorder (HD) as a repetitive and intense preoccupation with sexual fantasies, urges, and behaviors, leading to adverse consequences and clinically significant distress or impairment in social, occupational, or other important areas of functioning [13,22]. One defining feature of this proposed disorder includes multiple unsuccessful attempts to control or diminish the amount of time the individual engages in sexual fantasies, urges, and behavior in response to dysphoric mood states or stressful life events [13,14,23,24]. Despite a constellation of studies investigating characteristics of HD (usually defined in the literature as sexual addiction, sexual compulsivity, or hypersexual behavior), little is known about the neuropsychological correlates of this phenomenon, including possible associations with executive functioning.

Hypersexuality and Executive Function

Executive functions refer to a variety of mental processes necessary for adaptive behavior. Cognitive processes linked to executive functions include inhibition of behavior, impulse control, nonverbal and verbal working memory, emotion regulation,

motivation and arousal, planning, organization, decision making, judgment, task monitoring, attention, problem solving, hypothesis generation, abstract thinking, and cognitive flexibility [25–29]. Interestingly, there is evidence to suggest that patients exhibiting characteristics of hypersexual behavior may experience executive dysfunction across several of these domains apart from identifiable brain pathology. For example, common factors associated with hypersexual behavior and impairments in executive function include (i) difficulty with impulse control; (ii) poor judgment and decision making; (iii) emotional dysregulation; (iv) rumination or cognitive rigidity; and (v) difficulties with sustained attention necessary for task monitoring and behavior modification [30]. It is reasonable, therefore, to investigate executive deficits in hypersexual patients given research indicating executive dysfunction in other populations with poor impulse control, emotion regulation, and decision making such as individuals with substance-related disorders, [31–33] those with eating disorders [34–36], and pathological gamblers [37–39].

One imaging study investigated frontal functioning associated with executive control among hypersexual patients who displayed symptoms of the HD criteria [40]. When diffusion tensor imaging procedures were used to compare a small sample of hypersexual patients ($N = 8$) with healthy controls ($N = 8$), hypersexual patients showed lower diffusivity in the brain tissue in the superior frontal region of the brain and made more errors of commission and omission during a Go/No-Go procedure assessing impulse control. Additionally, patients with greater impulsivity self-reported higher levels of sexual compulsivity. Together, these findings suggest that brain regions implicated in executive functioning may be compromised in HD patients. However, these results should be interpreted with caution since the majority of the patient sample had a history of alcohol abuse or dependence and since no provisions were made to control for patients with adult attention deficit/hyperactivity disorder (ADHD), making it difficult to determine whether cortical differences and performance on measures of impulsivity were related to hypersexuality, substance misuse, or other pathology already known to be associated with frontal deficits and executive control.

Only one other previously published study has attempted to examine executive control among hypersexual patients [30]. A treatment-seeking patient sample of hypersexual individuals ($N = 87$)

was compared to healthy controls ($N = 92$) using the Behavior Rating Inventory of Executive Function-Adult Version (BRIEF-A [41]), a self-report measure of executive functioning. This study controlled for adult ADHD and comorbid substance abuse, with results yielding significant differences between the groups across eight of the nine subscales and all of the general indices of executive functioning, the most dramatic differences occurring on BRIEF-A subscales Shift, Emotional Control, Initiate, and Plan/Organize. Hypersexual behavior was positively correlated ($r = 0.37$, $P < 0.01$) with global indices of executive dysfunction as well as with several subscales of the BRIEF-A. These findings [30] provide preliminary evidence supporting the hypothesis that executive dysfunction may be implicated in hypersexual behavior. However, beyond anecdotal observations and one study that employed self-report measures, no studies to date have investigated executive control in hypersexual patients using objective neuropsychological tests. Thus, the purpose of this study is to extend previous findings by comparing executive functioning in a sample of hypersexual men with a community sample of healthy controls using several standardized neuropsychological assessments.

Method

Participants

The patient sample in this study consisted of men seeking treatment for hypersexual behavior at outpatient clinics predominantly located in Los Angeles, California. Patients were primarily recruited through referrals from their primary provider from clinics that specialized in the treatment of sexual issues including sexual addiction. Sexually active subjects for the community-based control group were recruited from Utah and California via advertisements placed online, on community bulletin boards, by word of mouth, and from students and spouses of students in community college evening classes. Subjects in the control group were matched as closely as possible to the patient sample based on age, years of education, and income. Demographic information for both groups is presented in Table 1. Self-reported compulsive sexual behavior for men in the patient group is reported in Table 2.

Procedure

Patients and healthy controls that consented to participate completed a demographic survey along

Table 1 Sample demographic information

	Patients N = 30	Controls N = 30
Age: mean (SD)	33 (8)	28 (6.7)
Range	19–49	22–57
Years of education: mean (SD)	15.6 (2.2)	15.6 (2.1)
Mean income	\$40–60 K	\$40–60 K
Sexual orientation		
Heterosexual	26	29
Gay	4	1
Ethnicity		
Caucasian	28	30
Asian/Pacific Islander	2	—
Relationship status		
Married	13	16
Never married	12	12
Divorced	2	—
Separated	3	1
Cohabiting	—	1

with measures of cognitive ability, measures of hypersexuality, and neuropsychological tests of executive function. Participants also received a diagnostic clinical interview to assess for Axis I disorders, including adult ADHD. The structured diagnostic interviews were conducted using the Mini International Neuropsychiatric Interview and were administered by two doctoral-level clinicians with 8+ years of experience. One clinician was trained in neuropsychology, the other in psychiatry. Exclusion criteria included any history of head injury, concussion, color blindness, cortical neurotoxins, stroke, or alcohol or drug abuse. Participants with any history of a neurological or neuropsychiatric condition or adult ADHD were also excluded given these confounds might better account for executive deficits or influence sexual desire [42]. Referring clinicians were made aware of these exclusion criteria, and thus less likely to refer clients with comorbid conditions. All procedures were approved by the sponsoring university's institutional review board.

Table 2 Self-reported compulsive sexual behavior in patient group

	Patients % who engage in behavior
Masturbation	67
Pornography	63
Solicitation of sex workers	23
Multiple extra-dyadic affairs*	27
Unprotected sex w/multiple partners	17
Sexual massage parlors	17
Cybersex	13

*Two men in heterosexual marriages had several affairs with gay men but self-identified as heterosexual.

In the clinical interview, participants were asked about the degree to which they use sex to cope with stress or uncomfortable emotions, consequences they have experienced as a result of their sexual choices, and ways in which they may have felt unable to control their sexual behavior. For patients referred for the hypersexual group, classification as such was verified based on elevated scores on the hypersexuality measures and (i) a reported pattern of hypersexual behavior that persisted for at least 6 months; (ii) reported preoccupation with sexual thoughts, urges, and the pursuit of sexual activities that interfered with at least two aspects of their daily life (e.g., academic or scholastic goals, work, parenting); and (iii) reported experiencing at least one significant consequence (e.g., contraction of a sexually transmitted disease [STD], loss of employment, debt, arrest, relational discord) as a result of their sexual behavior. Healthy participants were recruited from the community and received the same procedures. These participants were retained as controls if they had scores below the cutoffs on the measures of hypersexuality, denied symptoms of hypersexuality, and met the other study requirements. Based on these criteria, five patients and six controls were eliminated, which resulted in our final sample of hypersexual patients ($N = 30$) and healthy community controls ($N = 30$).

Measures

Hypersexual Behavior Inventory

The Hypersexual Behavior Inventory (HBI) is a 19-item, three-factor, self-report measure scored on a five-point Likert format (1 = never to 5 = very often) with possible scores ranging from 19 to 95 [43]. Confirmatory factor analysis has replicated the factor structure, and the HBI items demonstrate good validity and reliability (alpha coefficients range from 0.89 to 0.95) [15,44,45]. Scale items reflect the DSM-V proposed classification criteria for HD, including engaging in sex in response to stress (e.g., “Doing something sexual helps me cope with stress”); dysphoric mood (e.g., “I turn to sexual activities when I experience unpleasant feelings”); multiple unsuccessful attempts to diminish or control sexual thoughts, urges, and behaviors (e.g., “Even though I promised myself I would not repeat a sexual behavior, I find myself returning to it over and over again”); and impairments in social, occupational, or other important areas of functioning (e.g., “My sexual thoughts and fantasies distract me from accom-

plishing important tasks”). Respondents with HBI scores ≥ 53 are classified as hypersexual.

Compulsive Sexual Behavior Inventory

The Compulsive Sexual Behavior Inventory (CSBI) is a 28-item, two-factor, self-report measure developed to assess sexual control, abuse, and violence [46,47]. Cronbach’s alpha for the subscales ranged from 0.88 to 0.96. Confirmatory factor analysis supports the two-factor structure, and the scale items demonstrate adequate reliability and validity. The present study used the Control subscale.

Wechsler Adult Intelligence Scale—Fourth Edition

The Wechsler Adult Intelligence Scale—Fourth Edition (WAIS-IV) is one of the most widely used batteries of cognitive ability and consists of several subtests that collectively generate a Full-Scale Intelligence Quotient score (FSIQ). This WAIS-IV has demonstrated good reliability and validity and has been standardized with large normative and patient samples. The psychometric properties are available in the user manual [48]. The FSIQ score was used in the present study as a covariate to control for confounds that could potentially influence performance on tests of executive functioning.

Wisconsin Card Sorting Test

The Wisconsin Card Sorting Test (WCST) is a test commonly used to measure aspects of executive function such as concept formation, set shifting, abstract reasoning, cognitive flexibility, and response inhibition. The test assesses the ability of the subject to solve problems in response to changing stimuli and to utilize feedback. During the test, subjects are required to sort cards according to different categories (color, form, number). Following a series of correct category placements (e.g., sorting cards by color), the sorting rule is changed without notice. Thus, the sorting principle for the new rule is not made explicit and requires participants to deduce it from the verbal feedback received after each card placement. Various studies support the role of frontal lobe integrity in WCST performance using neuroimaging techniques and frontal brain lesion subjects [49,50]. The 128-item computerized version of the WCST was used in this study. The test psychometrics are reported to be adequate and are noted in the user manual [51].

Delis–Kaplan Executive Function System

The Delis–Kaplan Executive Function System (D-KEFS) is a battery of nine executive function

tests that have demonstrated good reliability and validity and have been standardized with large normative and patient samples [52]. Four subtests were selected for the present study: Color–Word Interference Test, Tower Test, Trial Making Test, and Verbal Fluency Test. Scoring for each of these tests requires the conversion of raw scores to scaled scores so comparisons can be made between tests. A brief description of each subtest is provided below, and further information can be obtained in the published user manual [52].

Color–Word Interference Test

This test was developed based on the original Stroop Color–Word Test and measures response inhibition, selective attention, vigilance, and cognitive flexibility. Examinees are required to say the color of the ink and inhibit the natural or more automatic response to read the word, which is presented in a different color than what the word states (e.g., the word “blue” is printed in red ink). An additional condition requires switching between naming the dissonant ink colors and reading the word if it appears inside a box. Scores incorporate time to completion and self-corrected and uncorrected errors.

Tower Test

This test measures spatial planning, rule learning, inhibition of impulsive and perseverative responding, and the ability to establish and maintain an instructional set. The examinee is required to move disks of varying size across three pegs to build a designated tower using the fewest number of moves possible. A total achievement score represents the number of disk moves required to correctly reproduce the designated towers within the allotted time constraints. The examinee is also observed for any rule violations throughout the test.

Trail Making Test

This test extends the structure of the original version by providing five different conditions with increased specificity to assess functions and by controlling for skills that may covary with the examinee’s abilities. It captures aspects of motor speed, sequencing, cognitive flexibility, sustained and divided attention, and inhibition of perseverative responding. The primary condition of interest requires examinees to draw a line in an alternating pattern connecting numbers and letters (e.g., 1, A, 2, B, and so forth). Scores are generated on completion time and consider sequencing errors of omission and commission.

Verbal Fluency Test

This test requires examinees to spontaneously generate words beginning with the letters F, A, and S. Each letter is allotted 60 seconds. The areas of executive function assessed with this test include cognitive flexibility, response inhibition, and verbal fluency. Scores are generated based on the number of words generated in compliance with the instructions. Deductions are made for words that violate the rules (e.g., saying the name of a person).

Mini International Neuropsychiatric Interview (MINI 6.0)

The MINI is a structured diagnostic clinical interview used to assess DSM-IV-TR psychopathology along the Axis I domains and includes a module that assesses for adult ADHD. It is widely used, and the psychometric properties have been established and reported in the literature [53].

Results

To examine whether there were differences between subjects in the hypersexual and control groups on hypersexuality and executive function, two multivariate analyses of variance (MANOVAs) were conducted. The two groups were approximately equal in education and income and showed a modest but significant difference in age and FSIQ. When age and FSIQ were entered as covariates in our analysis, the overall results reported below were unaltered.

Hypersexuality

Because of the modest sample sizes and number of dependent variables, analyses were conducted hierarchically. Dependent variables that were conceptually related were subject to a MANOVA to examine group differences. When significant differences were found, univariate *F*s were computed to determine which of the individual dependent variables showed group differences. Comparing groups on hypersexuality, as measured by the HBI and CSBI, indicated that patients scored higher than controls on indices of hypersexual behavior (Wilks’ $\lambda = 0.230$, $F[2,57] = 95.56$, $P < 0.001$). As shown in Table 3, univariate analyses revealed that both the HBI and CSBI differed significantly between patients and control, and that effect sizes were large. The controls showed a slightly higher score on the covariate, FSIQ ($M = 126.8$, $SD = 11.8$ vs. $M = 119.5$, $SD = 10.9$), compared to the hypersexual sample.

Table 3 Group differences among scores for executive functions and hypersexuality

Study variables	Controls N = 30		Patients N = 30		F	η^2
	M	SD	M	SD		
Hypersexuality						
HBI: Total Score	32.93	11.74	74.70	11.47	194.27*	0.77
CSBI: Control Subscale	26.73	9.81	48.07	5.75	105.65*	0.65
Executive Functions						
WCST (T-scores)						
Total Errors	54.37	8.72	51.40	8.85	1.71	0.03
D-KEFS (Scaled Scores)						
Trails-4 Letter-Number Seq.	12.17	1.49	11.47	1.33	3.69	0.06
Trails-4 Errors	0.37	0.56	0.40	0.72	0.04	0.00
Letter Fluency	13.30	3.59	12.23	3.87	1.23	0.02
Color-Word Condition 3	10.83	2.39	9.97	2.84	3.82	0.06
Color-Word Condition 4	11.20	1.76	10.40	2.99	2.93	0.05
Tower Test Total Score	12.27	2.42	11.13	2.24	3.54	0.06

* $P \leq 0.001$. All other P values are nonsignificant at $P < 0.05$.

Executive Function

For executive function, as measured by the WCST and the six indices of the four subscales of the D-KEFS, a MANOVA was first performed, followed by univariate comparisons between groups. There were no significant differences between groups (Wilks' $\lambda = 0.846$, $F[7,52] = 1.35$, $P = 0.245$) across all subscales. Although subsequent examination of univariate analyses was not supported in this case, they are presented in Table 3 for comparison. Again, these results were not meaningfully altered when using age, education, and FSIQ as covariates.

Discussion

The current investigation examined differences across scores on objective neuropsychological tests of executive functioning in a group of hypersexual male patients compared with a nonhypersexual community sample of men. Subjects were matched on age, years of education, income, and cognitive ability as measured by FSIQ. Group comparisons were examined yielding significant differences on measures of hypersexuality. Surprisingly, and in contrast to previous research using self-report measures [30], the groups failed to exhibit significant differences across all of the neuropsychological tests of executive functioning.

There are a number of potential explanations as to why executive deficits did not emerge among the patient sample in this study despite a pattern of impulsive and risky sexual behavior. First, difficulties in executive functioning of a magnitude that would show up on performance-based measures may be present in only a subset of hypersexual

patients, making such a difference more difficult to detect in a more heterogeneous sample of hypersexual men. Second, it is possible that the neuropsychological tests of executive functions were not sensitive to detect subtle deficits that may have existed in the patient sample [54]. Third, it may be that hypersexual men may exhibit impaired judgment, difficulty with impulse control, and cognitive rigidity but only in situations where they encounter opportunities for sex. Unfortunately, the design of this study was not context specific, and this is clearly an area of investigation worth pursuing in future research. We may not have sufficiently assessed or emphasized the correct elements of apparent "executive deficits" found among hypersexual patients. For example, cognitive flexibility may be a candidate for a focused approach, and the heterogeneity of the executive function (EF) construct could allow for this. Similarly, the most relevant forms of EF might be domain specific. In other words, hypersexual men may indeed exhibit impaired judgment, difficulty with impulse control, cognitive rigidity, and so forth only in situations where they encounter opportunities for sex or are exposed to specific cues that have been paired with sex. This perspective would be consistent with emerging literature on decision making, impulsivity, and risk-taking behavior that now challenges long-held assumptions that such propensities constitute a stable personality trait across various life domains such as health, finances, and social contexts [55]. Rather current research appears to favor impulsivity constructs and risk-taking characteristics as a domain-specific phenomenon [56]. Inhibition and impulsivity have also been shown to be neurobio-

logically heterogeneous [56,57]. Thus, the findings from the present study discount the possibility of a generalized deficit in executive function among this sample and support a context- or domain-specific deficit for impulse control. Finally, given that several univariate tests approached significance, a similar study conducted with a larger sample might yield sufficient power to obtain more robust results.

One strength of the current investigation was that the sample of hypersexual patients did not have comorbid disorders (e.g., ADHD, substance abuse) that could have confounded our results. On the other hand, this lack of comorbidity might explain the absence of significant differences between patients and controls. The importance of our methodology cannot be underemphasized, as research exploring executive functioning in subjects diagnosed with adult ADHD, for example, has consistently produced evidence of deficits across scores on self-report [58], objective neuropsychological testing [59,60], as well as neuroimaging exploring executive control [61,62]. Thus, it is likely that hypersexual patients who also are diagnosed with adult ADHD would show deficits in executive functioning. The same can be said for hypersexual patients with comorbid substance-related disorders.

Hypersexuality has shown associations with a number of other clinical attributes beyond ADHD, most notably neuroticism (e.g., anxiety, depression, stress vulnerability). Even though subjects with comorbid Axis I disorders were not included in this study, subclinical levels of these conditions may have been present in some hypersexual subjects. This raises the question of how comorbid conditions might contribute to impairments in the executive function of hypersexual patients. However, we see no reason to suggest that such comorbid conditions might enhance executive functioning so as to compensate for hypersexuality impairment (in effect, masking a real difference). Future studies might further answer this question with full controls on comorbidity using full diagnostic procedures rather than full exclusion from the study as was done here.

Despite the surprising finding that emerged in our data, we acknowledge several limitations to our study. First, our data are correlational and therefore do not address issues of causality or interactive effects on hypersexual behavior. The small sample size and lack of ethnic variation also limits the generalizability of our results. Similarly, caution is warranted in generalizing our results to nontreatment-seeking men.

Additionally, we recognize that religion may be a relevant moderating variable in investigations of sexual issues and that a small number of subjects were recruited from a religiously conservative area. We did not include a measure of religiosity in our design, as past research conducted by our team in multisite studies that included subjects specifically from the same geographic location (Utah) found no significant differences on measures of hypersexuality and psychopathology across different regions [43]. Moreover, our results are consistent with other studies examining potential confounding factors associated with religiosity where no influence has been found [63]. We acknowledge, however, that the failure to account for potential differences in our findings that might be attributed to the intersection of sex and religious beliefs, such as restrictive sexual attitudes toward sexuality [64], could be considered a limitation of this research.

Conclusions and Directions for Future Research

Given the limitations of objective neuropsychological assessments, more definitive indices of cognitive function should be considered in future investigations of cortical structures that may be associated with hypersexuality. For example, neuroimaging studies highlighting neuroanatomical characteristics of hypersexuality or biophysiological data generated from brain maps using quantitative electroencephalography should be pursued to elucidate possible etiological factors associated with hypersexual behavior. We recommend that future investigations of this type follow our design in controlling for comorbidity, especially attention deficit and substance-related disorders.

While debates continue as to what constitutes normative vs. “excessive” sexual behavior, there is empirical evidence to suggest that individuals who score “high” on measures of hypersexuality are more likely to engage in other high-risk behaviors such as drug use and cigarette smoking [65] and suffer higher rates of depression and anxiety [66–68]. Other consequences of high-risk sexual behavior include the transmission and contraction of STDs [69,70], unplanned pregnancies [71], decreased sexual satisfaction, and relationship distress [72–75]. One explanation for the increased incidence of patients seeking help for hypersexual behavior may be related to the extensive variety of sexual experiences now offered via the Internet [76,77], the exploration of which may fuel sexual

curiosity and experimentation and, in some cases, result in legal consequences [78].

Hypersexual patients appear, like many treatment-seeking populations, to be a heterogeneous group [45]. This is also true for populations exhibiting other forms of impulsivity, such as pathological gamblers [79–81]. Moreover, it is important to note that personality traits such as impulsiveness or neuroticism are not characteristic of all hypersexual patients. While many hypersexual patients lack comorbid disorders such as substance abuse or adult ADHD [66,67], a recent study reported a 23% prevalence rate of comorbid adult ADHD among hypersexual patients [82]. Thus, more studies are needed to better understand how these two conditions interact and what role the neurobiology of ADHD may play in exerting an influence on hypersexual activity.

Recent incidences of “compulsive sexual behavior” and “sexual addiction” in public media have called greater attention to hypersexual behavior. Hypersexual behavior is a complex and often hidden disorder due to the shame, guilt, and fear that is often associated with this phenomenon and misunderstandings about the broad range of sexual repertoire [83] in human sexual relations. Thus, until patients feel more able to be open about difficulties controlling their sexual activities, allied health professionals in the field of sexual medicine should consider hypersexual behavior as a possible explanation for a subgroup of patients who present with persistent sexual difficulties that are not better explained by more “obvious” circumstances or conditions.

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Statement of Authorship

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