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Sexual Addiction 25 Years On: A Systematic and Methodological Review of Empirical Literature and an Agenda for Future Research

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In 1998, Gold and Heffner authored a landmark review in Clinical Psychology Review on the topic of sexual addiction that concluded that sexual addiction, though increasingly popular in mental health settings, was largely based on speculation, with virtually no empirical basis. In the more than two decades since that review, empirical research around compulsive sexual behaviors (which subsumes prior research about sexual addiction) has flourished, ultimately culminating in the inclusion of a novel diagnosis of Compulsive Sexual Behavior Disorder in the eleventh edition of the World Health Organization's International Classification of Diseases. The present work details a systematic review of empirical research published between January 1st, 1995 and August 1st, 2020 related to compulsive sexual behaviors, with a specific focus on evaluating the methodologies of that literature. This review yielded 371 papers detailing 415 individual studies. In general, the present review finds that, although research related to compulsive sexual behaviors has proliferated, much of this work is characterized by simplistic methodological designs, a lack of theoretical integration, and an absence of quality measurement. Moreover, the present review finds a virtual absence of high-quality treatment-related research published within this time frame. Implications of these findings for both clinical practice and future research are discussed.

Keywords: Behavioral Addiction; Hypersexuality; Pornography Addiction; Sexual Addiction; Compulsive Sexual Behavior Disorder

A little more than two decades ago, Gold and Heffner (1998) published a pivotal paper in *Clinical Psychological Review* about the nature of "sexual addiction." At the time, the concept—popularized by Patrick Carnes fifteen years earlier (Carnes, 1983)—was gaining increasing attention in clinical settings and in popular media. However, after thoroughly reviewing the available empirical literature, Gold and Heffner concluded that, "The literature on this topic [sexual addiction] consists largely of theory and conjecture based almost entirely on clinical observation rather than on research findings" (Gold & Heffner, 1998, p. 379).

Since 1998, much has changed in clinical understandings of various phenomenon that might be related to sexual addiction. Research into compulsive, addictive, impulsive, or out-of-control sexual behavior has proliferated. The fifth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (hereafter: *DSM-5*) only narrowly excluded the diagnosis of Hypersexual Disorder, and the World Health Organization recently elected to include the diagnosis of Compulsive Sexual Behavior Disorder (hereafter: CSBD) in the forthcoming eleventh edition of the *International Classifications of Diseases* (hereafter: *ICD-11*). In short, the knowledge base regarding non-paraphilic out-of-control sexual behaviors has indeed moved substantially forward in the past two decades.[1] As such, the purpose of the present work was to conduct a systematic review of literature published since 1995 on behaviors that might fall under the greater umbrella of sexual addiction, provide an updated summary of research with a particular focus on methodology, and discuss areas of consideration for both clinical translation and research focus.

Evolution of Sexual Addiction in Research Literature

Out of control sexual behaviors have been described by physicians since the early 19th century (Rush, 1812), though descriptions of people with excessive or voracious sexual appetites can be found in various histories and mythologies that long predate such medical attention. However, it was not until the latter half of the 20th century

[1] Given the recognition of CSBD in the ICD-11, for the remainder of the present work, we use Compulsive Sexual Behavior (or CSB) to refer to non-paraphilic out-of-control or dysregulated sexual behavior patterns, despite past literature's use diverse terms such as sexual addiction, compulsive sexual behavior, hypersexuality, and similar terms.

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that these ideas began to receive academic attention, with some of the earliest works on out of control sexual behaviors labeling the presentation of these phenomena "hypersexuality." Although the early literature and case reports describing hypersexuality often lacked rigor, substance, or clarity (Orford, 1978), these works underscored the potential for hypersexuality to be of research and clinical importance and led to novel conceptualizations of problematic sexuality, especially that of "sexual addiction."

In 1983, Patrick Carnes first introduced the concept of sexual addiction to clinical audiences in his work *Out of the Shadows: Understanding Sexual Addiction*, which intensified interest in excessive sexual behaviors. This work provided clinical descriptions, etiological speculations, and treatment recommendations based on Carnes's experiences in treating what he had labeled sexual addiction (Carnes, 1983). At the time, little empirical work supported his claims, and initial reactions to Carnes' work and the general notion of sexual addiction were mixed (c.f., M. Levine & Troiden, 1988). Even so, a steady trickle of research described excessive or out of control sexual behaviors followed Carnes' early writings.

In the early to mid-1990s, a number of studies began to emerge detailing various aspects of "sexual addiction," "sexual compulsivity," and "compulsive sexual behavior." Much of this work was in the form of theoretical speculation (Goodman, 1992; Pincu, 1989; Sunderwirth et al., 1996) or case reports (Coleman, 1991, 1992). However, some empirical studies were conducted around this time (Hecker et al., 1995; Lundy, 1994), and the notion of sexual compulsivity (particularly among men who have sex with men) was the subject of various studies (Kalichman et al., 1994; Kalichman & Rompa, 1995).

Beginning in the late 1990s, research into out of control sexual behaviors began to accelerate, in part due to the advent of the internet and its subsequent uses for sexual purposes (Cooper, Putnam, et al., 1999; Delmonico & Carnes, 1999). Specifically, some empirical studies emerged at this time with a clear focus on the possibility for some people to get caught in patterns of compulsive or addictive sexual behaviors facilitated by technological mediums (Cooper, Scherer, et al., 1999; Delmonico, 1997; Delmonico & Carnes, 1999). Termed "cybersex," online activities such as chat rooms, digital infidelity, and internet pornography consumption were posited as being potential expressions of out-of-control sexual behavior (Delmonico, 2002). Indeed, empirical work during the same time supported this notion, showing that some people did report that their online sexual behaviors were excessive (Cooper, Delmonico, et al., 2000; Delmonico & Miller, 2003).

At the time, many of these problems were attributed to what Cooper and colleagues termed the "Triple A Engine," or the Anonymity, Affordability, and Accessibility of online sexual behaviors (Cooper, 1998; Cooper, McLoughlin, et al., 2000; Cooper, Scherer, et al., 1999). According to this model, the internet presented a unique space for out-of-control sexual behaviors due to the ease at which sexual content online could be accessed (accessibility), the privacy afforded by at-home internet service (anonymity), and the relatively low cost (affordability) of online sexual behaviors in comparison to more traditional means of engaging in such behaviors (i.e., buying pornography videos or magazines; soliciting prostitutes; frequenting strip clubs). Although intuitive, this model was not without its critics, and the only empirical study to actually test the model did not find support for it (Byers et al., 2004). Even so, research into out-of-control sexual behaviors, including, but not limited to, online sexual activities, continued to progress.

Interest into CSBs reached a tipping point during the development of the American Psychiatric Association's *DSM-5*. At this time, the diagnosis of Hypersexual Disorder was proposed for inclusion in the *DSM-5* (Kafka, 2010). Conceptualized as being related to both addictive disorders and sexual desire disorders, Hypersexual Disorder followed highly similar diagnostic criteria to those seen in other syndromes outlined in earlier versions of the DSM, namely Pathological Gambling, which was considered an impulse control disorder in the DSM-IV and later classified as an addictive behavior called Gambling Disorder in the DSM-5 and substance use disorders. Specifically, this proposed diagnosis required that the recipient of the diagnosis experience repetitive and impairing sexual behaviors, urges, or fantasies that consumed excessive time, were in response to negative emotions or stress, were uncontrollable despite efforts to control or reduce these symptoms, and that disregarded the well-being or safety of the self or others (Kafka, 2010). Importantly, to meet criteria for Hypersexual Disorder, sexual behaviors could not be attributable drug use or to the side effects of prescription drug use or manic episodes as these behaviors must have occurred as a result of the sexual urges themselves instead of being caused by external factors.

Field trials of Hypersexual Disorder found the disorder to be useful, reliably applied, and generally well-received by clinicians (Reid et al., 2012). However, Hypersexual Disorder was ultimately excluded from the DSM-5 due to a range of concerns related to diagnostic accuracy, moral and cultural confounds, and general skepticism from the psychiatric community (Kafka, 2014). Regardless, in the time since that decision, research into this domain has flourished, ultimately culminating in diagnostic recognition of specific cases of out-of-control sexual behaviors, as we explore below.

Compulsive Sexual Behavior Disorder in the ICD-11

The landscape of research related to out-of-control sexual behaviors again changed with the proposal and

subsequent inclusion of Compulsive Sexual Behavior Disorder (hereafter: CSBD) in the *ICD-11*. Similar to the excluded diagnosis of Hypersexual Disorder for the DSM-5, CSBD refers to persistent, repetitive engagement in sexual behaviors that results in impairment in one's life in addition to failed attempts to reduce or stop such behaviors (Kraus et al., 2018). The diagnostic criteria for this new disorder are included in Table 1.

Table 1. Diagnostic criteria for Compulsive Sexual Behavior Disorder for ICD-11

Essential (required) features for compulsive sexual behavior disorder:

- A persistent pattern of failure to control intense, repetitive sexual impulses or urges resulting in repetitive sexual behavior, must be manifested in one or more of the following:
  - 1a. Engaging in repetitive sexual activities has become a central focus of the person's life to the point of neglecting health and personal care or other interests, activities, and responsibilities (yes/no).
  - 1b. The person has made numerous unsuccessful efforts to control or significantly reduce repetitive sexual behavior (yes/no)
  - 1c. The person continues to engage in repetitive sexual behavior despite adverse consequences (e.g., repeated relationship disruption, occupational consequences, negative impact on health) (yes/no).
  - 1d. The person continues to engage in repetitive sexual behavior even when the individual derives little or no satisfaction from it (yes/no).
- 2. The pattern of failure to control intense, sexual impulses or urges and resulting repetitive sexual behavior is manifested over an extended period (e.g., 6 months or more) (Must be met)
- 3. The pattern of repetitive sexual behavior causes marked distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning (Must be met). *Note for rule out*. Distress that is entirely related to moral judgments and disapproval about sexual impulses, urges, or behaviors is not enough to meet this requirement.

The inclusion of CSBD in the ICD-11 has not been without its controversy, generating more commentary and critique than any other novel diagnosis considered for the ICD-11 (Fuss et al., 2019). This controversy in the public sphere mirrors the longstanding history of controversy around CSB related notions more generally, such as the use of such diagnoses to stigmatize some sexual behaviors and debates about how and when to consider certain sexual behaviors problematic. Dating back to early work on sexual addiction, attempts to diagnose excessive sexual behaviors as a discrete syndrome have been met with criticism for a variety of reasons (Levine & Troiden, 1988; S. B. Levine, 2010). Some critiques have focused on the potential of such diagnoses to stigmatize non-conforming sexual behaviors (Halpern, 2011), arguing that the choice to conceptualize certain behaviors as problematic is inherently biased against non-traditional sexual behaviors. Others have argued that the evidence in support of such disorders is lacking (Ley et al., 2014; Prause et al., 2017). Still, others have noted that application of such diagnoses may be complicated by extraneous variables such as client or therapist religiosity or client sexual orientation (Droubay & Butters, 2019; Grubbs, Kraus, et al., 2020; Klein et al., 2019). Despite these controversies, the recognition of this new disorder has highlighted the need for rigorous research into out-of-control sexual behaviors and has generated new interest within clinical psychology with regards to the appropriate classification of such behaviors (for example, see: Grubbs, Kraus, et al., 2020; Klein et al., 2019).

Conceptualizations of CSB

At present, CSBD has been included in the ICD-11 as an impulse control disorder. Even so, there is ongoing debate as to whether or not CSBs are rightly considered addictive, impulsive, or compulsive. The Working Group on Obsessive-Compulsive and Related Disorders proposed a conceptualization of CSBD as an impulse control disorder because individuals exhibiting this behavior repeatedly failed to resist such sexual impulses, drives, and urges which were, at some point, rewarding, despite long-term harm (Kraus, Krueger et al. 2018). Building on this conceptualization, the diagnostic criteria are written in such a way that essential features of CSBD are intended to be less rigid because they rely less on arbitrary cut-offs or symptom counts, rely more on objective indicators of impairment and dysregulation, and are meant to support the exercise of clinical judgment in assigning the diagnosis (First et al., 2015). However, one of the current challenges is drawing the clear distinction between addiction, impulsivity, and compulsivity, as these concepts overlap because impulses or urges to engage in repetitive behaviors are core features of addiction.

Strong impulses or compulsions are distinctive from addictions in that addiction is typically associated with additional features caused by the substance or behavior, including tolerance and withdrawal, whereas in impulse control disorders (e.g., kleptomania and pyromania) or compulsive disorders (e.g., obsessive compulsive disorder) the assumption is that the pathology lies primarily within the individual. Some evidence suggests that persons with CSB exhibit significantly higher levels of impulsiveness than healthy controls (Antons et al., 2019; Mechelmans et al., 2014; Miner et al., 2009; Reid et al., 2015), however, similar associations have been

observed in people with other addictive disorders, such as gambling (Specker et al., 1995), alcohol (Lejoyeux et al., 1999), or cocaine (Li et al., 2008) use disorders. In short, impulsivity is a feature of most addictive disorders, which suggests that distinguishing between impulse control disorder and addiction is not a straightforward endeavor.

Further, there are some studies on patients with CSBD that show comparable levels of impulsivity to patients with addictive disorders (gambling and drug use disorders) while also finding that only half of patients in all these groups show clinically elevated scores on measures of impulsivity (Reid, Cyders et al, 2014). Other studies have found no difference compared to healthy controls in terms of general impulsivity, but only specific increased sensitivity for erotic cues among individuals with CSBD (Gola et al., 2017). Such specific increases of sensitivity towards one category of cues is typical for addictive behaviors and has been well described by incentive salience theory as a main factor underlying craving in addiction (Olney et al., 2018). These studies, most of which use addiction related experimental paradigms, have sought to better understand the neurobiological underpinnings of CSB. In general, these studies have found that CSB is associated with altered functioning in brain regions and networks implicated in sensitization, habituation, diminished impulse control, and reward processing in patterns like substance, gambling, and gaming addictions (Kowalewska et al., 2018; Stark et al., 2018). In addition, studies looking at dopamine replacement therapies used for individuals with Parkinson's disease have also produced similar patterns of impulse control problems that resemble CSBD (Weintraub et al., 2010). As such, there is some research which suggests that, although CSBD fits the characteristics of an impulse control disorder, it also exhibits some of the same behavior specific impulses and reward processing as an addictive disorder.

Similar critiques can be made with regards to role of compulsivity in CSB and other addictive disorders. Specifically, addictions are inherently characterized by compulsions to seek a substance or behavior that provides neurological rewards (Koob, 2017). Although compulsions may characterize other disorders as well (e.g., compulsive checking in obsessive compulsive disorder), the compulsivity associated with CSBs more closely resembles the compulsivity seen in addictive disorders. Future research on CSBD may find more evidence to support an addictive classification in which case CSBD may follow a similar trajectory as pathological gambling which has transitioned from an impulse control disorder characterized by compulsive engagement in gambling to an addictive classification renamed gambling disorder in the DSM-5.

Moving beyond the substantive debates about the correct conceptualization of CSBD, there is evidence that the majority of laypeople view CSBs, such as excessive pornography use, as addictions (Burke & MillerMacPhee, 2020; Perry, 2019; Taylor, 2019). Many people believe that sexual behaviors can be addictive (Lang & Rosenberg, 2017, 2018), and when describing their own experiences with CSBs, addiction seems to be the most commonly used explanation (Cavaglion, 2008, 2009; Wordecha et al., 2018). In short, public perceptions of out-of-control sexual behaviors are most often couched in terms associated with addiction, regardless of the formal distinctions still debated in the research literature. This latter difference is not surprising, as scientists are focused on finding the most parsimonious theoretical model to explain a phenomenon while members of the public are typically interested in getting help for the phenomenon regardless of how it may be classified.

There is also considerable evidence that many people may interpret their sexual behaviors as addictive, compulsive, or out-of-control, even when their behaviors do not objectively appear to be dysregulated or clinically impairing (Burke & Haltom, 2020; Grubbs & Perry, 2019). That is, several studies (particularly in the U.S.) have found that many people are likely to experience moral qualms about their sexual behaviors which, in turn, seem to promote feelings of addiction or compulsion (Griffin et al., 2016; Hook, Farrell, Davis, et al., 2015; Hook, Farrell, Ramos, et al., 2015). Recently, in reference to pornography use specifically, this has been described as *moral incongruence*, which specifically refers to feelings that arise when one's actual pornography use behaviors are not in line with one's beliefs about pornography use (Grubbs, Perry, et al., 2019; Grubbs & Perry, 2019). Importantly, this moral incongruence can appear in clinical settings among those seeking help for their self-perceived out-of-control sexual behaviors (Cantor et al., 2013; Kraus & Sweeney, 2019).

The Present Study

Building on the above history, the purpose of the present work was to conduct a systematic review of published empirical literature since 1995 on the topic of CSB, broadly defined. The primary aims of the present work are 1) to examine the development of the CSB literature since Gold and Heffner's 1998 review, 2) describe the sample and general methodological characteristics of studies of CSB, 3) summarize clinical knowledge and recommendations for the assessment and treatment of CSB, and 4) identify areas of CSB research in need of further development.

Although reviews of CSB related topics have been conducted in the past, the majority of these reviews have been concerned with issues of conceptualization and assessment of CSB (i.e., Karila et al., 2014; Montgomery-Graham, 2017), pornography related behaviors only (i.e., de Alcarón et al., 2019; Efrati, 2020; Bőthe, Vaillancourt-Morel, et al., 2019), or conceptual frameworks for

understanding CSB (i.e., Walton et al., 2017; Briken, 2020). The present work seeks to more exhaustively review the literature in ways that more comprehensively establish the state of the science in this domain, with a particular emphasis on methodology. The present work also avoids systematically drawing conclusions about the legitimacy of CSB or CSBD as a distinct clinical syndrome or psychiatric diagnosis, nor does it evaluate the veracity of the novel CSBD diagnosis (or any previously proposed diagnoses) or how it should best be classified. Such debates are generally justified and are indeed occurring in various literatures at present (for examples, see: Kraus et al., 2016; Potenza et al., 2017; Prause et al., 2017; Reid & Grant, 2017). Regardless of these debates, however, research on CSB has proliferated over the past several decades. Accordingly, the present work seeks to summarize empirical literature related to CSB from the past 25 years, with a goal of broadly evaluating the methodological rigor and clinical implications of such literature.

As alluded to previously, the advent of the internet substantially changed the course of research related to CSB. As such, any serious consideration of CSB research must also consider technologically mediated CSBs. Additionally, given evidence that CSBs encountered in clinical practice are most often related to pornography use and concomitant masturbation (de Tubino Scanavino et al., 2013; Mitchell et al., 2005; Reid et al., 2012; Short et al., 2016), we specifically elected to include studies that purported to measure impulsive, compulsive, or addictive use of pornography.

Method

To accomplish the aforementioned aims, we conducted a systematic review of the literature published from January 1st, 1995 to August 1st, 2020. We followed the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines in conducting and reporting our results (Moher et al., 2009). We did not complete a meta-analysis of results because the variety of methods and measures used in this area of research (as we examine below) would make such an analysis nearly impossible to conduct in any meaningful way. Our primary searches were conducted via PsycInfo, PubMed, Academic Search Complete, Academic Search Premier, Health Source: Nursing/Academic Edition, MEDLINE, Psychology and Behavioral Sciences Collection, and SocINDEX. We also conducted supplemental searches via Google Scholar and consulted with subject matter experts in the field to identify any missing studies. Our search process is described below and summarized in our PRISMA diagram depicted in Figure 1.

Search Terms. Given the proliferation of research on CSB, as described above, we included a range of search terms for the present study. These terms were derived through consultation with subject matter experts, review of available literature, and iterative searching procedures where terms consistently encountered in reviewed literature were themselves searched. Search terms were as follows: Hypersexuality, Hypersexual Behavior, Hypersexual Disorder, Hypersex*, Compulsive Sexual Behavior, Sex Addict*, Pornography Addict*, Problematic Pornography Use, and Sexual Compulsivity. Using these terms, we identified 2,007 papers somehow relevant to CSB that were subject to further review. Additional literature reviews performed by the authors of the paper identified 102 additional potential references for review. We also conducted supplementary searches looking at alternative terms for pornography such as "impulsive sexual behavior," "excessive pornography use," "Visual Sexual Stimuli" and "Sexually Explicit Material," and "Sexually Explicit Online Material." These searches did not yield any new results not already encompassed by previous terms. The first five authors of this paper collaboratively reviewed these identified papers and abstracts and extracted the data reported in supplemental tables. For all studies, we sought to extract and summarize key methodological information regarding study design, research paradigms, sample characteristics, specific focus of research, and measures of CSB included.

Exclusion criteria. After eliminating duplicates, we limited our review to works published in academic journals (i.e., excluding dissertations, books, magazines, and non-academic periodicals), which reduced the number of studies eligible for title and abstract review to 1,369. Studies were only included if they featured an empirical analysis of non-paraphilic CSB. Studies that primarily focused on paraphilias or pedophilia were excluded from analyses, as past literature suggests that there are unique aspects of these disorders that differ from non-paraphilic CSB, despite the fact that individuals with paraphilia also often exhibit CSB (Efrati et al., 2019; Kafka & Hennen, 2003). Case studies and qualitative studies were similarly excluded, as they did not provide quantitative summaries salient to current understandings of CSB. Studies of CSB that clearly did not meet criteria for CSBD or adjacent disorders were also excluded. Specifically, studies of CSB in the context of Parkinson's disease, bipolar disorder, or dopamine agonist pharmacotherapy were not included, as current criteria for CSBD and past proposed criteria for Hypersexual Disorder both noted diagnostic exclusions for such types of CSB. Finally, we excluded studies for which CSBs were secondary to substance use (i.e., CSB in substance use rehabilitation populations; CSBs in the context of illicit drug use).

Using the above criteria, review of titles and abstracts resulted in 766 papers eligible for full-text review. Of those, 371 papers subsuming 415 individual studies met

inclusion criteria and were included in our full review.[2] Below, we summarize findings from these materials.

[2] Among these 415 studies, we were able to identify 89 that were duplicate reports from the same data sets. That is, our review found that at least 89 papers were reports from the same data reported in other papers, representing only 36 data collection efforts. Based on these findings, it appears that there are, at most, 362 unique data collection efforts represented in the literature. Additionally, it is likely that some of the remaining 362 studies are duplicates as well, though it was not possible to ascertain such information from materials reported in the texts of those studies.

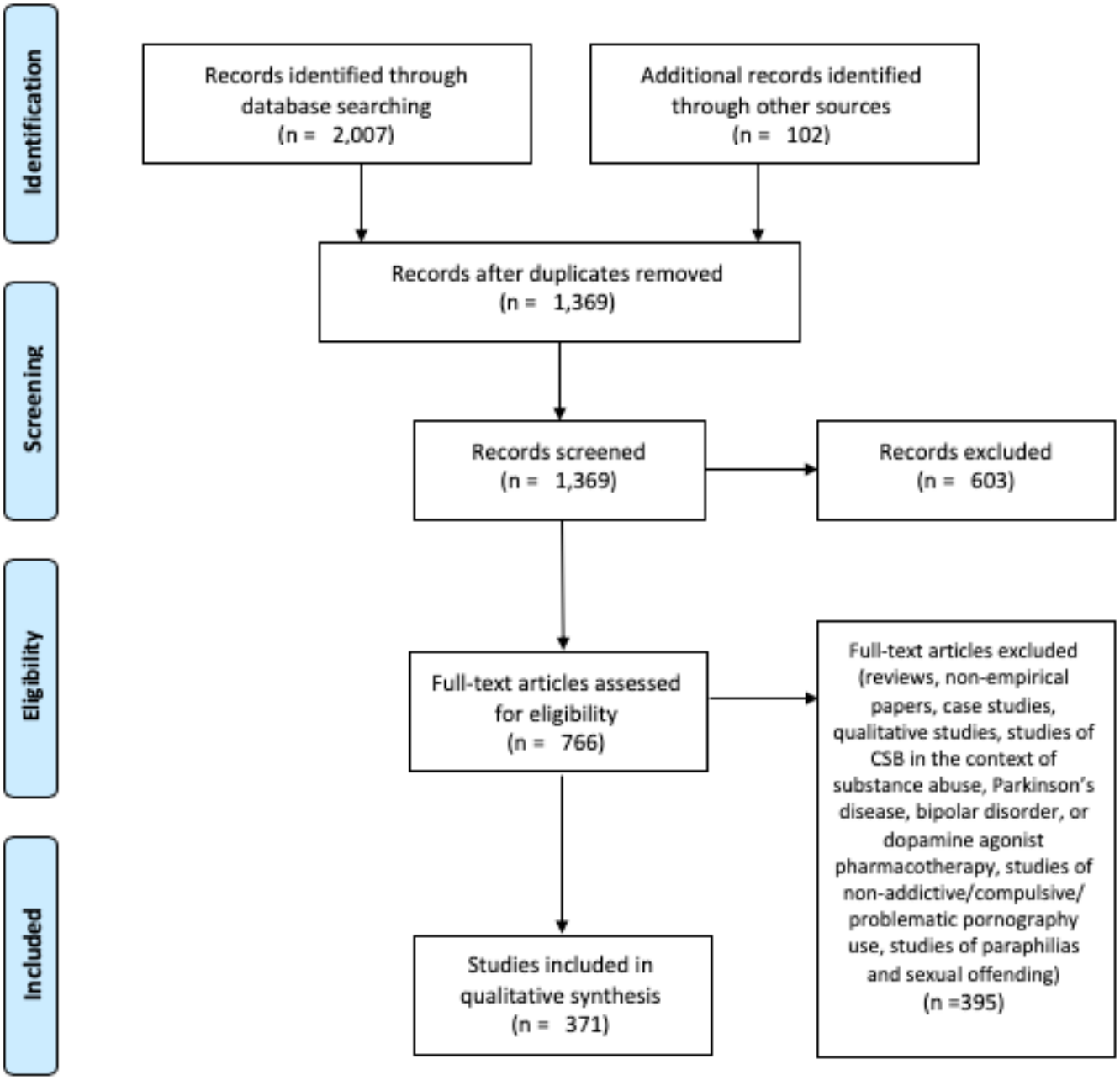

Figure 1. *Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram illustrating article selection process*

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Results

A primary finding of the present work is the rapid acceleration of CSB-relevant research in the past 10 years. This general trend is summarized in Figure 2. In the ten years from 1995 to 2004, 25 empirical papers were published that met criteria for the present review, for an average of 2.5 papers per year. From 2005 to 2014, an additional 119 papers were published, for an average of 11.9 papers per year. Finally, from 2015 until August 1st, 2020 (5.58 years) an additional 227 papers were published, for an average of 40.7 papers per year.

Below, we summarize key findings related to the types and settings of studies conducted, the behaviors subsumed by CSB research, and the treatment

recommendations that have resulted from this body of research. A full summary of included papers can be found in Supplemental Table 1. This table reports sample sizes, demographic variables, study methodology, subject of focus, and key measure of CSB for each study.

Demographic Summary.

The age ranges covered by studies were variable, with 73 studies exclusively reporting results from college student populations, an additional 13 studies reporting results from studies of adolescents, and the remaining 331 studies covering a range of ages. In general, there was an overrepresentation of studies entirely comprised of men, with almost half of all studies being limited to participants who identified as men (k = 197; 47.4%). In contrast, only 2.6% of studies exclusively examined women (k = 11). However, as we review in more detail later, nationally representative works in a number of countries do suggest that men are more likely to report CSB than women.

With regards to sexual orientation, 33.7% (k = 140) of studies did not report sexual orientation. A small subset of studies exclusively examined CSB in heterosexual individuals (9.4%; k = 39), whereas a larger number of studies (16.6%; k = 69) examined CSB in predominately or exclusively sexual minority (bisexual; gay; lesbian) or men who have sex with men (MSM) populations. The remainder of studies reported a blend of sexual orientations.

Regarding relationship status, the majority of studies did not report marital or relationship status (51.1%; k = 212). One study exclusively focused on married individuals (Muise et al., 2013), and two studies reported exclusively focusing on unmarried individuals (Luo et al., 2018; Yeagley et al., 2014). However, among studies reporting relationship status, many of the studies reviewed consisted entirely or predominantly of individuals who reported being unmarried (i.e., studies about adolescents; studies of undergraduate students, studies focusing exclusively on men who have sex with men).

The present review identified 27 unique countries in which research related to CSB has been conducted in the past 25 years. A very large portion of research on CSB has been conducted in the U.S., with approximately 47.2% (k = 196) of published studies being comprised of entirely or majority U.S. samples. After the U.S., the most common countries of CSB related research were Germany (k = 29), Israel (k = 28), multinational origin (k = 24), Canada (k = 19), Hungary (k =19), Sweden (k = 12), Spain (k =12), and Poland (k = 10). Only a relatively small number of studies (7.9%; k = 33) were taken from countries from the Global South (e.g., Mexico, Brazil, Indonesia, China, India, Malaysia, Nigeria, Bangladesh).

Behaviors subsumed by CSB

General CSB. The majority of studies reviewed (65.1%; k = 270) examined CSB generally. Such studies may subsume compulsive pornography use or online sexual behaviors (discussed below), but may also subsume solicitation of sex workers, compulsive casual sex, or compulsive solicitation of adult entertainment venues (e.g., strip clubs). Moreover, in most cases, these studies made no specific designation of the types of behaviors that were of focus.

Pornography Use. Of the studies reviewed, 29.9% (k = 124) focused primarily or exclusively on problematic pornography use. In many cases, this use was restricted to internet pornography use, whereas, in other cases, the media by which pornography was consumed was not specified. Even so, evidence from relatively recent research suggests that virtually all pornography use is consumed via the internet (for reviews, see: Grubbs, Wright, et al., 2019; Kohut et al., 2019). We also note that most studies likely implied masturbation, as the use of pornography is almost always accompanied by masturbation (e.g., Grubbs, Wright, et al., 2019; Prause, 2019), though most studies did not mention masturbation. This is of importance as there is also evidence that problematic associates of excessive pornography are often more related to compulsive masturbation (Perry, 2020).

Cybersex. A number of studies, particularly those from the late 1990s and early 2000s (e.g., Cooper, Delmonico, et al., 2000) specifically mentioned or focused on "cybersex" or "online sexual activities" more generally. This term has persisted even into recent literature (e.g., Ballester-Arnal et al., 2017; Wery & Billieux, 2017). However, this term seems to be idiosyncratically used across a range of studies (Wery & Billieux, 2017). For example, early use of cybersex referred to any number of sexually focused online activities such as sexual chats in chatrooms, sexually themed games, or online pornography (Carvalheira & Gomes, 2003; Delmonico, 1997). Yet, more recent works have used it to refer exclusively to online pornography use (Laier et al., 2013, 2014; Snagowski et al., 2015). For the purpose of this review, we considered studies to be concerned with online sexual activities if the study explicitly mentioned a focus on social sexual behaviors online (i.e., sexual chatrooms; sexual video calls; live sexual cam shows) or a general focus on online sexual behaviors that were not exclusively limited to pornography use. Using these criteria, we found that 5.1% (k = 21) of studies focused on cybersex or online sexual activities broadly, which may include pornography use among other behaviors.

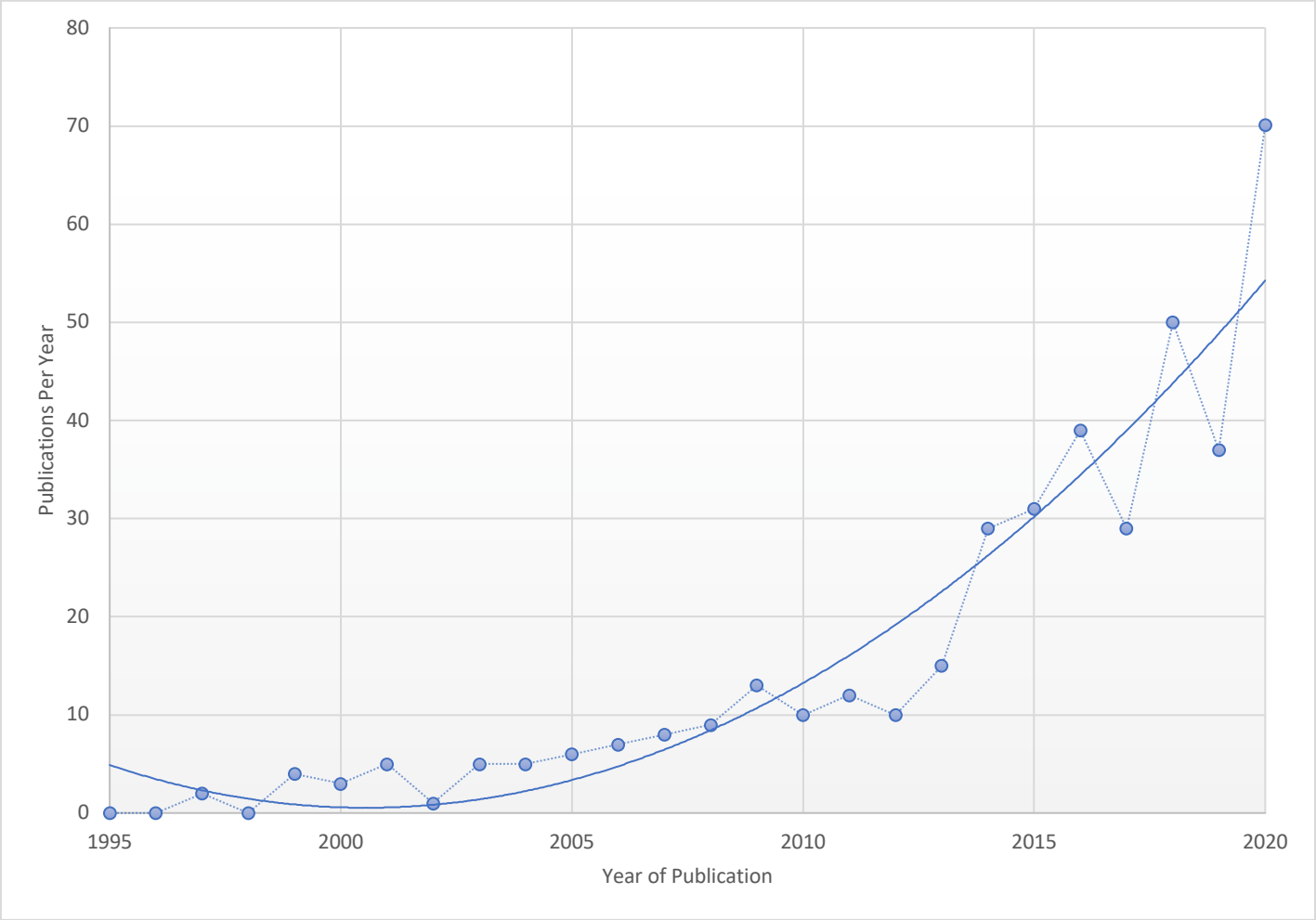

Figure 2. *Summary of included publications related to CSB published over the past 25 years. Data point for 2020 estimated by multiplying the count of articles published from January 1st, 2020 to August 1st, 2020 by 1.71 (1 and 5/7).*

Prevalence of CSB

To date, there have been no epidemiological studies of CSB and few population level studies of CSB. Among population samples, all are limited to Western countries and cultures. Only two of these population samples have examined CSB broadly, with the remainder examining self-perceived addiction to pornography specifically. Below, we summarize these studies in detail.

In 2018, a U.S. national probability survey (N = 2,325), recruited by KnowledgePanel (GfK Research), found that 10.3% of men and 7.0% of women reported at least occasional subjective feelings of distress over difficulty controlling sexual behaviors, impulses, or desires (Dickenson et al., 2018). Of note, that study (Dickenson et al., 2018) found that both sexual and racial minorities were much more likely to report such concerns and were disproportionately represented among positive screens. However, we also note that the measure used for this study (the Compulsive Sexual Behavior Inventory) was developed prior to the proposal or inclusion of the CSBD diagnosis for the ICD-11 and does not fully map onto the diagnostic criteria for the disorder.

Similar rates are also evident in recent samples of the Hungarian population (Bőthe, Potenza, et al., 2020). Specifically, in a probability sample of Hungarian participants (N = 473), 5.2% of men and 3.3% of women scored above critical cutoff scores on the novel Compulsive Sexual Behavior Disorder Inventory-19, which indicates a high risk of CSBD symptoms. Importantly, analyses of this inventory suggest that up to one quarter of people in this high-risk category may not, in fact, have CSBD. Even with such a reduction, however, prevalence estimates suggest a small but sizable portion of the Hungarian population is likely at risk of CSBD.

Moving beyond CSBs generally, there have been a number of studies of self-perceived addiction to pornography in nationally representative samples. For example, in a non-probability sample matched to U.S. norms (N= 2,075) conducted in 2018 and recruited via Qualtrics Omnibus service, 11% of men and 3% of women reported that they at least "somewhat agree" with the statement "I am addicted to

pornography" (Grubbs, Kraus, et al., 2019). This study also found that the greatest predictors of such agreement were male gender, greater religiousness, greater moral disapproval of pornography, and greater frequency of pornography use. Later re-analysis of this sample (Grubbs, Kraus, et al., 2020) found that moral disapproval of pornography substantially interacted with pornography use to predict self-reports of addiction. That is, use was more strongly related to self-reports of addiction among those that morally disapproved of pornography use than it was among those who did not morally disapprove of such use. Such findings highlight earlier discussed findings regarding the role of moral incongruence in predicting self-reported problematic pornography use. Moreover, these findings suggest that self-reports of CSB in national samples may be influenced by religiosity and morality in ways that may complicate straight-forward interpretations of self-reports.

The above findings are consistent with another non-probability sample matched to U.S. norms (e.g., Sample 4 of Grubbs, Grant, et al., 2019). Specifically, in a sample of adults (N = 1,063) in the U.S. recruited via TurkPrime (now known as Cloud Research; Litman et al., 2017), 5.4% of respondents reported that the statement: "I believe I am addicted to internet pornography" was true of them (Grubbs, Grant, et al., 2019). Subsequent regression analyses found that male gender, moral disapproval of pornography use, and self-reported frequency of use emerged as robust predictors of agreement with that statement. Again, such findings demonstrate that self-reports of CSB in broad-based nationally representative samples are likely to be influenced by morality in ways that may artificially inflate prevalence estimates.

The above findings were further reiterated by another (Grubbs, Lee, et al., 2020) national sample in the U.S., recruited via YouGov America polling and matched to U.S. demographic norms. Somewhat surprisingly, in this sample, 18.3% of men and 4.7% of women indicated at least some agreement with the statement "I believe I am addicted to pornography." Additionally, 10.1% of men and 3.1% of women obtained a mean score of at least 5 (on a scale of 1-7, where 4 equals "*neither agree or disagree*") on the Cyber Pornography Use Inventory-4, which measures self-perceived addiction to or compulsivity in pornography use. Importantly, these findings were strongly influenced by the religiousness of participants. Specifically, this work found that religion moderated the relationship between pornography use and self-perceived addiction or self-reported problems. The relationship between pornography use and self-perceived problems was dramatically stronger for more religious participants in comparison with less religious ones.

Similar prevalence rates to the above studies have also been found in nationally representative cross-sections of the Polish population (Lewczuk et al., 2020). In this sample (N = 1,036), roughly 6% of lifetime pornography users (N = 880; 55.1% men; Mage = 43.69, SD = 14.06) indicated at least some agreement with the statement "I am addicted to pornography." Further analysis of this sample reported that only 3% of women endorsed agreement with such an item, whereas 8.7% of men did. Importantly, consistent with the above reported studies, these works also found that religiousness and moral incongruence were positively predictive of both self-reported problems with pornography use and self-perceived addiction.

Finally, in a nationally representative sample of the Australian population (N = 20,094), among lifetime pornography users, 4.4% of men and 1.2% of women reported that they agreed with the statement "You feel that you are addicted to pornography" (Rissel et al., 2017). Importantly, these rates were only among those who reported ever viewing pornography. Subsequent analyses indicated that being male, being between the ages of 16 and 19 or between the ages of 30 and 39, or living in a more rural area were all associated with greater odds of self-reporting such feelings of addiction.

Types of studies.

Across studies reviewed, we noted a diverse range of methodologies. Below, we summarize those methodologies. Where appropriate, we also highlight key findings.

Non-Clinical, Cross-Sectional Studies. The majority of studies included in the present review made use of non-clinical cross-sectional samples (60.4%; k = 252). These samples ranged from college students, to individuals recruited to complete paper-and-pencil surveys at social events, to crowdsourced online samples, to online snowball samples, to population samples recruited to match demographic norms of various regions. Even so, these studies focused on populations with relatively low levels of CSBs and overwhelmingly used survey-based methods and self-reported measures of CSBs to draw inferences about the nature, prevalence, and structure of CSBs.

Clinical and Treatment-Seeking Samples. Among studies included in the present review, 25.2% (k = 105) made use of clinical or treatment seeking samples broadly defined. The majority (k = 65) of these studies are cross-sectional in nature, though 19 reported results of neuroscience studies (see below), 4 reported results of neurocognitive testing, 2 were longitudinal in nature, and 15 reported results of treatment efforts (see below). A full summary of cross-sectional studies from clinical samples is available in Supplemental Table 2.

Longitudinal Studies. Including treatment outcome studies (k = 15), our search identified a number (k = 44) of longitudinal studies of CSB. Excluding treatment studies (examined more thoroughly below), these longitudinal studies (k = 29) are summarized in Supplemental Table 3. We observed a variety of intervals in longitudinal studies, ranging from as little as one (Noor et al., 2014) or two weeks

(Fernandez et al., 2017) up to 2.5 years (Kohut & Stulhofer, 2018), 4 years (Thompson et al., 2015), and 10 years (Skegg et al., 2010).

Among longitudinal studies, few involved more than a single follow-up, with only two papers involving four waves of data collection over a year (Grubbs, Kraus, et al., 2020; Grubbs & Gola, 2019), one examining five follow-ups over 2.5 years (Kohut & Stulhofer, 2018), and another examining four waves of data collection over four years (Thompson et al., 2015). These studies are particularly significant as they are the only studies, to date, to use growth curve modeling or latent growth mixture modeling to examine the growth or change in CSBs over time. That is, the above four papers are the only papers identified in our search that actually seek to model trajectories of CSB over time. We also noted that three studies made use of intensive longitudinal methods such as daily diary studies (Grov et al., 2010; Rendina et al., 2018; Wordecha et al., 2018). However, no studies made use of more recent advances in experience sampling, ecological momentary assessment, or ambulatory assessment methods.

Neuroscience studies. Across included studies, we identified 21 studies (5%) using neuroscience methods, broadly defined. These studies are summarized in Supplemental Table 4. Methods across studies involved structural magnetic resonance imaging among individuals with CSB (Schmidt et al., 2017), functional magnetic resonance imaging among individuals with CSB (e.g., Banca et al., 2016; Gola et al., 2017), and electroencephalograms among individuals with CSB (e.g., Prause et al., 2015). Across neuroimaging studies, the majority of this research seems to be in its nascency, without adequate controls for confounds (e.g. comorbid conditions such as ADHD) and samples consisting of predominantly heterosexual men (for a review, see: Kowalewska et al., 2018).

Cognitive/Experimental/Quasi-Experimental. Among studies included in our review, 23 used experimental/quasi-experimental methods to specifically study cognitive and executive functioning aspects of CSBs. Methods included classical conditioning studies (Hoffmann et al., 2014), modified Stroop tasks (Albery et al., 2017), dot-probe tasks (Mechelmans et al., 2014), implicit association tests (Snagowski et al., 2015), and a range of other laboratory based experimental procedures. Full details regarding these studies and their associated experimental paradigms are available in Supplemental Table 5.

Assessments of CSB

Perhaps not surprisingly, given the heterogeneity of behaviors that comprise CSB and the lack of theoretical unity in conceptualizations of CSB, there is wide discrepancy in the measurement of CSB. Consistent with recent reviews (e.g., Fernandez & Griffiths, 2019; Grubbs et al., 2017; Hook et al., 2010; Womack et al., 2013), we also found a large number of assessment techniques (n = 39) as measures of CSB. These results are summarized in Supplemental Table 6. Additionally, we found that 5.3% (k = 22) of studies relied on idiosyncratic measures of CSB, such as single-item measures like "I am addicted to pornography" (e.g., Grubbs, Kraus, et al., 2019; Rissel et al., 2017). Finally, 5.3% of studies (k = 20) provided no details regarding assessment at all, instead noting that the presence of CSBs was confirmed via clinician interview. Although some scales are clearly much more popular than other scales (e.g., the Sexual Compulsivity Scale, k = 140, Kalichman & Rompa, 1995; the Hypersexual Behavior Inventory, k = 64, Reid et al., 2011), the wide variety of scales currently used to measure CSB suggests a domain of study with a lack of clear unifying standards. More details regarding these problems in measurement and the proliferation of redundant measures are available in a number of recent reviews (Fernandez & Griffiths, 2019; Kohut et al., 2019; Marshall & Miller, 2019)

Treatment of CSB

Of the articles reviewed, only 3.5% (k = 15) recounted empirical studies of the treatment of CSB, although many more case studies of treatments do exist (e.g., Gola & Potenza, 2016; Kraus et al., 2015). We also noted that the majority of articles detailing the treatment of CSBs were conducted in samples that were 100% men (k = 10; 66% of treatment studies), with an additional two studies that were more than 90% men, two more being at least 70% men, and one not reporting gender at all. These studies are summarized in Supplemental Table 7.

Treatment modalities reported across studies were highly variable, with Acceptance and Commitment Therapy based treatments and Cognitive Behavioral Therapy based treatments appearing most often. Of treatment studies, two are reports of the same single pharmacological treatment study (Muench et al., 2007; Savard et al., 2020; Wainberg et al., 2006), one reports an online psychoeducational program (Hardy et al., 2010), and the remainder report, with varying degrees of detail, psychotherapy-based treatment programs. Importantly, only three studies published to date have made use of a double-blind (Wainberg et al., 2006) or randomized control trial (Crosby & Twohig, 2016; Hallberg et al., 2019) design to evaluate treatment for CSB.

General Discussion

At the outset of the present work, we set out to conduct a systematic review of empirical research on CSBs that had been published since Gold and Heffner's (1998) review of sex addiction in *Clinical Psychology Review*. In service of this goal, we reviewed all empirical research related to this topic published since 1995. Importantly, our review was limited to searches concerned with general CSB, cybersex, and pornography use. It is possible that there is additional literature examining other forms of CSB that were not captured by our search terms (i.e., excessive masturbation without pornography; excessive solicitation of sex workers; excessive use of "hook up" apps). However, we believe this

is generally unlikely, given the breadth of search terms we employed for this work. Below, we discuss the implications of our review for clinical practice and research moving forward.

Clinical Implications

Despite the lack of large-scale epidemiological work related to CSB, a variety of nationally representative samples conducted in the U.S., Poland, and Australia all suggest that self-perceived problems with CSB are at least as common as other major mental illnesses. Self-perceptions of addiction to pornography range from 1% of women in Australia (Rissel et al., 2017) up to 11% of men in the U.S (Grubbs, Kraus, & Perry, 2019). Similarly, general distress over compulsive, excessive, or seemingly out-of-control sexual behaviors has been reported by 7% of adult women and 11% of adult men in the U.S. (Dickenson et al., 2018). Even though none of the above statistics were derived from epidemiological work and all are based on self-reported perceptions of one's own behavior, such numbers suggest that substantial portions of the populace in a number of Western countries are expressing concerns about their ability to regulate their sexual behaviors. Such prevalence is not necessarily proof of the existence of CSBD or confirmation of its utility as a psychiatric diagnosis; however, it does provide growing support for the conclusion that many people feel out-of-control in their sexual behaviors and that clinicians might encounter such problems in practice.

In clinical settings, there is growing evidence that CSBs are relatively common, though representative samples of mental health providers have not yet been examined. For example, in a study of post-deployment U.S. military veterans, results suggested that up to 13.8% of men and 4.3% of women report some experiences of CSB (Kraus et al., 2017). Additionally, some studies suggest that CSBs are commonly encountered by mental health providers. Specifically, in a non-representative, snowball sample of mental health providers in the U.S. ($N = 183$), 39.4% reported having seen someone with "sex addiction" and 48.8% percent reported having seen someone with "problematic internet pornography use" (Short et al., 2016). This finding mirrors results from a 2003 survey of mental health providers that found that 65% of providers had treated internet related problems in their clientele, of which 61% were related to internet pornography, for a total of 39.6% of mental health providers who had treated online pornography related problems in 2003 (Mitchell et al., 2005). Of note, in some clinical settings, these estimates are even higher, with a 2015 survey of mental health providers in college counseling centers finding that 84% of respondents reported treating CSBs, in some form, in the 12 months prior to the survey (Giordano & Cashwell, 2018).

Given the above estimates of clinical encounters with CSBs, there is a clear need for evidence-based recommendations for front-line mental health providers. Accordingly, we believe the results of the present review have clinical implications for practitioners. Below, we examine these findings and implications, and provide clear recommendations for further advancement in these domains.

Lack of Treatment Studies. The overarching finding of the present review with regards to the clinical treatment of CSB and related disorders is the paucity of rigorous outcome research using gold-standard approaches such as RCTs Although previous reviews on this topic have concluded that there are some promising treatments for CSB (Dhuffar & Griffiths, 2015; Hook et al., 2014; Miles et al., 2016), our conclusion from the present review are much more qualified. Specifically, despite almost four decades of clinical attention to the notion of CSB, the current body of research demonstrates little systematic evaluation of treatment for such behaviors. Arguably, this is at least in part due to the novelty of the CSBD diagnosis and the absence of a comparable diagnosis prior to CSBD. We suspect that there is likely an absence of quality treatment studies for CSB because, until recently, there was no formal recognition of such behavior as a mental health disorder. Even so, the lack of empirical treatment studies is quite concerning, particularly for a cluster of behaviors that have been discussed in clinical literature since the 1970s. For a behavioral syndrome or psychiatric disorder to be discussed in clinical literature for roughly four decades without any substantive treatment literature suggests a longstanding history of non-evidence-based treatment delivery.

Consistent with Gold and Heffner's (1998) conclusions over two decades ago, the need for quality, empirically-based treatment continues to be tantamount. As they (p. 379; 1998) stated, "If sexual addiction exists, the benefits to both the individual and society of devising a demonstrably effective treatment protocol could be enormous." At present, the former aspect of this statement is largely settled. That is, an abundance of evidence of literature clearly demonstrates that CSB is a real phenomenon. Though conceptualizations of CSB vary, the existence of a syndrome that matches the criteria defined by the CSBD diagnosis in the ICD-11 is well supported. Even so, there has been no demonstration of an effective treatment protocol for such a syndrome. Currently, the absence of effective treatment protocols for CSBD reflects significant gaps in healthcare for treatment-seeking persons. This gap is somewhat disconcerting given several high-profile treatment facilities have been charging exorbitant prices for residential care yet failing to divert some of these revenues to developing evidence-based protocols for CSB.

Despite our concerns about the current state of the treatment literature, the results of the present review do demonstrate that the treatment of CSBs is an area ready for rigorous treatment studies. Such studies should be evaluated through the use of randomized clinical trials designed to address issues surrounding efficacy and acceptability when

working with diverse clinical populations. Based on the preliminary studies reviewed, there seems to be some evidence for the continued evaluation of Acceptance and Commitment Therapy based strategies, Cognitive Behavioral Strategies, and pharmacological management in the treatment of CSB. Given the success of such strategies in treating other behavioral addictions (i.e., gambling disorder; Petry et al., 2017), there is cause for cautious optimism for future treatment studies of CSBs and CSBD, particularly if such studies are adequately powered and utilize diverse samples of both men and women, as well as ethnic and sexual minority groups.

Lack of Clinically Validated Assessments. Similar to our above concerns regarding the treatment of CSBs and CSBD, as we noted earlier, there is currently no gold standard assessment for CSB. Several prior reviews have examined such assessments and provided clear recommendations for which assessments show the most promise for clinical utility (e.g., Fernandez & Griffiths, 2019). Particularly, at present, the Hypersexual Behavior Inventory (HBI) seems to be a well-validated and clinically useful assessment of CSB (Reid et al., 2011). However, the HBI was developed alongside the proposed *DSM-5* diagnosis of Hypersexual Disorder and has not yet been fully evaluated in the context of the novel *ICD-11* diagnosis of CSBD. Although the diagnoses are quite similar, there are key differences in their conceptualization and symptoms, which suggests that assessments designed for Hypersexual Disorder may not fully capture the symptoms and presentation of CSBD. This concern may be ameliorated by the recent publication of the CSBD-19 inventory (Bőthe, Potenza, et al., 2020), as it was developed to specifically match the criteria for CSBD. As such, it is likely a useful measure for clinicians seeking to assess the diagnostic criteria of CSBD. However, this assessment remains quite novel and more time is needed to determine if it becomes widely used by the field.

We also note that a number of recent studies have highlighted the need for precision in the assessment and diagnosis of CSBs, as frequent sexual behaviors may not necessarily be problematic. Specifically, several studies have now documented the possibility for individuals to engage in even high levels of sexual behaviors like pornography use, without adverse consequences (Bőthe, Tóth-Király, et al., 2020). Similarly, other studies have found that frequency of pornography use is largely unrelated to sexual dysfunction, even though self-reported problems with pornography use are (Grubbs & Gola, 2019; Bőthe, et al., 2021; Landripet & Stulhofer, 2015). Similarly, at least some research suggests that problems associated with pornography use are better accounted for by other variables, such as masturbation frequency (Perry, 2020). Collectively, such findings suggest that assessment of CSBs needs to carefully account for both objective quantity of behavior, as well as subjective distress and more general impairment.

Moral Incongruence and CSB. As we have alluded to at several points in the present review, there is clear evidence that self-perceptions of sexual behaviors are influenced by personal morality and religiousness. This is particularly true of self-perceptions regarding CSBs. Moral and religiously based beliefs about sexual behavior seem to be particularly related to self-perceptions of CSB for many people (Grubbs & Perry, 2019; Walton, 2019). To date, CSBs are the only addictive or compulsive behavior pattern for which there is a clear body of empirical research suggesting that self-perceptions of addiction/compulsion are driven, in many cases, by personal religiousness or morality. This is not to say that personal morality or religiousness may not similarly influence self-perceptions of other behavioral or substance addictions but rather, religiousness and morality seem especially related to self-perceptions of CSB.

To the credit of the CSBD working group and the World Health Organization, the diagnostic criteria for CSBD make explicit the possibility that morally based distress might present as self-reported CSB or CSBD. Moreover, the criteria make it clear that self-reported distress over sexual behaviors that stems exclusively from moral or religious qualms is not sufficient for a diagnosis of CSBD, even if such distress is impairing. In this regard, as prior works have stated (Grubbs, Kraus, et al., 2020; Grubbs, Lee, et al., 2020), if mental health professionals remain faithful to the diagnostic criteria for CSBD, the possibility of misdiagnosis should be dramatically lessened. However, as we explore below, there is also evidence that religious/moral values may cloud clinician judgment in the assessment or treatment of CSBs/CSBD. Additional research seeking to identify clinicians' misperceptions toward CSBD diagnosis should be explored, particularly as it applies to groups where misdiagnosis may occur (e.g., ethnic and sexual minorities, highly religious/devout individuals).

Possibility of Therapeutic Bias. We also note that the present review suggests the possibility of therapeutic bias in the assessment and treatment of CSB. Specifically, there is evidence that both client and therapist individual differences might influence the application of the CSBD diagnosis. This finding is hardly novel, as work from the late 1990s noted that sex addiction was a more commonly used diagnosis among religious therapists (Hecker et al., 1995). Similarly, much more recent work has found that religious social workers are more likely to see sexual behaviors as addictive or compulsive (Droubay & Butters, 2019). Taken with the above reviewed findings about individual religiosity and morality often contributing to feelings of addiction or compulsivity in sexual behaviors, these findings suggest that therapists need to be particularly self-aware of how personal beliefs and values might influence their conceptualizations of clients. Such a statement—that therapists should be aware of how their personal beliefs influence diagnosis and treatment—is not limited to the treatment of CSBs or CSBD.

All therapeutic endeavors likely involve self-awareness with regards to personal biases. However, CSBs/CSBD are an area that might be particularly prone to such biases, and mental health professionals should be aware of such a possibility as they seek to assess and treat clients reporting issues with CSB.

We further note that recent research suggests that therapists might allow other aspects of client identity to shape their assessment and treatment of clients presenting with excessive sexual behaviors. Specifically, in a study of mental health professionals, participants were more likely to view sexual behaviors as compulsive or pathologically excessive in heterosexual men and women than they were in gay men or women (Klein et al., 2019). This tendency was documented, even though all other aspects of clinical presentation were held constant. In other words, clinical evaluations were influenced strongly by whether or not a client identified as a sexual minority, with many therapists expecting these individuals to be naturally more compulsive. Such a finding is concerning, particularly in light of the new CSBD diagnosis. More research is needed examining the influence of gender and sex roles (i.e., heteronormativity) on clinicians' attributions when determining the appropriateness of CSBD diagnosis for a client.

Research Implications

Beyond the clinical implications of the current body of literature, there are clear implications for current and ongoing programs of research related to this topic. Many of the below implications and critiques may be largely secondary to the absence of clear diagnostic recognition of and criteria for CSB and may naturally improve with the recent inclusion of CSBD in the ICD-11. However, the current state of empirical literature does lead to the following clear conclusions.

Lack of Theoretical Integration. Psychological science broadly (Muthukrishna & Henrich, 2019) and clinical psychological science specifically (Borsboom, 2013; Borsboom et al., 2019) suffer from a lack of strong unifying theoretical frameworks that are essential characteristics of a mature science. Accordingly, it is not surprising that CSB-related research similarly lacks a strong theoretical underpinning. Yet, even by the standards of psychological science, current theoretical understandings of CSB are particularly underdeveloped.

Despite our decision to review all literature falling under the general umbrella of CSB, our work found little consistency in the definition, classification, and theoretical conception of CSB. As alluded to earlier, a number of studies conceptualized CSB as an impulse control disorder, whereas others consider it to be an addictive disorder, and still others refer to it as simply an issue of compulsivity. In most cases, as past works have noted (Reid & Grant, 2017), it seems terms are entirely interchangeable in their use, with various research groups using diverse terms to encompass non-paraphilic CSBs without much regard for the specific theoretical and etiological implications of such terms. Perhaps more concerningly, a large number of studies seem to approach CSB without any regard for its theoretical underpinnings at all. That is, many studies do not even address whether or not CSBs are best characterized as issues of addiction, impulsivity, or compulsivity or seek to frame CSB within larger frameworks for understanding of psychopathology and mental illness. Although some exceptions to this exist (e.g., network models of CSB; Bőthe, Lonza, et al., 2020), there is still a paucity of research seeking to integrate understandings of CSB into larger theoretical frameworks.

The authors of the present review have, in the past, repeatedly noted that there is currently a lack of evidence to conclude that CSB is an addictive disorder (Kowalewska et al., 2018; Kraus et al., 2016; Potenza et al., 2017; Reid, 2016; Reid & Grant, 2017). The present review is no exception to that conclusion. Regrettably, despite past assertions that there is a need for programmatic research testing the best theoretical understandings of non-paraphilic CSB, virtually no such research exists. In order for CSB-related research to make substantive advances in the coming years, there must be sustained efforts to systematically study the psychological, social, environmental, and neurocognitive mechanisms underlying the disorder. This type of research will likely involve high-quality epidemiological studies, long term longitudinal research, intensive longitudinal methods (i.e., ecological momentary assessment; ambulatory assessment), and larger scale neuroscientific research. More importantly, however, such approaches should be conducted in a cumulative manner, with diverse research groups seeking to build on past findings instead of simply attempting to conduct such research in isolation.

CSB related research needs to move past its veritable hodge-podge of conceptualizations and seemingly random use of terminology and move toward systematic attempts to develop a strong theoretical understanding of CSBs and related syndromes. Such a systematic approach would allow for robust research efforts to examine the environmental, psychosocial, and neurobiological underpinnings of CSBD and provide important insights for the development of effective treatments (e.g., psychotherapy, pharmacotherapy) for affected persons. It is beyond the scope of the present review to propose or evaluate what such a strong theoretical understanding of CSB might look like, but it is abundantly clear that such theoretical organization is needed to substantively move understandings of CSB forward. Recent attempts at such an understanding of CSB, such as the Dual Control Model and Sexual Tipping Point Model (e.g., Briken, 2020) may serve to fill this need, as might other proposed theoretical models (e.g., the Sexhavior Cycle, Walton et al., 2017). Additionally, recent theoretical and empirical models for understanding psychopathology

broadly may be of use too (i.e., Network Theory of Mental Disorders; Borsboom, 2017; Borsboom et al., 2019; Hierchical Taxonomy of Psychopathology; Kotov et al., 2017).

The Role of Neuroscience. As reviewed above, neuroscientific studies of CSB remain in their infancy. Given the lack of diagnostic recognition for CSB until recent years, this is to be expected, and we do expect this research to expand substantially in the near future. However, we also note that, while neuroimaging is often given special status in scientific research, imaging technology is an instrument that is subject to many of the same limitations, measurement errors, and challenges with interpretation common among traditional measures used in the field of psychological research (Button et al., 2013; Elliott et al., 2020; Fröhner et al., 2019). There are also concerns in the field of imaging research that many studies are being conducted with small sample sizes which raises some challenges for imaging research among individuals with CSB that need to be addressed (Szucs & Ioannidis, 2019; Turner, Paul, Miller, & Barbey, 2018). Insofar as the fields of addiction, impulsivity, and compulsivity are still evolving (along with their operationalized measures), it is difficult for neuroimaging to elucidate the most parsimonious conceptualization of CSB, including questions related to how CSB might best be classified (e.g., addiction, compulsion, impulse control disorder). Nevertheless, as the field continues to grow, neuroimaging will help highlight possible neurobiological mechanisms implicated in patterns of CSB, brain-behavior relationships, and their associated features. In short, we advocate for the use of neuroscience as an important component of systematic research into CSB, rather than as being seen as a definitive ruling on the nature of CSB.

Definition and Assessment. Building on the above problems with theoretical understandings of CSBs, existing literature on CSB seems to lack any semblance of consistency with regards to the definition of what behaviors and symptoms constitute CSB. In some regards, this is to be expected, given that diagnostic recognition of CSBD only occurred recently and the proposed criteria for CSBD were only made public shortly before that. Even so, this inconsistency within the literature has hampered the advancement of the field. At present, a study purporting to measure CSB might refer to slightly elevated rates of pornography use, excessive use of sexual "hook-up" applications, or compulsive solicitation of sex workers. More concerningly, studies of CSB often do not specify at all what behaviors are of interest in the sample being described, instead focusing entirely on self-reported feelings of being out-of-control. We also note that there is at least some evidence that behaviors that are problematic for one individual might be wholly unproblematic for another individual (Grubbs, Lee, et al., 2020). In short, it seems likely that what is considered a compulsive or problematic sexual behavior may vary based on a range of individual and cultural differences, which may complicate efforts to both define and assess CSBs.

Although the diagnosis of CSBD, by design, encompasses a range of sexual behaviors, a lack of consistency in describing the behaviors that warrant the diagnosis makes it exceedingly difficult to systematically evaluate the presence, presentation, and associates of CSBs or to articulate if different presentations of CSB warrant different clinical approaches. For example, differences in clinical presentations with CSBD patients may require further refinement of treatment approaches for patients, particularly for individuals engaging in high risk sexual behaviors (e.g., condomless sex with paid sex workers or casual sexual partners) or those who have co-occurring psychiatric disorders (e.g., substance use, trauma). Yet, given the lack of consistency in prior literature, it is not known whether such a supposition is true. More simply, definitional and assessment inconsistencies have hampered evidence-based treatment recommendations.

A consolidation of definitions for CSB and the assessments of CSB is a necessary pre-requisite for future research in this domain. Although the systematic evaluation of various definitions and models of CSB is an important domain of research that merits continued investment, the adoption of a standard definition of CSB is necessary if researchers seeking to study CSB want to develop this field into a mature science. The inclusion of CSBD in the ICD-11 offers a unique opportunity to accomplish this aim. That is, given the diagnostic recognition of CSBD, there is now a standard diagnostic framework that can be used to develop more consistent definitions for CSB itself and behavior specific forms of CSB (i.e., compulsive pornography use; compulsive masturbation).

Flowing from the above inconsistencies in definitions, alongside the seeming exponential growth of studies related to CSB over the past two decades, there has also been a proliferation of assessments related to CSB and similar phenomena. As has been highlighted in numerous past reviews (Duffy et al., 2016; Fernandez & Griffiths, 2019; Kohut et al., 2019; Marshall & Miller, 2019), there is inconsistency with regards to how constructs related to CSB are defined and measured by such assessments. That is, at present, there are few, if any, well-validated measures of CSB that have been clearly tested and validated across a range of methodologies and samples (Grubbs et al., 2017).

Rather than attempting to shoehorn conceptualizations of CSB or CSBD into past assessments (for example, see: Carnes et al., 2014), there is a need for research that methodically tests new assessments in a variety of diverse samples and settings against the criteria for CSBD, as the novel CSBD-19 has done quite well (Bőthe, Potenza, et al., 2020). Some existing measures also seem particularly well-poised for such evaluation. The widely used HBI-19

(Reid et al., 2011) has been extensively tested in both clinical and non-clinical populations and translated into several languages for administration (Ballester-Arnal et al., 2019; Bothe et al., 2019). Similarly, the Brief Pornography Screen (Kraus et al., 2020) has been tested in nationally representative samples in both the United States (Grubbs, Lee, et al., 2020) and Poland (Lewczuk et al., 2020), as well as in treatment seeking samples in Poland and in clinical samples in the United States (Kraus et al., 2020). We also note that one recent review (Fernandez & Griffiths, 2019) concluded that the Problematic Pornography Consumption Scale (Bőthe et al., 2018) and the Problematic Pornography Use Scale (Kor et al., 2014) are both well-validated measures of PPU.

Rigorous Research Design. Finally, we note that there is a need for more rigorous research design in the study of CSB. At present, most CSB research is in cross-sectional samples of non-clinical populations. Although such research may provide information about CSBs in a variety of groups, such research designs preclude any substantive causal, mechanistic, or predictive inferences. Moreover, despite the fact that at least five studies of CSB have used samples matched to various population norms, there has been no true epidemiological research related to CSB conducted in the United States or elsewhere. This has prevented any substantive conclusions being drawn on the true prevalence of CSB in any population, or the psychiatric, social, cultural, or economic factors that characterize CSB. Based on the above problems, there is a clear and ongoing need for rigorous longitudinal research, systematic epidemiological research, and continued research in clinical and treatment seeking samples.

Conclusions

We began the present review by noting the primary conclusions of Gold and Heffner's (1998) work in *Clinical Psychological Review* about the nature of "sexual addiction." Chiefly, they found that the majority of work related to "sexual addiction" was based on theoretical conjecture and limited case observations. As evidenced by the present work, this criticism of the field is no longer universally true. In the past two decades, empirical research into the nature of CSB has increased at an accelerating rate, and there is clear evidence that CSB is a real phenomenon with clinical implications.

Importantly, we note that the rapid acceleration of research into this domain will likely only increase with the recognition of CSBD in the ICD-11. Indeed, as is evidenced in Figure 1, the projected number of publications on CSBs for the year 2020 will likely exceed any prior year. In their work, Gold and Heffner concluded that, "Only with the execution of controlled empirical research on etiology, symptom patterns, course, related difficulties and their consequences, and treatment, is our knowledge base in this area likely to substantially move forward" (1998, p. 379). The results of the present review clearly demonstrate that at least some of these goals have been realized. Over the past twenty-five years, research into "sexual addiction" has proliferated immensely. In the present study alone, we reviewed 415 empirical studies of compulsive, impulsive, or excessive sexual behaviors that may rightly fall under the greater umbrella of "sexual addiction." Moreover, despite the impressive rise in research in this domain, the inclusion of CSBD in the *ICD-11* is likely to spur accelerating expansion of research in this domain. Yet, despite these advances, research related to "sexual addiction" remains in its infancy. A lack of theoretical integration, deficits in methodological rigor, a paucity of clinical samples, over reliance on convenience samples (i.e., university students or Mechanical Turk samples), the complete absence of epidemiological studies, widespread inconsistencies in the definitions and measurements of CSB, and a lack of treatment studies all still plague the literature related to "sexual addiction." If scientists, researchers, and clinicians in this domain want to bring the field forward and provide evidence-based care to people who report out-of-control sexual behaviors, all of the above are needed.

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Supplemental Table 1
Complete summary of all papers included in the present review

Study	Design	Subject of Focus and Measurement
(Achterbergh et al., 2020)	A sexual education intervention study of adult men who have sex with men in the Netherlands (N = 155)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Albery et al., 2017)	A quasi-experimental study of adults in the U.K. (N = 55; 50.9% men; Mean age = 28.4, SD = 10.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Allen et al., 2017)	A cross-sectional study of adults in Australia (N = 192; 94.8% men; Mean age = 26.65, SD = 8.52)	PPU as measured by the Problematic Pornography Use Scale and the Pornography Craving Questionnaire
(Andreassen et al., 2018)	A cross-sectional study of adults in Norway (N = 23,533; 35% men; Mean Age = 35.8, SD = 13.3)	General CSB as measured by the Bergen-Yale Sex Addiction Scale
(Antons & Brand, 2018)	An experimental study of adult men in Germany (N = 50; Mean age = 23.30, SD = 4.08; 100% heterosexual) recruited predominantly from a university setting	Online CSB as measured by the Short Internet Addiction Test modified for Cybersex Use
(Antons, Mueller, et al., 2019)	A cross-sectional study of adult men in Germany (N = 1,498; Mean age = 31.76, SD = 11.26; 100% heterosexual)	PPU as measured by the short Internet Addiction Test and the Craving Assessment Scale for Behavioral Addictions-Porn version.
(Antons, Trotzke, et al., 2019)	A cross-sectional study of adult men in Germany (N = 1,498; Mean age = 31.76, SD = 11.26; 100% heterosexual)	PPU as measured by the short Internet Addiction Test and the Craving Assessment Scale for Behavioral Addictions-Porn version.
(Baggio et al., 2018)	A nationally representative, cross-sectional study of adult men in Switzerland (N = 3,404; Mean age = 25.4; SD = 1.2)	Online CSB as measured by the Internet Sex Screening Test
(Ballester-Arnal et al., 2017)	A cross-sectional study of university students in Spain (N = 1,557; 35.6% men; Mean age = 20.37, SD = 1.98; 94.2% heterosexual, 3.6% bisexual, 2.2% homosexual)	Online CSB as measured by the Internet Sex Screening Test
(Ballester-Arnal et al., 2020)	A cross-sectional study of university students (48.8% men; 86% heterosexual, 9% homosexual, 5% bisexual) in Spain with CSBD (n = 68; Mean age = 20.63, SD = 2.26) and without CSBD (n = 315; Mean age = 20.89, SD = 2.12)	General CSB as measured by the Hypersexual Behavior Inventory, the Kalichman Sexual Compulsivity Scale, and the Sexual Addiction Screening Test
(Ballester-Arnal et al., 2013)	A cross-sectional study of university students in Spain (N = 1,196; 24.5% men; Mean age = 20.22, SD = 2.11; 95.5% heterosexual), with a one-week longitudinal follow-up (N = 100)	General CSB as measured by the Sexual Compulsivity Scale

(Baltieri et al., 2016)	A cross-sectional study of medical students in Brazil (N = 205; 48.8% men: Mean age = 21.42, SD = 3.02; 51.2% women: Mean age = 21.18, SD = 1.99)	PPU as measured by the Pornography Consumption Inventory
(Banca et al., 2016)	A functional magnetic resonance imaging study of men (N = 22; Mean age = 25.14, SD = 4.68; 100% heterosexual) with CSB in the U.K. compared with healthy controls (N = 40)	General CSB as measured by psychiatrist diagnosed CSB
(Baranowski et al., 2019)	A cross-sectional study of women in Germany (N = 485; Mean age = 25.79, SD = 7.27)	PPU as measured by the short Internet Addiction Test modified for online sexual activities
(Benotsch, 2001)	A cross-sectional study of adults in the U.S. (N = 294; 69% men; Mean age = 40.5, SD = 7.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Benotsch et al., 1999)	A cross-sectional study in the U.S. of HIV-positive men who have sex with men (N = 112; Mean age = 34.6, SD = 8.6)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Berberovic, 2013)	A cross-sectional study of college students in Bosnia, Serbia, and Herzegovina (N = 1,711; 37.9% men; Mean age = 21.88, SD = 1.67)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Berger et al., 2019)	A cross-sectional study (N = 362; 86.7% men) of patients at a urology clinic that predominantly served active duty military personnel in the U.S. military (Men: Mean age = 30.7, SD = 5.9, 97.8% heterosexual; Women: Mean age = 28.1, SD = 6.3, 81% heterosexual)	PPU as measured by the Pornography Craving Questionnaire
(Black et al., 1997)	A cross-sectional study of individuals with self-identified problems with CSB in the U.S. (N = 36; Mean age = 27, SD = 8)	General CSB as measured by the Compulsive Sexual Disorders Interview
(Blain et al., 2012)	A cross-sectional study of gay and bisexual men in the U.S. (N = 182; Mean age = 35.99, SD = 8.33; 90% gay, 10% bisexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Blum et al., 2018)	A cross-sectional study of young adults in the U.S. (N = 54; 67.3% men, Mean age = 23.6, SD = 3.5)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Blum et al., 2019)	A cross-sectional study of university students in the U.S. (N = 3,659; 36.5% men; Mean age not reported; sexual orientation not reported)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Borgogna, Duncan, et al., 2018)	A cross-sectional study of adults in the U.S. recruited via snowball sampling methods (N = 757; 33% men; Men: Mean age = 24.2, SD = 9.9, 86% heterosexual; Women: Mean age = 24.1, SD = 10.7; 83.2% heterosexual)	PPU as measured by the Problematic Pornography Use Scale
(Borgogna et al., 2020)	A cross-sectional study of heterosexual men in the U.S. recruited via snowball sampling methods (N = 244; Mean age = 19.63, SD = 6.22)	PPU as measured by the Cyber-Pornography Use Inventory-9

(Borgogna, Lathan, et al., 2018)	A cross-sectional study of women in the U.S. recruited via snowball sampling methods (N = 949; Mean age = 22.8, SD = 8.5; 82.2% heterosexual, 10.5% bisexual, 4.2% other, 3.1% lesbian)	PPU as measured by the Problematic Pornography Use Scale
(Borgogna, McDermott, et al., 2018)	A cross-sectional study of adults in the U.S. recruited via snowball sampling methods (N = 779; 39.7% men; Men: Mean age = 32.93, SD = 16.01; 76.8% heterosexual, 10.6% bisexual, 8.4% gay; Women: Mean age = 28.89, SD = 12.70; 76.3% heterosexual, 14.1% bisexual, 3.2% lesbian)	PPU as measured by the Problematic Pornography Use Scale
(Borgogna & Aita, 2019)	A cross-sectional study of adults in the U.S. recruited via snowball sampling methods (N = 769; Men: Mean age = 24.22, SD = 9.89; 86.2% heterosexual, 5.5% bisexual, 5.1% gay; Women: Mean age = 24.20, SD = 10.96; 82.9% heterosexual, 3.1% lesbian, 9.7% bisexual)	PPU as measured by the Problematic Pornography Use Scale
(Borgogna et al., 2019)	A cross-sectional study of men in the U.S. recruited via snowball sampling methods (N = 520; Mean age = 25.46, SD = 11.99; 83.1% heterosexual, 8.7% gay, 5.2% bisexual)	PPU as measured by the Problematic Pornography Use Scale
(Bőthe et al., 2018)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 18,034; 65.4% men; Mean age = 33.6, SD = 11.2; 83.6% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Bőthe, Koós, et al., 2019)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 14,043; 70% men; Mean age = 33.5, SD = 10.9; 82.9% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory and PPU as measured by the Problematic Pornography Consumption Scale
(Bőthe, Kovács, et al., 2019)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 18,034; 65.4% men; Mean age = 33.6, SD = 11.2; 83.6% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Bőthe, Lonza, et al., 2020)	A cross-sectional study of adult men in Hungary (N = 4,253; Mean age = 38.33, SD = 12.40)	PPU as measured by the Problematic Pornography Consumption Inventory
(Bőthe, Potenza, et al., 2020; Sample 1)	A cross-sectional study of internet using adults in Hungary (N = 7995; 64.8% men; Mean age = 36.25; SD = 12.14)	General CSB as measured by the Compulsive Sexual Behavior Disorder Scale -19
(Bőthe, Potenza, et al., 2020; Sample 2)	A probability sample matched to nationally representative norms in Hungary (N = 473; 48.3% men; Mean age = 40.22, SD = 11.79)	General CSB as measured by the Compulsive Sexual Behavior Disorder Scale -19
(Bőthe, Potenza, et al., 2020; Sample 3)	A cross-sectional sample of Mechanical Turk workers in the U.S.A. (N = 477; 53.9% men; Mean age = 38.25, SD = 11.04)	General CSB as measured by the Compulsive Sexual Behavior Disorder Scale -19
(Bőthe, Potenza, et al., 2020; Sample 4)	A cross-sectional sample of internet using adults in Germany (N = 380; 38.4% men; Mean age = 27.81, SD = 7.73)	General CSB as measured by the Compulsive Sexual Behavior Disorder Scale -19

(Bőthe, Tóth-Király, Demetrovics, et al., 2020; Sample 1)	A cross-sectional sample of adults in Hungary (N = 15,051; 70.3% men; Mean age = 33.2, SD = 11.0; 82.5% heterosexual)	PPU as measured by the Problematic Pornography Consumption Inventory
(Bőthe, Tóth-Király, Demetrovics, et al., 2020; Sample 2)	A cross-sectional sample of adults in Hungary (N = 760; 92.7% men; Mean age = 39.6, SD = 9.7; 79.3% heterosexual)	PPU as measured by the Problematic Pornography Consumption Inventory
(Bőthe, Tóth-Király, Demetrovics, et al., 2020; Sample 3)	A cross-sectional sample in a clinical setting of adults in Hungary (N = 266; 97% men; Mean age = 37.2, SD = 12.3; 69.2% heterosexual)	PPU as measured by the Problematic Pornography Consumption Inventory
(Bőthe, Tóth-Király, et al., 2019)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 18,034; 65.4% men; Mean age = 33.6, SD = 11.2; 83.6% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Bőthe, Tóth-Király, Potenza, et al., 2020; Sample 1)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 14,006; 70% men; Mean age = 33.2, SD = 10.9; 92.6% heterosexual)	PPU as measured by the Problematic Pornography Consumption Scale
(Bőthe, Tóth-Király, Potenza, et al., 2020; Sample 2)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 483; 89.9% men; Mean age = 27.7, SD = 9.3)	PPU as measured by the Problematic Pornography Consumption Scale
(Bőthe, Tóth-Király, Potenza, et al., 2020; Sample 3)	A cross-sectional study of adults in Hungary recruited via an online questionnaire (N = 672; 93.6% men; Mean age = 39.6, SD = 9.6; 90.2% heterosexual)	PPU as measured by the Problematic Pornography Consumption Scale
(Bradley et al., 2016)	A cross-sectional study of adults in the U.S. recruited via Amazon's Mechanical Turk (N = 713; 51.9% men; Mean age = 30.2, SD = 9.9)	PPU as measured by the Cyber-Pornography Use Inventory-9
(Brahim et al., 2019)	A cross-sectional study of adults recruited primarily from Switzerland (68%) and France (25%), as well as other countries (N = 306; 49% men; Mean age = 32.63; SD = 10.83; 84% heterosexual)	Online CSB as measured by the Compulsive Internet Use Scale modified for cybersex
(Brakoulias et al., 2020)	A cross-sectional sample of adults seeking treatment for obsessive compulsive disorder in multiple countries (N = 6,919; 51.7% men; Mean age = 34.5, SD = 12.1)	General CSB as measured by clinician diagnosis
(Brand et al., 2011)	A quasi-experimental study of heterosexual men (university students) in Germany (N = 89; Mean age = 23.98, SD = 4.09)	PPU as measured by the Internet Addiction Test modified for sexual use of the internet
(Brand et al., 2016)	A functional magnetic resonance imaging study of heterosexual men in Germany (N = 19; Mean age = 25.05, SD = 1.43)	PPU as measured by the short Internet Addiction Test modified for online sexual activities and general CSB as measured by the Hypersexual Behavior Inventory
(Brown et al., 2016)	A cross-sectional study in the U.S. of men who have sex with men (N = 338; Mean age = 42.1, SD = 11.0)	General CSB as measured by the Compulsive Sexual Behavior Inventory

(Brown et al., 2018)	A cross-sectional study in the U.S. of HIV-positive men who have sex with men (N = 266; Mean age = 43.6, SD = 10.5)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Burri, 2017)	A cross-sectional study of adults in Switzerland (N = 279; 30.8% men; Mean age = 32.0, SD = 10.6)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Carnes et al., 2012; Sample 2)	A cross-sectional sample including outpatients (n = 646; 86.8% men; Mean age = 43.4, SD = 11.4; Women: Mean age = 37.9, SD = 10.8), inpatients (n = 63; 100% men; Men: Mean age = 41.3, SD = 11.2), and university students (n = 203; 23.2% men; Men: Mean age = 21.65, SD = 5.6; Women: Mean age = 19.9, SD = 2.8) in the U.S.	General CSB as measured by the Sexual Addiction Screening Test Revised and the brief screening measure PATHOS
(Carnes et al., 2012; Sample 1)	A cross-sectional sample of patients receiving inpatient treatment for CSB between 1996 and 2004 (N = 1,118; 69.6% men) and a sample of university students (N = 790; 24.3% men; Mean age = 20.60, SD = 3.88)	General CSB as measured by the Sexual Addiction Screening Test Revised and the brief screening measure PATHOS
(Carnes et al., 2014)	A cross-sectional sample of patients receiving treatment for CSB in the U.S. (N = 4,492; 88% men)	General CSB as measured by the Sexual Addiction Screening Test Revised and clinician diagnosis
(Carvalho, Guerra, et al., 2015)	A cross-sectional sample of heterosexual women university students in Portugal (N = 235; Mean age = 23.35, SD = 7.91)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Carvalho, Stulhofer, et al., 2015)	A cross-sectional sample of adults in Croatia (N = 4,597; 43.5% men; Mean age = 31.1, SD = 9.67; 66.7% heterosexual)	General CSB as measured by the Hypersexual Behavior Consequences Scale
(Cashwell et al., 2018)	A cross-sectional study of undergraduates in the U.S. (N = 337; 40.1% men; Mean age = 23.18, SD = 5.04; 92.2% heterosexual)	General CSB as measured by the Sexual Addiction Screening Test Revised and the brief screening measure BODIES
(Castro-Calvo et al., 2018; Sample 1)	A cross-sectional study of adults in Spain (N = 1,585; 43.1% men; Mean age = 20.58, SD = 2.17; 92.2% heterosexual)	General CSB as measured by the Sexual Addiction Screening Test, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Behavior Inventory
(Castro-Calvo et al., 2018; Sample 2)	A cross-sectional study of adults in Spain (N = 943; 50.9% men; Mean age = 24.21, SD = 5.49; 68.4% heterosexual)	General CSB as measured by the Sexual Addiction Screening Test, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Behavior Inventory
(Castro-Calvo et al., 2020; Sample 1)	A cross-sectional sample of university students in Span (N = 1,581; 43.1% men; Mean age = 20.58, SD = 2.17; 92% heterosexual)	General CSB as measured by the Hypersexual Beahvior Inventory, the Kalichman Sexual Compulsivity Scale,

		and the Sexual Addiction Screening Test
(Castro-Calvo et al., 2020; Sample 2)	A cross-sectional community sample of adults in Spain (N = 1,318; 56.4% men; Mean age = 32.37, SD = 12.42; 73.7% heterosexual)	General CSB as measured by the Hypersexual Beahvior Inventory, the Kalichman Sexual Compulsivity Scale, and the Sexual Addiction Screening Test
(Chaney & Blalock, 2006)	A cross-sectional study in the U.S. of men who have sex with men (N = 517; Mean age = 40, SD = 11.95)	Online CSB as measured by the Internet Sex Screening Test
(Chaney & Burns-Wortham, 2014)	A cross-sectional study in the U.S. of men who have sex with men (N = 517; Mean age = 40, SD = 11.95)	Online CSB as measured by the Internet Sex Screening Test
(Chaney & Burns-Wortham, 2015)	A cross-sectional study in the U.S. of men who have sex with men (N = 314; Mean age = 34.31, SD = 7.99)	Online CSB as measured by the Internet Sex Screening Test
(Chatzittofis et al., 2016)	A neuroendocrinological study of hypersexual men (n = 67; Mean age = 39.2) in contrast with healthy controls (n = 39; Mean age = 37.5) in Sweden	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment screening interview
(Chatzittofis et al., 2017)	A cross-sectional study of hypersexual men (n = 67; Mean age = 39.2, SD = 11.5) in contrast with healthy controls (n = 39; Mean age = 37.5, SD = 11.9) in Sweden	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment screening interview
(Chatzittofis et al., 2020)	A neuroendocrinological study of hypersexual men in Sweden (N = 67; Mean age = 39.2, SD = 11.5) in comparison with healthy controls (N = 39; Mean age = 37.5; SD = 11.9)	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment Scale
(Chen et al., 2018)	A cross-sectional study of university students in China (N = 808; 57.7% men; Mean age = 18.54, SD = 0.75)	PPU as measured by the Problematic Internet Pornography Use Scale
(Chen & Jiang, 2020)	A cross-sectional sample of adults in China (N = 972; 57.6% men; Mean age = 24.8, SD = 7.2; 92.7% heterosexual)	PPU as measured by the Problematic Pornography Consumption Scale, the Problematic Pornography Use Scale, and the Internet Addiction Test for Sex.
(Chen et al., 2021; Sample 1)	A cross-sectional sample of internet using adults men in China (N = 695; Mean age = 25.39, SD = 7.18; 94.4% heterosexual)	PPU as measured by the Problematic Pornography Consumption Scale; the Brief Pornography Screener;

		and the Kalichman Sexual Compulsivity Scale
(Chen et al., 2021; Sample 2)	A cross-sectional sample of adult men in China (N = 4,651; Mean age = 22.7, SD = 4.33; 93.1% heterosexual)	PPU as measured by the Problematic Pornography Consumption Scale; the Brief Pornography Screener; and the Kalichman Sexual Compulsivity Scale
(Chen et al., 2021; Sample 3)	A cross-sectional sample of adult men in China (N = 9,395; Mean age = 23.4 SD = 3.34; 93.1% heterosexual	PPU as measured by the Problematic Pornography Consumption Scale
(Chowdhury et al., 2018)	A cross-sectional sample of university students in Bangladesh (N = 299; 70.6% men)	PPU as measured by idiosyncratic questions to this study and face-to-face interviews with researchers
(Coleman et al., 2000)	A retrospective intervention study on the efficacy of pharmacological treatment for CSB (N = 14; 100% men; Mean age = 45)	General CSB as measured by clinician diagnosis
(Coleman et al., 2010)	A cross-sectional study in the U.S. of men who have sex with men (N = 2,716; Mean age = 29.0, SD = 8.3)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Coleman et al., 2001)	A cross-sectional study in the U.S. of men with non-paraphilic CSB (n = 15; Mean age = 38), in comparison with men with paraphilic CSB (n = 35, Mean age = 36), and healthy controls (n = 42, Mean age = 43)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Cooper, Delmonico, et al., 2004)	A cross-sectional study of internet users in the U.S (N = 7,037; 84.1% men)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Cooper et al., 2000)	A cross-sectional study of adult internet users in the U.S. (N = 9,265; 86% men; 86.5% heterosexual)	Online CSB and general CSB as measured by the Kalichman Sexual Compulsivity Scale
(Cooper, Galbreath, et al., 2004)	A cross-sectional study of adult men internet users in the U.S. (N = 384; Mean age = 33, SD = 10.44; 88% heterosexual)	Online CSB as measured by idiosyncratic items unique to this research project
(Cooper et al., 2001)	A cross-sectional study of internet using adults in the United States (N = 7,037; 84.1% men; Mean age = 33.73)	Online CSB as measured by the Kalichman Sexual Compulsivity Scale
(Cooper et al., 2002)	A cross-sectional study of internet using adults in the United States (N = 7,037; 84.1% men; Mean age = 33.73)	Online CSB as measured by the Kalichman Sexual Compulsivity Scale
(Cooper et al., 2006)	A cross-sectional study of internet using adults in the U.S. (N = 3,466; no other demographics reported)	Online CSB as measured by the Kalichman Sexual Compulsivity Scale
(Cooper et al., 1999)	A cross-sectional study of internet using adults in the U.S. (N = 9,177; 86% men; Mean age = 34.96, SD = 11.62; 87% heterosexual)	Online CSB as measured by the Kalichman Sexual Compulsivity Scale
(Crosby & Twohig, 2016)	A treatment study evaluating the efficacy of Acceptance and Commitment Therapy in treating PPU in men in the U.S. (N = 28; Mean age = 29.3, SD = 11.4)	PPU as measured by the Kalichman Sexual Compulsivity Scale and the Cognitive and Behavioral

		Outcomes of Sexual Behavior Scale
(Daneback et al., 2006)	A cross-sectional survey of adult internet users in Sweden (N = 1,458; 45.1% men; 90% heterosexual; Men: Mean age = 29.7, SD = 10.3; Women: Mean age = 31.5, SD = 9.8)	Online CSB as measured by the Kalichman Sexual Compulsivity Scale
(Das et al., 2017)	A cross-sectional survey of adult outpatients of a psychiatric hospital in India (N = 75; 60% men; Mean age = 26.57, SD = 6.50)	PPU as measured by the Pornography Addiction Screening Tool
(Davidson et al., 2017)	A cross-sectional study of patients in a psychiatric hospital setting in New Zealand (N = 100; 63% men; Mean age = 35.88, SD = 12.54)	General CSB as measured by the Hypersexuality in Psychiatric Conditions Observer-Rated Scale
(De Boni et al., 2018)	A cross-sectional study of men who have sex with men receiving PrEP treatment in Brazil (N = 421; Mean age = 29)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Delmonico & Miller, 2003)	A cross-sectional study of visitors to an English language sexual health website (N = 6,088; 82.2% men)	Online CSB as measured by the Internet Sex Screening Test
(Derbyshire & Grant, 2015)	A study of neurocognitive functioning in adults with CSB (n = 13; no other demographics reported) in comparison with healthy controls (n = 13)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Dew & Chaney, 2005)	A cross-sectional study of men who have sex with men in the U.S. (N = 513; Mean age = 36.1, SD = 11.44)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Dhuffar et al., 2015)	A cross-sectional study of university students in the U.K. (N = 165, 40.6% men; Mean age = 28.0, SD = 7.7)	General CSB as measured by the Hypersexual Disorder Questionnaire and the Hypersexual Behavior Consequences Scale
(Dhuffar & Griffiths, 2014)	A cross-sectional study of women university students in the U.K. (N = 102; 87.3% heterosexual)	General CSB as measured by the Hypersexual Disorder Questionnaire and the Hypersexual Behavior Consequences Scale
(Dickenson et al., 2018)	A nationally representative, cross-sectional, probability sampling study of the U.S. population (N = 2,325; matched to U.S. norms)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Dilley et al., 2008)	A longitudinal (12 months) efficacy study for a HIV counseling intervention study among a sample of U.S. men who have sex with men (N = 336)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(do Amaral et al., 2015)	A cross-sectional study of men seeking treatment for CSB in Brazil (N = 69; Mean age = 35.2, SD = 802)	General CSB as measured by clinician diagnosis and the Kalichman Sexual Compulsivity Scale
(Dodge et al., 2004)	A cross-sectional study of undergraduates in the U.S. (N = 876; 37.1% men; Mean age = 20.2, SD = 0.87)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(Dodge et al., 2008)	A cross-sectional study of U.S. men who have sex with men (N = 504; Mean age = 34.7, SD = 10.6)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Downing et al., 2014)	A cross-sectional study of U.S. men who have sex with men (N = 265; Mean age = 32.9, SD = 12.5)	PPU as measured by a modified form of the Compulsive Internet Use Scale
(Draps et al., 2020)	A functional magnetic resonance imaging study of heterosexual men in Poland (N = 98; Mean age = 34.5, SD = 6.5)	General CSB as measured by the Sexual Addiction Screening Test and the Brief Pornography Screener
(Dwulit & Rzymski, 2019)	A cross-sectional study of university students in Poland (N = 6,463; 40.7% men; Mean age = 22.1, SD = 1.7)	PPU as measured by idiosyncratic measures
(Efrati, 2018)	A cross-sectional study of Israeli adolescents (N = 310; 59% boys; Mean age = 16.94, SD = 0.65)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, 2019; Study 1)	A cross-sectional study of Israeli adolescents (N = 661; 49.8% boys; Mean age = 16.84, SD = 1.29)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, 2019; Study 2)	A cross-sectional study of Israeli adolescents (N = 522; 43.5% boys; Mean age = 16.84, SD = 1.29)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, 2019; Study 3)	A cross-sectional study of Israeli adolescents (N = 317; 49.52% boys; Mean age = 17.84, SD = 4.23)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Dannon, 2018)	A cross-sectional study of Israeli adolescents (N = 311; 59% boys; Mean age = 16.94, SD = 0.65)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Mikulincer, 2018; Study 1)	A cross-sectional study of Israeli adults (N = 492; 50% men; Mean age = 32.2, SD = 5.3)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Mikulincer, 2018; Study 2, Sample 1)	A cross-sectional study of Israeli adults (N = 205; 50.7% men; Mean age = 39.9, SD = 9.4)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Mikulincer, 2018; Study 2, Sample 2)	A cross-sectional study of Israeli adults (N = 201; 50.8% men; Mean age = 33.1, SD = 9.1)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Mikulincer, 2018; Study 3)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 112; 95% men; Mean age = 34.6, SD = 9.25)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, Gerber, et al., 2019)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 160; 100% men)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale

(Efrati, Shukron, et al., 2019)	A cross-sectional study of Israeli men in a Sexaholics Anonymous group (n = 68; Mean age = 32.26, SD = 14.98), of sex offenders in an Israeli prison (n = 103; Mean age = 43.57, SD = 16.59) and violent offenders in an Israeli Prison (n = 81, Mean age = 35.67, SD = 9.98)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2018a)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 97; 98% men; Mean age = 30.19, SD = 7.3)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2018b; Study 1)	A cross-sectional study of Israeli adolescents (N = 1,182; 42% boys; Mean age = 16.68, SD = 1.54)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2018b; Study 2)	A cross-sectional study of Israeli adolescents (N = 618; 55.3% boys; Mean age = 16.69, SD = 1.16)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2019a)	A cross-sectional study of Israeli adults (95% men) in Sexaholics Anonymous (n = 65; Mean age = 34.6, SD = 9.25) and healthy controls (n = 47; Mean age = 36.78, SD = 8.67)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2019b)	A cross-sectional study of Israeli adolescents (N = 275; 42% boys; Mean age = 16.23, SD = 1.18)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Egan & Parmar, 2013)	A cross-sectional study of men in the U.K. (N = 227; Mean age = 23.59, SD = 8.70)	PPU as measured by the Cyber Pornography Use Inventory and the Sexual Addiction Screening Test Revised
(Engel, Kessler, et al., 2019)	A cross-sectional study of adults in Germany (N = 1,194; 53% men; Mean age = 32.99, SD = 10.78; 83% heterosexual)	General CSB and Online CSB as measured by the Hypersexual Behavior Inventory and the Short Internet Addiction Test revised for cybersex behavior
(Engel, Veit, et al., 2019)	A cross-sectional study of heterosexual men in Germany with CSB (n = 47; Mean age = 36.51, SD = 11.47) in comparison with healthy controls (n = 38; Mean age = 37.92, SD = 12.33)	General CSB and Online CSB as measured by the Hypersexual Behavior Inventory, the Sexual Addiction Screening Test Revised, and the Short Internet Addiction Test revised for cybersex behavior
(Farre et al., 2015)	A cross-sectional study in a psychiatric setting in Spain of adults with gambling disorder (n = 2190; 90.1% men; Mean age = 42.2, SD = 13.4) in comparison with individuals with CSB (n = 59; 98.3% men;	General CSB as measured by clinician diagnosis

	Mean age = 40.1, SD = 8.8) and healthy controls (n = 93; 89.2% men; Mean age = 31.0, SD = 9.5)	
(Fernandez et al., 2017)	A brief, longitudinal (2 weeks) study of men in a university setting in Malaysia (N = 76; Mean age = 22.27, SD = 3.45)	PPU as measured by the Cyber Pornography Use Inventory-9
(Gil-Llario et al., 2016)	A cross-sectional study of heterosexual young adults in Spain (N = 424; 39.6% men; Mean age = 20.62, SD = 2.62)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Gilbert & Rhodes, 2014)	A cross-sectional study in the U.S. of Latino men who have sex with men (N = 190; Mean age = 25.5, SD = 5.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Gilliland et al., 2015)	A cross-sectional sample of men seeking treatment for CSB in the U.S. (N = 136; Mean age = 34.73, SD = 13.06)	General CSB as measured by the Hypersexual Behavior Inventory
(Giordano & Cecil, 2014)	A cross-sectional sample of undergraduates at a university in the U.S. (N = 235; 58% men; Mean age = 20.91, SD = 3.56; 94.5% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Giordano et al., 2015)	A cross-sectional sample of undergraduates at a university in the U.S. (N = 235; 58% men; Mean age = 20.91, SD = 3.56; 94.5% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Gola et al., 2016)	A cross-sectional analysis of heterosexual men in Poland (N = 569; Mean age = 28.871, SD = 6.36)	PPU as measured by the Sexual Addiction Screening Test Revised
(Gola, Skorko, et al., 2017)	A cross-sectional study of heterosexual men in Poland seeking treatment for CSB (n = 116; Mean age = 28.35, SD = 7.33) in comparison with healthy controls (n = 442; Mean age = 28.35, SD = 7.33)	General CSB as measured by the Sexual Addiction Screening Test
(Gola, Wordecha, et al., 2017)	A longitudinal functional magnetic resonance imaging study of heterosexual men in Poland seeking treatment for PPU (n = 28; Mean age = 30.96, SD = 6.51) in comparison with healthy controls (n = 24; Mean age = 30.49, SD = 7.55)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Graham et al., 2016)	A cross-sectional study of college students in the U.S. (N = 1,152; 47.4% women; Mean age = 19.46, SD = 1.79)	General CSB as measured by the Multidimensional Assessment of Sex and Aggression
(Granero et al., 2016)	A cross-sectional study in a psychiatric setting in Spain of adults with compulsive buying behaviors (n = 110; 28.2% men; Mean age = 43.3) in comparison with individuals with CSB (n = 28; 96.4% men; Mean age = 41.3), internet gaming disorder (n = 51; 94.1% men; Mean age = 22), internet addiction (n = 41; 73.2% men; Mean age = 31.7) and gambling disorder (n = 3,094; 89.9% men; Mean age = 42.9)	General CSB as measured by clinician assessment based on the DSM-IV-TR criteria for Sexual Disorder Not Otherwise Specified
(Greenfield, 1999)	A cross-sectional study from English speaking users of a U.S. news website in 1999 (N = 17,251; 71% men)	Online CSB as measured by four idiosyncratic questions

(Grov, Golub, et al., 2010)	An intensive longitudinal study (daily diary study) of gay and bisexual men in the U.S. (N = 47, Mean age = 36.2)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Grov, Parsons, et al., 2010)	A cross-sectional study of gay and bisexual men in the U.S. (N = 1,214; Mean age = 37.4, SD = 11.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Grov et al., 2014)	A cross-sectional study in the U.S. of men who have sex with men (N = 2,063)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Grubbs et al., 2017; Study 1)	A longitudinal (1 year) study of college students in the U.S. (N = 1,519; 67.2% men; Mean age = 19.3, SD = 1.3)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs et al., 2017; Study 2)	A longitudinal (1 year) study of adult internet users in the U.S. recruited via Mechanical Turk (N = 713; 51.9% men; Mean age = 30.2, SD = 9.9)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs & Gola, 2019; Sample 1)	A cross-sectional study of undergraduate men in the U.S. (N = 147; Mean age = 19.8, SD = 3.7)	PPU as measured by the Cyber Pornography Use Inventory-4
(Grubbs & Gola, 2019; Sample 2)	A longitudinal study of men in the U.S. recruited via Mechanical Turk (N = 433; Mean age = 33.5, SD = 9.7)	PPU as measured by the Cyber Pornography Use Inventory-4
(Grubbs & Gola, 2019; Sample 3)	A cross-sectional sample of men in the U.S. matched to 2010 Census norms (N = 297, Mean age = 46.5, SD = 15.3)	PPU as measured by the Cyber Pornography Use Inventory-4
(Grubbs, Kraus, et al., 2019)	A cross-sectional sample of adults in the U.S. matched to 2010 Census norms (N = 1,461; 59% men; Mean age = 44.8, SD = 16.7)	PPU as measured by three items from the Cyber Pornography Use Inventory-9
(Grubbs, Grant, et al., 2019; Sample 1)	A cross-sectional sample of adults in the U.S. recruited via Mechanical Turk (N = 829; 56.7% men; Mean age = 19.3, SD = 1.8)	PPU as measured by idiosyncratic true/false questions about self-identification as a pornography addict
(Grubbs, Grant, et al., 2019; Sample 2)	A cross-sectional sample of adults in the U.S. recruited via Mechanical Turk (N = 424; 52.4% men; Mean age = 33.6, SD = 9.1)	PPU as measured by idiosyncratic true/false questions about self-identification as a pornography addict
(Grubbs, Grant, et al., 2019; Sample 3)	A cross-sectional sample of university students in the U.S. (N = 231; 39.8% men; Mean age = 19.3, SD = 1.8)	PPU as measured by idiosyncratic true/false questions about self-identification as a pornography addict
(Grubbs, Grant, et al., 2019; Sample 4)	A cross-sectional sample of adults in the U.S. matched to 2010 Census norms (N = 736; 58.1% men; Mean age = 48.0, SD = 15.0)	PPU as measured by idiosyncratic true/false questions about self-identification as a pornography addict
(Grubbs, Kraus, et al., 2020; Study 1, Sample 1)	A cross-sectional sample of undergraduates at a university in the U.S. (N = 467; 38.5% men; Mean age = 19.32, SD = 2.45)	PPU as measured by the Cyber Pornography Use Inventory-4

(Grubbs, Kraus, et al., 2020; Study 1, Sample 2)	A cross-sectional sample of adults in the U.S. matched to 2010 Census norms (N = 739; 58% men; Mean age = 47.9, SD = 15.81)	PPU as measured by the Cyber Pornography Use Inventory-4
(Grubbs, Kraus, et al., 2020; Study 1, Sample 3)	A cross-sectional sample of adults in the U.S. matched to 2010 Census Norms (N = 1,463; 59% men; Mean age = 45.51, SD = 16.6)	PPU as measured by the Brief Pornography Screener
(Grubbs, Kraus, et al., 2020; Study 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 850; 52.3% men; Mean age = 33.98, SD = 9.87)	PPU as measured by the Cyber Pornography Use Inventory-4
(Grubbs, Lee, et al., 2020)	A cross-sectional sample of adults in the U.S. matched to 2016 American Community Survey Norms (N = 1,424; 66.4% men; Mean age = 43.92, SD = 16.74)	PPU as measured by the Cyber Pornography Use Inventory-4 and the Brief Pornography Screener
(Grubbs, Stauner, et al., 2015; Study 1)	A cross-sectional study of adults in the U.S. recruited via Mechanical Turk (N = 713; 51.9% men; Mean age = 30.2, SD = 9.9)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Stauner, et al., 2015; Study 2)	A longitudinal study (1 year) of college students in the U.S. (N = 1,215; 67.2% men; Mean age = 19.3, SD = 1.3)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Volk, et al., 2015; Study 1)	A cross-sectional study of undergraduate students in the U.S. (N = 269; 84.4% men; Mean age = 19.5, SD = 1.4)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Volk, et al., 2015; Study 2)	A cross-sectional study of adults in the U.S. recruited via Mechanical Turk (N = 214; 63.6% men; Mean age = 31.8, SD = 10.7)	PPU as measured by the Cyber Pornography Use Inventory-9 and the Kalichman Sexual Compulsivity Scale
(Grubbs, Volk, et al., 2015; Study 3)	A cross-sectional study of university students in a college counseling center setting (N = 152; 67.8% men; Mean age = 20.3, SD = 1.8)	PPU as measured by the Cyber Pornography Use Inventory-9 and the Kalichman Sexual Compulsivity Scale
(Grubbs, Wilt, Exline, & Pargament, 2018; Study 1)	A longitudinal (1 year) study of undergraduate students in the U.S. (N = 1,352; 67.7% men; 90.1% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Wilt, Exline, & Pargament, 2018; Study 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 793; 48.8% men; 83.9% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Wilt, Exline, Pargament, et al., 2018; Sample 1)	A longitudinal (1 year) study of undergraduate students in the U.S. (N = 1,507; 65.2% men; Mean age = 19.3, SD = 2.2; 90.1% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory-9
(Grubbs, Wilt, Exline, Pargament, et al., 2018; Sample 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 782; 48.8% men; Mean age = 32.2, SD = 10.3)	PPU as measured by the Cyber Pornography Use Inventory-9
(Gullette & Lyons, 2005)	A cross-sectional study of university students in the U.S. (N = 256, 39.1% men; Mean age = 21.6)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(Guyon et al., 2020)	A cross-sectional sample of adults in Canada (N = 175; 45% men; Mean age = 41.2; 73% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Halkitis, Green, et al., 2005)	A cross-sectional study in the U.S. of HIV-positive men who have sex with men (N = 1,168; Mean age = 40, SD = 7.51)	General CSB as measured by an abridged version of the Kalichman Sexual Compulsivity Scale
(Halkitis, Wilton, et al., 2005)	A cross-sectional study in the U.S. of HIV-positive men who have sex with men (N = 980; Mean age = 41, SD = 7.91)	General CSB as measured by an abridged version of the Kalichman Sexual Compulsivity Scale
(Hall et al., 2020)	A psychoeducational treatment study CSB in the UK (N = 119; gender, age, and sexual orientation not reported)	General CSB as measured by clinician diagnosis
(Hallberg et al., 2017)	A treatment feasibility study of men in Sweden (N = 10; Mean age = 38.9, SD = 8.1)	General CSB as measured by the Hypersexual Disorder Current Assessment Scale and the Hypersexual Disorder Screening Inventory
(Hallberg et al., 2019)	A treatment study of men in Sweden (N = 137; Mean age = 40, SD = 12)	General CSB as measured by the Kalichman Sexual Compulsivity Scale, the Hypersexual Disorder Current Assessment Scale, and the Hypersexual Disorder Screening Inventory
(Hardy et al., 2010)	A cross-sectional, retrospective, self-report study of English-speaking users of an online program for treating CSB (N = 138; 97% men; Mean age = 37.97, SD = 12.40)	General CSB and PPU as measured by idiosyncratic self-report questions
(Harper & Hodgins, 2016)	A cross-sectional study of university students in Canada (N = 191; 45% men; Mean age = 21.05, SD = 2.96)	PPU as measured by the Cyber Pornography Use Inventory
(Hart et al., 2016)	A longitudinal study in the U.S. of HIV-positive men who have sex with men (N = 59; Mean age = 42.4, SD = 9.0)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Hart et al., 2020)	A sexual education intervention study for HIV positive adult men who have sex with men in Canada (Treatment arm: n = 89; Mean age = 40.77, SD = 11.37; control group: n = 94; Mean age = 40.82, SD = 10.7)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Hartman et al., 2012)	A longitudinal study of treatment outcomes in Canada (N = 57; 91.2% men; Mean age = 39.09, SD = 8.81)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Hequembourg et al., 2011)	A cross-sectional study in the U.S. of men who have sex with men (N = 634; Mean age = 37.7, SD = 11.2)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Herrick et al., 2013)	A cross-sectional study in the U.S. of men who have sex with men (N = 1,551; Mean age = 52)	General CSB as measured by the Compulsive Sexual Behavior Inventory

(Hoffmann et al., 2014)	An experimental study in the U.S. of men who have sex with men (N = 56)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Ince et al., 2020)	A cross-sectional sample of adult male Mechanical Turk users in various countries (N = 138; Mean age = 31.75, SD = 10.72; 87.7% heterosexual)	PPU as measured by the Brief Pornography Screener, the Problematic Pornography Use Scale
(Janssen et al., 2020)	A lab-based sexual arousal study of men in the U.S. who have sex with men, comparing men with CSB (n = 81, Mean age = 38.3, SD = 20.2) and healthy controls (n = 130; Mean age = 33.8, SD =12.7)	General CSB as measured by clinician diagnosis
(Jardin et al., 2016)	A cross-sectional study of university students in the U.S. (N = 758; 21.2% men; Mean age = 22.4, SD = 4.27; 91.8% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Jerome et al., 2016)	A cross-sectional study in the U.S. of men who have sex with men (N = 711, Mean age = 43.86, SD = 13.36)	General CSB as measured by the Sexual Preoccupation Scale
(Jokinen et al., 2017)	A neuroendocrinological study of hypersexual men (n = 54; Mean age = 39.2) in contrast with healthy controls (n = 33, Mean age = 37.5) in Sweden	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Current Assessment
(Kafka, 1997)	A cross-sectional study of men in the U.S. with paraphilia (n = 65; Mean age = 36.4, SD = 10.2; 80% heterosexual) and without paraphilia (n = 35; Mean age = 37.1, SD = 8.9; 74.3% heterosexual)	General CSB as measured by clinician diagnosis
(Kafka & Hennen, 1999)	A cross-sectional study of men in the U.S. seeking treatment for sexual disorders (N = 206; Mean age = 37)	General CSB as measured by clinician diagnosis
(Kafka & Hennen, 2003)	A cross-sectional study of men in the U.S. seeking treatment for sexual disorders (N = 120; Mean age = 37.1, SD = 9.5)	General CSB as measured by clinician diagnosis
(Kalichman & Cain, 2004)	A cross-sectional study of adults in the U.S. receiving services related to sexually transmitted infections (N = 685; 71.8% men; Mean age = 35.7, SD = 10.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kalichman & Rompa, 2001)	A cross-sectional study of adults in the U.S. with HIV (N = 287; 69% men; Mean age = 40.3, SD = 7.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kalichman et al., 2005)	A cross-sectional study in the U.S. of HIV-positive men (N = 141; Mean age = 38.6, SD = 7.9)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kelly et al., 2009)	A cross-sectional study of Lesbian/Gay/Bisexual men and women in the U.S. (N = 1,543; 78.7% men; Men: Mean age = 37.46; Women: Mean age = 34.03)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kingston et al., 2018; Study 1)	A cross-sectional study of university students in Canada (N = 915; 26.7% men; Men: Mean age = 20.4, SD = 3.6; Women: Mean age = 19.5, SD = 2.6)	General CSB as measured by the Hypersexual Behavior Inventory and the Kalichman Sexual Compulsivity Scale

(Kingston et al., 2018; Study 2)	A cross-sectional study of adults in Canada (N = 694; 49.3% men; Men: Mean age = 28.3, SD = 8.4; Women: Mean age = 25.5, SD = 8.4)	General CSB as measured by the Hypersexual Behavior Inventory and the Kalichman Sexual Compulsivity Scale
(Kingston et al., 2020; Sample 1)	A cross-sectional sample of adults in Canada (N = 694; 49.4% men)	General CSB as measured by the Hypersexual Behavior Inventory and the Kalichman Sexual Compulsivity Scale
(Kingston et al., 2020; Sample 2)	A cross-sectional sample of adults in Canada (N = 1,113; 42.3% men)	General CSB as measured by the Hypersexual Behavior Inventory and the Kalichman Sexual Compulsivity Scale
(Klein, Jurin, et al., 2015)	A cross-sectional study of heterosexual men in Croatia (n = 687; Mean age = 36.75, SD = 9.34) and Germany (n = 195; Mean age = 34.69; SD = 10.22)	General CSB as measured by the Hypersexual Disorder Screening Inventory
(Klein et al., 2014)	A cross-sectional study of women in Germany (N = 988; Mean age = 24.10, SD = 4.88)	General CSB as measured by the Hypersexual Behavior Inventory
(Klein et al., 2020)	A functional magnetic resonance imaging study of adult men in Germany (N = 72; Mean age = 25.6, SD = 4.5)	Online CSB as measured by the Short Interent Addiction Test revised for Sex
(Klein, Schmidt, et al., 2015)	A cross-sectional study of men in Germany (N = 8,718, Mean age = 43.5, SD = 13.7)	General CSB as measured by the Hypersexual Behavior Inventory
(Klontz et al., 2005)	A treatment study of adults in the U.S. (N = 38; 73.6% men; Mean age = 44.1, SD = 8.88; 79% heterosexual)	General CSB as measured by the Garos Sexual Behavior Inventory
(Klucken et al., 2016)	A functional magnetic resonance imaging study in Germany of men with CSB (n = 20; Mean age = 34.2, SD = 8.6) and healthy controls (n = 20; Mean age = 34.9, SD = 9.7)	General CSB as assessed by clinician interview
(Kohut & Stulhofer, 2018; Sample 1)	A longitudinal (2.5 years) study of adolescent boys in Croatia (N = 314)	PPU as measured by the Compulsive Pornography Consumption Scale
(Kohut & Stulhofer, 2018; Sample 2)	A longitudinal (2.5 years) study of adolescent boys in Croatia (N = 197)	PPU as measured by the Compulsive Pornography Consumption Scale
(Kor et al., 2014; Study 1)	A cross-sectional sample of adults in Israel (N = 303; 45.2% men; Mean age = 39.5, SD = 14.5)	PPU as measured by the Problematic Pornography Use Scale
(Kor et al., 2014; Study 2)	A cross-sectional sample of adults in Israel (N = 300; 60% men; Mean age = 43.85, SD = 14.34)	PPU as measured by the Problematic Pornography Use Scale
(Kor et al., 2014; Study 3)	A cross-sectional sample of adults in Israel (N = 1,720; 48.5% men; Mean age = 39.5, SD = 14.2)	PPU as measured by the Problematic Pornography Use Scale
(Kowalewska et al., 2019)	A cross-sectional study of heterosexual men in Poland seeking treatment for CSB (n = 72; Mean age = 35.4, SD = 7.7) in comparison with healthy controls (n = 208; Mean age = 27.8, SD = 5.8)	General CSB as measured by the Sexual Addiction Screening Test and PPU as measured by the Brief Pornography Screener

(Kraus et al., 2016)	A cross-sectional study of men in the U.S. (N = 1,298; Mean age = 34.4, SD = 13.1; 58% heterosexual)	PPU as measured by the Pornography Craving Questionnaire and the Hypersexual Behavior Inventory
(Kraus et al., 2020; Sample 1)	A cross-sectional sampel of U.S. Armed Forces veterans (N = 220; 70.6% men; Mean age =25.1, SD = 9.2)	PPU as measured by the Brief Pornography Screener, the Problematic Pornography Use Scale, and Hypersexual, Behavior Inventory
(Kraus et al., 2020; Sample 2)	A cross-sectional sample of adults in the U.S. matched to representative norms (N = 1,058; 66% men; Mean age = 44.8, Sd = 16.7)	PPU as measured by the Cyber Pornography Use Inventory- 9 and the Brief Pornography Screener
(Kraus et al., 2020; Sample 3)	A cross-sectional sample of adults in the U.S. matched to representative norms (N = 470; 72% men; Mean age = 44.9, Sd = 15.9)	PPU as measured by the Cyber Pornography Use Inventory- 9 and the Brief Pornography Screener
(Kraus et al., 2020; Sample 4)	A cross-sectional sample of adults in Poland (N = 703; 272% men; Mean age = 26.04, SD = 6.07)	PPU as measured by the Brief Pornography Screener, the Problematic Pornography Use Scale ,and Hypersexual, Behavior Inventory
(Kraus et al., 2020; Sample 5)	A treatment seeking sample of men in Poland (N = 105; Mean age = 32.9, SD = 7.5)	PPU as measured by the Brief Pornography Screener, the Problematic Pornography Use Scale ,and Hypersexual, Behavior Inventory
(Kraus, Martino, et al., 2017)	A cross-sectional study of U.S. armed forces veterans (N = 820; 60% men; Mean age = 35.1, SD = 8.8)	General CSB as measured by two items from the Minnesota Impulsive Disorders Interview
(Kraus, Potenza, et al., 2015)	A cross-sectional sample of men in the U.S. with PPU related problems (N = 103; Mean age = 39.8, SD = 12.1; 17% heterosexual, 70% gay)	General CSB and PPU as measured by the Yale-Brown Obsessive Compulsive Scale adapted for Compulsive Sexual Behaviors
(Kraus, Rosenberg, et al., 2015)	A cross-sectional study of men in the U.S. (N = 1,298; Mean age = 34.4, SD = 13.1; 58% heterosexual)	PPU as measured by the Pornography Use Avoidance Self-Efficacy Scale and the Hypersexual Behavior Inventory
(Kraus, Rosenberg, et al., 2017)	A cross-sectional sample of adult men in the U.S. (N = 229; Mean age = 33.3, SD = 12.2; 66% heterosexual)	PPU as measured by the Pornography Use Avoidance Self-Efficacy Scale and the Hypersexual Behavior Inventory
(Kühn & Gallinat, 2014)	A functional magnetic resonance imaging study in Germany of men (N = 64; Mean age = 28.9, SD = 6.6)	PPU as measured by the Sexual Addiction Screening

		Test and the Internet Sex Screening Test
(Labadie et al., 2018)	A cross-sectional study in Canada of adults who had survived childhood sexual abuse (n = 324; 25.3% men; Mean age = 28.56, SD = 9.92) in comparison with those who had not experienced such abuse (n = 484; 27.5% men; Mean age = 24.95, SD = 7.03)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Laier & Brand, 2017; Study 1)	A cross-sectional study of men university students in Germany (N = 80; Mean age = 26.41, SD = 6.23)	PPU as measured by the short version of the Internet Addiction Test modified for pornography and the Pornography Consumption Inventory
(Laier & Brand, 2017; Study 2)	A longitudinal (repeated measures) study of men in Germany (N = 66; Mean age = 26.91, SD = 5.43)	PPU as measured by the short version of the Internet Addiction Test modified for pornography and the Pornography Consumption Inventory
(Laier et al., 2013; Study 1)	An experimental study of heterosexual men in Germany (N = 171; Mean age = 24.56, SD = 5.22)	PPU as measured by the Internet Addiction Test modified for cybersex use
(Laier et al., 2013; Study 2)	An experimental study of heterosexual men in Germany with PPU (n = 25; Mean age = 23.96, SD = 2.91) in comparison with men without PPU (n = 25; Mean age = 22.88, SD = 1.86)	PPU as measured by the Internet Addiction Test modified for cybersex use
(Laier et al., 2014)	An experimental study of heterosexual women in Germany (N = 102; Mean age = 21.83, SD = 2.48)	PPU as measured by the Internet Addiction Test modified for cybersex use
(Laier et al., 2015)	A cross-sectional study of homosexual men in Germany (N = 71; Mean age = 29.15, SD = 6.22)	Online CSB as measured by the Internet Addiction Test modified for cybersex use, the Hypersexual Behavior Inventory, and the Pornography Consumption Inventory
(Langstrom & Hanson, 2006)	A cross-sectional study of adults in Sweden (N = 2,450; 52.2% men; Age range = 18-60)	General CSB as measured by idiosyncratic measures
(Lee et al., 2009)	A cross-sectional sample of men university students in the U.S. (N = 334; Mean age = 19.54, SD = 2.16; 94.6% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Compulsive Sexual Behavior Inventory
(Leonhardt et al., 2018)	A cross-sectional study of adults in the U.S. recruited via Mechanical Turk (N = 686; 51% men; Mean age = 28.54, SD = 7.85)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Leonhardt et al., 2020)	A cross-sectional sample of adult men in the U.S. recruited via Mechanical Turk (N = 1,421; 45.7% men; Mean age = 34.1; SD = 10.5)	PPU as measured by the Cyber Pornography Use Inventory- 9

(Levert, 2007)	A cross-sectional study of men in the U.S. (N = 120; Mean age = 39.51; 88% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Levi et al., 2020; Sample 1)	A cross-sectional sample of adults in Israel (N = 177; 18% men; Mean age = 33.3, SD = 9.8)	Online CSB as measured by the Sexual Addiction Screening Test Revised
(Levi et al., 2020; Sample 2)	A cross-sectional sample of adults in Israel (N = 139; 29% men; Mean age = 24.8; SD = 0.3)	Online CSB as measured by the short Internet Addiction Test, modified for online sexual activities and the Sexual Addiction Screening Test Revised
(Levin et al., 2017)	A treatment feasibility study for PPU among adults in the U.S. (N = 19; 90% men; Mean age = 23.10, SD = 4.48)	PPU as measured by the Cyber Pornography Use Inventory and the Cognitive and Behavioral Outcomes of Sexual Behavior Scale
(Lewczuk et al., 2020)	A cross-sectional study of adults in Poland matched to nationally representative norms (N = 880; 55.1% men; Mean age = 55.1, SD = 44.9)	PPU as measured by the Cyber Pornography Use Inventory-9, the Brief Pornography Screener, and the Hypersexual Behavior Inventory
(Lewczuk et al., 2017)	A cross-sectional study of Polish women seeking treatment for PPU compared to healthy controls (N = 719; Mean age = 26.5, SD = 5.93; 64.25% heterosexual, 2.64% lesbian, 11.96% bisexual, 21.14% did not report sexuality)	PPU as measured by the Sexual Addiction Screening Test Revised
(Liao et al., 2015)	A cross-sectional study of heterosexual men in China (N = 1,048; Age range = 18-60)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Luo et al., 2018)	A cross-sectional study of women in China (N = 1,352; Age ranges = 32.4% < 21, 32.6% 21-23, 35% > 23)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Maddock et al., 2019)	A longitudinal study of a U.S. sample recruited from Mechanical Turk (N = 320; 54.8% men; Mean age = 36.26, SD = 10.18; 86% heterosexual, 2.9% homosexual, 10.1% bisexual, 0.91% other; baseline stats)	PPU as measured by the Problematic Pornography Use Scale
(McBride et al., 2008)	A cross-sectional study of U.S. undergraduate students (N = 390; 29.7% men; 95.4% heterosexual, 1% homosexual, 2.6% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Mechelmans et al., 2014)	An experimental study of heterosexual men in the U.K. with CSB (n = 22; Mean age = 25.14, SD = 4.68) and healthy controls (n = 44; Mean age = 24.16, SD = 5.14)	General CSB as indicated by psychiatrist diagnosed presence of symptoms
(Messina et al., 2017)	An experimental study of Brazilian men with CSB (n = 30; Age range = 20-60; 60% heterosexual) and healthy controls (n = 30; Age range = 20-60; 86.6% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(Mimiaga et al., 2015)	A cross-sectional study of men who have sex with men in 17 Latin American countries (N = 24,274; Mean age = 30.4, SD = 9.1; 77.4% homosexual, 19% bisexual, 0.5% heterosexual, 3.1% unsure/questioning/other)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Miner et al., 2007)	A cross-sectional study of U.S. men who have sex with men (N = 1,026; Mean age = 28.2)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Miner et al., 2017)	A cross-sectional study of U.S. men who have sex with men (N = 242)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Miner et al., 2009)	A neuroscience study using diffusion tensor imaging on men with CSB (n = 8; Mean age = 44.5, SD = 10.6) and healthy controls (n = 8; Mean age = 43.4, SD = 9.1) in the U.S.	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Miner et al., 2016)	A cross-sectional study of U.S. men who have sex with men who have CSB (n = 93; Mean age = 34.1, SD = 12.8) and healthy controls (n = 149; Mean age = 38.4, SD = 10.1)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Moholy et al., 2015)	An experimental study of college students in the U.S. (N = 116; 52.6% men; Mean age = 21.59, SD = 5.95)	General CSB as measured by the Cognitive and Behavioral Outcomes of Sexual Behavior Scale
(Moisson et al., 2019)	A cross-sectional study of U.S. veterans (N = 283; 70.6% men; Mean age = 35.1, SD = 9.2)	General CSB as measured by the Hypersexual Behavior Inventory and the Problematic Pornography Use Scale
(Morgenstern et al., 2011)	A cross-sectional study of gay and bisexual men in the U.S. (N = 183; Mean age = 36, SD = 8.33; 89.6% homosexual, 10.4% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Morrison et al., 2018)	A cross-sectional study of a clinical sample of Canadian men who have sex with men (N = 186; Mean age = 31)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Muench et al., 2007)	A treatment study of gay and bisexual men with CSB in the U.S. (N = 28; Mean age = 36.8, SD = 8.2; 85.7% homosexual, 14.3% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Compulsive Sexual Behavior Consequences Scale
(Muise et al., 2013)	A cross-sectional study of heterosexual men (n = 1061; Mean age = 32.77, SD = 8.15) and women (n = 240; Mean age = 38.76, SD = 9.17) in multiple countries	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Mulhauser et al., 2014)	An experimental study of U.S. men receiving counseling for CSB (n = 18; Mean age = 43.22, SD = 14.52) and healthy controls (n = 44; Mean age = 21.23, SD = 4.55)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Mulhauser et al., 2018; Study 1)	An experimental study of U.S. adults recruited via Mechanical Turk (N = 369;	PPU as measured by the Pornography Purchase Task,

	63.4% men, 36.3% women, n = 1 non-binary participant; Mean age = 33.2, SD = 9.5)	the Hypersexual Behavior Inventory, the Cyber Pornography Use Inventory-9, and the Problematic Pornography Use Scale
(Mulhauser et al., 2018; Study 2)	A cross-sectional study of a clinical sample of men in the U.S. (N = 39; Mean age = 46.3, SD = 12.8)	PPU as measured by the Pornography Purchase Task, the Hypersexual Behavior Inventory, the Cyber Pornography Use Inventory-9, and the Problematic Pornography Use Scale
(Niazof et al., 2019)	A cross-sectional study of Israeli adults (N = 85; 44.7% men; Mean age = 26.58, SD = 7.14)	PPU as measured by the Cyber Pornography Use Inventory-9
(Noor et al., 2014; Study 1)	A cross-sectional study of men who have sex with men (N = 240; Age ranges = 31.5% 18-24, 30.3% 25-34, 19.5% 35-44, 18.7 > 45)	PPU as measured by the Compulsive Pornography Consumption Scale
(Noor et al., 2014; Study 2)	A cross-sectional study of men who have sex with men (N = 1,165; Age ranges = 36.2% 18-24, 31.9% 25-34, 15.8% 35-44, 16.1% > 45; 82.2% homosexual, 17.3% other)	PPU as measured by the Compulsive Pornography Consumption Scale
(Nugroho & Afiyanti, 2019)	A cross-sectional study of Indonesian college students (N = 301; 58.8% men; Mean age = 20.11, SD = 1.42)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Oberg et al., 2017)	A cross-sectional study of Swedish adults with self-identified CSB (N = 80; 80% men; Mean age = 38.4, SD = 10.6)	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Cognitive and Behavioral Outcomes of Sexual Behavior Scale
(O'Dell et al., 2008)	A cross-sectional study of a clinical sample of HIV-positive men who have sex with men (N = 637; Mean age = 42.3, SD = 8.2; 81.9% homosexual, 18.1% bisexual/heterosexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Odlaug & Grant, 2010)	A cross-sectional study of U.S. college students (N = 791; 32.1% men; Mean age = 20, SD = 1.25)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Odlaug et al., 2013)	A cross-sectional study of U.S. college students (N = 1,837; 42.4% men; Mean age = 22.6, SD = 5.02)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Olley, 2008)	A cross-sectional study of college freshman in Nigeria (N = 841; 61% men; Mean age = 20.6, SD = 2.5)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Orzack et al., 2006)	A treatment study of adult men with problematic online sexual behaviors (N = 35; Mean age = 44.5, range 26-59)	Online CSB as measured by clinician-based diagnosis

(Pachankis et al., 2014)	A cross-sectional study of gay and bisexual men in the U.S. (N = 202; Mean age = 37.03, SD = 11.35; 85.6% gay/queer/homosexual, 11.9% bisexual, 2.5% other non-heterosexual identity)	General CSB as measured by the Hypersexual Disorder Screening Inventory
(Parmenter et al., 2020)	A cross-sectional study of sexual minority men in the U.S. (N = 95; Mean age = 34.86, SD = 14.32; 80% homosexual, 10.3% bisexual, 9.6% other non-exclusively same-sex attracted sexual identities)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons, 2001)	A cross-sectional study in the U.S. of men who have sex with men (N = 50, Mean age = 31.76, SD = 6.27)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons & Bimbi, 2007)	A cross-sectional study of men who have sex with men in the U.S. (N = 687; Mean age = 36.2, SD = 10.17)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons, Severino, et al., 2007)	A cross-sectional study of gay and bisexual men in the U.S. (N = 183; Mean age = 36, SD = 8.33; 89.6% homosexual, 10.4% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Diagnostic Inventory for Sexual Compulsivity
(Parsons et al., 2012)	A cross-sectional study of gay and bisexual men in the U.S. (N = 669; Mean age = 37.7, SD = 11.3; 88.8% homosexual, 8.5% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons, Millar, et al., 2017)	A cross-sectional study of HIV-negative gay and bisexual men in the U.S. (N = 1,033; Mean age = 40.2, SD = 13.8; 94.8% homosexual, 5.2% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons, Rendina, et al., 2017)	A treatment study of HIV-positive gay and bisexual men with CSB in the U.S. (N = 13; Mean age = 34.4, SD = 9.6; 90.9% homosexual, 9.1% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Parsons et al., 2015)	A cross-sectional study of gay and bisexual men in the U.S. (N = 370; Mean age = 36.8, SD = 11.4; 88% gay/queer/homosexual, 12% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Screening Inventory
(Parsons et al., 2016)	A cross-sectional study of gay and bisexual men in the U.S. (N = 370; Mean age = 36.8, SD = 11.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Screening Inventory
(Parsons, Kelly, et al., 2007)	A cross-sectional study of gay and bisexual men in the U.S. (N = 183; Mean age = 36, SD = 8.33; 89.6% homosexual, 10.4% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Diagnostic Inventory for Sexual Compulsivity
(Pekal et al., 2018)	An experimental study of college students and a community sample in Germany (N = 174; 50% men; Mean age = 23.59, SD = 4.93)	PPU as measured by a short version of the Internet Addiction Test modified for sex

(Perera et al., 2009a)	A cross-sectional study of U.S. undergraduate students (N = 539; 69.2% men; Age ranges = 54.9% 18-20, 45.1% 21 and older)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Perera et al., 2009b)	A cross-sectional study of U.S. undergraduate students (N = 539; 69.2% men; Age ranges = 54.9% 18-20, 45.1% 21 and older)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Perry et al., 2007)	A cross-sectional study of U.S. undergraduate students (N = 307; 36.8% men; Mean age = 22.04, SD = 5.66)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Petrican et al., 2015)	An experimental study of Canadian college students (N = 74; 35.13% men; Mean age = 21.72, SD = 3.57)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Phillips et al., 2019)	A cross-sectional study of a U.S. sample of adults recruited through Mechanical Turk (N = 364; 55.22% men; Mean age = 34.6)	General CSB as measured by the Hypersexual Behavior Inventory
(Pinto et al., 2013)	A cross-sectional study of male college students in Portugal (N = 152; Mean age = 22, SD = 2.63; 98.7% heterosexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Pitpitan et al., 2016)	A cross-sectional study of men who have sex with men in Mexico (N = 100; Mean age = 29.7, SD = 8.9; 62.3% homosexual, 37.7% bisexual/heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Pocknell & King, 2019)	A cross-sectional study of a U.S. sample of adults recruited through Mechanical Turk (N = 428; 52.5% men; Mean age = 36.30, SD = 11.38)	General CSB as measured by the Sexual Addiction Screening Test Revised
(Prause et al., 2015)	A neuroscience study using EEG to measure differences between reactions to sexual images in hypersexual adults (N = 55; 75% men; Mean age = 24.4, SD = 4.9) and healthy controls (N = 67; 64.6% men; Mean age = 24, SD = 6.5) in the U.S.	PPU as measured by the Kalichman Sexual Compulsivity Scale, the Cognitive and Behavioral Outcomes of Sexual Behavior Scale, and the Pornography Consumption Effects Scale
(Prawiroharjo et al., 2019)	An experimental study of adolescents with PPU behaviors (n = 15; 33.33% men; Mean age = 13.80, SD = 1.26) and healthy controls (n = 15; 53.33% men; Mean age = 13.27, SD = 1.26)	PPU as measured by the Pornography Addiction Test
(Raymond et al., 2003)	A cross-sectional study of adults in the U.S. who self-perceive their sexual behaviors as addictive or compulsive (N = 25; 92% men; Mean age = 38, SD = 11)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Reece, 2003)	A cross-sectional study of a clinical sample of HIV-positive men who have sex with men (N = 180; Mean age = 33.6, SD = 6.9; 100% gay or bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reece & Dodge, 2004)	A cross-sectional study of men seeking casual sexual encounters on college campuses in the U.S. (N = 30; Age range = 18-43; 10% heterosexual, 70% homosexual, 16.7% bisexual, 3.3% other)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(Reid, 2007)	A cross-sectional study of a clinical sample of men in the U.S. seeking treatment for CSB (N = 67; Mean age = 32.6, SD = 9.9; 100% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid, Bramen, et al., 2014)	A cross-sectional study of a clinical sample of treatment-seeking hypersexual men (n = 40; Mean age = 46.6, SD = 11.6; 75% heterosexual, 10% homosexual, 15% bisexual) and healthy controls (n = 30; Mean age = 43.3, SD = 15.6; 96.7% heterosexual, 3.3% homosexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid & Carpenter, 2009)	A cross-sectional study of a clinical sample of hypersexual men in the U.S. (N = 152; Mean age = 31.6, SD = 9.3; 98% heterosexual, 1% homosexual, 1% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid et al., 2016)	A cross-sectional study of a clinical sample of hypersexual men in the U.S. who were either highly religious (n = 52; Mean age = 39.5, SD = 13.5; 94% heterosexual, 4% homosexual, 2% bisexual) or non-religious (n = 105; Mean age = 44.3, SD = 10.5; 81% heterosexual, 12% homosexual, 7% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Carpenter, Gilliland, et al., 2011)	A cross-sectional study of a clinical sample of men with ADHD seeking treatment for hypersexuality in the U.S. (N = 81; Mean age = 31.8, SD = 8.7; 98.8% heterosexual, 1.2% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid, Carpenter, et al., 2012)	A longitudinal study (2 weeks) of a clinical sample of adults seeking treatment for hypersexuality, general psychiatric concerns, and substance abuse in the U.S. (hypersexual group: N = 152; 94.7% men; Mean age = 41.1, SD = 13.0; 84.2% heterosexual, 9.9% homosexual men, 0.7% homosexual women, 5.3% bisexual; baseline stats)	General CSB as measured by the Hypersexual Behavior Inventory, the Hypersexual Disorder Diagnostic Clinical Interview, the Hypersexual Disorder Questionnaire, the Hypersexual Disorder Course Questionnaire, the Hypersexual Behavior Consequences Scale, and the Sexual Compulsivity Scale
(Reid et al., 2008)	A cross-sectional study of a clinical sample of adults seeking treatment for hypersexuality in the U.S. (N = 120; 96.7% men; 95.8% heterosexual, 3.3% homosexual, 0.8% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid, Cooper, et al., 2012)	A cross-sectional study of a clinical sample seeking treatment for hypersexual behaviors in the U.S. (N = 136; 85.3% men; Mean age = 32.4, SD = 11.3; 89% heterosexual, 8.1% homosexual men, 0.7% homosexual women, 2.2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Cyders, et al., 2014)	A cross-sectional study of a clinical sample of adults seeking treatment for hypersexual behaviors in the U.S. (N = 353; 74% men; Mean age = 39.2, SD = 11.1)	General CSB as measured by the Hypersexual Behavior Inventory

(Reid, Dhuffar, et al., 2012)	A cross-sectional study of a clinical sample of women (N = 31; Mean age = 29.9, SD = 10.1; 93.5% heterosexual, 3.2% homosexual, 3.2% bisexual) and men (N = 47; Mean age = 41.5, SD = 10.1; 78.7% heterosexual, 19.2% homosexual, 2.1% bisexual) seeking treatment for hypersexuality in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Garos, & Carpenter, 2011; Study 1)	A cross-sectional study of a clinical sample of U.S. men seeking treatment through a paid online coaching and psychoeducational website for self-identified pornography addiction (N = 105; Mean age = 36.5, SD = 12.4)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Garos, & Carpenter, 2011; Study 2)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 107; Mean age = 34.7, SD = 9.9; 90% heterosexual, 8% homosexual, 2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Garos, et al., 2012)	A longitudinal study (2 weeks) of a clinical sample of adults in the U.S. (N = 137; Mean age = 41.5, SD = 12.7; 79.6% heterosexual, 13.1% homosexual, 7.3% bisexual) seeking treatment for hypersexuality	General CSB as measured by the Hypersexual Behavior Inventory, the Hypersexual Disorder Diagnostic Clinical Interview, the Hypersexual Disorder Questionnaire, the Hypersexual Disorder Course Questionnaire, the Hypersexual Behavior Consequences Scale, and the Sexual Compulsivity Scale
(Reid, Garos, Carpenter, et al., 2011)	A cognitive study of a clinical sample of hypersexual men seeking treatment (n = 30; Mean age = 33, SD = 8; 86.7% heterosexual) and healthy controls (n = 30; Mean age = 28, SD = 6.7; 96.7% heterosexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory and the Compulsive Sexual Behavior Inventory
(Reid et al., 2009)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexual behaviors (n = 71; Mean age = 30.89, SD = 7.6; 91.5% heterosexual, 5.6% homosexual, 2.8% bisexual) and healthy controls (n = 73; Mean age = 25.5, SD = 4.6; 95.9% heterosexual, 2.7% homosexual, 1.4% bisexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid et al., 2010)	A cognitive study of a clinical sample of treatment-seeking men (n = 87; Mean age = 31.4, SD = 8.9; 92% homosexual, 5.7% homosexual, 2.3% bisexual) and healthy controls (n = 92; Mean age = 26.2, SD = 5.1; 94.6% heterosexual, 4.3% homosexual, 1.1% bisexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Li, Gilliland, et al., 2011; Sample 1)	A cross-sectional study of a clinical sample of men in the U.S. who were subscribed to	PPU as measured by the Pornography Consumption Inventory

	an online pornography addiction website (N = 105; Mean age = 36.5, SD = 12.4)	
(Reid, Li, Gilliland, et al., 2011; Sample 2)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 107; Mean age = 34.7, SD = 9.9; 90% heterosexual, 8% homosexual, 2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Stein, & Carpenter, 2011)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 95; Mean age = 31.8, SD = 8.26; 94% heterosexual, 5% homosexual, 1% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Temko, et al., 2014)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 172; Mean age = 43.4, SD = 12.1; 83.7% heterosexual, 8.1% homosexual, 8.1% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Rendina et al., 2014)	A cross-sectional study of a clinical population of gay and bisexual men in the U.S. (N = 1,532; Mean age = 35.2, SD = 12.4; 75.5% homosexual, 24.5% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2017)	A longitudinal study of HIV-positive gay and bisexual men in the U.S. (N = 138; Mean age = 40.2, SD = 10.1; 93.5% gay/queer/homosexual, 6.5% bisexual)	General CSB as measured by the Hypersexual Disorder Screening Inventory and the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2012)	A cross-sectional study of HIV-positive gay and bisexual men in the U.S. (N = 127; 92.9% homosexual, 7.1% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2019)	A longitudinal study (1 year) of gay and bisexual men in the U.S. (N = 376; Mean age = 37.8, SD = 11.7; 90.8% gay/queer/homosexual, 9.2% bisexual; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2018)	A longitudinal cognitive study (30 days) of gay and bisexual men in the U.S., recruited as part of a daily diary study (N = 334; Mean age = 11.5)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rettenberger et al., 2016)	A cross-sectional study of adults in Germany recruited from universities and online (N = 1,749; 42.9% men, 42.9% women, 0.6% other; Mean age = 24.42, SD = 4.37; 83.6% heterosexual, 3.6% homosexual, 4.2% bisexual, 8.6% other)	General CSB as measured by the Hypersexual Behavior Inventory
(Rhodes et al., 2013)	A cross-sectional study of adults in the U.S. recruited via respondent driven sampling (N = 190; 88.5% men, 16.3% transgender men; Mean age = 25, SD = 5.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rissel et al., 2017)	A cross-sectional study of an Australian nationally representative sample (N = 20,094; 50% men; Age range = 16-69)	PPU as measured by a single idiosyncratic item
(Rømer Thomsen et al., 2018)	A cross-sectional study of adults in Denmark (N = 109; 69% men; Mean age = 21.7, SD = 2.7)	PPU as measured by the Pornography Craving Questionnaire

(Rosenberg & Kraus, 2014)	A cross-sectional study of male undergraduate students (N = 221; Mean age = 21.8, SD = 3.8; 81% heterosexual, 16% homosexual/bisexual, 2% uncertain)	PPU as measured by the Pornography Craving Questionnaire and the Kalichman Sexual Compulsivity Scale
(Ross et al., 2008)	A cross-sectional study of HIV-positive men who have sex with men in the U.S. (N = 675; Median age = 42; 80% homosexual, 17% bisexual, 3% other/heterosexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Rosser et al., 2014)	A cross-sectional study of men who have sex with men in the U.S. (N = 1,165; Age ranges = 36.2% 18-24, 31.9% 25-34, 15.8% 35-44, 16.1% ≥ 45; 0.5% heterosexual, 82.6% homosexual, 11.7% bisexual, 1.2% same-gender loving, 2.1% queer, 1.8% other)	PPU as measured by the Compulsive Pornography Consumption Scale, the Compulsive Sexual Behavior Inventory, and the Pornography Consumption Effect Scale
(Safren et al., 2018)	A longitudinal study (6 months) of men who have sex with men in the U.S. (N = 197; Mean age = 37, SD = 11.6; 2.5% heterosexual, 76.6% homosexual, 18.8% bisexual, 0.5% unsure, 1.5% other; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Salmeron-Sanchez et al., 2017)	A cross-sectional study of male sex workers (n = 60; Mean age = 23.1, SD = 3.31; 100% homosexual) and gay men (n = 63; Mean age = 23.75, SD = 3.79) in Spain	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Savard et al., 2020)	A psychopharmaceutical treatment study of men with CSB in Sweden (N = 20; Mean age = 38.8, Sd = 10.3; 70% heterosexual)	Hypersexual Disorder: Current Assessment Scale; HBI; K-SCS
(Satinsky et al., 2008)	A cross-sectional study of men who have sex with men in the U.S. (N = 504; Mean age = 34.7, SD = 10.61; 80% homosexual, 16% bisexual, 5% queer/other)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Scanavino et al., 2020)	A cross-sectional study of adults seeking treatment for CSB in Brazil (N = 204; 91.7% men; Age range = 23-57)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Screening Inventory
(Scanavino et al., 2013)	A cross-sectional study of a clinical population of men in Brazil (N = 86; Mean age = 38.17, SD = 0.95; 57% heterosexual, 26% homosexual, 17% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Scanavino et al., 2018)	A cross-sectional study in Brazil of a clinical population of treatment-seeking men (n = 88; Mean age = 38.17, SD = 8.91; 58% heterosexual) and healthy controls (n = 64; Mean age = 33.98, SD = 11.4; 84.4% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Scanavino et al., 2016)	A cross-sectional study of a clinical population of men in Brazil (N = 153; Mean age = 36.4, SD = 13.9; 68.6% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale, the Hypersexual Disorder Screening Inventory, and the

		Compulsive Sexual Behavior Inventory
(Schatzel-Murphy et al., 2009)	A cross-sectional study of undergraduate students in the U.S. (N = 186; 50% men; Men: Mean age = 19.9, SD = 1.1; Women: Mean age = 19.6, SD = 1.4)	General CSB as measured by the Multidimensional Assessment of Sex and Aggression
(Schecklmann et al., 2020)	A study of high-frequency repetitive transcranial magnetic stimulation in heterosexual men in Germany (N = 19; Mean age = 23.6, SD = 3.4)	Sexual Desire Inventory-2; Two items from the Questionnaire of Sexual Experience and Behavior
(Schiebener et al., 2015)	An experimental study of men college students in Germany (N = 104; Mean age = 24.29; SD = 3.96)	PPU as measured by the short version of the Internet Addiction Test modified for sex
(Schmidt et al., 2017)	A functional magnetic resonance imaging study of heterosexual men in the U.K. with CSB (n = 23; Mean age = 26.9, SD = 6.22) and without CSB (n = 69; Mean age = 25.6, SD = 6.55)	General CSB as measured by idiosyncratic measures and clinician diagnosis
(Schnarrs et al., 2010)	A cross-sectional study in the U.S. of men who have sex with men (N = 309; Mean age = 29.37, SD = 11.33)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Seegers, 2003)	A cross-sectional study of university students in the U.S. (N = 240; 28.75% men)	General CSB as measured by the Sexual Addiction Screening Test
(Semple et al., 2017)	A cross-sectional study in Mexico of men who have sex with men (N = 201; Mean age = 29.7, SD = 8.7)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Semple et al., 2010)	A cross-sectional study of men in Mexico (N = 300; Mean age = 37.8, SD = 9.8)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Semple et al., 2006)	A cross-sectional study in the U.S. of HIV-positive men who have sex with men (N = 217; Mean age = 37.9; SD = 7.3)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Seok & Sohn, 2015)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 23; Mean age = 26.12, SD = 4.11) in comparison with healthy controls (n = 22; Mean age = 26.27, SD = 3.39)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(Seok & Sohn, 2018a)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 23; Mean age = 26.12, SD = 4.11) in comparison with healthy controls (n = 22; Mean age = 26.27, SD = 3.39)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(Seok & Sohn, 2018b)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 17; Mean age = 26.92, SD = 4.73) in comparison with healthy controls (n = 19; Mean age = 25.08, SD = 3.53)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(Seok & Sohn, 2020)	A functional magnetic resonance imaging study of heterosexual men with CSB in South Korea (n = 30; mean age – 28.81, Sd = 5.26) compared with healthy controls (n = 30; Mean age = 27.41, SD = 4.01)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory

(Shimoni et al., 2018)	A cross-sectional study of adults in Israel (N = 267; 70% men; Mean age = 30.17, SD = 9.8)	General CSB as measured by the Sexual Addiction Screening Test
(Sindermann et al., 2018)	A cross-sectional study of university students in Germany (N = 472; 30.2% men; Mean age = 23.19)	PPU as measured by a short version of the Internet Addiction Test
(Sinke et al., 2020)	A functional magnetic resonance imaging study of heterosexual men with CSB in Germany (n = 38; Mean age = 36.3, SD = 11.2) compared with healthy controls (n = 31; Mean age = 37.6, SD = 11.17)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(Sirianni & Vishwanath, 2016)	A cross-sectional study of university students in the U.S. (N = 340; 58% men)	PPU as measured by idiosyncratic questions about frequency and duration of use
(Siu-ming et al., 2019)	A cross-sectional study of adolescent boys in Hong Kong (N = 133; Mean age = 15.99, SD = 2.59)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Cognitive and Behavioral Outcomes of Sexual Behavior Scale
(Skegg et al., 2010)	A cross-sectional study of young adults in New Zealand (N = 940; 50.42% men; Mean age = 32)	General CSB as measured by idiosyncratic measures
(Sklenarik et al., 2019)	An experimental study using an approach-avoidance task with male undergraduate students in the U.S. (N = 72; Mean age = 19.5, SD = 2.4; 100% heterosexual)	PPU as measured by the Problematic Pornography Use Scale and the Brief Pornography Screener
(Sklenarik et al., 2020)	An experimental study using an approach-avoidance task with heterosexual female undergraduate students in the U.S. (N = 121; Mean age = 18.9, SD = 1.1)	PPU as measured by the Brief Pornography Screener and the Problematic Pornography Consumption Scale
(N. G. Smith et al., 2018)	A cross-sectional study of bisexual men in the U.S. and Canada (N = 942; Mean age = 38.97, SD = 13.94)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(P. H. Smith et al., 2014)	A longitudinal study (6 months) of male veterans in the U.S. (N = 258; Mean age = 33.3, SD = 8.2; baseline stats)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Smolenski et al., 2009)	A cross-sectional study of Latino men who have sex with men in the U.S. (N = 963; Mean age = 28.2, SD = 7.8)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Smolenski et al., 2011)	A cross-sectional study of men who have sex with men in the U.S. (N = 1, 699; Age ranges = 34% 18-24, 41.16% 25-34, 16.72% 35-44, 4.79% ≥ 45)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Snagowski & Brand, 2015)	An experimental study of adult men recruited from a university and online in Germany (N = 123; Mean age = 23.79, SD = 5.10; 100% heterosexual)	Online CSB as measured by the short version of the Internet Addiction Test, modified for online sexual activities, and the Hypersexual Behavior Inventory

(Snagowski et al., 2015)	A cross-sectional study of adult men recruited from undergraduate classes and online in Germany (N = 128; Mean age = 23.88, SD = 4.01; 100% heterosexual)	Online CSB as measured by the short version of the Internet Addiction Test, modified for online sexual activities, and the Hypersexual Behavior Inventory
(Spenhoff et al., 2013)	A cross-sectional study of adult men from multiple countries (N = 349; Mean age = 35.8, SD = 11; 86.8% heterosexual)	General CSB as measured by the Sexual Addiction Screening Test
(Stark et al., 2017)	An experimental study of college students in Germany (N = 95; 50% men; Mean age = 25.45, SD = 5.03)	PPU as measured by the short version of the Internet Addiction Test modified for online sexual activities
(Starks et al., 2013)	A cross-sectional study of homosexual male couples in the U.S. (N = 344, 172 couples; Mean age = 38.57, SD = 9.34; 100% homosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Steele et al., 2013)	A neuroscience study of adults in the U.S. (N = 52; 75% men; Mean age = 24.35, SD = 4.92; 45% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Storholm et al., 2011)	A cross-sectional study of U.S. adults composed of three groups, the Multiple Morbidities Testing Program (MMTP), Counseling and Food Bank Program (CFBP), and Gay Respect Program (GRP) (MMTP: n = 278, 68.48% men; Mean age = 39.52, SD = 11.87; 56.16% heterosexual, 30.07% homosexual, 13.77% bisexual; CFBP: n = 98, 71.43% men; Mean age = 50.54, SD = 7.61; 71.43% heterosexual, 5.10% homosexual, 23.47% bisexual; GRP: n = 108; 100% men; Mean age = 40.23, SD = 10.48; 4.63% heterosexual, 77.78% homosexual, 17.57% bisexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Storholm et al., 2016)	A cross-sectional study of gay and bisexual men in the U.S. (N = 509; Age range = 18-19; 84.8% homosexual, 15.2% bisexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Studer et al., 2019)	A cross-sectional study of adult men in Sweden (N = 5,332; Mean age = 25.45, SD = 1.25; 89.2% heterosexual, 2.3% homosexual, 8.4% bisexual)	Online CSB as measured by the Internet Sex Screening Test
(Stulhofer, Bergeron, et al., 2016)	A cross-sectional study of women in Croatia (N = 2,599; Mean age = 28.3, SD = 8.57; 66.9% exclusively heterosexual, 5.8% exclusively homosexual)	General CSB as measured by the Hypersexual Disorder Screening Inventory
(Stulhofer et al., 2008)	A cross-sectional study of adults in Croatia (N = 1,528; 38.2% men; Mean age = 22, SD = 2.02)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Stulhofer, Jurin, et al., 2016)	A cross-sectional study of adult men in Croatia (N = 1,998; Mean age = 34.7, SD = 9.83; 66.4% exclusively heterosexual, 9.3% exclusively homosexual)	General CSB as measured by the Hypersexual Disorder Screening Inventory

(Štulhofer et al., 2020)	A longitudinal (6 months) study of adolescent boys in Croatia (N = 337; Mean age = 15.8, SD = 0.48)	PPU as measured by the Compulsive Pornography Consumption Scale
(Stupiansky et al., 2009)	A cross-sectional study of college women in the U.S. (N = 170; Mean age = 20.52, SD = 2.46; 96% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Sutton et al., 2015)	A cross-sectional study of a clinical population in Canada (N = 115; 100% men; Mean age = 41.5, SD = 11.67; Sexual orientation recorded for 109 patients: 87% heterosexual)	General CSB as measured by reviews of patients' charts
(Thomas et al., 2020)	A cross-sectional sample of internet using adults and university students in Australia (N = 523; 28.3% men; Mean age = 27, SD = 10.5; 83.5% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Thompson et al., 2015)	A longitudinal study (4 years) of male undergraduate students in the U.S. (N = 795; Mean age = 18.56, SD = 0.51; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Tierens et al., 2014)	A cross-sectional sample of a clinical population in Belgium (N = 10; 100% men; Mean age = 48.2; 90% heterosexual)	General CSB as measured by a questionnaire developed based on Kafka's proposed diagnosis for Hypersexual Behavior Disorder
(Tóth-Király et al., 2019)	A cross-sectional study of adults in Hungary (N = 632; 33.4% men; Mean age = 26.02, SD = 6.91)	PPU as measured by the Problematic Pornography Consumption Scale
(Turban et al., 2020)	A cross-sectional sample of dating application users in the U.S. (N = 515; 55.3% men; Mean age = 26.11, SD = 8.28; 59.2% heterosexual) in comparison with non-dating application users (N = 3,688; 44.2% men; Mean age = 33.28, SD = 15.01; 64.4% heterosexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Twohig & Crosby, 2010)	A treatment study of adult men in the U.S. (N = 28; Mean age = 29.3, SD = 11.4; 100% heterosexual)	PPU as measured by the Cognitive and Behavioral Outcomes of Sexual Behavior Scale and the Kalichman Sexual Compulsivity Scale
(Twohig et al., 2009)	A cross-sectional study of adult men in the U.S. (N = 84; Mean age = 22)	PPU as measured by the Cognitive and Behavioral Outcomes of Sexual Behavior Scale and the Kalichman Sexual Compulsivity Scale
(Vaillancourt-Morel et al., 2017)	A cross-sectional study of Canadian adults (N = 830; 28.2% men; Mean age = 25.2, SD = 8; 81.1% heterosexual, 5.8% homosexual, 11.6% bisexual/other)	PPU as measured by the Cyber Pornography Use Inventory. General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Vaillancourt-Morel et al., 2016)	A cross-sectional study of Canadian adults (N = 669; 22.1% men; Mean age = 27.56, SD = 9.18; 85.8% heterosexual, 4.0% homosexual, 8.2% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(Vaillancourt-Morel et al., 2015)	A cross-sectional study of Canadian adults (N = 686; 23% men; Mean age = 27.51, SD = 9.24; 86% heterosexual, 4% homosexual, 8% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Valero-Solis et al., 2018)	A cross-sectional study in Spain of a clinical population (CSB group: N = 34; 100% men; Mean age = 42.6, SD = 11.9)	General CSB as measured by idiosyncratic items based on Kafka's Hypersexual Behavior Disorder diagnosis proposal for the DSM-IV
(Varfi et al., 2019)	A cross-sectional study of adults in Switzerland (N = 145; 60% men; Mean age = 31; 77% heterosexual, 7.6% homosexual, 14.5% bisexual)	Online CSB as measured by the Compulsive Internet Use Scale
(Ventuneac et al., 2015)	A cross-sectional study of gay and bisexual men in the U.S. (N = 202; Mean age = 37, SD = 11.35; 85.6% homosexual/queer, 11.9% bisexual, 2.5% other non-heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Volk et al., 2019)	A cross-sectional study of U.S. adults (N = 179; 50.28% men; Mean age = 32.1, SD = 1.79)	PPU as measured by the Cyber Pornography Use Inventory-9
(Voon et al., 2014)	A neuroscience study of adult men in the U.K. (CSB treatment group: n = 19; Mean age = 25.61, SD = 4.77; Control group: n = 19; Mean age = 23.17, SD = 5.38; 100% heterosexual)	Online CSB as measured by the Internet Sex Screening Test
(Wainberg et al., 2006)	A treatment study of gay and bisexual men with compulsive sexual behaviors in the U.S. (N = 28; Mean age = 36.8, SD = 8.2; 85.7% homosexual, 14.3% bisexual)	General CSB as assessed via clinician interview and diagnosis
(Walters et al., 2011; Study 1)	A cross-sectional study of Swedish adults (N = 2101; 52.7% men; Mean age = 36.55, SD = 11.80)	General CSB as measured by four self-report variables measuring masturbation frequency, ratio of sexual partners to sexually active years, past year pornography use, and interest in impersonal sex
(Walters et al., 2011; Study 2)	A cross-sectional study of U.S. male sex offenders (N = 716; Mean age = 37.74, SD = 10.23)	General CSB as measured by the Hypersexuality Rational Scale and the Multidimensional Assessment of Sex and Aggression
(Walton, 2019)	A cross-sectional study of Australian adults (N = 277; Cisgender men: n = 186, Mean age = 33.31, SD = 10.99; Cisgender women: n = 82, mean age = 26.41, SD = 8.13; Transgender men: n = 2, Mean age = 22.00, SD = 4.24; Transgender women: n = 3, Mean age = 31.33, SD = 2.52; Other gender: n = 4, Mean age = 22.75, SD = 5.50)	General CSB as measured by the Problematic Sexual Behaviors scale and Hypersexual Behavior Inventory

(Walton & Bhullar, 2018)	A cross-sectional study of adults in the U.S., Australia, Canada, and the U.K. (N = 1,373; Cisgender men: n = 711, Mean age = 39.31, SD = 15.30; Cisgender women: n = 549, Mean age = 31.23, SD = 11.26; Transgender men: n = 65, Mean age = 26.69, SD = 6.74; Transgender women: n = 69, Mean age = 30.46, SD = 12.09; Intersex: n = 7, Mean age = 33.29, SD =14.57)	General CSB as measured by the Hypersexual Behavior Inventory
(Walton et al., 2017)	A cross-sectional study of Australian adults (N = 510; 52.4% men: Mean age = 36.52, SD = 12.66; 47.6% women: Mean age = 30.38, SD = 12.12; 76.1% heterosexual, 12.5% homosexual/transgender, 11.4% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Walton et al., 2016)	A cross-sectional study of Australian adults (N = 510; 52.4% men: Mean age = 36.52, SD = 12.66; 47.6% women: Mean age = 30.38, SD = 12.12; 76.1% heterosexual, 12.5% homosexual, 11.4% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Wan et al., 2000)	A treatment study (2 years) of Canadian adults (N = 202; 71% male; Mean age = 38; baseline stats)	General CSB as measured by the Sexual Addiction Screening Test
(X. Wang et al., 2018)	A cross-sectional study of men who have sex with men in China (N = 547; Age ranges = 27.1% < 25, 61.5% 25-40 years, 11.4% > 40; 71.2% homosexual, 28.8% non-homosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Y. Wang et al., 2017)	A cross-sectional study of men who have sex with men in China (N = 547; Mean age = 30.5, SD = 8.84; 71.3% homosexual, 28.7% non-homosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Z. Wang et al., 2018)	A cross-sectional study of men who have sex with men in China (N = 547; Mean age = 30.5, SD = 8.84; 1.3% heterosexual, 71.3% homosexual, 23.4% bisexual, 4% unsure/other)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Weinstein, Katz, et al., 2015)	A cross-sectional study of Israeli adults (N = 104; 25% heterosexual men: Mean age = 27.93, SD = 4.97; 25% homosexual men: Mean age = 26.17, SD = 3.13; 25% heterosexual women: Mean age = 29.58, SD = 5.9; 25% homosexual women: Mean age = 24.5, SD = 1.86)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Weinstein, Zolek, et al., 2015)	A cross-sectional study of Israeli adults (N = 267; 72% men: Mean age = 28.16, SD = 6.8; 28% women: Mean age = 25.5, SD = 5.13)	Online CSB as measured by the Cybersex Addiction Test
(Werner et al., 2018)	A cross-sectional study of Croatian adults (N = 3,028; 41% men: Mean age = 35.6, SD = 9.56; 59% women: Mean age = 28.7, SD = 8.56)	General CSB as measured by the Hypersexual Disorder Screening Inventory
(Wery, Burnay, et al., 2016)	A cross-sectional study of men in multiple countries recruited online (N = 401; Mean	Online CSB as measured by the short Internet Addiction

	age = 28.74, SD = 8.80; 88.5% heterosexual, 9.3% homosexual, 2.2% bisexual)	Test, modified for online sexual activities
(Wery, Vogelaere, et al., 2016)	A cross-sectional study in a clinical population in France (N = 72; 94.4% men; Mean age = 40.3, SD = 10.9)	General CSB as measured by the Sexual Addiction Screening Test
(Wetterneck et al., 2012)	A cross-sectional study of U.S. adults from a university as well as the community (N = 494; 30.8% male; Mean age = 29.5, SD = 9.0; 89.8% heterosexual, 4.5% homosexual, 5.7% bisexual)	PPU as measured by the Pornography Consumption Effects Scale. General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Wilt et al., 2016)	A cross-sectional study of U.S. undergraduate students (N = 1,070; 68.41% men; Mean age = 19.33, SD = 2.53)	PPU as measured by the Cyber Pornography Use Inventory-9
(Wilton et al., 2018)	A cross-sectional study of adult men who have sex with men in Canada (N = 86; Mean age = 33; 94.19% homosexual, 5.81% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Winters et al., 2009)	A cross-sectional study of adult men in the U.S. adults from universities and the community (N = 49; Mean age = 27.7, SD = 10.1; 90% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Winters et al., 2010)	A cross-sectional study of adults in multiple countries, recruited via the internet (N = 14,396; 44.9% men; Mean age = 28.9, SD = 8.6; 76.3% heterosexual, 5.9% homosexual, 12.8% bisexual, 2.7% queer)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Woolf-King et al., 2013)	A cross-sectional study with a representative sample of men who have sex with men in San Francisco (N = 711)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Wordecha et al., 2018)	A longitudinal (10-week) daily diary study of men seeking treatment for PPU in Poland (N = 9; Mean age = 31.7, SD = 4.85)	PPU as measured by the Sexual Addiction Test and the Brief Pornography Screener
(Xu et al., 2016)	A cross-sectional study in China of men who have sex with men (N = 436; Mean age = 24.5)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Yeagley et al., 2014)	A cross-sectional study of U.S. men who have sex with men (N = 366; Mean age = 21.46, SD = 1.95)	General CSB as measured by the Hypersexual Behavior Inventory
(Zilberman et al., 2018)	A cross-sectional study of Israeli adults with drug addiction (n = 58), alcohol addiction (n = 50), gambling disorder (n = 48), CSB (n = 65), and healthy controls (n = 78)	General CSB as assessed by the Individual Based Compulsive Sexual Behavior Scale
(Zilberman et al., 2020)	A cross-sectional sample of adults in a clinical treatment setting in Israel (N = 56; 92.9% men; age not reported)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Zimmer & Imhoff, 2020)	A cross-sectional study of adult men in the U.S. (N = 1,063; Mean age = 26.86, SD = 6.79)	General CSB as measured by the Hypersexual Behavior Inventory
(Zlot et al., 2018)	A cross-sectional study of Israeli adults (N = 279; 45.9% men; Mean age = 25, SD = 2.75)	General CSB as measured by the Sexual Addiction Screening Test

(Zsila et al., 2020)	A large, cross-sectional study of adults in Hungary (N = 15,703; 64.76% men; Mean age = 33.42, SD = 11.06)	General CSB as measured by the Hypersexual Behavior Consequences Scale

Supplemental Table 2

Complete listing of included studies (k = 65) primarily concerned with cross-sectional samples in clinical settings

Study	Design	Subject of Focus and Measurement
(Achterbergh et al., 2020)	A sexual education intervention study of adult men who have sex with men in the Netherlands (N = 155)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Bőthe et al., 2020; Sample 3)	A cross-sectional sample in a clinical setting of adults in Hungary (N = 266; 97% men; Mean age = 37.2, SD = 12.3; 69.2% heterosexual)	PPU as measured by the Problematic Pornography Consumption Inventory
(Brakoulias et al., 2020)	A cross-sectional sample of adults seeking treatment for obsessive compulsive disorder in multiple countries (N = 6,919; 51.7% men; Mean age = 34.5, SD = 12.1)	General CSB as measured by clinician diagnosis
(Carnes et al., 2012; Sample 2)	A cross-sectional sample including outpatients (n = 646; 86.8% men, Mean age = 43.4, SD = 11.4; Women: Mean age = 37.9, SD = 10.8), inpatients (n = 63; 100% men; Men: Mean age = 41.3, SD = 11.2), and university students (n = 203; 23.2% men; Men: Mean age = 21.65, SD = 5.6; Women: Mean age = 19.9, SD = 2.8) in the U.S.	General CSB as measured by the Sexual Addiction Screening Test Revised and the brief screening measure PATHOS
(Carnes et al., 2012; Sample 1)	A cross-sectional sample of patients receiving inpatient treatment for CSB between 1996 and 2004 (n = 1,118; 69.6% men) and a sample of university students (n = 790; 24.3% men; Mean age = 20.60, SD = 3.88)	General CSB as measured by the Sexual Addiction Screening Test Revised and the brief screening measure PATHOS
(Carnes et al., 2014)	A cross-sectional sample of patients receiving treatment for CSB in the U.S. (N = 4,492; 88% men)	General CSB as measured by the Sexual Addiction Screening Test Revised and clinician diagnosis
(Chatzittofis et al., 2017)	A cross-sectional study of hypersexual men (n = 67; Mean age = 39.2, SD = 11.5) in contrast with healthy controls (n = 39, Mean age = 37.5, SD = 11.9) in Sweden	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment screening interview.
(Chatzittofis et al., 2020)	A neuroendocrinological study of hypersexual men in Sweden (N = 67; Mean age = 39.2, SD = 11.5) in comparison with healthy controls (N = 39; Mean age = 37.5; SD = 11.9)	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment Scale
(Coleman et al., 2000)	A retrospective intervention study on the efficacy of pharmacological treatment for CSB (N = 14; 100% men, Mean age = 45)	General CSB as measured by clinician diagnosis
(Das et al., 2017)	A cross-sectional survey of adult outpatients of a psychiatric hospital in India (N = 75; 60% men; Mean age = 26.57, SD = 6.50)	PPU as measured by the Pornography Addiction Screening Tool
(Davidson et al., 2017)	A cross-sectional study of patients in a psychiatric hospital setting in New Zealand (N = 100; 63% men; Mean age = 35.88, SD = 12.54)	General CSB as measured by the Hypersexuality in Psychiatric Conditions Observer-Rated scale
(De Boni et al., 2018)	A cross-sectional study of men who have sex with men receiving PrEP treatment in Brazil (N = 421; Mean Age = 29)	General CSB as measured by the Kalichman Sexual Compulsivity Scale

(de Tubino Scanavino et al., 2013)	A cross-sectional study of men seeking treatment for CSB in Brazil (N = 86; Mean age = 38.17, SD = 0.95)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(do Amaral et al., 2015)	A cross-sectional study of men seeking treatment for CSB in Brazil (N = 69; Mean age = 35.2, SD = 802)	General CSB as measured by clinician diagnosis and the Kalichman Sexual Compulsivity Scale
(Efrati & Mikulincer, 2018; Study 3)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 112; 95% men; Mean age = 34.6, SD = 9.25)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, Gerber, et al., 2019)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 160; 100% men)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati, Shukron, et al., 2019)	A cross-sectional study of Israeli men in a Sexaholics Anonymous group (N = 68; Mean age = 32.26, SD = 14.98), of sex offenders in an Israeli prison (n = 103; Mean age = 43.57, SD = 16.59) and violent offenders in an Israeli Prison (n = 81; Mean age = 35.67, SD = 9.98)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2018)	A cross-sectional study of Israeli adults in a Sexaholics Anonymous group (N = 97; 98% men; Mean age = 30.19, SD = 7.3)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Efrati & Gola, 2019)	A cross-sectional study of Israeli adults (95% men) in Sexaholics Anonymous (n = 65; Mean age = 34.6, SD = 9.25) and healthy controls (n = 47; Mean age = 36.78, SD = 8.67)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale
(Engel et al., 2019)	A cross-sectional study of heterosexual men in Germany with CSB (n = 47; Mean age = 36.51, SD = 11.47) in comparison with healthy controls (n = 38; Mean age = 37.92, SD = 12.33)	General CSB and Online CSB as measured by the Hypersexual Behavior Inventory, the Sexual Addiction Screening Test Revised, and the Short Internet Addiction Test modified for online sexual behavior
(Farre et al., 2015)	A cross-sectional study in a psychiatric setting in Spain of adults with gambling disorder (n = 2,190; 90.1% men; Mean age = 42.2, SD = 13.4) in comparison with individuals with CSB (n = 59; 98.3% men; Mean age = 40.1, SD = 8.8) and healthy controls (n = 93; 89.2% men; Mean age = 31.0, SD = 9.5)	General CSB as measured by clinician diagnosis
(Gilliland et al., 2015)	A cross-sectional sample of men seeking treatment for CSB in the U.S. (N = 136; Mean age = 34.73, SD = 13.06)	General CSB as measured by the Hypersexual Behavior Inventory
(Gola et al., 2016)	A cross-sectional analysis of heterosexual men in Poland (N = 569; Mean age = 28.87, SD = 6.36).	PPU as measured by the Sexual Addiction Screening Test Revised
(Granero et al., 2016)	A cross-sectional study in Spain in a psychiatric setting of adults with compulsive buying behaviors (n = 110; 28.2% men; Mean age = 43.3) in comparison with individuals with CSB (n = 28; 96.4% men; Mean age = 41.3), internet gaming disorder (n = 51; 94.1% men, Mean age = 22), Internet addiction (n = 41; 73.2% men; Mean age = 31.7) and gambling disorder (n = 3094; 89.9% men; Mean age = 42.9)	General CSB as measured by clinician assessment based on the DSM-IV-TR criteria for Sexual Disorder Not Otherwise Specified

(Grubbs et al., 2015; Study 3)	A cross-sectional study of university students in a college counseling center setting (N = 152; 67.8% men, Mean age = 20.3, SD = 1.8)	PPU as measured by the Cyber Pornography Use Inventory-9 and the Kalichman Sexual Compulsivity Scale
(Hall et al., 2020)	A psychoeducational treatment study CSB in the UK (N = 119; gender, age, and sexual orientation not reported)	General CSB as measured by clinician diagnosis
(Hart et al., 2020)	A sexual education intervention study for HIV positive adult men who have sex with men in Canada (Treatment arm: n = 89; Mean age = 40.77, SD = 11.37; control group: n = 94; Mean age = 40.82, SD = 10.7)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(M. P. Kafka & Hennen, 1999)	A cross-sectional study of men in the U.S. seeking treatment for sexual disorders (N = 206, Mean age = 37)	General CSB as measured by clinician diagnosis
(Martin P. Kafka & Hennen, 2003)	A cross-sectional study of men in the U.S. seeking treatment for sexual disorders (N = 120, Mean age = 37.1, SD = 9.5)	General CSB as measured by clinician diagnosis
(Kalichman & Cain, 2004)	A cross-sectional study of adults in the U.S. receiving services related to sexually transmitted infections (N = 685; 71.8% men; Mean age = 35.7, SD = 10.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kowalewska et al., 2019)	A cross-sectional study of heterosexual men in Poland seeking treatment for CSB (n = 72; Mean age = 35.4, SD = 7.7) in comparison with healthy controls (n = 208; Mean age = 27.8, SD = 5.8)	General CSB as measured by the Sexual Addiction Screening Test and PPU as measured by the Brief Pornography Screener
(Kraus et al., 2015)	A cross-sectional sample of men in the U.S. with PPU related problems (N = 103; Mean age = 39.8, SD = 12.1; 17% heterosexual, 70% gay)	General CSB and PPU as measured by the Yale-Brown Obsessive Compulsive Scale adapted for Compulsive Sexual Behaviors
(Kraus et al., 2020; Sample 5)	A treatment seeking sample of men in Poland (N = 105; Mean age = 32.9, SD = 7.5)	PPU as measured by the Brief Pornography Screener, the Problematic Pornography Use Scale ,and Hypersexual, Behavior Inventory
(Morrison et al., 2018)	A cross-sectional study of a clinical sample of Canadian men who have sex with men (N = 186; Mean age = 31)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Mulhauser et al., 2018; Study 2)	A cross-sectional study of a clinical sample of men in the U.S. (N = 39; Mean age = 46.3, SD = 12.8)	PPU as measured by the Pornography Purchase Task, the Hypersexual Behavior Inventory, the Cyber Pornography Use Inventory 9, and the Problematic Pornography Use Scale
(O'Dell et al., 2008)	A cross-sectional study of a clinical sample of HIV-positive men who have sex with men (N = 637; Mean age = 42.3, SD = 8.2; 81.9% homosexual, 18.1% bisexual/heterosexual)	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Reece, 2003)	A cross-sectional study of a clinical sample of HIV-positive men who have sex with men (N = 180; Mean age = 33.6, SD = 6.9; 100% gay or bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid, 2007)	A cross-sectional study of a clinical sample of men in the U.S. seeking treatment for CSB (N = 67; Mean age = 32.6, SD = 9.9; 100% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid & Carpenter, 2009)	A cross-sectional study of a clinical sample of hypersexual men in the U.S. (N = 152; Mean age =	General CSB as measured by the Kalichman Sexual Compulsivity Scale

	31.6, SD = 9.3; 98% heterosexual, 1% homosexual, 1% bisexual)	
(Reid, Bramen, et al., 2014)	A cross-sectional study of a clinical sample of treatment seeking hypersexual men (n = 40; Mean age = 46.6, SD = 11.6; 75% heterosexual, 10% homosexual, 15% bisexual) and healthy controls (n = 30; Mean age = 43.3, SD = 15.6; 96.7% heterosexual, 3.3% homosexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid et al., 2016)	A cross-sectional study of a clinical sample of hypersexual men in the U.S. who were either highly religious (n = 52; Mean age = 39.5, SD = 13.5; 94% heterosexual, 4% homosexual, 2% bisexual) or non-religious (n = 105; Mean age = 44.3, SD = 10.5; 81% heterosexual, 12% homosexual, 7% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Carpenter, et al., 2011)	A cross-sectional study of a clinical sample of men with ADHD seeking treatment for hypersexuality in the U.S. (N = 81; Mean age = 31.8, SD = 8.7; 98.8% heterosexual, 1.2% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid et al., 2008)	A cross-sectional study of a clinical sample of adults seeking treatment for hypersexuality in the U.S. (N = 120; 96.7% men; 95.8% heterosexual, 3.3% homosexual, 0.8% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Reid, Cooper, et al., 2012)	A cross-sectional study of a clinical sample seeking treatment for hypersexual behaviors in the U.S. (N = 136; 85.3% men; Mean age = 32.4, SD = 11.3; 89% heterosexual, 8.1% homosexual men, 0.7% homosexual women, 2.2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Cyders, et al., 2014)	A cross-sectional study of a clinical sample of adults seeking treatment for hypersexual behaviors in the U.S. (N = 353; 74% men; Mean age = 39.2, SD = 11.1)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Dhuffar, et al., 2012)	A cross-sectional study of a clinical sample of women (n = 31; Mean age = 29.9, SD = 10.1; 93.5% heterosexual, 3.2% homosexual, 3.2% bisexual) and men (n = 47; Mean age = 41.5, SD = 10.1; 78.7% heterosexual, 19.2% homosexual, 2.1% bisexual) seeking treatment for hypersexuality in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Garos, et al., 2011; Study 2)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 107; Mean age = 34.7, SD = 9.9; 90% heterosexual, 8% homosexual, 2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Garos, et al., 2011; Study 1)	A cross-sectional study of a clinical sample of U.S. men seeking treatment online for self-identified pornography addiction (N = 105; Mean age = 36.5, SD = 12.4)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid et al., 2009)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexual behaviors (n = 71; Mean age = 30.89, SD = 7.6; 91.5% heterosexual, 5.6% homosexual, 2.8% bisexual) and healthy controls (n = 73; Mean age = 25.5, SD = 4.6; 95.9% heterosexual, 2.7% homosexual, 1.4% bisexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory

(Reid, Li, et al., 2011; Sample 2)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 107; Mean age = 34.7, SD = 9.9; 90% heterosexual, 8% homosexual, 2% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Li, et al., 2011; Sample 1)	A cross-sectional study of a clinical sample of men in the U.S. who were subscribed to an online pornography addiction website (N = 105; Mean age = 36.5, SD = 12.4)	PPU as measured by the Pornography Consumption Inventory
(Reid, Stein, et al., 2011)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 95; Mean age = 31.8, SD = 8.26; 94% heterosexual, 5% homosexual, 1% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Reid, Temko, et al., 2014)	A cross-sectional study of a clinical sample of men seeking treatment for hypersexuality in the U.S. (N = 172; Mean age = 43.4, SD = 12.1; 83.7% heterosexual, 8.1% homosexual, 8.1% bisexual)	General CSB as measured by the Hypersexual Behavior Inventory
(Rendina et al., 2014)	A cross-sectional study of a clinical population of gay and bisexual men in the U.S. (N = 1,532; Mean age = 35.2, SD = 12.4; 75.5% homosexual, 24.5% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Savard et al., 2020)	A psychopharmaceutical treatment study of men with CSB in Sweden (N = 20; Mean age = 38.8, Sd = 10.3; 70% heterosexual)	Hypersexual Disorder: Current Assessment Scale; HBI; K-SCS
(de Tubino Scanavino et al., 2020)	A cross-sectional study of adults seeking treatment for CSB in Brazil (N = 204; 91.7% men; Age range = 23-57)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Screening Inventory
(de Tubino Scanavino et al., 2018)	A cross-sectional study in Brazil of a clinical population of treatment seeking men (n = 88; Mean age = 38.17, SD = 8.91; 58% heterosexual) and healthy controls (n = 64; Mean age = 33.98, SD = 11.4; 84.4% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(de Tubino Scanavino et al., 2013)	A cross-sectional study of a clinical population of men in Brazil (N = 86; Mean age = 38.17, SD = 0.95; 57% heterosexual, 26% homosexual, 17% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(de Tubino Scanavino et al., 2016)	A cross-sectional study of a clinical population of men in Brazil (N = 153; Mean age = 36.4, SD = 13.9; 68.6% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale, the Hypersexual Disorder Screening Inventory, and the Compulsive Sexual Behavior Inventory
(Sutton et al., 2015)	A cross-sectional study of a clinical population in Canada (N = 115; 100% men; Mean age = 41.5, SD = 11.67; Sexual orientation recorded for 109 patients: 87% heterosexual)	General CSB as measured by reviews of patients' charts.
(Tierens et al., 2014)	A cross-sectional sample of a clinical population in Belgium (N = 10; 100% men; Mean age = 48.2; 90% heterosexual)	General CSB as measured by a questionnaire developed based on Kafka's proposed diagnosis for Hypersexual Behavior Disorder.
(Valero-Solis et al., 2018)	A cross-sectional study in Spain of a clinical population (CSB group: N = 34; 100% men; Mean age = 42.6, SD = 11.9)	General CSB as measured by idiosyncratic items based on Kafka's Hypersexual Behavior Disorder diagnosis proposal for the DSM-IV

(Wery et al., 2016)	A cross-sectional study in a clinical population in France (N = 72; 94.4% men; Mean age = 40.3, SD = 10.9)	General CSB as measured by the Sexual Addiction Screening Test
(Zilberman et al., 2018)	A cross-sectional study of Israeli adults with drug addiction (n = 58), alcohol addiction (n = 50), gambling disorder (n = 48), CSB (n = 65), and healthy controls (n = 78).	General CSB as assessed by the Individual Based Compulsive Sexual Behavior Scale
(Zilberman et al., 2020)	A cross-sectional sample of adults in a clinical treatment setting in Israel (N = 56; 92.9% men; age not reported)	General CSB as measured by the Individual Based Compulsive Sexual Behavior Scale

Supplemental Table 3
Summary of included longitudinal studies

Study	Design	Measurement
(Ballester-Arnal et al., 2013)	A cross-sectional study of university students in Spain (N = 1,196; 24.5% men; Mean age = 20.22, SD = 2.11; 95.5% heterosexual), with a one-week longitudinal follow-up (N = 100)	General CSB as measured by the Sexual Compulsivity Scale
(Dilley et al., 2008)	A longitudinal (12 months) efficacy study for a HIV counseling intervention study among a sample of U.S. men who have sex with men (N = 336).	General CSB as measured by the K-SCS
(Fernandez et al., 2017)	A brief, longitudinal (2 weeks) study of men in a university setting in Malaysia (N = 76; Mean age = 22.27, SD = 3.45)	PPU as measured by the Cyber Pornography Use Inventory-9.
(Gola et al., 2017)	A longitudinal functional magnetic resonance imaging study of heterosexual men in Poland seeking treatment for PPU (n = 28; Mean age = 30.96; SD = 6.51) in comparison with healthy controls (n = 24, Mean age = 30.49, SD = 7.55)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Grov et al., 2010)	An intensive longitudinal study (30 days; daily diary study) of gay and bisexual men in the U.S. (N = 47, Mean age = 36.2)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Grubbs & Gola, 2019; Sample 2)	A longitudinal study (1 year) of men in the U.S. recruited via Mechanical Turk (N = 433; Mean age = 33.5, SD = 9.7)	PPU as measured by the Cyber Pornography Use Inventory 4
(Grubbs et al., 2015; Study 2)	A longitudinal study (1 year) of college students in the U.S. (N = 1,215; 67.2% men, Mean age = 19.3, SD = 1.3)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs et al., 2017; Study 1)	A longitudinal (1 year) study of college students in the U.S. (N = 1,519; 67.2% men; Mean age = 19.3, SD = 1.3)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs et al., 2017; Study 2)	A longitudinal (1 year) study of adult internet users in the U.S. recruited via Mechanical Turk (N = 713; 51.9% men; Mean age = 30.2, SD = 9.9)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs et al., 2020; Study 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 850; 52.3% men; Mean age = 33.98, SD = 9.87)	PPU as measured by the Cyber Pornography Use Inventory 4
(Grubbs, Wilt, Exline, & Pargament, 2018; Study 1)	A longitudinal (1 year) study of undergraduate students in the U.S. (N = 1,352; 67.7% men; 90.1% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory 9

(Grubbs, Wilt, Exline, & Pargament, 2018; Study 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 793; 48.8% men; 83.9% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs, Wilt, Exline, Pargament, et al., 2018; Sample 1)	A longitudinal (1 year) study of undergraduate students in the U.S. (N = 1,507; 65.2% men; Mean age = 19.3, SD = 2.2; 90.1% heterosexual)	PPU as measured by the Cyber Pornography Use Inventory 9
(Grubbs, Wilt, Exline, Pargament, et al., 2018; Sample 2)	A longitudinal (1 year) study of adults in the U.S. recruited via Mechanical Turk (N = 782; 48.8% men, Mean age = 32.2, SD = 10.3)	PPU as measured by the Cyber Pornography Use Inventory 9
(Hart et al., 2016)	A longitudinal study (3 months) in the U.S. of HIV positive men who have sex with men (N = 59; Mean age - 42.4, SD = 9.0)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Kohut & Stulhofer, 2018; Sample 1)	A longitudinal (2.5 years) study of adolescent boys in Croatia (n = 314)	PPU as measured by the Compulsive Pornography Consumption Scale
(Kohut & Stulhofer, 2018; Sample 2)	A longitudinal (2.5 years) study of adolescent boys in Croatia (n = 197)	PPU as measured by the Compulsive Pornography Consumption Scale
(Laier & Brand, 2017; Study 2)	A longitudinal (repeated measures) study of men in Germany (N = 66; Mean age = 26.91, SD = 5.43)	PPU as measured by the short version of the Internet Addiction Test modified for pornography and the Pornography Consumption Inventory
(Maddock et al., 2019)	A longitudinal study (6 months) of a U.S. sample recruited from Mechanical Turk (N = 320; 54.8% men; Mean age = 36.26, SD = 10.18; 86% heterosexual, 2.9% gay, 10.1% bisexual, 0.91% other; baseline stats)	PPU as measured by the Problematic Pornography Use Scale
(Noor et al., 2014; Study 1)	A longitudinal study (7 days) of men who have sex with men (N = 240; Age ranges = 31.5% 18-24, 30.3% 25-34, 19.5% 35-44, 18.7 >45)	PPU as measured by the Compulsive Pornography Consumption Scale
(Reid, Carpenter, et al., 2012)	A longitudinal study (2 weeks) of a clinical sample of adults seeking treatment for hypersexuality, general psychiatric concerns, and substance abuse in the U.S. (hypersexual group: N = 152; 94.7% men; Mean age = 41.1, SD = 13.0; 84.2% heterosexual, 9.9% gay men, 0.7% gay women, 5.3% bisexual; baseline stats)	General CSB as measured by the Hypersexual Behavior Inventory, the Hypersexual Disorder Diagnostic Clinical Interview, the Hypersexual Disorder Questionnaire, the Hypersexual Disorder Course Questionnaire, the Hypersexual Behavior Consequences Scale, and the Sexual Compulsivity Scale
(Reid, Garos, et al., 2012)	A longitudinal study (2 weeks) of a clinical sample of adults in the U.S. (N = 137; Mean age = 41.5, SD = 12.7; 79.6% heterosexual, 13.1% gay, 7.3% bisexual) seeking treatment for hypersexuality	General CSB as measured by the Hypersexual Behavior Inventory, the Hypersexual Disorder Diagnostic Clinical Interview, the Hypersexual Disorder Questionnaire, the Hypersexual Disorder Course Questionnaire, the Hypersexual Behavior Consequences Scale, and the Sexual Compulsivity Scale
(Rendina et al., 2017)	A longitudinal study (6 months) of HIV-positive gay and bisexual men in	General CSB as measured by the Hypersexual Disorder Screening

	the U.S. (N = 138; Mean age = 40.2, SD = 10.1; 93.5% gay/queer/homosexual, 6.5% bisexual)	Inventory and the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2018)	A longitudinal cognitive study (1 year) of gay and bisexual men in the U.S., recruited as part of a daily diary study (N = 334; Mean age = 11.5)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Rendina et al., 2019)	A longitudinal study (1 year) of gay and bisexual men in the U.S. (N = 376; Mean age = 37.8, SD = 11.7; 90.8% gay/queer/homosexual, 9.2% bisexual; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Safren et al., 2018)	A longitudinal study (6 months) of men who have sex with men in the U.S. (N = 197; Mean age = 37, SD = 11.6; 2.5% heterosexual, 76.6% gay, 18.8% bisexual, .5% unsure, 1.5% other; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Smith et al., 2014)	A longitudinal study (6 months) of male veterans in the U.S. (N = 258; Mean age = 33.3, SD = 8.2; baseline stats)	General CSB as measured by the Minnesota Impulsive Disorders Interview
(Štulhofer et al., 2020)	A longitudinal (6 months) study of adolescent boys in Croatia (N = 337; Mean age = 15.8, SD = 0.48)	PPU as measured by the Compulsive Pornography Consumption Scale
(Thompson et al., 2015)	A longitudinal study (4 years) of male undergraduate students in the U.S. (N = 795; Mean age = 18.56, SD = .51; baseline stats)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Wordecha et al., 2018)	A longitudinal (10-week) daily diary study of men seeking treatment for PPU in Poland (N = 9; Mean age = 31.7, SD = 4.85)	PPU as measured by the Sexual Addiction Test and the Brief Pornography Screener

Supplemental Table 4
Summary of neuroscience related studies included in the present review

Study	Design	Subject of Focus and Measurement
(Banca et al., 2016)	A functional magnetic resonance imaging study of men (n = 22; Mean Age = 25.14, SD = 4.68; 100% heterosexual) with CSB in the U.K. compared with healthy controls (n = 40).	General CSB as measured by psychiatrist diagnosed CSB
(Brand et al., 2016)	A functional magnetic resonance imaging study of heterosexual men in Germany (N = 19; Mean age = 25.05, SD = 1.43)	PPU as measured by the short Internet Addiction Test modified for online sexual activities and general CSB as measured by the Hypersexual Behavior Inventory
(Chatzittofis et al., 2016)	A neuroendocrinological study of hypersexual men (n = 67; Mean age = 39.2) in contrast with healthy controls (n = 39; Mean age = 37.5) in Sweden	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment screening interview.
(Chatzittofis et al., 2020)	A neuroendocrinological study of hypersexual men in Sweden (N = 67; Mean age = 39.2, SD = 11.5) in comparison with healthy controls (N = 39; Mean age = 37.5; SD = 11.9)	General CSB as measured by the Hypersexual Disorder Screening Inventory, the Kalichman Sexual Compulsivity Scale, and the Hypersexual Disorder: Current Assessment Scale
(Draps et al., 2020)	A functional magnetic resonance imaging study of heterosexual men in Poland (N = 98; Mean age = 34.5, SD = 6.5)	General CSB as measured by the Sexual Addiction Screening Test and the Brief Pornography Screener
(Gola et al., 2017)	A longitudinal functional magnetic resonance imaging study of heterosexual men in Poland seeking treatment for PPU (n = 28; Mean age = 30.96, SD = 6.51) in comparison with healthy controls (n = 24; Mean age = 30.49, SD = 7.55)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Jokinen et al., 2017)	A neuroendocrinological study of hypersexual men (n = 54; Mean age = 39.2) in contrast with healthy controls (n = 33; Mean age = 37.5) in Sweden	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Hypersexual Disorder Current Assessment
(Klein et al., 2020)	A functional magnetic resonance imaging study of adult men in Germany (N = 72; Mean age = 25.6, SD = 4.5)	Online CSB as measured by the Short Interent Addiction Test revised for Sex
(Klucken et al., 2016)	A functional magnetic resonance imaging study in Germany of men with CSB (n = 20; Mean age = 34.2, SD = 8.6) and healthy controls (n = 20; Mean age = 34.9, SD = 9.7)	General CSB as measured by clinician diagnosis
(Kühn & Gallinat, 2014)	A functional magnetic resonance imaging study in Germany of men (n = 64, Mean age = 28.9, SD = 6.6)	PPU as measured by the Sexual Addiction Screening Test and the Internet Sex Screening Test

(Miner et al., 2009)	A neuroscience study using diffusion tensor imaging on men with CSB (N = 8; Mean age = 44.5, SD = 10.6) and healthy controls (N = 8; Mean age = 43.4, SD = 9.1) in the U.S.	General CSB as measured by the Compulsive Sexual Behavior Inventory
(Prause et al., 2015)	A neuroscience study using EEG to measure differences between reactions to sexual images in hypersexual adults (N = 55; 75% men; Mean age = 24.4, SD = 4.9) and healthy controls (N = 67; 64.6% men; Mean age = 24, SD = 6.5) in the U.S.	PPU as measured by the Kalichman Sexual Compulsivity Scale, the Cognitive and Behavioral Outcomes of Sexual Behavior Scale, and the Pornography Consumption Effects Scale
(Schecklmann et al., 2020)	A study of high-frequency repetitive transcranial magnetic stimulation in heterosexual men in Germany (N = 19; Mean age = 23.6, SD = 3.4)	General CSB as measured by the Sexual Desire Inventory-2 and items from the Questionnaire of Sexual Experience and Behavior
(Schmidt et al., 2017)	A functional magnetic resonance imaging study of heterosexual men in the U.K. both with CSB (n = 23; Mean age = 26.9, SD = 6.22) and without CSB (n = 69; Mean age = 25.6, SD = 6.55)	General CSB as measured by idiosyncratic measures and clinician diagnosis
(J.-W. Seok & Sohn, 2015)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 23; Mean age 26.12, SD = 4.11) in comparison with healthy controls (n = 22; Mean age = 26.27, SD = 3.39)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(J.-W. Seok & Sohn, 2018a)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 23; Mean age 26.12, SD = 4.11) in comparison with healthy controls (n = 22; Mean age = 26.27, SD = 3.39)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(J.-W. Seok & Sohn, 2018b)	A functional magnetic resonance imaging study of heterosexual men in South Korea with CSB (n = 17; Mean age 26.92, SD = 4.73) in comparison with healthy controls (n = 19; Mean age = 25.08, SD = 3.53)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(J. Seok & Sohn, 2020)	A functional magnetic resonance imaging study of heterosexual men with CSB in South Korea (n = 30; mean age – 28.81, Sd = 5.26) compared with healthy controls (n = 30; Mean age = 27.41, SD = 4.01)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory
(Sinke et al., 2020)	A functional magnetic resonance imaging study of heterosexual men with CSB in Germany (n = 38; Mean age = 36.3, SD = 11.2) compared with healthy controls (n = 31; Mean age = 37.6, SD = 11.17)	General CSB as measured by the Sexual Addiction Screening Test Revised and the Hypersexual Behavior Inventory

(Steele et al., 2013)	A neuroscience study of adults in the U.S. (N = 52; 75% men; Mean age = 24.35, SD = 4.92; 45% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale
(Voon et al., 2014)	A functional magnetic resonance imaging study of adult men in the U.K. (CSB treatment group: n = 19; Mean age = 25.61, SD = 4.77; Control group: n = 19; Mean age = 23.17, SD = 5.38; 100% heterosexual)	Online CSB as measured by the Internet Sex Screening Test

Supplemental Table 5

Summary of cognitive, experimental, and quasi-experimental studies included in the present review

Study	Sample Details	Subject of Focus and Measurement	Experimental/Cognitive Design
(Albery et al., 2017)	A quasi-experimental study of adults in the U.K. (N = 55; 50.9% men; Mean age = 28.4, SD = 10.4)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Modified Stroop Task with sexual and neutral words
(Antons & Brand, 2018)	An experimental study of adult men in Germany (N = 50; Mean age = 23.30, SD = 4.08; 100% heterosexual) recruited predominantly from a university setting	Online CSB as measured by the short version of the Internet Addiction Test modified for online sexual activities	Modified Stop-Signal task with neutral and pornographic pictures
(Brand et al., 2011)	A quasi-experimental study of heterosexual men (university students) in Germany (N = 89; Mean age = 23.98, SD = 4.09)	PPU as measured by the Internet Addiction Test modified for sexual use of the internet	Assessment of emotional reactions to standardized pictures depicting sexual behavior
(Hoffmann et al., 2014)	An experimental study in the U.S. of men who have sex with men with low sexual compulsivity (n = 31; Mean age = 26.42, SD = 4.84) and high sexual compulsivity (n = 25; Mean age = 25.62, SD = 4.95)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Classical conditioning paradigm using olfactory stimulation paired with sexual stimuli
(Laier et al., 2013; Study 1)	An experimental study of heterosexual men in Germany (N = 171; Mean age = 24.56, SD = 5.22)	PPU as measured by the short version of the Internet Addiction Test modified for sexual use of the internet	A cue reactivity paradigm using sexually explicit pictures
(Laier et al., 2013; Study 2)	An experimental study of heterosexual men in Germany with PPU (n = 25; Mean age = 23.96, SD = 2.91) in comparison with men without PPU (n = 25; Mean age = 22.88, SD = 1.86)	PPU as measured by the short version of the Internet Addiction Test modified for sexual use of the internet	A cue reactivity paradigm using sexually explicit pictures
(Laier et al., 2014)	An experimental study of heterosexual women in Germany (N = 102; Mean age = 21.83, SD = 2.48)	PPU as measured by the short version of the Internet Addiction Test modified for online sexual activities	Assessment of emotional reactions, subjective arousal, and craving in response to standardized pictures depicting sexual behavior

(Mechelmans et al., 2014)	An experimental study of heterosexual men in the U.K. with CSB (n = 22; Mean age = 25.14, SD = 4.68) and healthy controls (n = 44; Mean age = 24.16, SD = 5.14)	General CSB as indicated by psychiatrist diagnosed presence of symptoms	Dot probe task assessing attentional bias to sexually explicit cues
(Messina et al., 2017)	An experimental study of Brazilian men with CSB (n = 30; Age range = 20-60; 60% heterosexual) and healthy controls (n = 30; Age range = 20-60; 86.6% heterosexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Evaluation of decision making using the Wisconsin Card Sorting Task and cognitive flexibility using the Iowa Gambling Task before and after watching a pornographic video
(Moholy et al., 2015)	An experimental study of college students in the U.S. (N = 116; 52.6% men; Mean age = 21.59, SD = 5.95)	General CSB as measured by the Cognitive and Behavioral Outcomes of Sexual Behavior Scale	Assessment of ability to control sexual arousal in response to pornographic videos
(K. R. W. Mulhauser et al., 2014)	An experimental study of U.S. men receiving counseling for CSB (n = 18; Mean age = 43.22, SD = 14.52) and healthy controls (n = 44; Mean age = 21.23, SD = 4.55)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Assessment of desire for pornography as the hypothetical cost associated with use increases using the Pornography Purchase Task
(K. Mulhauser et al., 2018; Study 1)	An experimental study of U.S. adults recruited via Mechanical Turk (N = 369; 63.4% men, 36.3% women; n = 1 non-binary participant; Mean age = 33.2, SD = 9.5)	PPU as measured by the Pornography Purchase Task, the Hypersexual Behavior Inventory, the Cyber Pornography Use Inventory 9, and the Problematic Pornography Use Scale	Decision making assessed using the Iowa Gambling Task
(Pekal et al., 2018)	An experimental study of college students and a community sample in Germany (N = 174; 50% men; Mean age = 23.59, SD = 4.93)	PPU as measured by the short version of the Internet Addiction Test modified for online sexual activities	Visual probe task assessing attentional bias to sexually explicit cues
(Petrican et al., 2015)	An experimental study of Canadian college students (N = 74; 35.13% men; Mean age = 21.72, SD = 3.57)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Gaze-cueing task to evaluate attractiveness of neutral and flirtatious faces following a task to increase feelings of personal shame
(Prawiroharjo et al., 2019)	An experimental study of adolescents with problematic pornography use behaviors (n = 15; 33.33% men; Mean	PPU as measured by the Pornography Addiction Test	Evaluation of impairments in verbal memory using the Auditory Verbal Learning Test,

	age = 13.80, SD = 1.26) and healthy controls (n = 15; 53.33% men; Mean age = 13.27, SD = 1.03)		visual memory using the Rey–Osterrieth Complex Figure Test, and attention using the Trail Making Test A and B
(Sklenarik et al., 2019)	An experimental study using an approach-avoidance task with male undergraduate students in the U.S. (N = 72; Mean age = 19.5, SD = 2.4; 100% heterosexual)	PPU as measured by the Problematic Pornography Use Scale and the Brief Pornography Screener	Modified approach-avoidance task using neutral and sexually explicit pictures
(Sklenarik et al., 2020)	An experimental study using an approach-avoidance task with heterosexual female undergraduate students in the U.S. (N = 121; Mean age = 18.9, SD = 1.1)	PPU as measured by the Brief Pornography Screener and the Problematic Pornography Consumption Scale	Modified approach-avoidance task using neutral and sexually explicit pictures
(Snagowski & Brand, 2015)	An experimental study of adult men recruited from a university and online in Germany (N = 123; Mean age = 23.79, SD = 5.10; 100% heterosexual)	Online CSB as measured by the short version of the Internet Addiction Test modified for online sexual activities, and the Hypersexual Behavior Inventory	Modified approach-avoidance task using neutral and sexually explicit pictures
(Stark et al., 2017)	An experimental study of college students in Germany (N = 95; 50% men; Mean age = 25.45, SD = 5.03)	PPU as measured by the short version of the Internet Addiction Test modified for online sexual activities	Modified approach-avoidance task using neutral, positive, negative, and sexually explicit pictures
(Derbyshire & Grant, 2015)	A study of neurocognitive functioning in adults with CSB (n = 13; no other demographics reported) in comparison with healthy controls (n = 13)	General CSB as measured by the Minnesota Impulsive Disorders Interview	Assessment of cognitive flexibility using the Intradimensional/ Extradimensional Set-Shift Task, response inhibition using a Stop Signal Task, decision making and risk taking using the Cambridge gambling task, and spatial working memory using the Spatial Working Memory task
(Schiebener et al., 2015)	An experimental study of male college students in Germany (N = 104; Mean age = 24.29, SD = 3.96)	PPU as measured by the short version of the Internet	An executive multitasking paradigm using neutral pictures

		Addiction Test modified for sex	of people in addition to sexually explicit pictures
(Reid et al., 2011)	A cognitive study of a clinical sample of hypersexual men seeking treatment (n = 30; Mean age = 33, SD = 8; 86.7% heterosexual) and healthy controls (n = 30; Mean age = 28, SD = 6.7; 96.7% heterosexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory and the Compulsive Sexual Behavior Inventory	Executive deficits assessed by the Wisconsin Card Sorting Task in addition to several subtests of the Delis-Kaplan Executive Function System: Color–Word Interference Test, the Tower Test, the Trail Making Test, the Verbal Fluency Test
(Reid et al., 2010)	A cognitive study of a clinical sample of treatment seeking men (n = 87; Mean age = 31.4, SD = 8.9; 92% heterosexual, 5.7% gay, 2.3% bisexual) and healthy controls (n = 92; Mean age = 26.2, SD = 5.1; 94.6% heterosexual, 4.3% gay, 1.1% bisexual) in the U.S.	General CSB as measured by the Hypersexual Behavior Inventory	An evaluation of overall executive functioning using the Behavior Rating Inventory of Executive Function – Adult Version

Supplemental Table 6

Measures in included studies used to assess Problematic Pornography Use or Compulsive Sexual Behavior

Measure	Source	Number of Times Cited in Reviewed Literature as of April 1st, 2020
Kalichman Sexual Compulsivity Scale	(Kalichman & Rompa, 1995, 2001)	140
Hypersexual Behavior Inventory	(Reid, Garos, et al., 2011)	64
Cyber Pornography Use Inventory (and modified forms)	(Grubbs et al., 2010, 2015; Grubbs & Gola, 2019)	35
Sexual Addiction Screening Test (and modified forms)	(Carnes et al., 2010; Carnes et al., 2014)	33
Compulsive Sexual Behavior Inventory (and modified forms)	(Coleman et al., 2001; Miner et al., 2017)	27
Internet Addiction Test (and modified forms)	(Pawlikowski et al., 2013; Widyanto & McMurran, 2004; Young, 1998)	23
Idiosyncratic Measures	n/a	22
Clinician Based Diagnosis	n/a	21
Sexual Impulsivity Scale	(Exner et al., 1992)	21
Problematic Pornography Consumption Scale (and modified forms)	(Bőthe et al., 2018)	17
Individual Based Compulsive Sexual Behavior Scale	(Efrati & Mikulincer, 2018)	17
Hypersexual Disorder Screening Inventory	(Parsons et al., 2013; Reid, Carpenter, et al., 2012)	15
Problematic Pornography Use Scale	(Kor et al., 2014)	15
Cognitive and Behavioral Outcomes of Sexual Behavior Scale	(McBride et al., 2010)	9
Hypersexual Behavior Consequences Scale	(Reid, Garos, et al., 2012)	9
Pornography Consumption Inventory	(Reid, Li, et al., 2011)	9
Internet Sex Screening Test	(Delmonico & Miller, 2003)	8
Brief Pornography Screener	(Kraus et al., 2020)	7
Minnesota Impulsive Disorders Interview	(Odlaug & Grant, 2010)	7
Compulsive Pornography Consumption Scale	(Noor et al., 2014)	5
Pornography Craving Questionnaire	(Kraus & Rosenberg, 2014)	5
Hypersexual Disorder Current Assessment Scale	(Reid, Carpenter, et al., 2012)	4
Multidimensional Assessment of Sex and Aggression	(Knight et al., 1994)	4
Compulsive Sexual Behavior Disorder Scale 19	(Bőthe et al., 2020)	4

PATHOS	(Carnes et al., 2012; Johnson et al., 2013)	3
Compulsive Internet Use Scale	(Meerkerk et al., 2008)	3
Diagnostic Interview for Sexual Compulsivity	(Parsons et al., 2007)	3
Hypersexual Disorder Questionnaire	(Reid, Carpenter, et al., 2012)	3
Hypersexual Disorder Diagnostic Clinical Interview	(Reid, Carpenter, et al., 2012)	2
Pornography Purchase Task	(Mulhauser et al., 2018)	2
BODIES	(Cashwell et al., 2018)	1
Bergen Yale Sex Addiction Scale	(Andreassen et al., 2018)	1
Craving Assessment Scale for Behavioral Addictions - Porn	(Antons et al., 2019)	1
Cybersex Addiction Test	(Young, 2001)	1
Compulsive Sexual Disorders Interview	(Black et al., 1997)	1
Garos Sexual Behavior Index	(Garos & Stock, 1998)	1
Hypersexuality in Psychiatric Conditions Observer-Rated	(Davidson et al., 2017)	1
Pornography Addiction screening tool	(Das et al., 2017)	1
Sexual Preoccupation Scale	(Snell & Rapini, 1989)	1
Yale-Brown Obsessive Compulsive Scale modified for CSB	(Kraus et al., 2015)	1

Supplemental Table 7

Summary of studies detailing treatments of compulsive sexual behaviors and problematic pornography use.

Study	Design	Subject of Focus and Measurement	Treatment Modality
(Coleman et al., 2000)	A retrospective intervention study on the efficacy of pharmacological treatment for CSB (N = 14; 100% men; Mean age = 45)	General CSB as measured by clinician diagnosis	A pharmacotherapy study for general CSB
(Crosby & Twohig, 2016)	A treatment study evaluating the efficacy of Acceptance and Commitment Therapy in treating PPU in men in the U.S. (N = 28; Mean age = 29.3, SD = 11.4)	PPU as measured by the Kalichman Sexual Compulsivity Scale and the Cognitive and Behavioral Outcomes of Sexual Behavior Scale	Acceptance and commitment therapy for PPU
(Hall et al., 2020)	A psychoeducational treatment study CSB in the UK (N = 119; gender, age, and sexual orientation not reported)	General CSB as measured by clinician diagnosis	A psychoeducational treatment for general CSB developed by the authors of the study
(Hallberg et al., 2017)	A treatment feasibility study of men in Sweden (N = 10, Mean age = 38.9, SD = 8.1)	General CSB as measured by the Hypersexual Disorder Current Assessment Scale and the Hypersexual Disorder Screening Inventory	Cognitive behavior therapy for general CSB
(Hallberg et al., 2019)	A treatment study of men in Sweden (N = 137; Mean age = 40, SD = 12)	General CSB as measured by the Kalichman Sexual Compulsivity Scale, the Hypersexual Disorder Current Assessment Scale, and the Hypersexual Disorder Screening Inventory	Cognitive behavior therapy for general CSB
(Hardy et al., 2010)	A cross-sectional, retrospective, self-report study of English speaking users of an online program for treating CSB (N = 138; 97% men; Mean age = 37.97, SD = 12.40)	General CSB and PPU as measured by idiosyncratic self-report questions	An online psychoeducational program for CSB
(Hartman et al., 2012)	A longitudinal study of treatment outcomes in Canada (N = 57; 91.2% men; Mean age = 39.09, SD = 8.81)	General CSB as measured by the Compulsive Sexual Behavior Inventory	Inpatient multi-modal treatment of CSB
(Savard et al., 2020)	A psychopharmaceutical treatment study of men with CSB in Sweden	Hypersexual Disorder: Current Assessment Scale; HBI; K-SCS	A pharmacotherapy study for general CSB

	(N = 20; Mean age = 38.8, Sd = 10.3; 70% heterosexual)		
(Klontz et al., 2005)	A treatment study of adults in the U.S. (N = 38; 73.6% men; Mean age = 44.1, SD = 8.88; 79% heterosexual)	General CSB as measured by the Garos Sexual Behavior Inventory	Brief, multimodal treatment of general CSB
(Levin et al., 2017)	A treatment feasibility study for PPU among adults in the U.S. (N = 19; 90% men; Mean age = 23.10, SD = 4.48)	PPU as measured by the Cyber Pornography Use Inventory and The Cognitive and Behavioral Outcomes of Sexual Behavior Scale	Acceptance and Commitment Therapy for PPU
(Muench et al., 2007; Wainberg et al., 2006)	A treatment study of gay and bisexual men with compulsive sexual behaviors in the U.S. (N = 28; Mean age = 36.8, SD = 8.2; 85.7% homosexual, 14.3% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale and the Compulsive Sexual Behavior Consequences Scale	A pharmacotherapy study for general CSB
(Orzack et al., 2006)	A treatment study of adult men with problematic online sexual behaviors (N = 35; Mean age = 44.5, range 26-59)	Online CSB as measured by clinician based diagnosis	Multimodal group therapy for online CSB
(Parsons et al., 2017)	A treatment study of HIV-positive gay and bisexual men with CSB in the U.S. (N = 13; Mean age = 34.4, SD = 9.6; 90.9% homosexual, 9.1% bisexual)	General CSB as measured by the Kalichman Sexual Compulsivity Scale	Emotion regulation intervention to improve safe sex practices among gay and bisexual men
(Twohig & Crosby, 2010)	A treatment study of adult men in the U.S. (N = 28; Mean age = 29.3, SD = 11.4; 100% heterosexual)	PPU as measured by the Cognitive and Behavioral Outcomes of Sexual Behavior Scale and the Kalichman Sexual Compulsivity Scale	Acceptance and Commitment Therapy for PPU
(Wan et al., 2000)	A treatment study (2 years) of Canadian adults (N = 202; 71% male; Mean age = 38; Baseline stats)	General CSB as measured by the Sexual Addiction Screening Test	Inpatient, 12-step based treatment of general CSB

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