Sexual Harassment in the Digital World

Developing and Validating a New Measure of Cyber-Sexual Harassment

by

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ABSTRACT

With widespread increases in the use of electronic communication technology, cyber-sexual harassment (CSH) has been on the rise. Broadly defined, CSH is unwelcome and repeated conduct of a sexual nature performed through electronic technology. The prevalence of CSH reported in previous studies varies significantly due in part to inconsistencies in how CSH is defined and measured. Whereas four existing scales measuring aspects of CSH have been published, each has several limitations. This research aims to develop and psychometrically validate the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V), which taps into five key components of CSH, including: (1) gathering sexual information online, (2) image and video-based sexual harassment, (3) offensive comments or posts, (4) coercive behaviors, and (5) CSH attitudes. In Study 1, a sample of psychology graduate students and faculty ($N = 13$) evaluated the content validity of the MCSHEA-V items, leading to key improvements in item relevance, clarity, and wording. In Study 2, a sample of adult participants ($N = 298$) completed the initial version of the scale through the online survey platform, Prolific.co. Confirmatory factor analyses indicated the proposed 5-factor structure was a good fit, but exploratory factor analyses indicated the items represented an alternative 4-factor structure. Specifically, these items captured dyadic CSH behaviors, CSH behaviors that affect one's reputation, perceptions of the seriousness of CSH, and CSH victim-blaming behaviors. In Study 3, an additional sample of adult participants ($N = 207$) was surveyed via Prolific.co. Separate confirmatory factor analyses indicated the 4-factor model was the best fit. Overall, the MCSHEA-V will

contribute to a clearer understanding of the defining features and prevalence of CSH victimization and facilitate future research through the introduction of a psychometrically-validated measurement tool.

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INTRODUCTION

Within the past two decades, a significant amount of attention has been paid to the topic of sexual harassment (SH) and it is commonly recognized as an important human rights issue (Chan et al., 2008; Henry & Powell, 2018). To date, numerous researchers have investigated the impacts (Bell et al., 2018; Leemis et al., 2019; Taylor et al., 2020) and prevalence (Kearl, 2018; Malloy & Smith, 2017) of SH, and developed theoretical models (Bates et al., 2006) to explain and understand SH victimization (Chan et al., 2008). Despite this wide body of research, there has been comparatively less empirical focus on cyber-sexual harassment (CSH), or SH that occurs through electronic media. Yet there is evidence to indicate that this form of SH may be increasing (Powell & Henry, 2016; Reed et al., 2019). For instance, in 2021, a Pew Research Center poll found that 48% of individuals between the ages of 18-29 have experienced SH online, which has steadily been increasing since 2014—the year in which the Pew Research Center began measuring this phenomenon (Pew Research Center, 2021). Given that SH victimization has been associated with significant psychological distress, anxiety, depression, and, in some cases, suicide (Sweeney, 2014), research that sheds light on CSH is vital. Therefore, this research will develop and psychometrically test a multidimensional, self-report measure of CSH victimization experiences and attitudes to add to the limited body of research on this topic.

Defining Traditional Sexual Harassment

Whereas legal, psychological, and lay definitions of SH vary (Quick & McFadyen, 2017), traditional SH tends to be broadly defined as intentional and frequent unwanted sexual comments, attention, and behavior, and offensive comments about one's sex or gender that occur in-person (Leemis et al., 2019; U.S. Equal Employment Opportunity Commission, 1997). Within academic research, SH has been divided into three different forms: verbal (i.e., sexually suggestive jokes, comments and questions, pressure for sexual favors, and sexual remarks about one's appearance), non-verbal (i.e., behaviors such as indecent exposure or performing sexual acts on oneself in public spaces, continuous and inappropriate staring, and the sending of sexually explicit materials), and physical (i.e., unwelcome physical contact, such as touching, hugging, or fondling; Kahsay et al., 2020; Rape, Abuse, & Incest National Network, 2020b). Within organizational research, SH has been defined with two additional components: 'quid-pro-quo' sexual harassment (i.e., when sexual favors are requested in exchange for anticipated benefits, such as employment, promotions, academic success; Ranganathan et al., 2020) and harassment that leads to hostile work environments (Ranganathan et al., 2020; U.S. Equal Employment Opportunity Commission, 1997). Furthermore, while SH can happen to anyone, SH is often considered under the umbrella of gendered harassment (i.e., any form of harassment that reinforces sexist or heteronormative ideals; Fitzgerald et al., 1995; Rinehart & Espelage, 2015).

Prevalence of Traditional Sexual Harassment

Research on the prevalence rates of SH varies significantly. One report by Malloy and Smith (2017) found that 60% of adult women and 20% of adult men have reported experiencing some form of sexual harassment. Alternatively, research performed by Campbell and colleagues (2017) found that 9% of university undergraduate and graduate students experienced SH during their collegiate career while other researchers have found SH prevalence ranging from 59.1% (Klein & Martin, 2019) to 80% (Kearney & Gilbert, 2012) of college students during their collegiate career. In 2018, a recent survey performed by Stop Street Harassment (Kearl, 2018) indicated that 81% of adult women and 41% of adult men reported experiencing SH during their lifetime. However, it is important to consider the potential for underreporting. Women often experience pressure to downplay or refrain from reporting their victimization experiences (Bonnes, 2017; Karami et al., 2019). Men are also likely to fail to report instances of SH due to social stigma, fear of retaliation, or the fear of not being believed (Association of Alberta Sexual Assault Services, 2022). For example, recent research by Cesario (2020) has indicated that male victims of SH often receive less sympathy and are perceived to have suffered less compared to their female counterparts.

Research on the more specific forms of traditional SH also reflects variability and gender differences in prevalence rates. For instance, verbal SH has been identified as the most common form of SH, as 77% of women and 34% of men report experiencing this type of victimization (Kearl, 2018). When considering non-verbal SH, research by Maghraby and colleagues (2020) found that, in the past six months, 28.5% of women in

the medical field have experienced non-verbal SH, most often in the form of obscene gestures. Further, a recent report by Stop Street Harassment (Kearl, 2018) found that 30% of women and 12% of men have experienced non-verbal SH in the form of indecent exposure. While less common than verbal SH, 62% of women and 26% of men have experienced physically aggressive forms of SH such as physical assault (Kearl, 2018). Within the workplace, 10.9% of adults have experienced quid-pro-quo SH with individuals of color more likely to experience this form of harassment (Pinto et al., 2019). Further, 48.9% of victims of quid-pro-quo SH indicated that the harassment negatively impacted their ability to perform their job or obtain future positions (Pinto et al., 2019). More colloquially, quid-pro-quo sexual harassment is defined as a form of sexual coercion, with 12.5% of women and 1.3% of men reporting being coerced into performing sexual activities during their lifetime (Breiding et al., 2014; Fitzgerald et al., 1995).

Risk Factors and Consequences of Traditional Sexual Harassment

Extensive research has indicated that women, younger individuals, people who have previously been in a relationship, and members of the LGBTQ community are at an increased risk of experiencing SH victimization (Leemis et al., 2019; Taylor et al., 2020; Walters & Espelage, 2020). While some previous research has found no differences in SH victimization based on race (Espelage & Holt, 2007; Hill & Silva, 2005), other findings indicate that White individuals are more likely to be sexually harassed compared to individuals of color (Cassino & Besen-Cassino, 2019; Campbell et al., 2017; Wood et al., 2018). Still, other studies indicate that individuals of color report more frequent SH

from peers (Goldstein et al., 2007). Crucially, family connectedness and high self-esteem have been linked to a reduced risk of SH victimization (Leemis et al., 2019; Mitchell et al., 2014; Taylor et al., 2020).

Across the existing literature, there is substantial evidence detailing the negative mental health outcomes associated with SH victimization, such as lower life satisfaction and higher levels of depression, anxiety, suicidality, and substance abuse (Bucchinneri et al., 2014; D'Augelli et al., 2002; Willness et al., 2007). Whereas women have been shown to be more likely to exhibit negative mood and increased stress, anxiety, social withdrawal, and self-blame as a result of SH (Cortina & Berdahl, 2008; Poteat & Espelage, 2007; Wright & Fitzgerald, 2007), men are more likely to exhibit higher levels of depression following SH victimization (Vogt et al., 2005). The Center for Victim Advocacy and Violence Prevention (2010) has also indicated that increased guilt, shame, and social withdrawal were more likely to be experienced by victims of SH. Prolonged victimization has also been linked with indicators of poor physical health such as hypertension, gastrointestinal problems, and cardiovascular disease (Buchanan et al., 2013). Researchers have theorized that the link between SH victimization and poorer physical health may stem from the internalization of the harassment experiences, victims' decreased likelihood of interacting with and thus gaining support from others, and increases in risky behaviors (Hodges & Perry, 1999; Rinehart et al., 2020).

Scales to Measure Traditional Sexual Harassment

Several scales have been developed and validated to measure SH perpetration, victimization, and attitudes towards both. The earliest developed scale to measure SH is

the Tolerance for Sexual Harassment Inventory (TSHI; Lott et al., 1982), which was designed to assess individuals' attitudes toward dealing with sexually harassing behaviors. A sample item from this 10-item scale is "most women who are sexually insulted by a man provoke his behavior by the way they talk, act, or dress." Sexual insults for this measure are defined as sexually suggestive, obscene, or offensive verbal or non-verbal behaviors (Lott et al., 1982). In a similar vein, the Sexual Harassment Proclivity Scale (SHP; Bartling & Eisenman, 1993) was also developed. The SHPS is a 10-item unidimensional measure designed to evaluate the extent to which individuals consider SH behavior appropriate and their intentions to perpetrate SH. Originally validated using a college student sample, the SHPS has been used in several studies to demonstrate increases in victim-blaming behaviors (Key & Ridge, 2011) and positive associations between SH perpetration and dark-triad personality traits (Zeigler-Hill et al., 2016). Several other scales have been developed to measure attitudes regarding the acceptability and seriousness of SH as well as normative beliefs, such as the Sexual Harassment Myth Scale (Cowan, 2000) and the Sexual Harassment Attitudes Scale (Mazer & Percival, 1989). Both of these measures have been utilized to evaluate hostility toward SH victims (Cowan, 2000) and the association between SH myth acceptance and benevolent and hostile sexism (Russell & Oswald, 2015).

The most frequently used scale for measuring SH victimization is the Sexual Experiences Questionnaire (SEQ) (Fitzgerald et al., 1999). Originally tested on female navy personnel, the SEQ has been applied broadly in occupational and academic settings to evaluate victimization experiences of SH (Lim & Cortina, 2005; Raver & Gelfand,

2005; Rosenthal et al., 2016). While originally validated for use on women, the SEQ has been adapted to and shown to be reliable in capturing the SH victimization experiences of men (Kalof et al., 2001). Alternatively, the Sexual Harassment Scale developed by Vogt and colleagues (2013) has also been used to assess the prevalence of SH victimization. As part of the Deployment Risk & Resilience Inventory 2, seven items on this multidimensional scale focus on unwanted sexual contact pre-, post-, and during deployment in the armed forces. While this measure has been used extensively and validated for use with military personnel (Kearns et al., 2016; Maoz et al., 2016), it has not been applied to other populations. The Psychological Climate for Sexual Harassment Questionnaire (Estrada et al., 2011) has also been used to measure SH experienced by individuals in the armed forces, but instead of measuring experiences, several items inquire about the level of security individuals feel sharing or reporting their experiences. This measure has also been adapted for use within occupational environments and has been shown to be associated with lower job satisfaction and increased job stress (Long et al., 2016).

Related to the previously discussed measures, the Sexual Coercion Inventory (SCI; Waldner et al., 1999) is a measure of SH that focuses solely on sexually coercive behaviors. Originally validated using a sample of high school and college students, the 17-item measure assesses the frequency of sexually coercive behaviors such as threats to leave the victim and threats of physical or sexual assault (Waldner et al., 1999). While not as widely used as the previous measures, the SCI has been shown to have convergent validity with the Sexual Experiences Survey (Koss & Oros, 1982), a measure similar to

the SEQ. However, with the widespread use of the internet, social networking sites, and mobile technology, there are new avenues in which SH can be experienced that these measures fail to capture.

Cyber-Sexual Harassment Victimization

According to the Pew Research Center (2019) and the Office of Communications (2020)—a government entity based in the U.K. that oversees and regulates various forms of telecommunication and media—in 2019, 90% of adults indicated that they use the internet daily, for an average of 25.1 hours per week. Individuals between the ages of 18-29 report being the most connected, with only 2% of individuals between the ages of 16-24 and less than 1% of individuals between the ages of 25-34 stating they do not use the internet (Office of Communications, 2020). This frequent online presence corresponds with an increased risk of encountering sexual harassment online or *cyber-sexual harassment* (CSH). The most basic and broad conceptual definition, developed by Arafa and colleagues (2017), defines CSH as "sexual harassment that primarily occurs over the internet." The U.S. Department of Education Office for Civil Rights further expanded on this definition by specifying that unwelcome sexual conduct could occur within or outside of dating and peer relationships (U.S. Department of Education Office for Civil Rights, 2001). This includes unwanted and repeated sexual advances, persistent requests for sexual favors and information, negative and derogatory sexual messages and comments, and the unauthorized sharing of personal or sexual images and videos using electronic technology leading to negative psychological outcomes and diminished wellbeing (Arafa et al., 2018; Henry & Powell, 2018; Leemis et al., 2019; U.S. Equal

Employment Opportunity Commission, 1997). Other researchers have expanded on this definition to also include aspects of psychological abuse, sexual grooming (i.e., a method to gain trust from a victim to increase the likelihood they will engage in sexual activities in the future; Rape, Abuse, & Incest National Network, 2020a), gender/sexuality-based harassment, and acts that cause fear and apprehension, such as cyber-stalking (Henry & Powell, 2018; Ritter, 2014; Smith et al., 2014; Wick et. al., 2017).

Although traditional SH and CSH share similarities, CSH is a qualitatively different experience compared to traditional forms of SH, as it is not limited to physical location or geographical region, can target multiple victims, is often anonymous, and can be more salient to the victim due to the permanence of online media (Reed et al., 2019; Schenk, 2008). Within an online environment, these posts may be shared publicly or privately, with the potential for the harassment to be witnessed by the victims' friends or family, which can lead to longer-lasting impacts on the victim (Biber et al. 2002). Additionally, with increases in online usage, previous research suggests that CSH is considered more acceptable than SH (Ritter, 2016). Online disinhibition, a lack of behavioral restraint exhibited online, has been shown to play a role in CSH perpetration and victimization (Zhong et al., 2020). For example, individuals who exhibit more toxic disinhibition–a form of disinhibition characterized by a tendency to behave in rude, threatening, or violent ways due to the increased freedom and lack of penalties online–were more likely to engage in CSH (Zhong et al., 2020). Furthermore, individuals are more likely to post aggressive comments online under conditions of anonymity compared to when their online behaviors are more personally identifiable (Rosner & Kramer, 2016).

While research comparing the two forms of victimization is limited, victims of CSH reported greater difficulties when sleeping and more behavioral problems when the victimization occurred online (Hill & Kearl, 2011).

Although CSH can encompass a wide range of sexually harassing behaviors, common across most CSH definitions, CSH is comprised of four distinct types of behaviors: (1) image and video-based harassment (Branch et al., 2017; Griffiths 2000; Henry & Powell; 2014); (2) verbal CSH (Barak, 2005; Spitzberg & Hoobler, 2002; Ybarra et al., 2007; Ybarra & Mitchell, 2008); (3) gendered hate-speech online (Fox & Tang, 2013; Powell & Henry, 2014; Schenk, 2008; Taylor et al., 2020); and (4) coercive behaviors online (Schenk, 2008; Spitzberg & Cupach, 2014; Stanley et al., 2016).

Image and Video-Based Sexual Harassment

Image and video-based sexual harassment, also defined as revenge-porn or non-consensual pornography, is the most researched form of CSH and is also one of the only forms of CSH that is markedly distinct from traditional SH (Cripps & Stermac, 2018; O'Connor et al., 2018). In the U.S., approximately 50% of cell phone users reported taking sexual images of themselves or others during their lifetime (Pitcher, 2016). When that image becomes distributed to others or sexual images online are received unsolicited, it is considered a form of CSH (Citron & Franks, 2014). Recent research surrounding unsolicited sexual images indicated that about 90% of single adults in the U.S. who have ever received sexual images reported they were unsolicited (Marcotte et al., 2020). Among women who actively use online media in the United Kingdom, 41% indicated they have been exposed to unwanted sexual images during their lifetime (Griffiths, 2000).

Further, in 2016, it was reported that 1 in every 25 Americans (i.e., 10 million) have had their sexual images shared without their consent (Lenhart et al., 2016a). While this form of victimization could occur to anyone, younger women, LGBTQ individuals, those who have recently been in or are currently in a relationship, and Black individuals are more likely to experience image and video-based harassment (Branch et al., 2017; Cyber Civil Rights Initiative, 2013; Lenhart et al., 2016b; Marcotte et al., 2020; O'Connor et al., 2018). Victims of image and video-based sexual harassment report experiencing heightened levels of psychological distress, including posttraumatic stress disorder, depression, anxiety, and low self-esteem (Bates, 2017; Gámez-Guadix et al., 2015), and, in some cases, suicide, as it is difficult for an individual to remove images once they have been shared or posted online (Maddocks, 2018).

Verbal Cyber-Sexual Harassment and Gendered Hate Speech Online

Verbal CSH consists of offensive sexual comments or posts online (Powell & Henry, 2016). These comments can be insulting posts regarding a victim's appearance, perceived or actual sexual performance, or gender or sexual identity (Barak, 2005; Powell & Henry, 2016). This type of CSH has been defined as either active or passive, with active verbal CSH being directed toward a specific individual (i.e., comments made in direct messages or posted on an individual's social media profile), while passive verbal CSH can target anyone who views the comments (i.e., sexual comments posted on a public forum; Schenk, 2008). In a study performed by Powell and Henry (2016), 14.5% of men and 12.5% of women reported that someone has posted a sexually offensive comment about them publicly online. Additionally, within online gaming, research by

Kuznekoff and Rose (2013) indicated that players with female voices were three times as likely to experience sexually offensive and hateful comments compared to players who did not use voice chat. In a study of LGBTQ individuals in the U.K., 1 in 20 adults had experienced verbal CSH and online abuse in the past year (Guasp et al., 2013). Oftentimes, active and passive verbal CSH cooccurs with gendered hate speech, as gendered hate speech in online environments is often shared in a similar format (i.e., instant messages, comments, or posts). Specifically, gendered hate speech is defined as the use of degrading and offensive comments about an individual's gender identity or their gender (as a group), in general (Barak, 2005; Biber et al., 2002). While women are usually the target when considering online-hate speech, with women being 25 times more likely to receive sexually explicit or threatening comments compared to men (Megarry, 2014; Meyer & Cukier, 2006), gay and bisexual men and transgender individuals are more likely to experience offensive comments and messages online regarding their sexuality compared to heterosexual individuals (Powell et al., 2018). Additionally, in a study of adult Facebook users, 68% of individuals who experienced hateful posts online stated that the offensive content specifically referenced their sexual orientation (Oksanen et al., 2014). In both of these forms of CSH victimization, victims indicate these experiences are more harassing online (Biber et al., 2002) and often report experiencing heightened levels of social withdrawal (Fox & Tang, 2016) and increases in anxiety and depression (Stahl, & Dennhag, 2021).

Sexual Coercion Online

Victims of CSH often experience pressure or threats to engage in or continue to engage in sexual behaviors online (Schenk, 2008). Similar to coercion used in traditional SH, sexual coercion online is defined as the strategic use of pressure in the form of bribes, blackmail, and threats from the perpetrator to self-harm or harm others to force an individual to engage in sexual cooperation (Barak, 2005; Henry & Powell, 2018; Shufford, 2022). This pressure can occur repeatedly, increasing in aggression and severity when the victim fails to give in to the perpetrator's demands (Noor, 2019; Shufford, 2022). To date, much of the research surrounding sexual coercion online focuses on coercing a victim to engage in sexting behaviors (i.e., sexual conversations online that may include images or videos; Klettke et al., 2014). Research by Gasso and colleagues (2021) found that 32.7% of adults reported being coerced into engaging in sexting. Women were also about 2.5 times more likely to experience this pressure compared to men and this victimization often occurred multiple times in the past year (Gasso et al., 2021). In a study performed by Drouin and colleagues (2015), both men and women experienced increased levels of anxiety and depression after being coerced into engaging in sexting behaviors. However, for men, this coercion led to greater negative mental health outcomes when the coercion occurred online (Drouin et al., 2015). Furthermore, individuals who have experienced coercive pressure to engage in sexting are also at a higher risk of in-person sexual coercion compared to individuals who have never experienced this pressure (Kernsmith et al., 2018). Lastly, there has been other research that has evaluated the relationships between increased pornography usage

(Gonsalves et al., 2015), various coping strategies (Adams et al., 2022), and the impact of various personality traits (i.e., narcissism; Lamarche & Seery, 2019) on the likelihood of engaging in or coping with coercive behavior online.

Existing Measures of Cyber-Sexual Harassment

Across existing studies, the prevalence of CSH ranges significantly (Reed et al., 2019; Zhong et al., 2020). A meta-analysis performed by Patel and Roesch (2020) found that across 25 articles, the prevalence of CSH ranged from 1.1% to 24.1%. However, other studies have found prevalence rates of CSH as high as 84.3% (Snaychuk & O'Neill, 2020). One of the contributing factors to this high degree of variability is the different conceptualizations of CSH. Additionally, within the incipient literature on CSH, CSH is frequently measured with only one or two items, which can lead to less reliable estimates (Finn, 2004; Henry & Powell, 2016; Staude-Muller et al., 2012). To date, four scales have been developed to measure CSH (Buchanan & Mahoney, 2021; Ritter 2014; Schenk, 2008; Powell & Henry, 2016). The first scale, the Cyber-Sexual Experiences Questionnaire (Schenk, 2008), was designed to specifically measure experiences of CSH victimization among women. The second scale, the Cyber-Sexual Harassment Scale (Ritter, 2014), was designed to measure CSH perpetration in occupational settings. The third scale, the Technology-Facilitated Sexual Violence Victimization Scale (Powell & Henry, 2016), was designed to measure the frequency of CSH behaviors within the general population using a dichotomous response scale. Lastly, the most recently developed measure, the Online Sexual Harassment Scale (Buchanan & Mahoney, 2021), has been used to evaluate gendered harassment and unwanted sexual attention in online

spaces. Notably, these scales are limited by the specificity of their focus and by their response scale.

Cyber-Sexual Experiences Questionnaire

The Cyber-Sexual Experiences Questionnaire (CSEQ; Schenk, 2008) was designed to measure women's SH victimization experiences on the internet. Heavily influenced by the SEQ (Fitzgerald et al., 1999), the conceptual definition driving this study focused on the reception of targeted gender-based or sexuality-based negative comments or images that could lead to feelings of awkwardness or discomfort (Schenk, 2008). In a series of nine focus groups, 24 female undergraduate students discussed their experiences on the internet. Their responses were used to create the 21 CSEQ items measured on a 5-point scale from *never* to *most of the time.* The items assess SH experiences on various social media platforms, propositions for cyber-sex, and the sending and receiving of sexual images. A sample item from this scale is "in your experience on the internet during the past six months, has anyone said crude or gross sexual things to you?" Because the participants of the focus groups were women, several items are targeted toward the female demographic (i.e., "…made dirty remarks about women in general" or "called you a lesbian"). While the items in this scale are highly relevant to the experiences of women, by focusing solely on women, the CSEQ is limited in its usage. For example, 66% of homosexual males and 23% of heterosexual males experience SH (Mitchell et al., 2014). Their experiences online should also be captured in a scale of CSH. Further, the CSEQ was never psychometrically validated for use, so the dimensionality and reliability of this scale are unclear (Schenk, 2008). The scale

developed in the present research seeks to improve on these limitations through the process of psychometric validation with items that target gender-neutral CSH experiences.

Cyber-Sexual Harassment Scale

The Cyber-Sexual Harassment Scale (CSH; Ritter, 2014) is a multidimensional scale designed to measure what the researcher defines as the most salient components of CSH in the workplace: gender harassment (i.e., insulting, offensive behaviors towards women), unwanted sexual attention, and sexual coercion that could lead to a hostile work environment. Initially, 22 items were developed to capture four dimensions of CSH: active verbal (e.g., asking coworkers for personal information), active graphic (e.g., downloading pornography and requesting colleagues to participate in the acts pictured), passive verbal (e.g., posting comments in a work forum about a coworker's appearance), and passive graphic CSH (e.g., using pornographic images as a workplace computer wallpaper). The CSH scale asks participants to indicate the likelihood they would engage in various CSH behaviors measured on a 5-point scale from *not at all likely* to *very likely*. A sample item from this scale is "send a coworker an e-mail making sexually-oriented comments about the way she's/he's dressed." To test the scale, data were collected from a sample of 154 undergraduate and graduate students with an average age of 22 years (*SD* = 3.14). Despite initial predictions, an exploratory factor analysis indicated the presence of five factors: CSH through email (e.g., sending emails with sexist jokes; $\alpha = .85$), active graphic CSH behaviors (e.g., sending links to erotic websites; $\alpha = .77$), passive CSH behaviors (e.g., browsing pornography at work; $\alpha = .78$), verbal CSH behaviors (e.g.,

asking for personal information; α = .53), and purposeful CSH behaviors (e.g., making sexual comments with the intent to offend; α = .70). The emerging factors indicated that participants were more discerning about the medium of the communication, as all email-related communication loaded on one factor, and the directionality of communication, as active CSH behaviors targeted towards a specific individual and passive behaviors (without a specific target) loaded onto two distinct factors.

Following the exploratory factor analysis, Ritter (2014) performed a confirmatory factor analysis (with an additional sample of 154 undergraduate and graduate students) that resulted in an adequate model structure. Further analysis indicated gender differences in the performance of active graphic and passive CSH behaviors with men indicating they were more likely to report engaging in these behaviors. There were no gender differences regarding email-based CSH, indicating that men and women were equally likely to report using email to send sexual jokes, comments, or pictures (Ritter, 2014). Despite its validation, the CSH scale has not been used in a published article to date, which may be due to certain limitations of the scale. For example, their conceptualization of gender harassment only focuses on harassment experienced by women. While it is generally accepted that women face more harassment within the workplace, failing to account for the experiences of men prevents a thorough understanding of this phenomenon (Friborg et al., 2017). Further, the items are focused on online interactions between coworkers in a workplace setting, and thus fail to capture CSH that occurs during the considerable amount of time adults spend online outside of the workplace (Office of Communications, 2020; Pew Research Center, 2019; Ybarra & Mitchel, 2007). Slight modifications to

remove “coworker” and “work” from the items, however, would not alleviate this issue, as several items from the passive CSH subscale would become irrelevant. For instance, viewing pornography in a personal setting would not have the same harassing impact as viewing pornography on a workplace computer. Most importantly, this scale focuses on adults’ likelihood of perpetrating CSH. While perpetration is important to study, the present thesis will focus on CSH victimization, specifically, and address online experiences, broadly, rather than just experiences within the occupational realm.

Technology-Facilitated Sexual Violence Victimization Scale

Although termed differently, technology-facilitated sexual violence victimization (TFSV) is defined similarly to CSH. TFSV is defined as sexual violence and harassment that is mediated through the internet and other digital communications targeting both men and women (Powell & Henry, 2016). While factor analyses were not performed to determine the factor structure underlying the TFSV Victimization Scale, items were developed to capture the prevalence of four dimensions of CSH: online sexual harassment, image-based sexual abuse, sexual aggression/coercion, and gender and sexuality-based hate speech. The scale contains 21 items ($\alpha = .93$) measured using a dichotomous *yes-no* scale. A sample item from this scale is “in your lifetime, has anyone sent you unwanted sexually explicit images, comments, emails, or text messages?” To provide evidence of face validity, three scholars familiar with sexual violence and public health research evaluated and approved the items (Powell & Henry, 2016). In a sample of 2,965 Australian adults aged 18 to 54, 62.3% of respondents experienced at least one form of TFSV victimization during their lifetime (Powell & Henry, 2016). While they did

not find gender differences in the overall likelihood of experiencing TFSV, men were more likely to experience image-based sexual abuse (i.e., images taken and shared without permission) while women were more likely to experience sexual requests and receive unsolicited nude photos. Age differences were also found, such that younger individuals (i.e., 18-24) reported higher rates of TFSV (Powell & Henry, 2016).

The TFSV-V scale has been utilized in other studies with additional modifications (Snaychuk & O'Neill, 2020; Zhong et al., 2020). In a study conducted by Snaychuk and O'Neill (2020), three items measured using a 3-point response scale (i.e., *never experienced*, *experienced once,* and *experienced multiple times*) were added to the TFSV focusing on the sending and receiving of sexually explicit, nude photos and videos. Using this modified scale, 84.3% of individuals in their study reported experiencing some form of victimization and it was common for participants to experience TFSV multiple times. Further, Snaychuk and O'Neill (2020) found that TFSV victimization was correlated with lower self-esteem, less social support, and higher levels of depression. Zhong and colleagues (2020) found that by adding additional categories capturing victims' responses to the various CSH behaviors assessed in the TFSV-V, they were able to analyze perceptions of blame and responsibility for the victims of harassment. For example, victims who reacted to their victimization aggressively were more likely to be rated as more responsible for their victimization.

Despite its use in more than one study, there are several limitations of the TFSV-V scale. The dichotomous response scale limits the understanding of TFSV, as it may overlook meaningful distinctions in the severity, frequency, and potentially prolonged

experiences of CSH. For example, while research has not studied the effects of long-term CSH victimization, individuals who have experienced prolonged SH victimization have reported poor physical health (Buchanan et al., 2013). Snaychuk and O'Neill (2020) and Zhong and colleagues (2020) tried to mitigate this with their alteration of the response scale, but the additional response options were only available for the three additional items in Snaychuk and O'Neill's (2020) study and the response options in Zhong and colleague's (2020) study did not assess victimization prevalence. Additionally, some of the items included in this scale are vague in the representation of image-based sexual abuse. For example, the researchers acknowledged that swimwear photos taken at a beach or shirtless photos of males could potentially be considered a "nude or semi-nude image taken without permission" (Snaychuk & O'Neill, 2020). The distribution of these images may be a conceptually different experience compared to the sharing of sexually explicit images, resulting in noise in the measurement of TFSV. The scale developed in the present research will provide a deeper understanding of CSH and improve upon the TFSV-V in three key ways – by using a response scale that taps into the frequency and pervasiveness of CSH, removing the ambiguity surrounding image-based harassment by explicitly stating the sexual nature of the images, and by including video-based CSH experiences.

Online Sexual Harassment Scale

Most recently, the Online Sexual Harassment Scale (OSHS; Buchanan & Mahoney, 2021) has been developed to measure CSH. Similar to CSH, online sexual harassment is defined as any unwanted sexual advances, threats, or sexual attention

experienced through online media (Buchanan & Mahoney, 2021). Items for the OSHS were developed based on a content analysis of 100,000 posts on the Everyday Sexism website, which contains reports of victimization experiences from individuals who have experienced sexual assault or sexual harassment online. From their analyses, three distinct components of CSH were included in their initial scale: sexual coercion online, gendered harassment, and unwanted sexual attention. A sample item from this scale is "in the past 12 months while you were using the internet or a mobile device, have you been sent an unwanted message propositioning you for sex?" However, through pilot testing (N = 106 adults) and scale testing phases (N = 233 adult college students), the final structure of the scale resulted in a two-dimensional measure capturing only gender harassment and unwanted sexual attention. The final scale contains 12 items measured using a 5-point scale ranging from *never* to *all the time* in the past 12 months. While measurement invariance was not evaluated to determine gender differences within the OSHS, potentially due to the small sample sizes, a series of *t*-tests indicated that women experienced higher levels of both gender harassment and unwanted sexual attention than men. Due to its recent development, this measure has not been utilized in additional studies.

While the benefits of this scale include its brevity and inclusion of two key components of CSH, the scale is also limited due to the elements of CSH that it fails to measure. For example, only two items capture CSH related to the receiving and sharing of sexual images online, and no items capture the filming and sharing of sexual videos. Previous research has demonstrated the importance of this behavior in the measurement

of CSH, as it is one of the components of CSH that occurs specifically in online settings (O'Conner et al., 2018). Therefore, a measure that adequately evaluates this behavior is needed. Additionally, their measure fails to account for the experiences of individuals of differing sexual orientations or sexual identities. As previously stated, members of the LGBTQ community often experience CSH. For example, in a recent study by Powell, Scott, and Henry (2020), bisexual men and women and transgender individuals were more likely to experience harassment online compared to heterosexual and cisgender men and women. A measure of CSH that fails to account for the experiences of these individuals may thus have limited utility for evaluating CSH in the general population.

Additional Online Harassment Measures

Related to CSH, several measures have been developed for measuring sexually harassing behaviors online that occur specifically between relationship partners. As an extension of intimate partner violence, there are currently 22 instruments designed to measure digital dating abuse (Brown & Hegarty, 2018). Behaviors evaluated in these measures are similar to CSH, as coercion and verbal sexual aggression are often measured within these scales. However, CSH can be perpetrated by anyone, not just one's current or previous relationship partners (Brown & Hegarty, 2018; De La Ru et al., 2017). Therefore, it is imperative to have a well-validated scale to understand CSH victimization behavior within a general population of individuals.

Current Research

The primary aim of this research will be to develop and psychometrically test a self-report measure of CSH victimization: the Multidimensional Cyber-Sexual

Harassment Experiences and Attitudes Scale – Victimization (MCSHEA-V). The conceptual definition of CSH guiding this research will be unwelcome conduct of a sexual nature performed through electronic technology that includes but is not limited to: repeated and persistent sexual advances and requests for sexual information; negative and derogatory sexual comments; and the unauthorized sharing of personal or sexual images and videos leading to negative psychological outcomes and diminished wellbeing. The MCSHEA-V will build upon the previously mentioned scales with the goal of addressing their collective limitations.

First, the MCSHEA-V will be designed for a general online setting, will contain non-gender-specific items, and will utilize a Likert-type continuous response scale. Second, as with the CSH Scale (Ritter, 2014) and the TFSV-V Scale (Powell & Henry, 2016), the MCSHEA-V will also be divided into subscales. The specific factor structure of the MCSHEA-V, however, will be unique. The scale is designed to include five subscales that capture key components of CSH victimization as well as CSH attitudes: (1) *gathering sexual information online*, defined as any behavior where one is asked to share personal or sexual information about themselves, (2*) image and video-based sexual harassment*, defined as the unwanted sending or receiving of sexual images or videos, including sexual images or videos taken without permission and any alterations to these images or videos; (3) *offensive comments or posts*, defined as any online comment or post, either public or private, that is sexually suggestive including but not limited to sexual jokes, comments about one's appearance, and comments about one's sexuality; (4) *coercive behaviors online*, defined as any behavior in which pressure, threats of violence

to themselves or others, or blackmail are used to instigate sexual activities online; and (5) *CSH attitudes*, defined as one's thoughts or beliefs about the acceptability and seriousness of cyber-sexual harassment. Notably, although the CSEQ (Schenk, 2008), CSH Scale (Ritter, 2014), TFSV-V Scale (Powell & Henry, 2016), and OSHS (Buchanan & Mahoney, 2021) capture aspects of gathering information, offensive comments, and image-based harassment, the CSH, TFSV-V, and OSHS scales do not explicitly include references to videos. With the popularity of video-based social networking sites (e.g., TikTok, Snapchat), video-based CSH should be included (Iqbal, 2020). Further, the TFSV-V (Powell & Henry, 2016) was the only scale to include several items measuring aspects of coercion. Research by Choi et al. (2016) and Montiel et al. (2016) has documented that victims of CSH report significant pressure to share sexual images, engage in sexual communication, and perform sexual acts. As such, the MCSHEA-V will be designed to assess the pressure and coercion often experienced by victims of CSH. Lastly, items surrounding CSH attitudes are included in the MCSHEA-V to better understand beliefs regarding the seriousness and acceptability of CSH behaviors. With these additions and through the process of psychometric validation, the MCSHEA-V thus seeks to improve on previous scales measuring CSH victimization.

The items comprising the MCSHEA-V (see Table 1) were either adapted from previous research or created for the development of this measure. The gathering sexual information online subscale included eight items that were adapted primarily from research by Mitchell and colleagues (2008), Taylor and colleagues (2020), and Zweig and colleagues (2013). Sample items included “asked you to share sexual information about

yourself when you did not want to" and "repeatedly tried to ask sexual questions after you told them to stop." The image and video-based sexual harassment subscale contained 11 items that were adapted from Powell and Henry's (2016) TFSV-V and the Cyber-Dating Abuse Questionnaire developed by Zweig et al. (2013). Sample items included "asked you to send nude or semi-nude photos or videos of yourself" and "sent you a nude or semi-nude photo or video of themselves without you asking." The offensive comments subscale contained 12 items that were adapted from Schenk's (2008) CESQ, and research performed by Tynes and colleagues (2010) and Taylor and colleagues (2020). Sample items included "made offensive, dirty remarks about your gender in general (i.e., all women are whores, all men are pigs)" and "spread rumors about your sex life online." The coercive behaviors subscale contained 16 items that were adapted from research performed by Spitzberg and Hoobler (2002), Spitzberg and Cupach (2011), and Schenk (2008). Sample items included "pressured you to share sexual images of yourself to show your affection (i.e., "If you loved me, you would do it")" and "threatened to share personal information about you online if you did not perform a sexual act online." Lastly, the CSH attitudes subscale contained 14 items that were adapted from research by Mazer and Percival (1989) and Branch and colleagues (2017). Sample items included "an attractive person should expect sexual advances and learn how to handle them" and "cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical."

Table 1

Items Developed for the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization

Subscale	Item	Reference	Modifications
General Harassment Online			
GEN 1	Sexually harassed you online.*	*Powell & Henry, 2016; *Schenk, 2008; Ybarra et al., 2015	• Changed the response scale; the original was dichotomous (*yes/no)* in the past year.
Gathering Sexual Information Online			
GI 1	Asked you to share personal information (e.g., full name, address, age) about yourself when you did not want to?	Marret & Choo, 2017; Mitchell et al., 2008; Schenk, 2008; Ritter, 2014	• Included specific examples of personal information. • Removed reference to the workplace. • Changed the response scale; the original was dichotomous (*yes/no)* in the past year.
GI 2	Asked you to share sexual information about yourself when you did not want to?*	*Mitchell et al., 2008; Taylor et al., 2020; *Ybarra & Mitchell, 2008	• Removed lengthy examples. • Changed the response scale; the original was dichotomous (*yes/no)* in the past year.
GI 3	Tried to get you to talk about sexual topics when you did not want to?*	Mitchell et al., 2008; *Schenk, 2008	• Emphasized the importance of the topics being sexual. • Emphasized that the behavior was unwanted. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*every day)* in the past 6 months.
GI 4	Repeatedly tried to ask sexual questions after you told them to stop?	Schenk, 2008; Tynes et al., 2010	• Emphasized the repeated nature of this behavior. • Changed the response scale; the original ranged from 1 (*never)* to 6 (*most of the time)* in the past year.
GI 5	Shared personal information with others online without your consent?	Zweig et al., 2013	• Removed the requirement that the information had to come from social media. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year.
GI 6	Shared sexual information about you with others online without your consent?	Zweig et al., 2013	• Removed the requirement that the information had to come from social media. • Specified the information was sexual in nature. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year.
GI 7	Asked you to share information about your sexual orientation when you did not want to?	Ybarra et al., 2015	
GI 8	Sent you excessively disclosive messages (e.g., inappropriately giving private information about his/her life, body, family,	*Spitzberg & Cupach, 2014	• Included sexual fantasies as an example of information disclosure.

	hobbies, sexual experiences, or fantasies, etc.)?*		• Changed the response scale; the original ranged from 1 (*never)* to 7 (*> 25 times)* during the participants' relationship with an individual.
Image and Video-based Harassment			
IVH 1	Asked you to send photos or videos of yourself?	Zweig et al., 2013	• Removed the sexual component to capture non-sexual images (i.e., selfies). • Included a video component. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year.
IVH 2	Asked you to send nude or semi-nude photos or videos of yourself?	Sanchez et al., 2017; Zweig et al., 2013	• Removed the threatening aspect from the item. • Included a video component. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year.
IVH 3	Shared a nude or semi-nude photo or video of you online without your consent?	Branch et al., 2017; Powell & Henry, 2016	• Included a video component. • Specified general online recipients. • Changed the response scale; the original was dichotomous (*yes/no)* during the participants' lifetime.
IVH 4	Shared a nude or semi-nude photo or video of you with their friends without your consent?	Branch et al., 2017; Powell & Henry, 2016; Zweig et al., 2013	• Included a video component. • Changed the response scale; the original was dichotomous (*yes/no)* during the participants' lifetime.
IVH 5	Sent you a nude or semi-nude photo or video of themselves without you asking?	Sanchez et al., 2017; Schenk, 2008; Zweig et al., 2013	• Included a video component. • Removed the gender of the perpetrator. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year.
IVH 6	Sent you pornographic photos or videos of other people without you asking?	Duggan, 2017; Finn, 2004; Ritter, 2014; Schenk, 2008	• Removed the workplace component. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
IVH 7	Taken nude or semi-nude photos or videos without your permission?*	*Kearl, 2018; *Powell & Henry, 2016	• Removed references to sharing images and videos as sharing is captured by other items. • Changed the response scale; the original was dichotomous (*yes/no*) during the participants' lifetime.
IVH 8	Used photoshop to alter your photos in a sexual way?	Karasavva & Noorbhai, 2021	

IVH 9	Edited a video of someone else performing sexual acts to look like you (i.e., deepfake)?	Karasavva & Noorbhai, 2021	
IVH 10	Posted sexual photos or videos on your social media profile?	Picard, 2007; Powell & Henry, 2016; Ritter, 2014; Schenk, 2008	• Removed the workplace component. • Specified that the photos and videos were sexual in nature. • Changed the response scale; the original ranged from 1 (*not likely)* to 5 (*very likely*) in the 6 months.
IVH 11	Tagged you in a sexual photo or video?	Picard, 2007; Powell & Henry, 2016; Ritter, 2014; Schenk, 2008	• Emphasized an alternative way to share material on social media.
Offensive Comments or Posts			
OC 1	Called you names that made you feel uncomfortable?	Patchin & Hinduja, 2019; Schenk, 2008; Tynes et al., 2010	• Shortened the item by removing examples. • Included the discomfort of the participant. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*every day)* in the past year.
OC 2	Said offensive things about how you look, your body, or your sex life in a private/direct message?*	*Schenk, 2008; Tynes et al., 2010	• Specified that the comment occurred in private. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
OC 3	Said offensive things about how you look, your body, or your sex life in a public post/comment?*	*Schenk, 2008; Tynes et al., 2010	• Specified that the comment occurred in public. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
OC 4	Told you offensive, dirty stories or jokes through instant/text messaging, email, or social networking sites?*	*Schenk, 2008	• Specified the behavior had to occur using technology. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*every day)* in the past year.
OC 5	Made offensive, dirty remarks about your gender in general (i.e., all women are whores, all men are pigs)?	Fox & Tang, 2013; Schenk, 2008	• Removed gender-specific terminology. • Provided an example for male participants. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
OC 6	Called you a gay or lesbian as an insult in a private/direct message?*	*Taylor et al., 2020; Ybarra et al., 2015	• Specified that the comment occurred in private. • Changed the response scale; the original ranged from 1 (*never)* to 3 (*more than once*) in the past year
OC 7	Called you gay or lesbian as an insult in a public post/comment?*	*Taylor et al., 2020; Ybarra et al., 2015	• Specified that the comment occurred in public.

			• Changed the response scale; the original ranged from 1 (*never)* to 3 (*very often)* in the past year
OC 8	Left an offensive, dirty comment on your social media profile?*	Ritter, 2014; *Schenk, 2008	• Removed reference to the workplace. • Removed examples of specific social media sites. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
OC 9	Spread rumors about your sex life online?	Choi & Lee, 2017; Taylor et al., 2013; Ybarra & Mitchell, 2008	• Specified that the rumors were sexual in nature. • Changed the response scale; the original was dichotomous (*yes/no*) during the participants' lifetime.
OC 10	Spread rumors about your sexuality online?	Choi & Lee, 2017; Taylor et al., 2013; Ybarra & Mitchell, 2008	• Removed specific examples of types of sexuality. • Changed the response scale; the original was dichotomous (*yes/no*) during the participants' lifetime
OC 11	Tagged you in an inappropriate/sexual post?	Ritter, 2014; Schenk, 2008	
OC 12	Used sexual nicknames when talking with you (i.e., daddy, baby, sugar)?	Schenk, 2008	
Coercive Behaviors Online			
CB 1	Sent you excessively "needy" or demanding messages (e.g., pressuring to see you, assertively requesting you go out on a date, arguing with you to give him/her "another chance", etc.)?*	*Spitzberg & Cupach, 2014; Spitzberg & Hoobler, 2002	• Changed the response scale; the original ranged from 1 (*never)* to 7 (*> 25 times)* during the participants' relationship with an individual.
CB 2	Sent you tokens of their affection (e.g., poetry, songs, electronic greeting cards, praise, etc.) when you did not want them to?*	*Spitzberg & Hoobler, 2002	• Changed the response scale; the original ranged from 1 (*never)* to 5 (*over 5 times*) during the participants' relationship with an individual.
CB 3	Pressured you to share sexual images of yourself to show your affection (i.e., "If you loved me, you would do it?")*	*Stanley et al. 2016	• Changed the response scale; the original ranged from 1 (*never*) to 4 (*often*) during their relationship with their partner.
CB 4	Threatened to share conversations or photos with friends and family if you did not perform a sexual act online?	Patchin & Hinduja, 2018	• Specified who the recipient of the information would be. • Changed the response scale; the original was dichotomous (*never/within the past month, over a month ago*).
CB 5	Bribed you to conduct sexual acts (e.g., offering to send you money if you send him/her sexual pictures)?*	*Schenk, 2008	• Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.

CB 6	Made you feel worried or threatened because someone was bothering you online?*	*Wolak et al., 2007	• Changed the response scale; the original was dichotomous (*yes/no*) during the past year.
CB 7	Made promises to reward you if you performed a sexual act online?	Fisher, 2000; Office on Women's Health, 2019	• Specified the sexual act occurred online.
CB 8	Threatened to reveal your sexual orientation if you did not perform a sexual act online?*	*Office on Women's Health, 2019	• Removed reference to who would receive the information. • Specified the sexual act occurred online.
CB 9	Sent you sexually violent threats (i.e., rape threats, threatening sexual assault)?	Schenk, 2008; Tang & Fox, 2013	• Changed the response scale; the original ranged from 1 (*never)* to 5 (*always*) when playing videogames.
CB 10	Threatened to share personal information about you online if you did not perform a sexual act online?	Spitzberg & Hoobler, 2002; Zweig et al., 2013	• Included the threat from the perpetrator. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*over 5 times*) during the participants' relationship with an individual.
CB 11	Blackmailed you to continue to perform sexual acts online?	Álvarez-García et al., 2015; Henry & Powell, 2014	
CB 12	Repeatedly requested a romantic or sexual relationship with you even though you let them know you were not interested?*	*Schenk, 2008	• Specified that the behavior occurred more than once. • Changed the response scale; the original ranged from 1 (*never)* to 5 (*most of the time*) in the 6 months.
CB 13	Sent you threatening messages online (e.g., suggesting harming you, your property, family, friends, etc.) if you did not develop a relationship with them?*	*Spitzberg & Hoobler, 2002	• Changed the response scale; the original ranged from 1 (*never)* to 5 (*over 5 times*) during the participants' relationship with an individual.
CB 14	Been threatened online because of the way you look or act online?	Finkelhor et al., 2000; Schenk, 2008; Tynes et al., 2010	• Included the threat from the perpetrator. • Removed the reference to the perpetrator asking sexual questions.
CB 15	Asked you to do something sexual online when you did not want to?*	*Mitchel et al., 2008; *Taylor, et al., 2020; *Ybarra & Mitchell, 2008	• Changed the response scale; the original was dichotomous (*yes/no)* in the past year.
CB 16	Asked you to engage in "cybersex"?	Schenk, 2008; Shaughnessy et al., 2011	• Changed the response scale; the original was dichotomous (*yes/no)* in the past year.
Attitudes About Cyber-Sexual Harassment			
ATT 1	People who get sexually harassed online must have done something to deserve it.	Branch et al., 2017; Dodge, 2015; Gerger et al., 2007	• Specified the general nature of the sexual harassment online.
ATT 2	I would tell someone if I felt sexually harassed online.	Ybarra et al., 2015	
ATT 3	People who send nude or semi-nude pictures over the internet or cell phone deserve it if the	*Branch, et al., 2017; Gerger et al., 2007	• Changed the response scale; the original ranged from 1

	pictures are sent to other people.*		(*strongly agree*) to 4 (*strongly agree*).
ATT 4	If they don't go too far, suggestive remarks simply tell one they are attractive.*	*Gerger et al., 2007	• Removed gender-specific language.
ATT 5	It is disturbing for a person to be forced into a romantic relationship.	Ybarra et al., 2015	
ATT 6	An attractive person should expect sexual advances and learn how to handle them.*	*Mazer & Percival, 1989	• Removed gender-specific language. • Changed the response scale; the original ranged from 1 (*agree*) to 5 (*disagree*).
ATT 7	A lot of activities people call sexual harassment online are just normal flirtation.*	*Mazer & Percival, 1989	• Removed gender-specific language. • Changed the response scale; the original ranged from 1 (*agree*) to 5 (*disagree*).
ATT 8	Sexual harassment online is a serious social problem.*	*Mazer & Percival, 1989	• Specified that the sexual harassment occurs online. • Changed the response scale; the original ranged from 1 (*agree*) to 5 (*disagree*).
ATT 9	Others around me have shared sexual images of themselves and others, so it is not serious.	Branch, et al., 2017	• Removed the implied pressure to share images. • Emphasized the potential seriousness of the behavior.
ATT 10	Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.	Ritter, 2014	• Changed the type of behavior being referenced online; the original was blatant sexism. • Changed the response scale; the original ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).
ATT 11	Sexual jokes online are usually meant to be harmless.	Page et al., 2016	• Specified the jokes are shared online. • Removed gender-specific language.
ATT 12	Sexual comments online are more serious than sexual comments made in-person because information on the internet can be permanent.	Dodge, 2016; Henry & Powell, 2015; Wong-Lo & Bullock, 2011	
ATT 13	Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.	Anderson, 2022	
ATT 14	Sexual comments or posts online are more serious than sexual comments made in-person because they can be viewed by anyone (i.e., public).	Dodge, 2016; Henry & Powell, 2015; Wong-Lo & Bullock, 2011	

Note: GEN = general cyber-sexual harassment; GI = gathering sexual information online; IVH = image and video-based harassment; OC = offensive comments or posts online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. * Indicates quoted items from the reference.

CHAPTER 2

STUDY 1

Before testing the scale on a large sample of participants, it is recommended that a sample of experts evaluate the items to determine if they are relevant to and adequately cover all aspects of the construct being measured. Performing this stage of scale development is essential for gathering evidence for content validity. Determining content validity is done by precisely defining the construct and by evaluating the degree to which experts in the field agree on the conceptual domain and the extent to which they consider all aspects of the measure to be representative of, specific to, and relevant to the intended domain (DeVellis, 2017; Haynes et al., 1995). For a measure of CSH, relevance is focused on the extent to which the items can convey the extent of CSH victimization experiences while representativeness is focused on the degree to which items encapsulate the entire domain of CSH (Haynes et al., 1995). The conceptual definitions provided above are designed to be specific enough to carefully define the construct of interest while remaining broad enough to not underrepresent the variety of online sexual harassing behaviors. It is also important to provide evidence of content validity, as scales that have demonstrated inadequate content validity often fail to confirm the latent factor structure and developing composite scores from measures with low content validity would be inappropriate (Haynes et al., 1995). Therefore, the goal of Study 1 was to establish the content validity of the MCSHEA-V by gathering experts in the field of psychology to evaluate the initial pool of items.

In addition to determining whether each item represents the construct of CSH as a whole, each item was developed and included with the intention of capturing one facet of CSH behaviors (e.g., image and video-based harassment, coercive behaviors). During scale development, it is not only important that the items, themselves, are relevant to the overall construct, but that, collectively, the items adequately capture the construct. Therefore, an additional aim of Study 1 was to evaluate the extent to which the items adequately represent the construct of CSH, as a whole. Previous research has utilized the Q-sorting method to evaluate the adequacy of the items to represent each subscale (Cho et al., 2017; Hanges & Dickson, 2004). The process of Q-sorting is especially beneficial for identifying ambiguous items by classifying items in a multi-dimensional construct to specific subscale dimensions, which allows for the retention of more valid items (Cho et al., 2017; Zait & Bertea, 2011).

Method

Participants

A sample of psychology graduate students and faculty (N = 13) completed a Qualtrics survey to evaluate the extent to which each of the initial items were relevant to and adequately measure CSH. IRB approval was obtained prior to data collection, all participants provided informed consent before participation, and all data collected were anonymous. On average, the participants were 21.42 (SD = 8.94) years of age. The sample was primarily female (N = 10) and White (N = 11). The participants spent between *2 to 4* and *5 to 7* hours daily online (M = 2.62, SD = 0.87) and accessed the internet most often using a personal laptop computer or a mobile phone.

Table 2

Demographic Information for Sample (N = 13)

	Frequency	Minimum	Maximum	*M*	*SD*
Age		22	54	29.42	8.94
Gender					
Cisgender male	2 (15.4%)				
Cisgender female	10 (76.9%)				
Non-binary	1 (7.7%)				
Race					
White	11 (84.6%)				
Multiracial	1 (7.7%)				
Missing	1 (7.7%)				
Ethnicity					
Hispanic/Latinx	3 (23.1%)				
Non-Hispanic/Non-Latinx	10 (76.9%)				
Daily time spent online (hrs)		1	4	2.62	0.87
Technology Access		1	4	2.00	0.91
Phone/smartphone	12 (92.3%)				
Personal laptop computer	9 (69.2%)				
Tablet/iPad	1 (7.7%)				
Personal desktop computer	4 (30.8%)				

Procedure

Participants were provided with the conceptual definition of CSH and were asked to rate the relevance of each item on the MCSHEA-V (see Table 1) on a 4-point scale ranging from *not relevant* to *highly relevant.* They were also asked to sort each item into one of six categories: *gathering sexual information, image and video-based harassment, offensive comments or posts, coercive behaviors, attitudes about CSH*, and *none of the above*. During the sorting process, participants were provided with conceptual definitions for each of the categories. After the sorting task, participants were asked to indicate the extent to which the items sorted into each category adequately captured the subscale it was intending to measure along a 4-point scale from *not at all adequate* to *very adequate.*

If a participant indicated anything but very adequate, they were prompted with an additional free-response question to allow them to suggest additional items or modifications. Participants were also provided with two free-response questions that allowed them to indicate any aspects of CSH that were not captured by the measure and indicate any issues in clarity of the items (i.e., wording). Lastly, participants completed several demographic items (see Table 2).

Analytic Plan

Content validity was estimated using Aiken's Validity Index (i.e., Aiken's V; Aiken, 1980) and Lawshe's (1975) Content Validity Ratio (CVR). Aiken's V (1980; 1985) reflects the level of agreement between raters regarding the content validity of an item. It ranges from 0 to 1 with higher values indicating greater content validity. To calculate Aiken's V, the ratings are transformed using the following equation: $s = r - lo$ with *r* representing the participants' rating and *lo* representing the value of the lowest category. Using a 4-point scale, *lo* equals 1. The transformed ratings (now termed *s*) for all raters are added together to yield *S.* Therefore, using the following formula, Aiken's V is calculated with *c* representing the number of response categories and *N* representing the number of raters; $V = \frac{S}{N(c-1)}$. Aiken (1985) has also calculated probability values for specified values of *c* and *N* to determine significance. From these findings, given the sample size of this study ($N = 13$) and the number of response categories (i.e., 4), *V* coefficients greater than .69 are significant ($p = .041$). Lawshe's CVR (1975) has been widely used across academic fields (Ayre & Scally, 2014). Calculated using the

following formula, $CVR = \frac{n_e - (\frac{N}{2})}{\frac{N}{2}}$, CVR is a transformation of the level of agreement of an item's relevance. n_e represents the number of experts indicating an item is relevant and *N* represents the sample size. CVR values range from -1, which indicates perfect disagreement to +1, which indicates perfect agreement on an item's relevance. Critical CVR values developed by Ayre and Scally (2014) were utilized in this study to determine the significance of the findings. Based on Ayre and Scally's (2014) research, a value greater than .54 represents a significant CVR ($p < .05$). Items with insufficient content validity based on these indicators were flagged for removal.

Based on the findings from the Q-sorting task, items that were not sorted to the correct subscale at least 80% of the time, were flagged for rewording (Nunnally, 1978). The analysis is intended to determine if participants agree on whether each item captures the definition of the subscale (Boon-itt & Pongpanarat, 2011). Rewording is performed to clarify the meaning of each item, so the item aligns more closely with the conceptual definition of its respective subscale. Lastly, based on the content of the free-response items (e.g.., "Are there any experiences/content areas related to cyber-sexual harassment that were not included that you think should be?"; "Were there any items that you had trouble understanding (i.e., unclear wording)?"), additional items may be modified to improve clarity and understanding of the items as well as add items reflecting content not captured in the currently developed items.

Results

Based on Aiken's V (1985), 10 items from the MCSHEA-V lacked sufficient content validity (see Table 3). Specifically, these items were: GI 1, 5, and 7; IVH 1; OC

1, 4, 6, and 12; and CB 2 and 14. It is possible that these items were rated as lower in content validity because they do not specify that the victimization experience is sexual (i.e., sharing personal information, sharing photos of oneself). However, as previous research on cyberbullying and online harassment has indicated that members of the LGBTQ community often experience sexual harassment based on their sexual orientation or sexual identity (Choi & Lee, 2017; Ybarra & Mitchell, 2008), the inclusion of items that focus on sexual or sexual identity are relevant to include. According to DeVellis (2017), there is the potential for items related to a construct to not present as conceptually valid in all contexts. In this case, someone who is heterosexual might not experience harassment due to their sexual identity but removing this item might attenuate content validity for someone who has experienced this type of harassment. Therefore, GI 7 (i.e., "asked you to share information about your sexual orientation when you did not want to?") was retained. Additionally, while OC 4 and 12 were rated as not being content valid, the sharing of sexual jokes, stories, and sexual nicknames was utilized previously in several non-online sexual harassment scales (Biber et al, 2002; Fitzgerald et al., 1995). Therefore, these items were modified (rather than dropped) to clarify that the stories, jokes, and nicknames were sexual in nature and were shared or used in online spaces; that is, these items were modified to align more closely with the conceptual definition of offensive comments online.

Based on Lawshe's CVR, three additional items (i.e., IVH 2, OC 7, CB 16) were determined to lack content validity. Surprisingly, the behaviors represented in IVH 2 have been commonly used in other previously developed measures of CSH (Powell &

Henry, 2016; Sanchez et al., 2017; Zweig et al. 2013). Given this conceptual link, IVH 2 was retained. OC 7 focuses on offensive comments about an individual's sexual orientation/sexual identity. Given the similar rationale for including GI 7, OC 7 was retained but reworded to be less targeted to any one specific gender/sexual identity and address gender/sexual identity more broadly. Lastly, although determined to be lacking in content validity, CB 16, which focuses on requests for cybersex, was retained. Including an item that focuses on cybersex, a form of virtual sex occurring using text, online avatars, and/or webcams to achieve sexual gratification (Boskey, 2020; Shaughnessy et al., 2011), can be useful in capturing a wide range of potentially harassing sexual behaviors online. It is possible that the low ratings of content validity for this item were due, in part, to ambiguity in whether this behavior is perceived by the victim as harassing and whether it occurred without consent. Therefore, the item was modified to indicate the behavior was repeated, so that the item tapped into behavior that was less ambiguously harassing. In total, seven items were removed from the scale and were not analyzed in the following analyses.

Table 3

Content Validity Ratings of the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale of Victimization

	Rating Frequency								95% CI		
Item	1	2	3	4	**E**	**CVR by Item**	**CVR by Subscale**	***V***	**Lower Limit**	**Upper Limit**	**Typical Length**
GEN 1	0	0	2	11	13	1.00*	1.00*	0.95**	0.83	0.99	0.15
GI 1	4	4	3	2	5	-0.23	0.52	0.41	0.27	0.57	0.30
GI 2	0	1	7	5	12	0.85*		0.77**	0.62	0.87	0.26
GI 3	0	0	5	6	11	0.69*		0.72*	0.62	0.87	0.26
GI 4	0	0	1	12	13	1.00*		0.97**	0.87	1.00	0.13
GI 5	0	6	5	2	7	0.08		0.56	0.41	0.71	0.30

GI 6	0	1	1	11	12	0.85*		0.92**	0.80	0.97	0.18
GI 7	0	4	6	3	9	0.38		0.64	0.48	0.77	0.29
GI 8	0	3	5	5	10	0.54*		0.72*	0.56	0.83	0.27
IVH 1	0	5	4	4	8	0.23	0.80*	0.64	0.48	0.77	0.29
IVH 2	0	4	2	7	9	0.38		0.74*	0.59	0.85	0.27
IVH 3	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09
IVH 4	0	0	2	11	13	1.00*		0.95**	0.83	0.99	0.15
IVH 5	0	2	2	9	11	0.69*		0.85**	0.70	0.93	0.22
IVH 6	0	0	3	10	13	1.00*		0.92**	0.80	0.97	0.18
IVH 7	1	0	2	10	12	0.85*		0.87**	0.73	0.94	0.21
IVH 8	0	1	3	9	12	0.85*		0.87**	0.73	0.94	0.21
IVH 9	0	0	2	11	13	1.00*		0.95**	0.83	0.99	0.15
IVH 10	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09
IVH 11	0	1	5	7	12	0.85*		0.82**	0.67	0.91	0.24
OC 1	1	4	4	4	8	0.23	0.57*	0.62	0.46	0.75	0.29
OC 2	0	1	3	9	12	0.85*		0.87**	0.73	0.94	0.21
OC 3	0	0	1	12	13	1.00*		0.97**	0.87	1.00	0.13
OC 4	0	4	6	3	9	0.38		0.64	0.48	0.77	0.29
OC 5	0	3	6	4	10	0.54*		0.69*	0.54	0.82	0.28
OC 6	1	4	3	5	8	0.23		0.64	0.48	0.77	0.29
OC 7	0	4	3	6	9	0.38		0.72*	0.56	0.83	0.27
OC 8	0	1	3	9	12	0.85*		0.87**	0.73	0.94	0.21
OC 9	0	0	1	12	13	1.00*		0.97**	0.87	1.00	0.13
OC 10	0	1	3	9	12	0.85*		0.87**	0.73	0.94	0.21
OC 11	0	1	6	6	12	0.85*		0.79**	0.64	0.89	0.25
OC 12	0	8	2	2	4	-0.33		0.46	0.34	0.66	0.31
CB 1	0	3	5	5	10	0.54*	0.77*	0.72*	0.56	0.83	0.27
CB 2	1	6	3	3	6	-0.08		0.54	0.39	0.69	0.30
CB 3	0	0	6	7	13	1.00*		0.85**	0.70	0.93	0.22
CB 4	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09
CB 5	0	0	1	11	12	1.00*		0.97**	0.86	1.00	0.14
CB 6	0	3	5	5	10	0.54*		0.72*	0.56	0.83	0.27
CB 7	0	1	1	11	12	0.85*		0.92**	0.80	0.97	0.18
CB 8	0	1	2	10	12	0.85*		0.90**	0.76	0.96	0.20
CB 9	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09
CB 10	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09
CB 11	0	0	0	13	13	1.00*		1.00**	0.91	1.00	0.09

CB 12	0	1	2	10	12	0.85*	0.90**	0.76	0.96	0.20
CB 13	0	0	3	10	13	1.00*	0.92**	0.80	0.97	0.18
CB 14	0	3	5	3	8	0.45	0.67	0.50	0.80	0.31
CB 15	0	0	3	10	13	1.00*	0.92**	0.80	0.97	0.18
CB 16	1	3	3	6	9	0.38	0.69*	0.54	0.82	0.28

Note: GEN = general cyber-sexual harassment; GI = gathering sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; * $p < .05$, ** $p < .01$

Q-Sorting Analysis

The results of the sorting task (see Table 4) indicated that there was variability in how some of the items were perceived by the participants. GEN 1 (i.e., "sexually harassed you online") was sorted into the *offensive comments* and *none of the above* categories. It is possible that this disagreement arose because this is a general item that encompasses all sexually harassing behaviors online and general items were not represented by any of the sorting categories. In light of this, despite disagreement on the appropriate category, the original wording of this item was retained. GI 3, 4, 6, and 8 were incorrectly sorted into a category other than their intended subscale. In most cases, these items were sorted in the *gathering sexual information, offensive comments*, and *coercive behaviors* subscale categories. These items were modified to clarify the meaning behind "sexual topics" and "personal topics" as forms of sexual information that the victim could provide about themselves by providing examples of these types of information within the items. The phrase "after you told them to stop" was also removed from these four items to potentially reduce connections to the coercive behaviors subscale. However, given the overarching definition of CSH, it is implied that the behaviors are occurring without consent. Although the items sorted within the GI category were considered highly adequate (46.2%, $N = 6$), participants indicated that the

GI conceptual definition was confusing. Therefore, based on the content of these items, this subscale was re-defined as *gathering and spreading sexual information online*, which captures any behavior involving inquiring about a victim's sexual information (i.e., sexual history, sexual orientation/identity) or sharing a victim's sexual information publicly or privately with others online. The sole general harassment item will also be included within this subscale, as participants indicated that gathering and spreading sexual information could be considered a form of general harassment. Additional modifications were made to GI 7 to make the item wording consistent with the previously modified items.

Within the image and video-based harassment subscale, IVH 2 was the only item that was sorted to multiple subscale categories. Specifically, in addition to being sorted into the *image and video-based harassment* category, this item was sorted at least once into all other subscale categories except *attitudes about CSH*. This item was thus modified to clarify that the behavior was repeated and occurred despite requesting the perpetrator stop. This change may more effectively capture the element of coercion, increasing its correlation with other coercive behaviors; however, because the focus is on the sending of sexual images and videos, this item should still relate most strongly to the image and video-based harassment subscale. Additionally, as the overall definition of CSH includes repeated offenses of the unwanted behavior, reiterating this aspect may be beneficial. The remaining items were sorted to the IVH subscale 92.3-100% of the time. When asked how adequately the items sorted into this category reflect IVH, 53.8% (N = 7) indicated that the items were very adequate. Additional modifications to items within

the IVH subscale were also performed to improve generalizability and to account for participants' recommendations. These modifications include emphasizing the sexual photos taken were of the victim (IVH 7); using more general terms to reference photo editing software (IVH 8); and changing item phrasing to reference social media pages rather than profiles (IVH 10).

With the offensive comments subscale, OC 9, 11, and 12 were sorted jointly to the *image and video-based harassment, coercive behaviors*, and *none of the above* subscale categories. To further clarify that these items represent offensive comments online, OC 9 and OC 11 were modified to specify that the rumors and posts were shared online rather than potentially referencing the victim's online activity. For example, OC 9 was reworded from "spread rumors about your sex life online?" to "spread rumors online about your sexual experiences?". As mentioned above, OC 12 was reworded to clarify that the sexual nicknames were utilized during online communication. When asked how adequately the items sorted into this subscale capture offensive or harassing comments produced and spread online, 46.2% ($N = 6$) indicated that the items were very adequate. However, based on the participants' comments, one item was added focusing on inappropriate comments about the victim's ability to perform sexual acts (i.e., "I bet you are good in bed"). Additional modifications to items within the OC subscale were also performed to specify that the communication occurred online or through electronic means and that the comments and posts were sexual in nature.

Table 4

Item Frequencies for the Q-Sorting Task

Subscale	Item	Gathering Sexual Information Online	Image and Video-Based Harassment	Offensive Comments	Coercive Behaviors	Attitudes About Cyber-Sexual Harassment	None of the Above
General harassment							
GEN 1	Sexually harassed you online.		1 (7.7%)	6 (46.2%)			6 (46.2%)
Gathering sexual information							
GI 1	Asked you to share personal information (e.g., full name, address, age) about yourself when you did not want to?	11 (84.6%)			1 (7.7%)		1 (7.7%)
GI 2	Asked you to share sexual information about yourself when you did not want to?	12 (92.3%)		1 (7.7%)			
GI 3	*Tried to get you to talk about sexual topics when you did not want to?*	6 (46.2%)			7 (53.8%)		
GI 4	*Repeatedly tried to ask sexual questions after you told them to stop?*	5 (38.5%)		2 (15.4%)	6 (46.2%)		
GI 5	Shared personal information with others online without your consent?	3 (23.1%)		5 (38.5%)			5 (38.5%)
GI 6	*Shared sexual information about you with others online without your consent?*	1 (7.7%)	2 (15.4%)	9 (69.2%)			1 (7.7%)
GI 7	*Asked you to share information about your sexual orientation when you did not want to?*	11 (84.6%)		1 (7.7%)	1 (7.7%)		
GI 8	*Sent you excessively disclosive messages (e.g., inappropriately giving private information about his/her life, body, family, hobbies, sexual experiences, or fantasies, etc.)?*	2 (15.4%)		10 (76.9%)			1 (7.7%)
Image and video-based harassment							
IVH 1	Asked you to send photos or videos of yourself?	5 (38.5%)	5 (38.5%)				3 (23.1%)
IVH 2	*Asked you to send nude or semi-nude photos or videos of yourself?*	4 (30.8%)	6 (46.2%)	1 (7.7%)	1 (7.7%)		1 (7.7%)
IVH 3	Shared a nude or semi-nude photo or video of you online without your consent?		13 (100%)				
IVH 4	Shared a nude or semi-nude photo or video of you with their friends without your consent?		12 (92.3%)	1 (7.7%)			
IVH 5	Sent you a nude or semi-nude photo or video of themselves without you asking?		13 (100%)				
IVH 6	Sent you pornographic photos or videos of other people without you asking?		13 (100%)				
IVH 7	*Taken nude or semi-nude photos or videos without your permission?*		13 (100%)				
IVH 8	*Used photoshop to alter your photos in a sexual way?*		13 (100%)				
IVH 9	Edited a video of someone else performing sexual acts to look like you (i.e., deepfake)?		13 (100%)				
IVH 10	*Posted sexual photos or videos on your social media profile?*		12 (92.3%)	1 (7.7%)			
IVH 11	Tagged you in a sexual photo or video?		13 (100%)				
Offensive comments							
OC 1	Called you names that made you feel uncomfortable?			13 (100%)			
OC 2	Said offensive things about how you look, your body, or your sex life in a private/direct message?			13 (100%)			

OC 3	Said offensive things about how you look, your body, or your sex life in a public post/comment?			13 (100%)			
OC 4	*Told you offensive, dirty stories or jokes through instant/text messaging, email, or social networking sites?*		13 (100%)				
OC 5	*Made offensive, dirty remarks about your gender in general (i.e., all women are whores, all men are pigs)?*			13 (100%)			
OC 6	Called you a gay or lesbian as an insult in a private/direct message?			13 (100%)			
OC 7	*Called you gay or lesbian as an insult in a public post/comment?*			13 (100%)			
OC 8	*Left an offensive, dirty comment on your social media profile?*			13 (100%)			
OC 9	*Spread rumors about your sex life online?*			9 (69.2%)	2 (15.4%)		2 (15.4%)
OC 10	*Spread rumors about your sexuality online?*		1 (7.7%)	11 (84.6%)			1 (7.7%)
OC 11	*Tagged you in an inappropriate/sexual post?*		4 (30.8%)	9 (69.2%)			
OC 12	*Used sexual nicknames when talking with you (i.e., daddy, baby, sugar)?*			9 (69.2%)			4 (30.8%)
Coercive behaviors							
CB 1	*Sent you excessively "needy" or demanding messages (e.g., pressuring to see you, assertively requesting you go out on a date, arguing with you to give him/her "another chance", etc.)?*			3 (23.1%)	8 (61.5%)		
CB 2	Sent you tokens of their affection (e.g., poetry, songs, electronic greeting cards, praise, etc.) when you did not want them to?		1 (7.7%)	2 (15.4%)	2 (15.4%)		
CB 3	*Pressured you to share sexual images of yourself to show your affection (i.e., "If you loved me you would do it?")*	1 (7.7%)	2 (15.4%)		10 (76.9%)		
CB 4	*Threatened to share conversations or photos with friends and family if you did not perform a sexual act online?*		1 (7.7%)		12 (92.3%)		
CB 5	Bribed you to conduct sexual acts (e.g., offering to send you money if you send him/her sexual pictures)?				12 (92.3%)		
CB 6	*Made you feel worried or threatened because someone was bothering you online?*	1 (7.7%)		1 (7.7%)	4 (30.8%)	1 (7.7%)	
CB 7	*Made promises to reward you if you performed a sexual act online?*	1 (7.7%)			12 (92.3%)		
CB 8	*Threatened to reveal your sexual orientation if you did not perform a sexual act online?*			1 (7.7%)	12 (92.3)		
CB 9	*Sent you sexually violent threats (i.e., rape threats, threatening sexual assault)?*			6 (46.2%)	6 (46.2%)		
CB 10	*Threatened to share personal information about you online if you did not perform a sexual act online?*				13 (100%)		
CB 11	*Blackmailed you to continue to perform sexual acts online?*				13 (100%)		
CB 12	*Repeatedly requested a romantic or sexual relationship with you even though you let them know you were not interested?*	2 (15.4%)	1 (7.7%)	1 (7.7%)	8 (61.5%)		
CB 13	*Sent you threatening messages online (e.g., suggesting harming you, your property, family, friends, etc.) if you did not develop a relationship with them?*	1 (7.7%)		1 (7.7%)	11 (84.6%)		
CB 14	Been threatened online because of the way you look or act online?			5 (38.5%)	3 (23.1%)	1 (7.7%)	4 (30.8%)
CB 15	*Asked you to do something sexual online when you did not want to?*	1 (7.7%)		1 (7.7%)	10 (76.9%)		1 (7.7%)
CB 16	*Asked you to engage in "cybersex"?*	4 (30.8%)		3 (23.3%)	3 (23.3%)		3 (23.3%)
Attitudes about cyber-sexual harassment							
ATT 1	People who get sexually harassed online must have done something to deserve it.					13 (100%)	
ATT 2	I would tell someone if I felt sexually harassed online.					10 (76.9%)	3 (23.1%)

ATT 3	*People who send nude or semi-nude pictures over the internet or cell phone deserve it if the pictures are sent to other people.*	2 (15.4%)			11 (84.6%)	
ATT 4	If they don't go too far, suggestive remarks simply tell one they are attractive.				13 (100%)	
ATT 5	*It is disturbing for a person to be forced into a romantic relationship.*			1 (7.7%)	11 (84.6%)	1 (7.7%)
ATT 6	An attractive person should expect sexual advances and learn how to handle them.				13 (100%)	
ATT 7	A lot of activities people call sexual harassment online are just normal flirtation.				13 (100%)	
ATT 8	Sexual harassment online is a serious social problem.				13 (100%)	
ATT 9	*Others around me have shared sexual images of themselves and others, so it is not serious.*			1 (7.7%)	12 (92.3%)	
ATT 10	Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.				13 (100%)	
ATT 11	*Sexual jokes online are usually meant to be harmless.*		1 (7.7%)		12 (92.3%)	
ATT 12	Sexual comments online are more serious than sexual comments made in-person because information on the internet can be permanent.				13 (100%)	
ATT 13	Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.				12 (92.3%)	1 (7.7%)
ATT 14	Sexual comments or posts online are more serious than sexual comments made in-person because they can be viewed by anyone (i.e., public).				13 (100%)	

Note: GEN = general cyber-sexual harassment; GI = gathering sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. Underlined items were removed based on the content validity analyses. Italicized items were modified to improve clarity and align more strongly with their intended subscale.

The results of the sorting task also indicated disagreement regarding which items focused on coercive behaviors. CB 1, 3, 6, 9, 12, and 15 were sorted into the *gathering sexual information, image and video-based harassment, offensive comments*, and *none of the above* categories. To emphasize the coercive nature of these items, CB 1 was shortened to more clearly highlight the aspect of coercion and pressure. CB 6, 9, and 12 were modified to more clearly specify that the messages occurred online, thus creating a stronger distinction between traditional SH measures (Fitzgerald et al., 1999; Waldner et al., 1999). CB 3 was modified to specifically represent the pressure to perform *any* sexual act online, as the item previously only specified pressure to share sexual images, which may have contributed to confusion regarding the item's intended category. CB 15 was modified to emphasize the repeated nature of the behavior leading to pressure to perform a sexual activity. By explicitly stating that the behavior is repeated, the goal was to better highlight the coercive nature of the request to perform sexual acts. When asked how adequately the items sorted into the coercive behaviors category capture online coercive behaviors, 46.2% ($N = 6$) indicated that the items were very adequate. However, based on participants' comments, one item was added focusing on threats of self-harm from the perpetrator if the victim did not perform a sexual act. Threatening self-harm is a tactic previously reported by perpetrators in traditional sexual harassment settings to coerce and guilt a victim into complying with their wishes (Anderson & Aymami, 1993; Struckman-Johnson et al., 2003). Additional modifications to items within the CB subscale were also performed to specify that the communication occurred online or through electronic media.

ATT 2 was the only item that was not sorted into the intended subscale category within the attitudes about CSH subscale. The item was divided between its intended subscale and *none of the above*. This item focuses on a victim's willingness to disclose CSH victimization. As this item is similar in wording to Ybarra et al. (2015) and modification might further introduce ambiguity, the original wording of this item was retained. When asked how adequately the items sorted into this category effectively capture attitudes about CSH, most participants (61.5%, $N = 8$) indicated that the items were very adequate. Based on participants' comments, one item was added focusing on how acceptable CSH victimization would be if the victim did not take adequate measures to protect themselves from victimization (i.e., making their profile private, blocking harassers). Additional modifications to items within the attitudes about CSH subscale were also performed to specify that the communication occurred online or through electronic media.

Discussion

The goal of this study was to determine the content validity and adequacy of the MCSHEA-V as a measure of CSH, thus helping to ensure that the items reflect CSH victimization and attitudes relating specifically to the conceptual definition. The results of the content validity analysis indicated that most of the items were content valid for the measurement of CSH in the general population. Because multiple items were taken directly or adapted from previous measures of CSH (Powell & Henry, 2016; Ritter, 2014; Schenk, 2008), online dating violence (Sanchez et al., 2017), cyberstalking (Spitzberg & Hoobler, 2002), and sexual solicitation (Mitchell et al., 2008; Ybarra & Mitchell, 2008),

these findings corroborate previous findings identifying these items as important for the measurement of CSH. The items that were removed due to evidence of low content validity were primarily items pertaining to personal violations that were not explicitly sexual in nature (e.g., sharing non-sexual personal information, sharing non-sexual images). A few items with relatively low content validity (e.g., items regarding sexual orientation) were ultimately retained based on the perceived importance of these items from previous research (Powell & Henry, 2016; Ritter, 2014; Taylor et al., 2020; Ybarra et al., 2015). Notably, the CSH attitude items were not evaluated for content validity. After data collection, it became apparent that some participants provided responses based on their *own* attitudes rather than how relevant they considered these items to be to the measurement of CSH attitudes. The ambiguity in participants' ratings for these items thus precluded an interpretable content validity analysis.

The findings of the Q-sorting task indicated that there was variability in which subscale each of the items represented. This variability was largely evident in the gathering sexual information online and coercive behaviors subscales. To address this variability, modifications to subscale conceptual definitions and the wording of several items were made to specifically emphasize that the behaviors were sexual in nature, occurred online, and, in the case of the coercive behaviors subscale, that the behaviors were repeated (implying there was pressure from the perpetrator). It is also important to consider the overlap the items within the coercive behaviors subscale had with the other subscales. Because the conceptual definition of CSH defines all CSH behaviors as unwanted, many of the behaviors included in the other subscales might also be

considered coercive. Due to this overlap, factor analysis performed in the subsequent studies might indicate that separate coercive behaviors factors, as with the Online Sexual Harassment Scale (Buchanan & Mahoney, 2021), may be unnecessary. All but one of the attitude items were sorted to the correct subscale category. However, it is possible that, due to the different response format and a difference in the response stem, the grouping of these items reflects the similarity in their format rather than their relation to CSH attitudes. The differences in the response categories might create distinct relationships between the attitudes about CSH and CSH victimization experiences items in future factor analyses.

Limitations

While this study provides initial evidence of the validity of the MCSHEA-V, there are a few limitations worth noting. First, as previously stated, the attitudes about CSH items were not evaluated for content validity. It is also unclear if these items fully represent attitudes about CSH, as their sorting in the Q-sort task may have reflected the structure of the items, thus limiting the content validity and adequacy of these items to capture CSH attitudes. Further, the content validity demonstrated here may not be appropriate for other measures of CSH (e.g., scales that assess CSH in occupational settings; Haynes et al. 1995), as it was determined based on the specified definition of CSH and designed specifically for a general online environment. An additional limitation stems from potential technical difficulties with the sorting task. While effort was taken to reduce the number of items presented to participants on each page, sorting categories would shift in their positioning on the screen as more and more items were placed in

various categories. The potential shifting might have resulted in difficulty dragging items to their intended categories.

Overall, out of the 62 items, seven were removed based on low content validity. Thirty-four items were reworded based on suggestions from the participants and to provide more clarity and specificity, and two items were added. Therefore, a total set of 57 items were included within the MCSHEA-V for Study 2, where the underlying factor structure of these items was evaluated with a larger sample of participants.

CHAPTER 3

STUDY 2

The key objectives of Study 2 were to evaluate the underlying factor structure, reliability, and convergent and discriminant validity of the MCSHEA-V. Based on the results of Study 1, a 57-item modified version of the scale was administered that was expected to tap into four key components of CSH victimization: gathering and sharing sexual information online, image and video-based harassment, offensive comments, and coercive behaviors; as well as capture attitudes about CSH. As such, it was hypothesized that five factors would emerge, reflecting the four forms of CSH victimization and a factor representing attitudes about CSH. Each of these factors was expected to correlate positively with the others.

To examine the convergent and divergent validity of the MCSHEA-V, measures of related constructs, including the CSH Scale (Ritter, 2014), the TFSV-V Scale (Powell & Henry, 2016), and a measure of cyberbullying victimization, were also administered. It was predicted that the MCSHEA-V subscales focusing on CSH victimization would be strongly positively correlated with the measures used in the prior CSH literature (i.e., the CSH and TFSV-V scales) due to conceptual overlap in subscale content. For example, both previously developed measures of CSH and the MCSHEA-V contain items capturing experiences of sexually offensive comments and coercive behavior online. Whereas cyberbullying shares some similarities with CSH, these constructs are also distinct from each other (e.g., CSH is sexual in nature, whereas cyberbullying pertains more broadly to hostile or aggressive behavior perpetrated against an individual through

electronic media; Patchin & Hinduja, 2015). Therefore, it was expected that the MCSHEA-V would be only weakly (positively) correlated with cyberbullying victimization, providing evidence of divergent validity.

Method

Procedure

Participants completed a 20-25-minute online survey containing the 57-item MCSHEA-V, related measures, and items assessing basic demographic information. IRB approval was obtained prior to data collection, all participants provided informed consent before participation, and all data collected were anonymous. Participants were compensated approximately $3.00 for completing the survey.

Participants

Participants included a total of 500 adults recruited from the online survey platform, Prolific.co. To participate, the respondents had to be 18 years of age or older, English-speaking, and reside in the U.S. Most of this sample had limited experience with CSH and, therefore, only participants who reported experiencing at least one form of CSH, as indicated by the MCSHEA-V, were included in the analyses reported below. After removing participants who failed two or more attention checks and those who did not experience CSH, 298 participants were included in this study. The sample ranged in age from 18 to 76 years (M = 32.69, SD = 12.01). Most of the sample reported being female (N = 158), and a majority of the sample reported being White (N = 234), heterosexual (N = 192), and currently single (N = 125). On average, participants actively

used the internet between 5-7 hours and 8-10 hours a day (M = 3.14 SD = 0.98).

Additional demographic information about the sample can be found in Table 5.

Table 5

Demographic Information for Sample (N = 298)

	M	*SD*	*Range*	*n (%)*
Age	30.88	10.83	18-73	
Time spent online (hrs)	3.14	0.98	1-5	
Gender				
Cisgender male				114 (38.3%)
Cisgender female				158 (53.0%)
Transgender male				2 (0.7%)
Transgender female				1 (0.3%)
Non-binary				14 (4.7%)
Other				4 (1.3%)
Prefer not to answer				5 (1.7%)
Sexual Orientation				
Asexual				10 (3.4%)
Bisexual				61 (20.5%)
Gay				9 (3.0%)
Straight (heterosexual)				192 (64.4%)
Lesbian				10 (3.4%)
Queer				11 (3.7%)
Other				4 (1.3%)
Prefer not to Answer				1 (0.3%)
Ethnicity				
Hispanic/Latinx				34 (11.4%)
Non-Hispanic/Non-Latinx				262 (87.9%)
Missing				2 (0.7%)
Race				
White				234 (78.5%)
Black or African American				38 (12.8%)
American Indian or Alaska Native				12 (4.0%)
Asian or Pacific Islander				30 (10.1%)
Other				7 (2.3%)
Technology access				
Phone/Smartphone				252 (84.6 %)
Laptop computer				211 (70.8 %)
Desktop computer				115 (38.6 %)
Tablet/iPad				77 (25.8 %)
Other				1 (0.3 %)
Relationship Status				

Single	125 (41.9 %)
In a relationship, but not living with partner	55 (18.5 %)
In a relationship and living with partner	54 (18.1 %)
Married	58 (19.5 %)
Divorced or separated	5 (1.7 %)
Other	1 (0.3 %)

Measures

Online Activities

Participants' experiences online were measured using the Online Exposure Scale (Welsh & Lavoie, 2012) and the Risky Online Lifestyle Scale (Choi & Lee, 2017). The Online Exposure Scale asks participants to indicate the frequency with which they perform various activities online over the course of a week. The types of activities include using social media, shopping online, and dating online. The scale contains 17 items ($\alpha = .76$) measured along a 5-point scale ranging from *never* to *always*. The items were summed to create a composite online exposure variable with greater values indicating greater exposure to online activities. The Risky Online Lifestyle Scale asks participants to indicate their level of agreement or disagreement with statements about the extent to which they perform various risky behaviors online. The scale contains three subscales with seven items focusing on risky social networking site activities (i.e., "I frequently write about my life on social networking sites"; $\alpha = .89$), three items focusing on risky leisure activities (i.e., "I download free movies"; $\alpha = .69$), and four items focusing on risky vocational activities (i.e., "I open any email attachments"; $\alpha = .66$), resulting in a total of 14 items measured on a 5-point scale from *strongly disagree* to *strongly agree*. The items for each subscale were averaged to create three respective risky online lifestyle variables, with higher scores indicating higher levels of risky behavior.

Online Victimization

Online victimization, including cyberbullying and sexual harassment, was measured using the Cyberbullying Victimization Scale (Patchin & Hinduja, 2015), the Multi-Dimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V), the Cyber-Sexual Harassment Scale (Ritter, 2014), and the Technology-Facilitated Sexual Violence Scale for Victimization (TFSV-V; Powell & Henry, 2016).

Cyberbullying Victimization Scale. To investigate the divergent validity of the MCSHEA-V, participants completed the Cyberbullying Victimization Scale developed by Patchin and Hinduja (2015). This scale asks participants to indicate the extent to which they have experienced cyberbullying in the past 30 days. The scale contains 11 items ($\alpha = .90$) measured along a 5-point scale ranging from *never* to *many times.* A sample item from this scale is "someone posted mean or hurtful comments about me online." The items were averaged to create a composite cyberbullying victimization variable, with higher scores indicating a greater frequency of cyberbullying victimization in the past month.

Multi-Dimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization. The Multi-Dimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization asks participants to indicate the frequency in which they have experienced various CSH behaviors in the past six months and to indicate their level of agreement or disagreement with statements about CSH victimization. This measure was included for the main purpose of psychometrically validating these items as

a multidimensional measure of CSH. 43 items measured along a 7-point scale from *never* to *every day* focus on previous experiences of CSH. These items capture victimization experiences focusing on image and video-based harassment (i.e., "sent you a nude or semi-nude photo or video of themselves without you asking?"), offensive comments (i.e., "said offensive things about how you look, your body, or your sex life in a public post/comment?"), coercive behaviors (i.e., "sent you sexually violent threats in an electronic or online message (e.g., rape threats, threatening sexual assault)?"), and perpetrators gathering and sharing sexual information about the victim (i.e., "repeatedly tried to get you to talk about sexual topics (e.g., sexual history, sexual fantasies) when you did not want to?"). The items for each subscale were averaged to create four respective CSH variables, with higher scores indicating a greater frequency of CSH victimization in the past six months. Fifteen items measured along a 7-point scale from *strongly disagree* to *strongly agree* focus on participant's attitudes towards CSH victimization. Examples of these items include "people who get sexually harassed online must have done something to deserve it" and "sexual jokes through electronic or online messages are usually meant to be harmless." These items were averaged to create a composite CSH attitudes variable, with lower scores depicting greater perceived seriousness of CSH and lower acceptability of CSH.

Cyber-Sexual Harassment Scale. A modified version of the Cyber-Sexual Harassment scale (Ritter, 2014) was administered to measure the extent to which participants experienced CSH victimization in their lifetime. The scale was modified to reflect victimization behavior and the wording of several items were altered to remove

occupational references. The scale contains 14 items (α = .90) measured along a 5-point scale from *not at all* to *a great deal*. Examples of these items include "sent you an email making sexually oriented comments about the way you dressed" and "someone sent you links to sites containing pictures of pornography." The items were averaged to create a composite CSH victimization variable, with higher scores indicating a greater frequency of CSH victimization during their lifetime.

Technology-Facilitated Sexual Violence Scale – Victimization. A modified version of the Technology-Facilitated Sexual Violence Scale for Victimization (TFSV-V; Powell & Henry, 2016) was administered to measure the prevalence of online sexual violence including CSH, image-based sexual abuse, and sexual-based hate speech during participants' lifetime. The scale was modified to remove one item (i.e., "have you experienced at least one of the above?"), as this item was redundant given the rest of the measure. The modified dichotomous, *yes/no,* measure includes 20 items (α = .85). Examples of these items include "have you had an unwanted sexual experience with someone you met online?" and "has someone described or visually represented unwanted sexual acts against your avatar or game character?" The items were summed to create a composite TFSV variable with greater values indicating greater prevalence of sexual violence victimization online.

Overview of Analysis

Initial descriptive analysis of the MCSHEA-V items was performed to evaluate potential issues with ceiling or floor effects, skewness, and multicollinearity. Confirmatory factor analysis and exploratory factor analyses for the CSH experiences

items of the MCSHEA-V were performed using Mplus v. 8.5 (Muthen & Muthen, 2017) to determine the number of latent variables underlying the items. The models were tested using a weighted least square mean and variance adjusted estimator (WLSMV) and exploratory models were specified with an oblique (promax) rotation. WLSMV has been shown in previous simulation studies (DiStefano & Morgan, 2014; Flora et al., 2012; Li, 2016) to perform better than maximum likelihood estimators (ML) for factor analyses using ordinal data. Given the high degree of correlation expected among these items and the conceptual overlap suggested in Study 1, an oblique rotation was selected (a priori) to allow the extracted factors to correlate with one another. For the confirmatory factor analysis, the adequacy of the model fit was determined using Hu and Bentler's (1999) accepted cut-offs: a nonsignificant chi-square goodness of fit statistic, a root mean square error of approximation (RMSEA) less than .06, and a comparative fit index (CFI) of .90. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO; Kaiser, 1974), Bartlett's Test of Sphericity (Bartlett, 1954), and the determinant of the correlation matrix were evaluated using the *psych* and *base* R packages (R Core Team, 2022; Revelle, 2022) to determine the appropriateness of factor analysis and were evaluated after the removal of each item. Items were removed if they had low communalities ($h^2 < 0.40$; Costello & Osborn, 2005), cross-loadings higher than .40 on a non-dominant factor (Howard, 2016), or if the item did not have a loading above .40 on any factor (Boateng et al., 2018; Howard, 2016). For the CSH attitude items of the MCSHEA-V, exploratory factor analyses were performed using IBM SPSS Statistics v.27 (2020), using principal axis factoring with an oblique (promax) rotation. The KMO, Bartlett's Test of Sphericity, the

determinant of the correlation matrix, and the reproduced correlation matrix for non-redundant residuals with absolute values greater than 0.05 were examined each time the exploratory factor analysis was performed. The same criteria were utilized for the retention and removal of items. The Kaiser-Guttman rule (Kaiser, 1960) and an evaluation of the scree plot were used to determine the number of factors to be retained in each factor analysis model. After evaluating the results from the factor analyses, Cronbach's alpha was calculated to determine the internal consistency for each factor.

Results

Descriptive Analysis

Initial descriptive analysis (see Table 6) indicated that the MCSHEA-V items focusing on CSH victimization experiences were positively skewed. According to Klein (2015), skewness values should not exceed an absolute value of 3. Absolute skewness values for the CSH experience items ranged from 1.02 to 7.57. The skewness of these items might be indicative of a floor effect, as a large portion of the sample reported a low prevalence of CSH victimization experiences within the past six months. That is, the skewness may indicate potential issues with the wording of the items, the response time frame, or the sample. Descriptive analysis of the CSH attitude items of the MCSHEA-V indicated that these items were more normally distributed, with absolute skewness values ranging from 0.13 to 2.50. However, some items (e.g., ATT 1, ATT 3) showed evidence of floor effects, while others (e.g., ATT 5, ATT 9) showed evidence of ceiling effects. Thus, these items may have been worded too strongly in either direction or might be measuring different attitudes about CSH. Given the distribution of these items,

polychoric correlations were utilized when evaluating relationships between the CSH experience items and for the subsequent factor analysis; Pearson's correlations were utilized when examining bivariate relations and the exploratory factor analysis with the CSH attitude items, and polyserial correlations were utilized to evaluate the relationships between the CSH experiences and CSH attitude items.

The results indicated that all CSH experience items were significantly positively correlated with each other (see Table 6). Several correlations (e.g., between GSI 5 and GSI 6; between CB 9 and CB 10) were greater than .90. Due to the potential for these items to lead to multicollinearity, one item contributing to each high correlation was removed (Yong & Pearce, 2013). As such, GSI 4, GSI 6, IVH 8, OC 8, CB 10, CB 12, and CB 13 were removed from the following factor analytic models. The correlations for the CSH attitude items were varied, with several small and moderate relationships. The direction of the relationships for the attitude items also varied, providing a potential indicator that these items are capturing different aspects of CSH attitudes, or may need to be reverse-coded. Therefore, ATT 2, 5, and 9 on the attitudes about CSH subscale were reverse-coded before performing the following factor analysis. Because of issues that can arise when factor analytic models have inter-item correlations that are lower than |.30| (Hair et al., 2010; Tabachnick & Fidell, 2013), ATT 13 and ATT 15 were removed, as their correlations with all other CSH attitude items were < |.30| and none were statistically significant. The correlations between the CSH experience and attitudes items were small, and most were nonsignificant, which may have been due, in part, to the

Table 6

Descriptive Statistics and Bivariate Correlations of the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (N=295)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
GSI 1	-																			
GSI 2	0.80***	-																		
GSI 3	0.78***	0.89***	-																	
GSI 4	0.82***	0.87***	0.91***	-																
GSI 5	0.71***	0.78***	0.78***	0.74***	-															
GSI 6	0.66***	0.75***	0.78***	0.76***	0.91***	-														
GSI 7	0.77***	0.80***	0.83***	0.81***	0.75***	0.73***	-													
IVH 1	0.78***	0.86***	0.82***	0.82***	0.74***	0.72***	0.75***	-												
IVH 2	0.60***	0.62***	0.70***	0.57***	0.82***	0.72***	0.58***	0.60***	-											
IVH 3	0.62***	0.64***	0.72***	0.61***	0.85***	0.79***	0.66***	0.61***	0.85***	-										
IVH 4	0.71***	0.74***	0.77***	0.77***	0.71***	0.69***	0.77***	0.76***	0.65***	0.73***	-									
IVH 5	0.49***	0.60***	0.58***	0.51***	0.63***	0.59***	0.57***	0.55***	0.52***	0.65***	0.69***	-								
IVH 6	0.61***	0.64***	0.55***	0.48***	0.73***	0.63***	0.54***	0.58***	0.67***	0.87***	0.57***	0.69***	-							
IVH 7	0.43***	0.43***	0.35***	0.29***	0.57***	0.56***	0.34***	0.39***	0.56***	0.74***	0.32***	0.52***	0.88***	-						
IVH 8	0.43***	0.49***	0.48***	0.35***	0.66***	0.59***	0.35***	0.39***	0.72***	0.82***	0.52***	0.61***	0.94***	0.89***	-					
IVH 9	0.41***	0.47***	0.41***	0.33***	0.57***	0.48***	0.29***	0.47***	0.61***	0.73***	0.45***	0.56***	0.86***	0.81***	0.93***	-				
IVH 10	0.41***	0.43***	0.37***	0.35***	0.51***	0.46***	0.41***	0.42***	0.38***	0.63***	0.44***	0.57***	0.76***	0.65***	0.82***	0.78***	-			
OC 1	0.74***	0.76***	0.71***	0.74***	0.69***	0.58***	0.69***	0.68***	0.45***	0.59***	0.68***	0.63***	0.62***	0.37***	0.45***	0.43***	0.43***	-		
OC 2	0.56***	0.53***	0.55***	0.52***	0.67***	0.55***	0.55***	0.53***	0.59***	0.73***	0.60***	0.49***	0.62***	0.44***	0.58***	0.51***	0.31***	0.70***	-	
OC 3	0.52***	0.56***	0.59***	0.56***	0.51***	0.45***	0.52***	0.56***	0.41***	0.46***	0.61***	0.58***	0.49***	0.33***	0.36***	0.48***	0.34***	0.69***	0.52***	-
OC 4	0.42***	0.44***	0.36***	0.33***	0.45***	0.37***	0.30***	0.39***	0.35***	0.47***	0.38***	0.41***	0.43***	0.20***	0.26***	0.28***	0.35***	0.52***	0.47***	0.47***
OC 5	0.46***	0.45***	0.47***	0.42***	0.55***	0.57***	0.45***	0.36***	0.57***	0.61***	0.40***	0.39***	0.58***	0.41***	0.53***	0.59***	0.35***	0.46***	0.62***	0.44***
OC 6	0.59***	0.61***	0.62***	0.58***	0.65***	0.57***	0.59***	0.63***	0.42***	0.73***	0.65***	0.70***	0.71***	0.57***	0.64***	0.69***	0.58***	0.72***	0.69***	0.61***
OC 7	0.62***	0.65***	0.73***	0.62***	0.84***	0.82***	0.67***	0.57***	0.67***	0.88***	0.67***	0.68***	0.75***	0.68***	0.79***	0.72***	0.67***	0.62***	0.71***	0.52***
OC 8	0.54***	0.56***	0.64***	0.56***	0.83***	0.77***	0.60***	0.47***	0.75***	0.87***	0.64***	0.60***	0.75***	0.69***	0.83***	0.78***	0.63***	0.54***	0.78***	0.43***
OC 9	0.61***	0.63***	0.55***	0.49***	0.63***	0.60***	0.61***	0.55***	0.45***	0.67***	0.61***	0.71***	0.68***	0.57***	0.67***	0.69***	0.82***	0.63***	0.58***	0.55***
OC 10	0.52***	0.52***	0.53***	0.56***	0.36***	0.35***	0.43***	0.54***	0.36***	0.42***	0.62***	0.36***	0.37***	0.24***	0.28***	0.34***	0.32***	0.55***	0.37***	0.43***
OC 11	0.75***	0.78***	0.85***	0.83***	0.76***	0.73***	0.81***	0.79***	0.64***	0.74***	0.81***	0.58***	0.61***	0.44***	0.52***	0.50***	0.40***	0.70***	0.65***	0.61***
CB 1	0.74***	0.76***	0.82***	0.82***	0.68***	0.67***	0.77***	0.80***	0.56***	0.65***	0.78***	0.49***	0.49***	0.35***	0.41***	0.40***	0.41***	0.67***	0.57***	0.54***
CB 2	0.67***	0.72***	0.70***	0.68***	0.58***	0.60***	0.72***	0.71***	0.45***	0.52***	0.68***	0.46***	0.64***	0.56***	0.70***	0.60***	0.58***	0.60***	0.45***	0.54***
CB 3	0.71***	0.66***	0.73***	0.72***	0.71***	0.71***	0.64***	0.71***	0.73***	0.81***	0.64***	0.46***	0.65***	0.55***	0.57***	0.59***	0.32***	0.61***	0.69***	0.47***
CB 4	0.69***	0.73***	0.66***	0.65***	0.69***	0.68***	0.57***	0.68***	0.59***	0.73***	0.52***	0.58***	0.83***	0.71***	0.84***	0.78***	0.70***	0.60***	0.60***	0.50***
CB 5	0.71***	0.77***	0.75***	0.73***	0.60***	0.63***	0.66***	0.73***	0.49***	0.61***	0.78***	0.54***	0.63***	0.57***	0.67***	0.52***	0.50***	0.68***	0.49***	0.50***
CB 6	0.50***	0.53***	0.56***	0.49***	0.64***	0.60***	0.46***	0.54***	0.69***	0.81***	0.50***	0.46***	0.76***	0.73***	0.80***	0.73***	0.61***	0.49***	0.63***	0.31***
CB 7	0.60***	0.71***	0.70***	0.60***	0.67***	0.55***	0.60***	0.74***	0.58***	0.78***	0.65***	0.64***	0.80***	0.64***	0.71***	0.65***	0.55***	0.61***	0.63***	0.50***
CB 8	0.52***	0.46***	0.43***	0.40***	0.55***	0.50***	0.39***	0.46***	0.58***	0.78***	0.47***	0.57***	0.83***	0.77***	0.87***	0.86***	0.69***	0.38***	0.56***	0.32***
CB 9	0.75***	0.71***	0.67***	0.67***	0.58***	0.56***	0.70***	0.68***	0.60***	0.63***	0.68***	0.52***	0.78***	0.58***	0.75***	0.62***	0.57***	0.65***	0.54***	0.51***
CB 10	0.61***	0.60***	0.57***	0.46***	0.64***	0.60***	0.49***	0.56***	0.59***	0.73***	0.47***	0.54***	0.85***	0.77***	0.86***	0.85***	0.77***	0.57***	0.64***	0.47***
CB 11	0.52***	0.44***	0.52***	0.33***	0.61***	0.57***	0.41***	0.42***	0.64***	0.75***	0.51***	0.61***	0.86***	0.81***	0.92***	0.84***	0.69***	0.49***	0.55***	0.45***
CB 12	0.63***	0.63***	0.63***	0.51***	0.65***	0.63***	0.53***	0.62***	0.58***	0.79***	0.55***	0.61***	0.85***	0.78***	0.84***	0.86***	0.72***	0.58***	0.54***	0.57***
CB 13	0.63***	0.51***	0.53***	0.43***	0.59***	0.58***	0.51***	0.53***	0.68***	0.81***	0.50***	0.54***	0.83***	0.77***	0.86***	0.80***	0.73***	0.46***	0.51***	0.41***
CB 14	0.79***	0.89***	0.82***	0.83***	0.73***	0.69***	0.73***	0.83***	0.60***	0.65***	0.72***	0.56***	0.65***	0.50***	0.64***	0.51***	0.43***	0.77***	0.55***	0.47***
CB 15	0.71***	0.80***	0.76***	0.77***	0.69***	0.63***	0.69***	0.77***	0.51***	0.63***	0.70***	0.53***	0.61***	0.44***	0.54***	0.46***	0.40***	0.65***	0.45***	0.44***
ATT 1	0.09	0.10	0.13	0.05	0.19***	0.14*	0.03	0.08	0.23***	0.30***	0.09	0.16**	0.30***	0.24***	0.36***	0.40***	0.16**	0.15**	0.19**	0.14*
ATT 2	-0.07	-0.07	-0.08	-0.09	-0.15*	-0.07	-0.09	-0.09	-0.06	-0.12*	-0.04	-0.11	-0.23***	-0.06	-0.02	0.14*	0.07	-0.13*	-0.04	-0.13*
ATT 3	-0.01	0.03	0.11	-0.01	0.16**	0.10	0.01	-0.08	0.183**	0.24***	0.05	0.06	0.16**	0.16**	0.30***	0.31***	0.04	0.06	0.11	0.14*
ATT 4	-0.09	-0.01	0.04	0.01	0.03	0.05	0.01	-0.11	0.14*	0.21***	0.03	0.12*	0.20***	0.34***	0.28***	0.32***	0.20***	-0.01	0.03	0.14*
ATT 5	-0.03	-0.07	-0.06	-0.07	-0.04	-0.02	0.09	-0.05	-0.13*	-0.19**	-0.02	-0.12*	-0.17**	-0.13*	-0.22**	-0.14*	-0.03	-0.04	-0.05	-0.02
ATT 6	0.05	0.07	0.10	0.07	0.02	0.00	-0.01	-0.05	0.14*	0.16**	0.08	0.09	0.14*	0.10	0.16**	0.20***	0.05	0.02	0.02	0.15*
ATT 7	-0.12*	0.01	0.10	0.03	0.17**	0.07	0.03	-0.02	0.16**	0.17**	0.02	0.12*	0.10	0.14*	0.28***	0.36***	0.15*	0.09	0.12*	0.17**
ATT 8	0.08	0.12*	0.13*	0.05	0.19***	0.15	0.04	0.06	0.29***	0.31***	0.11	0.18**	0.36***	0.31***	0.48***	0.47***	0.21***	0.16**	0.22***	0.16**
ATT 9	0.10	0.09	0.03	0.07	-0.02	-0.01	0.10	0.15*	-0.10	-0.19**	0.07	-0.10	-0.20***	-0.16**	-0.24***	-0.23***	-0.07	0.11	0.04	0.02
ATT 10	0.03	0.09	0.08	0.04	0.06	0.00	0.02	0.08	0.10	0.13*	0.09	0.17**	0.23***	0.19**	0.28***	0.33***	0.17**	0.16**	0.15**	0.08
ATT 11	0.02	0.06	0.12*	0.07	0.16**	0.06	0.11	0.03	0.28***	0.12*	0.04	0.16**	0.11	0.06	0.23***	0.24***	0.09	0.12*	0.07	0.13*
ATT 12	-0.06	0.08	0.08	0.05	0.10	0.11	0.08	0.00	0.18**	0.06	0.12*	0.15**	0.06	-0.03	0.07	0.15**	0.04	0.06	0.01	0.20***
ATT 13	-0.05	0.02	0.03	0.06	0.06	0.08	0.04	0.12*	0.18**	0.10	0.02	0.01	0.05	0.04	0.04	0.13*	-0.02	-0.04	0.11	0.00
ATT 14	-0.01	0.01	0.07	0.04	0.02	-0.03	0.10	0.00	0.11	0.06	0.03	-0.01	0.10	-0.04	0.07	0.14*	-0.01	-0.03	-0.04	0.01
ATT 15	0.01	0.11	0.11	0.10	0.11	0.10	0.10	0.10	0.17**	0.07	0.04	0.11	0.05	-0.04	-0.01	0.01	0.08	0.06	0.17**	0.01
M	1.54	1.63	1.69	1.83	1.32	1.39	1.83	1.47	1.21	1.13	1.69	1.42	1.10	1.10	1.08	1.08	1.22	1.50	1.34	1.79
SD	1.01	1.11	1.20	1.28	0.91	0.92	1.26	0.99	0.79	0.62	1.23	0.89	0.46	0.48	0.47	0.42	0.72	1.08	0.85	1.22
Skewness	2.16	2.04	2.03	1.70	3.63	3.28	1.75	2.73	4.53	6.01	2.25	2.98	5.58	5.52	7.57	6.34	4.03	2.65	3.27	1.67
Kurtosis	4.47	3.88	3.87	2.24	14.82	12.85	2.70	8.25	22.00	41.77	5.14	11.06	34.37	32.91	64.05	44.79	17.63	7.20	12.30	2.29

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
GSI 1																				
GSI 2																				
GSI 3																				
GSI 4																				
GSI 5																				
GSI 6																				
GSI 7																				
IVH 1																				
IVH 2																				
IVH 3																				
IVH 4																				
IVH 5																				
IVH 6																				
IVH 7																				
IVH 8																				
IVH 9																				
IVH 10																				
OC 1																				
OC 2																				
OC 3																				
OC 4	-																			
OC 5	0.61***	-																		
OC 6	0.48***	0.54***	-																	
OC 7	0.46***	0.66***	0.75***	-																
OC 8	0.47***	0.75***	0.67***	0.91***	-															
OC 9	0.55***	0.57***	0.74***	0.71***	0.67***	-														
OC 10	0.26***	0.16**	0.50***	0.35***	0.29***	0.46***	-													
OC 11	0.43***	0.49***	0.61***	0.73***	0.71***	0.57***	0.60***	-												
CB 1	0.36***	0.45***	0.57***	0.59***	0.58***	0.59***	0.64***	0.84***	-											
CB 2	0.42***	0.45***	0.54***	0.57***	0.61***	0.65***	0.60***	0.77***	0.75***	-										
CB 3	0.34***	0.49***	0.64***	0.67***	0.70***	0.56***	0.43***	0.71***	0.78***	0.55***	-									
CB 4	0.49***	0.62***	0.64***	0.74***	0.79***	0.71***	0.44***	0.72***	0.62***	0.75***	0.68***	-								
CB 5	0.37***	0.37***	0.69***	0.61***	0.57***	0.63***	0.62***	0.74***	0.83***	0.75***	0.67***	0.70***	-							
CB 6	0.32***	0.59***	0.60***	0.82***	0.85***	0.67***	0.30***	0.61***	0.53***	0.63***	0.68***	0.82***	0.56***	-						
CB 7	0.45***	0.41***	0.68***	0.71***	0.58***	0.73***	0.52***	0.69***	0.73***	0.65***	0.70***	0.73***	0.70***	0.73***	-					
CB 8	0.28***	0.52***	0.77***	0.77***	0.77***	0.73***	0.41***	0.44***	0.32***	0.64***	0.61***	0.80***	0.49***	0.85***	0.74***	-				
CB 9	0.41***	0.43***	0.55***	0.60***	0.60***	0.63***	0.54***	0.71***	0.64***	0.81***	0.62***	0.72***	0.70***	0.65***	0.64***	0.69***	-			
CB 10	0.41***	0.55***	0.68***	0.85***	0.76***	0.75***	0.43***	0.59***	0.49***	0.70***	0.72***	0.82***	0.59***	0.86***	0.78***	0.88***	0.84***	-		
CB 11	0.31***	0.49***	0.66***	0.82***	0.80***	0.70***	0.38***	0.53***	0.41***	0.69***	0.67***	0.80***	0.58***	0.82***	0.74***	0.89***	0.78***	0.95***	-	
CB 12	0.45***	0.56***	0.71***	0.81***	0.71***	0.79***	0.38***	0.65***	0.53***	0.68***	0.74***	0.77***	0.64***	0.80***	0.75***	0.87***	0.81***	0.94***	0.94***	-
CB 13	0.36***	0.54***	0.70***	0.83***	0.75***	0.76***	0.36***	0.56***	0.43***	0.70***	0.72***	0.79***	0.59***	0.81***	0.74***	0.89***	0.87***	0.96***	0.95***	0.94***
CB 14	0.41***	0.43***	0.63***	0.56***	0.53***	0.56***	0.48***	0.76***	0.73***	0.76***	0.68***	0.77***	0.78***	0.57***	0.69***	0.56***	0.75***	0.62***	0.58***	0.64***
CB 15	0.32***	0.33***	0.57***	0.57***	0.51***	0.57***	0.55***	0.71***	0.69***	0.71***	0.67***	0.62***	0.68***	0.44***	0.65***	0.58***	0.68***	0.56***	0.55***	0.61***
ATT 1	0.02	0.04	0.28***	0.22***	0.25***	0.20***	0.11	0.09	0.05	0.15*	0.18**	0.23***	0.13*	0.27***	0.27***	0.33***	0.23***	0.32***	0.37***	0.33***
ATT 2	-0.11	0.06	-0.16**	0.01	0.12*	0.07	0.00	-0.04	-0.08	-0.03	-0.17**	0.06	-0.03	0.07	-0.06	-0.06	-0.06	0.15**	0.03	-0.05
ATT 3	-0.04	-0.03	0.154**	0.19**	0.21***	0.11	0.00	-0.03	-0.02	0.08	0.14*	0.05	0.03	0.23***	0.17**	0.23***	0.09	0.27***	0.26***	0.22***
ATT 4	-0.03	0.03	0.09	0.26***	0.19***	0.11	0.07	-0.01	0.01	-0.02	0.01	0.12**	-0.02	0.21***	0.13*	0.20***	0.11	0.27***	0.29***	0.37***
ATT 5	0.01	-0.04	-0.12*	-0.18**	-0.15*	-0.03	-0.03	0.01	0.05	0.02	-0.05	-0.07	0.03	-0.21***	0.00	-0.22***	-0.07	-0.14*	-0.18**	-0.17**
ATT 6	0.02	-0.01	0.09	0.16**	0.06	0.09	0.08	0.05	0.08	0.10	0.10	0.00	0.06	0.05	0.05	0.14*	0.17**	0.20***	0.25***	0.24***
ATT 7	-0.09	-0.10	0.14*	0.20***	0.15*	0.14*	0.07	0.03	0.02	0.10	0.07	0.07	-0.03	0.14*	0.18*	0.16**	0.02	0.25***	0.25***	0.25***
ATT 8	0.01	0.03	0.26***	0.22***	0.24***	0.17**	0.06	0.09	0.01	0.15*	0.17**	0.22***	0.11	0.32***	0.20***	0.31***	0.22***	0.36***	0.34***	0.34***
ATT 9	0.19**	0.02	-0.12*	-0.17**	-0.12*	-0.10	0.09	0.08	0.09	0.07	-0.01	-0.02	0.08	-0.21***	0.02	-0.32***	-0.08	-0.19***	-0.25***	-0.27***
ATT 10	0.02	-0.07	0.17**	0.11	0.07	0.14*	0.15*	0.06	0.01	0.04	0.03	0.03	0.00	0.12*	0.11	0.23***	0.13*	0.19***	0.16**	0.22***
ATT 11	0.08	0.10	0.15**	0.12*	0.10	0.14*	0.12*	0.05	0.06	0.16**	-0.05	0.04	-0.01	0.10	0.16**	0.20***	0.22***	0.11	0.16**	0.16**
ATT 12	0.03	-0.07	0.02	0.11	0.04	0.08	0.07	0.03	0.02	0.00	-0.06	0.03	0.02	-0.03	0.06	0.02	0.05	0.01	0.05	0.16**
ATT 13	0.12*	0.08	-0.01	0.07	0.13*	-0.07	-0.06	0.03	0.07	0.03	0.09	0.03	0.02	0.06	0.22***	0.02	0.01	0.15**	0.02	0.08
ATT 14	0.03	0.03	0.09	0.00	-0.09	-0.02	0.13*	0.01	0.02	0.03	-0.10	-0.05	-0.05	-0.06	0.04	0.13*	0.04	0.01	0.02	0.09
ATT 15	0.12*	0.10	-0.01	0.06	0.20***	0.05	-0.01	0.06	0.05	-0.01	0.04	0.07	0.00	0.07	0.14*	-0.02	0.00	0.01	0.01	0.06
M	2.07	1.39	1.22	1.17	1.15	1.19	2.29	1.55	1.62	1.26	1.26	1.13	1.54	1.15	1.20	1.09	1.27	1.10	1.11	1.10
SD	1.37	1.07	0.68	0.69	0.66	0.64	1.50	1.11	1.16	0.77	0.82	0.54	1.08	0.68	0.71	0.45	0.80	0.53	0.54	0.51
Skewness	1.20	3.24	3.70	5.64	5.59	4.01	1.02	2.42	2.31	3.47	4.04	5.26	2.39	6.02	4.25	6.25	3.54	5.89	5.90	6.47
Kurtosis	0.56	10.55	14.83	38.27	36.05	17.12	-0.05	5.71	5.47	12.54	17.88	32.32	5.78	40.43	19.85	43.96	13.24	36.12	37.41	46.96

	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
CB 13	-																	
CB 14	0.55***	-																
CB 15	0.56***	0.82***	-															
ATT 1	0.35***	0.17**	0.15**	-														
ATT 2	-0.11	-0.08	-0.05	-0.18**	-													
ATT 3	0.23***	0.03	0.01	0.53***	-0.10	-												
ATT 4	0.29***	-0.05	-0.06	0.41***	-0.07	0.35***	-											
ATT 5	-0.22***	-0.14	-0.17**	-0.25***	0.19**	-0.10	-0.03	-										
ATT 6	0.25***	0.03	0.05	0.47***	-0.17***	0.38***	0.51***	-0.163**	-									
ATT 7	0.20***	0.05	0.04	0.52***	-0.16**	0.47***	0.61***	-0.10	0.54***	-								
ATT 8	0.33***	0.18**	0.10	0.66***	-0.16***	0.55***	0.30***	-0.23***	0.39***	0.45***	-							
ATT 9	-0.35***	-0.01	0.01	-0.36***	0.29***	-0.28***	-0.26***	0.42***	-0.31***	-0.36***	-0.27***	-						
ATT 10	0.11	0.06	0.14*	0.36***	-0.13*	0.27***	0.38***	-0.25***	0.36***	0.46***	0.43***	-0.24***	-					
ATT 11	0.16**	0.11	0.124*	0.32***	-0.24***	0.27***	0.40***	-0.06	0.39***	0.55***	0.37***	-0.27***	0.39***	-				
ATT 12	0.03	0.06	0.01	0.35***	-0.13*	0.32***	0.56***	0.05	0.49***	0.63***	0.31***	-0.25***	0.30***	0.46***	-			
ATT 13	0.05	0.03	0.00	0.05	0.03	0.10	0.04	0.12*	-0.09	0.01	0.06	0.16**	0.00	0.05	0.01	-		
ATT 14	0.15*	0.05	0.08	0.31***	-0.19**	0.26***	0.33***	0.00	0.35***	0.50***	0.27***	-0.21***	0.31***	0.70***	0.41***	0.09	-	
ATT 15	-0.02	0.03	-0.01	0.00	0.04	0.04	0.05	0.13*	-0.08	0.02	0.02	0.14*	-0.03	0.03	0.05	0.65***	0.05	
M	1.10	1.50	1.47	1.41	4.88	1.72	2.77	6.18	2.11	2.27	1.61	5.77	2.12	2.72	2.73	3.70	3.02	3.78
SD	0.56	0.98	0.99	0.87	1.77	1.26	1.57	1.49	1.50	1.42	1.07	1.52	1.35	1.61	1.59	1.55	1.68	1.49
Skewness	6.22	2.19	2.52	2.50	-0.60	1.95	0.52	-2.40	1.24	0.97	2.17	-1.58	1.19	0.59	0.57	-0.13	0.39	-0.14
Kurtosis	40.93	4.19	6.14	6.08	-0.72	3.39	-0.84	5.22	0.49	0.01	4.85	2.16	0.77	-0.88	-0.90	-0.58	-0.99	-0.48

Note: GSI = gathering and sharing of sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. Polychoric correlations were computed between GSI, IVH, OC, and CB items. Polyserial correlations are presented between the GSI, IVH, OC, and CB items and the ATT items. Pearson's correlations were computed for the ATT items. Correlations were computed using Mplus and significance values were computed using the *cor_to_p* function in the *correlation* R package (Makowski et al., 2019). *p < .05, **p < .01, ***p < .001

differences in response scales and low reporting of CSH victimization. In light of these small correlations, exploratory factor analyses were performed separately for the CSH experience and attitude items.

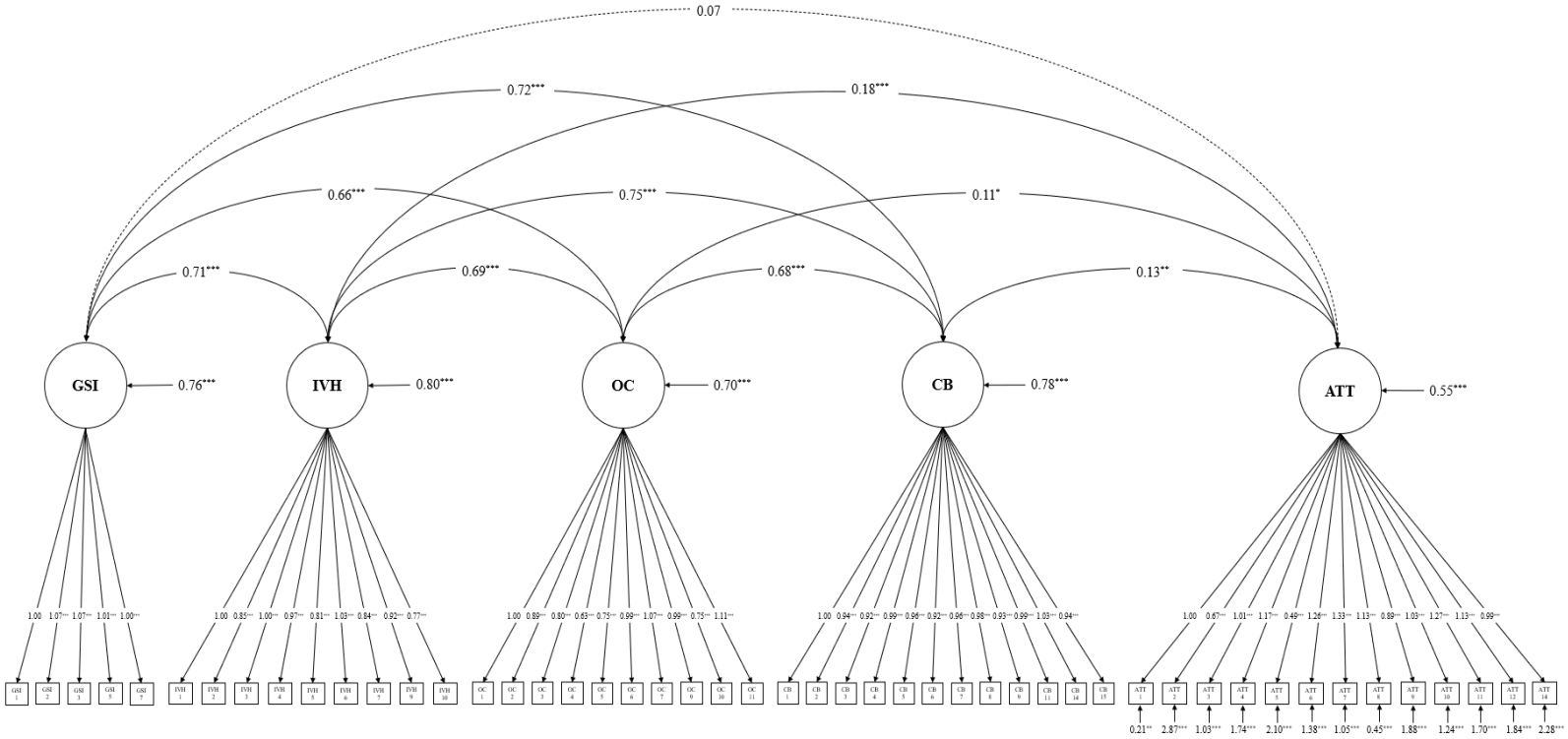
Confirmatory Factor Analysis

Because the items were developed to measure specific components of CSH experiences, an initial confirmatory factor analysis was performed to test the fit of the proposed factor structure. Using Mplus v.8.5, a 5-factor model (as shown in Figure 1) was specified with a probit link function and was estimated using a WLSMV estimator. Items on the MCSHEA-V that focused on victimization experiences were specified as ordinal variables. The scale factors for each of these ordinal items was set to 1, the first indicator of each factor was fixed to 1, and the factor means were constrained to zero for identification. The results of this model indicated that the proposed structure fit the data relatively well, $\chi^2(1117) = 1903.94$, $p < .001$; *RMSEA* = .05 [90% *CI*: .05, .05]; *CFI* = .95[1]. While the chi-square statistic was significant, this fit index has been found to be sensitive to sample size (Marsh et al., 1988). Notably, the other fit indices (i.e., the RMSEA and CFI) revealed that the 5-factor structure showed adequate fit. As a result, modifications to the model were not implemented.

[1] The proposed 5-factor model was also tested in EQS (Bentler, 2006) using a maximum likelihood estimator. While the factor loadings were similar to those found in Mplus, the model demonstrated poorer fit. Whereas using WLSMV is recommended for ordinal variables (Clark & Bowles, 2018), research by Xia and Yang (2019) has indicated that it is overly optimistic in determining the goodness of fit.

Figure 1

Path Diagram of the Confirmatory Factor Analysis Model (N = 295)



Note: GSI = gathering and sharing of sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. ATT 2, 5, and 9 are reverse-coded. Values represented are unstandardized parameter estimates. * $p < .05$, ** $p < .01$, *** $p < .001$

As shown in Figure 1, all of the items on the gathering and sharing sexual information, image and video-based harassment, offensive comments, and coercive behaviors factors were significant positive indicators of their respective factors ($p <$ .001). All of the items for the CSH attitudes subscale were also significant positive indicators ($p < .001$). All of the items had high loadings (i.e., $\geq .40$), indicating that the items were well captured by their respective factors. Correlations between the gathering and sharing sexual information, image and video-based harassment, offensive comments, and coercive behavior factors were all strong, positive, and significant ($p < .001$). However, correlations between the CSH attitudes and image and video-based harassment ($r = .18$, $p < .001$), offensive comments ($r = .11$, $p = .011$), and coercive behavior ($r = .13$, $p = .002$) factors were weak. The correlation between the gathering and sharing sexual information and CSH attitudes factors was nonsignificant ($r = .07$, $p = .111$). Evaluating the thresholds for the ordinal variables (see Table A1 in Appendix A), GSI 3 and GSI 7 were easier to endorse, as the thresholds were lower compared to the other items on this factor. IVH 4 was the easiest to endorse on the image and video-based harassment factor. Given that this item focuses on the perpetrator sending nude images without the victim asking, it might be a milder or more common form of harassment compared to having a victim's nude images shared without permission. OC 3, 4, and 10 were the easiest to endorse compared to the other items on the offensive comments online factor. While all of the items on the coercive behavior factor seemed to be difficult to endorse, CB 1 had the lowest threshold for endorsement.

Exploratory Factor Analysis

Cyber-Sexual Harassment Experiences

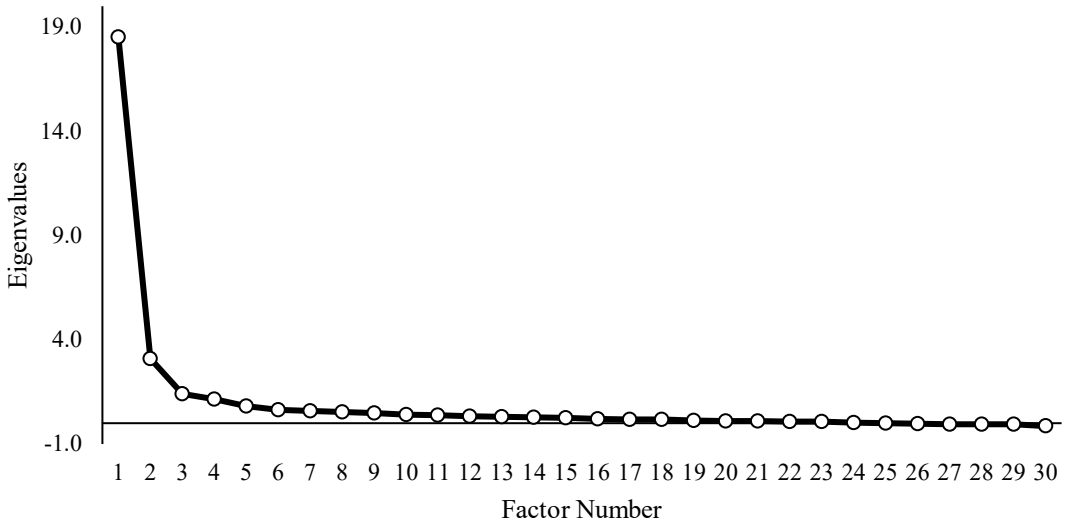
Exploratory factor analyses on the CSH experience items were performed using Mplus v.8.5 with an oblique (promax) rotation and the weighted least squares mean and variance adjusted (WLSMV) estimator. Initially, the factorability of the 36 items was examined. The KMO statistic was 0.75, which is above the recommended value of 0.60 (Hoelzle & Meyer, 2013; Kaiser, 1974). Bartlett's Test of Sphericity (Bartlett, 1954) was significant $\chi^2(630) = 40736.56$, $p < .001$ and, while not zero, the determinant (5.52e-63) was quite small, indicating a potential issue with multicollinearity (Field, 2000). The communalities of all of the items were above .50, indicating that these items share some common variance. Following the Kaiser-Guttman rule (Kaiser, 1960), four factors with eigenvalues greater than one were extracted. All communalities were high, but several items (i.e., IVH 3, OC 1, CB 7) cross-loaded onto two factors with loadings higher than .40 on their non-dominant factor and several items (i.e., IVH 5, OC 3, OC 7) failed to load on any factor. Two items were eliminated due to these cross-loadings and four items were eliminated due to the absence of a primary factor loading higher than .40. Each of these items was eliminated in an iterative process and KMO values, Bartlett's Test of Sphericity, and the determinant of the correlation matrix were evaluated after each elimination (see Table A2 in Appendix A).

After the elimination of these items, the factor structure of the remaining 30 items was evaluated. The KMO statistic for these items was 0.72 and Bartlett's Test of Sphericity was still significant, $\chi^2(435) = 34247.48$, $p < .001$. However, the

determinant of the correlation matrix was still small, 1.06e-52. Two items still cross-loaded onto more than one factor and two items failed to load on any factor, but the elimination of additional items led to the KMO statistic dropping below acceptable levels. From the 30 items, four factors emerged with eigenvalues greater than one, but 1- through 5-factor solutions were specified to evaluate if fewer or additional factors could remove the cross-loadings and allow for the unloaded items to load onto a factor. Analyses of these various factor structures indicated that a 2-factor structure removed the cross-loadings that were still present within the 4- and 5-factor structures. Contrary to the 3- through 5-factor models, all items loaded on their primary factor with factor loadings greater than .40. Within the 2-factor model, OC 4 displayed the only low communality (h^2 = 0.29). However, in the 1-factor model, three items had communalities below .40. Additionally, evaluation of the scree plot (see Figure 2) demonstrates a clear leveling off of the eigenvalues after two factors, providing further support for a 2-factor solution.

Figure 2

Scree Plot of the Cyber-Sexual Harassment Victimization Experiences Items (N = 298).



Examination of the items that loaded on the first factor (see Table 7) indicated that Factor 1 seemed to reflect dyadic CSH behaviors, as these items focus on interactions that occur directly between the victim and the perpetrator. For example, GSI 3, which loaded the highest on this factor, and IVH 4 involve the perpetrator repeatedly asking the victim sexual questions or sending nude images of themselves to the victim. While these items do not specify that the interactions happened in private, the items do not reference posting or sharing the sexual information, photos, or conversations with others, suggesting the interactions are more dyadic in nature. Based on an examination of the items that loaded onto the second factor, Factor 2 seemed to capture sexually harassing behaviors online that affect one's reputation. For example, CB 8 and IVH 9, which had the highest loadings on Factor 2, involve the perpetrator threatening to share with family and friends or post online sexual images or sexual conversations they have had with the victim. Other items that loaded onto this factor also involve behaviors that are more public (i.e., "referred to your gender/sexual identity as an insult in a public post/comment") or might lead to negative outcomes for the victim's friends and family (i.e., "threatening to harm you, your property, family, friends, etc.") Notably, however, two items did not align as strongly with this overall concept. IVH 6 involves nude photos or videos but does not entail the sharing of the photos or videos with a broader online community. As many other items that loaded on this factor reference nude or semi-nude images, it might be the case that this item loaded on this factor based on this conceptual connection. CB 4 (i.e., "sent you sexually violent threats in an electronic or online message (e.g., rape threats, threatening sexual assault)?") also loaded on Factor 2 and,

while it does not explicitly refer to threats that occurred in public, where it could potentially harm the victim's reputation, its connection to threatening behavior may be why it loaded with similar items on Factor 2. The correlation between these factors was also high (r = .64, p < .001), indicating a strong positive relationship between dyadic CSH and CSH that affects one's reputation.

Table 7

Factor Loadings for the Cyber-Sexual Harassment Experiences Items (N = 298)

		Factor		h^2
		1	2	
Factor 1: Dyadic Cyber-Sexual Harassing Behaviors				
GSI 3.	Repeatedly tried to get you to talk about sexual topics (e.g., sexual history, sexual fantasies) when you did not want to?	**.98**	-.08	0.87
GSI 2.	Asked you to share sexual information about yourself when you did not want to?	**.95**	-.04	0.86
CB 1.	Sent you excessively "needy" or demanding electronic or online messages (e.g., pressuring you to perform a sexual act or go on a date)?	**.93**	-.06	0.79
IVH 1.	Repeatedly asked you to send nude or semi-nude photos or videos of yourself after you told them no?	**.92**	-.03	0.80
GSI 7.	Sent you inappropriate messages about personal topics such as their body, sexual experiences, or fantasies, etc.?	**.90**	-.05	0.75
CB 14.	Repeatedly asked you to do something sexual online when you did not want to?	**.86**	.07	0.82
OC 11.	Made inappropriate comments about your ability to perform sexual acts (e.g., "I bet you are good in bed", "You look like you give good blowjobs")?	**.86**	.07	0.81
IVH 4.	Sent you a nude or semi-nude photo or video of themselves without you asking?	**.83**	.04	0.74
CB 15.	Repeatedly asked you to engage in "cybersex" or perform sexual acts online?	**.82**	.03	0.69
GSI 1.	Sexually harassed you online?	**.81**	.08	0.74
CB 5.	Repeatedly requested a romantic or sexual relationship with you through electronic or online messages even though you let them know you were not interested?	**.79**	.10	0.74
OC 10.	Used flirty or sexual nicknames (e.g., baby, daddy, sugar, sexy) when talking with you in electronic or online messages?	**.67**	-.05	0.41
CB 2.	Bribed you to do something of a sexual nature (e.g., offering you money if you send them sexual pictures)?	**.64**	.27	0.71
CB 3.	Made you feel worried or threatened because they were sexually harassing you online?	**.57**	.32	0.67
CB 9.	Made promises in an electronic or online message to reward you if you performed a sexual act online?	**.54**	.39	0.71
Factor 2: Sexually Harassing Behaviors that Affect One's Reputation				
CB 8.	Threatened in an electronic or online message to share conversations or photos with friends and family if you did not perform a sexual act online?	-.11	**1.00**	0.87
IVH 9.	Posted sexual photos or videos on your social media page?	-.14	**1.00**	0.83

IVH 7.	Used photo editing software to alter your photos in a sexual way?	-.15	**.95**	0.73
CB 11.	Threatened in an electronic or online message to share personal information about you online if you did not perform a sexual act online?	-.03	**.95**	0.86
IVH 6.	Taken nude or semi-nude photos or videos of you without your permission?	.06	**.91**	0.90
IVH 10.	Tagged you in a sexual photo or video?	-.06	**.82**	0.61
CB 6.	Sent you threatening electronic or online messages (e.g., threatening to harm you, your property, family, friends, etc.) if you did not develop a relationship with them?	.08	**.82**	0.75
OC 9.	Tagged you in an online post that you felt was inappropriately sexual?	.22	**.67**	0.70
IVH 3.	Shared a nude or semi-nude photo or video of you with their friends without your consent?	.31	**.67**	0.82
CB 4.	Sent you sexually violent threats in an electronic or online message (e.g., rape threats, threatening sexual assault)?	.33	**.66**	0.81
OC 5.	Referred to your gender/sexual identity as an insult in a public post/comment?	.09	**.63**	0.48
OC 6.	Left an offensive, sexual comment on your social media profile?	.34	**.55**	0.65
IVH 2.	Shared a nude or semi-nude photo or video of you online without your consent?	.38	**.46**	0.58
OC 2.	Said offensive things about how you look, your body, or your sex life in a public post/comment?	.33	**.45**	0.51
OC 4.	Made offensive, sexual remarks about your gender, in general (e.g., "All women are whores", "All men are pigs")?	.17	**.41**	0.29

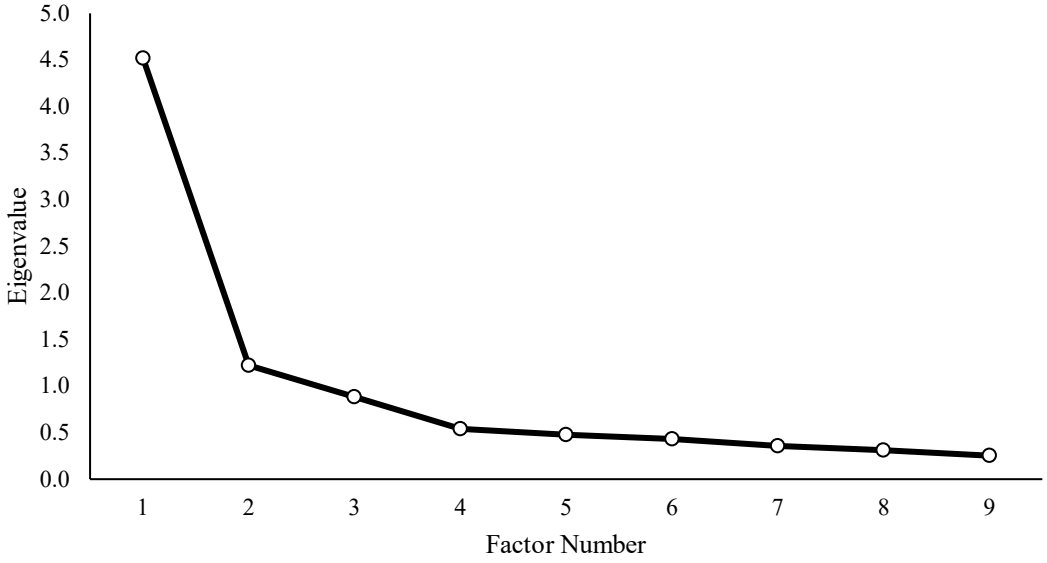
Note: GSI = gathering and sharing of sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; Factor analytic models were performed with a WLSMV estimator with a promax rotation.

Attitudes About Cyber-Sexual Harassment

Exploratory factor analyses on the CSH attitudes items were performed using IBM SPSS 27 (2020) with principal axis factoring and an oblique (promax) rotation. The factorability of the 13 items was examined. Given the negative factor loadings for ATT 2, 5, and 9 on the CSH attitudes factor within the previous confirmatory factor analysis, these items were reverse-coded before performing the exploratory factor analysis. The results from the KMO statistic and Bartlett's Test of Sphericity indicated the correlation matrix was appropriate for performing factor analysis, as the KMO statistic was .87 and Bartlett's Test of Sphericity was significant, $\chi^2(78) = 1503.48$, $p < .001$. The determinant of the correlation matrix was 0.01, indicating that multicollinearity was not a

Figure 3

Scree Plot of the Attitudes About Cyber-Sexual Harassment Items (N = 296)



significant issue. Initially, three factors were extracted with eigenvalues greater than one. However, evaluation of the communalities indicated that ATT 2 (i.e., "I would tell someone if I felt sexually harassed online.") was not well captured by the retained factors (h^2 = .16). Due to its low communality, this item was removed and the analyses reperformed. ATT 10 (h^2 = .33), ATT 5 (h^2 = .28), and ATT 9 (h^2 = .19) were also removed in an iterative fashion based on their low communalities. The KMO statistic, Bartlett's Test of Sphericity, and the determinant of the correlation matrix were evaluated each time an item was removed, and these measures stayed within appropriate cut-offs (see Table A2 in Appendix A). An analysis of the remaining nine items resulted in a KMO statistic of 0.86, a significant Bartlett's Test of Sphericity, $\chi^2(36) = 1215.84$, $p <$ .001, and a determinant of the correlation matrix of 0.15. Two factors with eigenvalues greater than one were extracted. As shown in Figure 3, the scree plot displays a clear bend at the second factor, indicating that the retention of two factors is appropriate.

Additionally, only 27% of the non-redundant residuals had absolute values greater than 0.05. One- and 3-factor solutions were also evaluated to determine if these items could be explained by additional or fewer factors. In a 1-factor solution, several item communalities dropped below .40 and 52% of the non-redundant residuals had absolute values greater than 0.05. In a 3-factor model, all of the communalities were high and there were no non-redundant residuals with absolute values greater than 0.05. However, within the 3-factor solution, the interpretations of two of the factors was similar and their separation might be due, in part, to wording rather than conceptual differences. Additionally, one of the factors in the 3-factor solution contained only two items. Because Costello and Osborne (2005) recommend that factors be comprised of at least three items to create strong, stable factors, the 2-factor solution was retained and interpreted.

An evaluation of the pattern matrix for the 2-factor model indicated that all items had factor loadings greater than .40 on one factor and none had loadings higher than .40 on their non-dominant factor. Examination of the items loading on the first factor (see Table 8) suggested that Factor 1 captures participants' interpretations of the seriousness of CSH. As a whole, these items pertain to whether or not CSH behaviors are perceived to be normal flirtation, harmless behaviors, or less serious compared to in-person or traditional forms of SH. Factor 2, on the other hand, focuses more on victim-blaming behaviors. For example, ATT 1, which had the highest loading on Factor 2, pertains to whether the victim of CSH had done something to deserve the harassment, while ATT 8

states that if a victim did not take adequate measures to protect themselves, they are at fault for the victimization. These factors were also strongly positively correlated (r = .64).

Table 8

Factor Loadings for the Attitudes About Cyber-Sexual Harassment Items (N=296)

		Factor		h^2
Items		1	2	
Factor 1: Seriousness of Cyber-sexual Harassment				
ATT 11.	Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.	**.83**	-.12	.57
ATT 14.	Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.	**.78**	-.15	.49
ATT 12.	Sexual jokes through electronic or online messages are usually meant to be harmless.	**.68**	.05	.50
ATT 7.	A lot of activities people call sexual harassment online are just normal flirtation.	**.66**	.24	.70
ATT 4.	If they don't go too far, suggestive remarks simply tell one they are attractive.	**.54**	.17	.44
ATT 6.	An attractive person should expect sexual advances and learn how to handle them.	**.42**	.30	.43
Factor 2: Victim-blaming Behaviors				
ATT 1.	People who get sexually harassed online must have done something to deserve it.	-.03	**.84**	.67
ATT 8.	People who don't protect themselves online (e.g., update privacy settings, hide personal information, monitor people added as friends) deserve it if they are sexually harassed online.	-.07	**.81**	.58
ATT 3.	People who send nude or semi-nude pictures in electronic or online messages deserve it if the pictures are sent to other people.	.00	**.68**	.46

Note: ATT = attitudes about cyber-sexual harassment. Factor analytic models were performed principal axis factoring with a promax rotation.

Reliability and Convergent and Divergent Validity

The internal consistency of the hypothesized five factors (e.g., gathering and sharing sexual information online) of the MCSHEA-V was examined using Cronbach's alpha. Given that the alphas for the CSH experience factors were computed using a polychoric correlation matrix, they are considered ordinal alphas (Gadermann et al., 2012). The alphas for these factors were well above commonly accepted criteria for reliability (i.e., $\alpha \geq .70$), indicating the strong reliability of these factors (Nunnally, 1978). Specifically, the alpha for the gathering and sharing sexual information online subscale was .95; the alpha for the image and video-based harassment subscale was .94; the alpha for the offensive comments online subscale was .93; and the alpha for the coercive behaviors online subscale was .96. Cronbach's alpha for the attitudes about CSH subscale was also high, at .85. For the factors identified through the exploratory factor analyses, the dyadic CSH behaviors factor had an alpha of .97, while the CSH behaviors that affect one's reputation had an alpha of .96. Lastly, for the two exploratory CSH attitudes factors, internal consistency for the six items that loaded onto the seriousness of CSH factor was .85, while the alpha for the three items that loaded onto the victim-blaming factor was .79. Given that all of these values were above the generally accepted cut-off of .70 (for scale development; Nunnally, 1978), all factors demonstrated adequate internal reliability.

The items representing each of the originally hypothesized factors and those identified through the exploratory factor analyses were averaged to create composite CSH experiences and attitude variables. Correlations between these composite variables

and other measures identified in previous research to be related to CSH were assessed to determine convergent and divergent validity (see Table 9). The results indicated that the originally hypothesized subscales of the MCSHEA-V focusing on CSH experiences were moderate to strongly positively correlated with the TFSV-V and CSH scales ($p < .001$). The strongest correlations were found between these measures and the offensive comments subscale. However, the CSH attitudes subscale was not significantly correlated with the TFSV-V and was only weakly correlated with the CSH scale ($r = .17$, $p = .004$). The original MCSHEA-V subscales, apart from CSH attitudes, were also weakly positively correlated with online experiences and risky online social networking and leisure behaviors, which have been associated with CSH victimization in previous research (Choi & Lee, 2017). That is, the significance and direction of these correlations provide some evidence of convergent validity. However, cyberbullying victimization also showed moderate to strong positive correlations with CSH experiences, with the strongest correlations with cyberbullying victimization emerging for the CSH offensive comments ($r = .54$, $p < .001$) and coercive behaviors ($r = .51$, $p < .001$) subscales. The strength of these correlations fails to provide evidence of divergent validity. However, these findings might indicate that, in some cases, specifically in relation to hateful online comments, CSH and cyberbullying might be an extension of online harassment, although, slightly distinguished through the presence of the sexual component of the harassment.

Table 9

Bivariate Correlations of Scales as Indicated by Factor Analytic Models (N = 298)

Variable	*M*	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Gathering and Sharing Sexual Information	1.57	0.90	.95															
2. Image and Video-based Harassment	1.27	0.52	.79***	.94														
3. Offensive Comments	1.55	0.69	.79***	.78***	.93													
4. Coercive Behaviors	1.26	0.55	.77***	.83***	.76***	.96												
5. Attitudes About CSH	2.29	0.87	0.11	.18**	.14*	.14*	.85											
6. Dyadic Cyber-Sexual Harassing Behaviors	1.57	0.84	.95***	.82***	.84***	.86***	.10	.97										
7. Sexually Harassing Behaviors that Affect One's Reputation	1.24	0.46	.65***	.86***	.81***	.83***	.19**	.66***	.96									
8. Seriousness of Cyber-Sexual Harassment	2.60	1.19	.08	.14*	.13*	.10	.91***	0.08	.14*	.85								
9. Victim-Blaming Behaviors	1.58	0.91	.13*	.25***	.16**	.23***	.73***	.12*	.29***	.55***	.79							
10. TFSV-V	5.45	4.11	.52***	.38***	.54***	.40***	-.07	.51***	.41***	-.07	-.05	.85						
11. CSH Scale	1.78	0.65	.42***	.44***	.55***	.42***	.09	.44***	.46***	.08	.15*	.56***	.90					
12. Online Exposure	44.61	8.46	.28***	.33***	.31***	.37***	.07	.30***	.35***	.01	.12*	.14*	.30***	.76				
13. ROL-SNS	2.54	1.00	.25***	.25***	.26***	.22***	-.15*	.22***	.29***	-.15*	-.03	.30***	.17**	.29***	.89			
14. ROL-LEI	2.67	1.17	.22***	.21***	.20***	.17**	.17**	.20**	.19**	.16**	.12*	.07	.14*	.30***	.18**	.69		
15. ROL-VOC	1.68	0.70	.12	.12*	.09	.17**	.13*	.10	.17**	.06	.17**	.05	.04	.14*	.20***	.27***	.66	
16. Cyberbullying Victimization	1.36	0.59	.45***	.47***	.54***	.51***	.09	.46***	.56***	.05	.17**	.36***	.32***	.32***	.26***	.13*	.17**	.90

Note: TFSV-V = Powell and Henry's (2016) Technology-Facilitated Sexual Violence Victimization Scale; CSH = Ritter's (2014) Cyber-Sexual Harassment Scale; ROL-SNS = Risky Online Lifestyle Social Networking Site Behaviors; ROL-LEI = Risky Online Lifestyle Leisure Behaviors; ROL-VOC = Risky Online Lifestyle Vocational Behaviors. ATT 2, 5 and 9 on the attitudes about CSH subscale were reverse-coded before computing the composite variable. Cronbach's alphas are reported on the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$

For the composite variables created based on the exploratory factor analyses (e.g., dyadic CSH, seriousness of CSH), the size and direction of the relationships with previous CSH measures were similar to those that emerged with the originally hypothesized subscales. One unique correlation emerged, such that CSH behaviors that affect one's reputation had a weak correlation with risky online vocational behaviors (r = .17, p = .004). Interestingly, seriousness of CSH was negatively correlated with risky online social networking site behaviors (r = -.16, p = .008) but positively correlated with risky online leisure behaviors (r = .18, p = .002). Correlations with the other measures of CSH and cyberbullying victimization were nonsignificant. Lastly, victim-blaming was only weakly significantly positively correlated with the CSH scale, risky online leisure and vocational behaviors, and cyberbullying victimization.

Discussion

The Multidimensional Cyber-Sexual Harassment Experiences and Attitudes-Victimization Scale (MCSHEA-V) was designed to measure four forms of CSH victimization (i.e., gathering and sharing sexual information online, image and video-based harassment, offensive comments online, coercive behaviors online) and capture individuals' attitudes about CSH. A confirmatory factor analysis was performed to initially test this structure and subsequent exploratory analyses were performed to determine if a different structure yielded a stronger model fit. The confirmatory factor analysis indicated that the proposed 5-factor model was a good fit for the data, with fit indices that were within acceptable conventions for good fit. All of the items were significant indicators of their respective factors and several factors were also significantly

correlated with each other. Specifically, in addition to being correlated with each other, the image and video-based harassment, offensive comments online, and coercive behaviors online factors were significantly positively correlated with CSH attitudes. These findings provide support for the adequacy of the proposed structure and the presence of different forms of CSH. The presence of these factors has also been supported by previous research, as the TFSV-V (Powell & Henry, 2016) contains both image-based sexual abuse and sexual aggression/sexual coercion factors and the CSH scale (Ritter, 2016) contains active verbal harassment (i.e., gathering information) and purposeful harassing actions (i.e., offensive comments) factors. While the high thresholds for this model and the exploratory models might be due partly to the low prevalence of CSH in this sample, these thresholds may also be an indication that individuals are more likely to experience milder forms of CSH (i.e., a perpetrator asking sexual questions), as these items had the lowest thresholds and are less likely to experience more extreme forms of CSH such as sexual coercion online.

Exploratory factor analysis models indicated the presence of two factors capturing CSH experiences (i.e., dyadic CSH behaviors, sexually harassing behaviors that can affect one's reputation) and two factors capturing CSH attitudes (i.e., seriousness of CSH, victim-blaming behaviors). Compared to TFSV-V (Powell & Henry, 2016) and the OSHS (Buchanan & Mahoney, 2021), which focus more on types of CSH victimization, this structure aligns more closely with the CSH scale (Ritter, 2014) given its focus on interactions between the victim and perpetrator. This factor structure may help inform a deeper understanding of CSH victimization prevalence by shedding light on the different

types of CSH interactions online. Further, as the types of CSH might vary in the future due to increased diversity in forms of online communication (e.g., the metaverse), a 2-factor structure relying less on the form of victimization might provide greater versatility and applicability.

While originally intended to capture individuals' perceptions of the seriousness and acceptability of CSH, the two factors that emerged for the CSH attitude items focus on the seriousness of CSH behaviors and victim-blaming behaviors. Whereas the items that loaded onto the victim-blaming factor can potentially be interpreted as perceptions of how acceptable CSH behaviors are, the items more clearly place blame on the victim due to their actions or lack of action. This distinction may be at least partly a function of the scales from which some of these items were adapted. That is, the items that loaded onto this factor were adapted from the Modern Myths about Sexual Aggression scale (Gerger et al., 2007) and the Perceptions of Sexting and Forwarding Private Pictures scale (Branch et al., 2017), which capture the myth that victims should take responsibility for their own outcomes. Because previous research has not directly measured attitudes about CSH (Branch et al., 2017), the relation of these factors with other measures of CSH marks a novel contribution to this area of research.

Correlations between the MCSHEA-V and the TFSV-V and CSH scales provided evidence of the convergent validity of both the originally hypothesized and exploratory factor structures. These measures were also weakly to moderately correlated with online experiences and risky behavior online, which corroborates previous research as these experiences are risk factors for CSH victimization (Baumgartner et al., 2010; Choi and

Lee, 2017; Ybarra & Mitchell, 2007). Cyberbullying, which has been most commonly researched in children, teens, and young adults, was predicted to be only weakly related to CSH (Patchin & Hinduja, 2015). The unexpectedly strong correlation between CSH experiences and the Cyberbullying Victimization Scale, however, suggests a greater overlap in constructs. The correlations between the hypothesized and exploratory factors of the MCSHEA-V and cyberbullying victimization were, in fact, similar in magnitude to the correlations between the MCSHEA-V and the other previously developed measures of CSH. Due to these findings, it is possible that CSH might fall under a broader construct of online or cyber-harassment. In other words, the MCSHEA-V's emphasis on offensive comments and posts and threatening behaviors and the emphasis of similar constructs without the sexual component (e.g., cyberbullying victimization) may be driving this higher correlation (Patchin & Hinduja, 2015). If this were the case, however, it is puzzling that cyberbullying victimization had weaker correlations with the TFSV-V and CSH scales.

All Cronbach's alphas for the hypothesized and exploratory factors were above acceptable cut-offs, suggesting the items had good internal consistency. The alphas for the hypothesized and exploratory CSH experience factors were, in fact, markedly high. Because alpha is positively related to the number of items (i.e., increasing the number of quality items increases Cronbach's alpha; DeVellis, 2017), it is possible that the large number of items that loaded on each factor contributed to the high alphas observed. Further, the items were also highly correlated with each other, which could have artificially inflated the Cronbach's alpha (DeVellis, 2017). One way to address this in

future research would be to reduce the number of items—for instance, a short form of the MCSHEA-V could be created and tested to further determine the validity and measurement precision of this scale.

Limitations

There were several limitations of this study, including the sample size, limited prevalence of CSH among participants in the sample, and the potential for social desirability concerns. Previous rules-of-thumb for factor analysis indicate that sample sizes larger than 500 participants are ideal (Cattell 1978; Comrey & Lee, 1992), while other researchers have indicated a minimum of 200 participants is usually adequate (Guilford, 1954). However, according to the *N:q* ratio (Klein, 2015), a commonly used index for determining adequate sample size based on the number of unknown parameters within a model, a sample size of 1,080 would have been needed for this study. Therefore, the sample ($N = 298$) may not have been sufficiently powered to test the factor analytic models, potentially resulting in unstable factor loading estimates and indicators of fit. Participants were also only asked to report instances of CSH victimization within the past six months, which might have limited the frequency of victimization responses and played a role in the significant positive skew of the data. Lastly, due to the nature of the topic being studied, individuals might have felt uncomfortable reporting their victimization experiences. As noted earlier, SH and CSH victimization have been linked with negative psychological outcomes, such as feelings of shame, guilt, and fear of retaliation when reporting the victimization (Bates, 2017; Gámez-Guadix et al., 2015; Stahl & Dennhag, 2020). To the extent that participants were experiencing any of these

feelings, they may have been particularly reluctant to report their CSH victimization experiences. While it was indicated repeatedly that CSH victimization can happen to anyone and that responses in the study would be anonymous, the sensitive nature of the victimization might have contributed to the low reported prevalence rates.

CHAPTER 4

STUDY 3

The goal of Study 3 was to assess and compare the fit of the 5-factor structure of the MCSHEA-V (with four CSH experiences factors and one CSH attitudes factor) to the 4-factor structure (with two CSH experience factors and two CSH attitudes factors). It was hypothesized that the 5-factor structure would display better fit, as items were developed with this originally hypothesized structure in mind. Further, this structure is similar to the factor structures of Powell & Henry's (2016) TFSV-V and Buchanan & Mahoney's (2021) Online Sexual Harassment Scale (OSHS). Because of the low prevalence of CSH reported in Study 2, a preliminary screening was performed for Study 3 in order to recruit a targeted sample of individuals who had experienced some degree of CSH. Additionally, the response scale was modified to assess CSH victimization in the past year, to potentially increase the reported prevalence. Furthermore, given extensive research indicating that women are at a greater risk of experiencing CSH (Branch et al., 2017; O'Conner et al., 2018; Powell & Henry, 2016) and that women consider CSH to be more harassing (Biber et al., 2002) than men, it was hypothesized that women would report a higher degree of CSH experiences and perceive CSH to be more serious on the MCSHEA-V compared to men.

Method

Prescreening

A sample of 500 adults recruited through Prolific completed a brief (5-10-minute) prescreening survey. Specifically, they completed a shortened 12-item version of the

MCSHEA-V (α = .95) asking about 12 of the most reported CSH victimization experiences in Study 2 (e.g., “repeatedly asked you to send nude or semi-nude photos or videos of yourself after you told them no?”; “made offensive, sexual remarks about your gender, in general (e.g., “All women are whores”, “All men are pigs")?”), Choi and Lee’s (2017) Risky Online Behavior on Social Networking Sites scale (α = .89), and provided demographic information. Participants had to be 18 years of age or older, English-speaking, and reside in the U.S. IRB approval was obtained prior to data collection, all participants provided informed consent before participation, and all data collected was anonymous. Participants were compensated approximately $0.55 for completing the prescreening survey.

For each participant, a sum score was created reflecting how many of the 12 CSH victimization experiences they indicated had occurred in the past year. A total of 309 participants reported experiencing at least one of the 12 CSH victimization experiences in the past year and were subsequently invited to take part in Study 3 (via a “custom allow” list in Prolific).

Participants and Procedure

A final sample of 207 adults (of the 309 invited to participate after prescreening) completed a 20-25-minute online Qualtrics survey through Prolific for which they were compensated approximately $2.33. Despite the prescreening, most participants in the final sample still reported relatively few CSH victimization experiences. The sample ranged in age from 18 to 79 years (M = 39.12, SD = 13.39) and included an equal number of men and women (N = 99). A majority of the sample reported being White (N = 166),

heterosexual (N = 151), and currently single (N = 89). On average, participants actively used the internet between 5-7 and 8-10 hours a day (M = 3.11, SD = 1.08). See Table 10 for additional demographic information.

Table 10
Demographic Information for Sample (N = 207)

	M	*SD*	*Range*	*n (%)*
Age	36.12	13.39	18-79	
Time spent online (hrs)	3.11	1.08	1-5	
Gender				
Cisgender male				99 (47.8 %)
Cisgender female				99 (47.8 %)
Transgender male				1 (0.5 %)
Non-binary				5 (2.4 %)
Other				2 (1.0 %)
Missing				1 (0.5 %)
Sexual Orientation				
Asexual				7 (3.4 %)
Bisexual				32 (15.5 %)
Gay				3 (1.4 %)
Straight (heterosexual)				151 (72.9 %)
Lesbian				6 (2.9 %)
Queer				5 (2.4 %)
Other				1 (0.5 %)
Missing				2 (1.0 %)
Relationship Status				
Single				89 (43.0 %)
In a relationship, but not living with partner				26 (12.6 %)
In a relationship and living with partner				27 (13.0 %)
Married				50 (24.2 %)
Divorced or separated				12 (5.8 %)
Other				1 (0.5 %)
Missing				2 (1.0 %)
Ethnicity				
Hispanic/Latinx				20 (9.7 %)
Non-Hispanic/Non-Latinx				183 (88.4 %)
Missing				4 (1.9 %)

Race	
White	166 (80.2 %)
Black or African American	23 (11.1 %)
American Indian or Alaska Native	3 (1.4 %)
Asian or Pacific Islander	22 (10. %)
Other	4 (1.9 %)
Technology access	
Phone/Smartphone	165 (79.7 %)
Laptop computer	138 (66.7 %)
Desktop computer	66 (31.9 %)
Tablet/iPad	41 (19.8 %)
Other	1 (0.5 %)

Measures

Online Activities

As in Study 2, participants completed the Online Exposure Scale (α = .77; Welsh & Lavoie, 2012) and the Risky Online Lifestyle Scale ($\alpha_{\text{social networking sites}}$ = .91; $\alpha_{\text{leisure activities}}$ = .61, $\alpha_{\text{vocational activities}}$ = .76; Choi & Lee, 2017), which measure the frequency of various activities performed online over the course of a week and the frequency with which individuals engage in risky behavior online, respectively. The Online Exposure Scale items were summed to create a composite online exposure variable—with higher values indicating greater exposure to online activities—and the items for each of the three Risky Online Lifestyle subscales were averaged to create corresponding composite variables, with higher scores indicating higher levels of risky online behaviors on social networking sites, in leisure activities, and vocational activities, respectively.

Online Victimization

As in Study 2, participants completed the Cyberbullying Victimization Scale (α = .94; Patchin & Hinduja, 2015), the Multi-Dimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V), the Cyber-Sexual

Harassment Scale (α = .92; Ritter, 2014), and the Technology-Facilitated Sexual Violence Scale for Victimization (TFSV-V; α = .89; Powell & Henry, 2016). These measures assess the frequency with which individuals experienced cyberbullying or CSH victimization, respectively. For each of these measures, the items for each subscale were averaged to create composite online victimization variables, with higher scores indicating higher levels of cyberbullying, TFSV, and CSH victimization respectively. As previously mentioned, the response scale for the MCSHEA-V was modified to reflect victimization experiences in the past year along a 6-point scale ranging from *never* to *always*. The number of items and the response scales for the other measures stayed consistent with Study 2.

Overview of Analysis

Confirmatory factor analyses for the 5-factor and 4-factor models of the MCSHEA-V were performed using Mplus v 8.5 (Muthen & Muthen, 2017). Both analyses were performed with a WLSMV estimator, due to the ordinal nature of the CSH experience items, and models were determined to be good fitting based on the same criteria used in Study 2 (i.e., RMSEA < .06, CFI > .90, and a nonsignificant model chi-square). Because these models were not nested, chi-square difference tests were not appropriate for determining the best fitting model. However, Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC), which are used to compare non-nested models, are not provided when using a WLSMV estimator. Therefore, both models were re-estimated using a robust maximum likelihood estimator (MLR) to obtain these values (Boeschoten et al., 2018). A difference in BIC values greater than 10 was used as the

threshold for demonstrating a significantly better fit for the model with the lower BIC (Kass & Raftery, 1995). Model modification indices were considered to improve model fit through the addition or removal of parameters.

Results

Initial descriptive analyses indicated that CSH victimization experiences measured by the MCSHEA-V were positively skewed (see Table 11). While slightly improved, absolute skewness values ranged from 1.02 to 5.24. While modifications were made to the response scale to increase the time range in which the victimization had occurred, the prevalence of CSH victimization within the past year was still low. Further, similar to Study 2, the items capturing CSH attitudes (i.e., seriousness and victim-blaming behaviors) were more normally distributed with absolute skewness values ranging from 0.03 to 2.44. Therefore, polychoric, Pearson, and polyserial correlations were once again used to evaluate the relationships between the items. Evaluation of the correlation matrix indicated several pairs of items with correlations greater than .90. To reduce the potential for multicollinearity, one item contributing to the high degree of correlation was removed based on the content of the items (Yong & Pearce, 2013). As such, GSI 3, IVH 3, CB 4, and CB 6 were removed from subsequent analyses.

Two confirmatory factor analysis models were performed to determine the best fitting factor structure for the items (see Figures 4 and 5). All models were specified with a probit link function and were estimated using a WLSMV estimator. Items on the MCSHEA-V that focused on victimization experiences were specified as ordinal

Table 11

Descriptive Statistics and Bivariate Correlations for the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (N = 207)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
GSI 1	--																	
GSI 2	0.82***	--																
GSI 3	0.82***	0.92***	--															
GSI 4	0.87***	0.92***	0.91***	--														
GSI 5	0.68***	0.69***	0.70***	0.66***	--													
GSI 6	0.83***	0.85***	0.86***	0.83***	0.80***	--												
GSI 7	0.83***	0.85***	0.90***	0.85***	0.58***	0.78***	--											
IVH 1	0.83***	0.79***	0.81***	0.84***	0.52***	0.76***	0.84***	--										
IVH 2	0.61***	0.60***	0.64***	0.65***	0.69***	0.64***	0.62***	0.75***	--									
IVH 3	0.70***	0.61***	0.66***	0.65***	0.78***	0.69***	0.69***	0.77***	0.90***	--								
IVH 4	0.75***	0.68***	0.71***	0.75***	0.52***	0.72***	0.78***	0.86***	0.75***	0.71***	--							
IVH 5	0.72***	0.71***	0.75***	0.77***	0.61***	0.79***	0.75***	0.85***	0.73***	0.77***	0.81***	--						
IVH 6	0.65***	0.70***	0.71***	0.68***	0.75***	0.70***	0.72***	0.80***	0.87***	0.83***	0.77***	0.74***	--					
IVH 7	0.74***	0.78***	0.79***	0.68***	0.84***	0.87***	0.73***	0.70***	0.80***	0.82***	0.65***	0.75***	0.86***	--				
IVH 8	0.69***	0.67***	0.70***	0.64***	0.74***	0.75***	0.68***	0.78***	0.89***	0.86***	0.71***	0.70***	0.91***	0.91***	--			
IVH 9	0.65***	0.74***	0.69***	0.66***	0.72***	0.79***	0.64***	0.71***	0.83***	0.75***	0.73***	0.74***	0.80***	0.87***	0.94***	--		
IVH 10	0.60***	0.67***	0.68***	0.66***	0.59***	0.69***	0.72***	0.74***	0.76***	0.72***	0.71***	0.70***	0.80***	0.80***	0.88***	0.91***	--	
OC 1	0.68***	0.71***	0.76***	0.70***	0.61***	0.79***	0.70***	0.66***	0.59***	0.64***	0.63***	0.73***	0.63***	0.79***	0.61***	0.57***	0.66***	--
OC 2	0.75***	0.76***	0.80***	0.75***	0.78***	0.85***	0.73***	0.70***	0.63***	0.66***	0.70***	0.74***	0.71***	0.81***	0.67***	0.76***	0.75***	0.87***
OC 3	0.65***	0.68***	0.74***	0.69***	0.52***	0.75***	0.73***	0.66***	0.46***	0.49***	0.69***	0.66***	0.45***	0.65***	0.59***	0.65***	0.65***	0.78***
OC 4	0.57***	0.52***	0.56***	0.53***	0.51***	0.65***	0.52***	0.47***	0.28***	0.36***	0.49***	0.52***	0.43***	0.56***	0.43***	0.45***	0.44***	0.64***
OC 5	0.67***	0.60***	0.65***	0.60***	0.67***	0.75***	0.63***	0.51***	0.44***	0.47***	0.54***	0.62***	0.54***	0.67***	0.54***	0.57***	0.56***	0.74***
OC 6	0.64***	0.63***	0.61***	0.63***	0.61***	0.72***	0.64***	0.63***	0.70***	0.70***	0.71***	0.71***	0.68***	0.74***	0.73***	0.84***	0.79***	0.77***
OC 7	0.68***	0.66***	0.70***	0.63***	0.78***	0.77***	0.62***	0.61***	0.71***	0.73***	0.65***	0.72***	0.68***	0.89***	0.74***	0.78***	0.74***	0.82***
OC 8	0.63***	0.62***	0.62***	0.57***	0.83***	0.80***	0.50***	0.48***	0.66***	0.69***	0.48***	0.68***	0.68***	0.88***	0.77***	0.75***	0.70***	0.81***
OC 9	0.66***	0.59***	0.60***	0.57***	0.61***	0.65***	0.65***	0.66***	0.63***	0.71***	0.60***	0.62***	0.66***	0.78***	0.74***	0.66***	0.81***	0.72***
OC 10	0.66***	0.72***	0.73***	0.73***	0.58***	0.69***	0.74***	0.65***	0.48***	0.53***	0.67***	0.60***	0.57***	0.64***	0.49***	0.46***	0.58***	0.71***
OC 11	0.77***	0.79***	0.83***	0.79***	0.66***	0.79***	0.78***	0.76***	0.67***	0.65***	0.71***	0.74***	0.69***	0.79***	0.67***	0.65***	0.67***	0.83***
CB 1	0.81***	0.77***	0.78***	0.79***	0.59***	0.79***	0.78***	0.87***	0.69***	0.74***	0.72***	0.79***	0.72***	0.73***	0.73***	0.75***	0.68***	0.71***
CB 2	0.76***	0.77***	0.80***	0.79***	0.53***	0.70***	0.80***	0.84***	0.76***	0.73***	0.79***	0.78***	0.80***	0.78***	0.79***	0.81***	0.81***	0.71***
CB 3	0.85***	0.80***	0.77***	0.78***	0.67***	0.83***	0.77***	0.72***	0.59***	0.65***	0.62***	0.70***	0.61***	0.83***	0.75***	0.75***	0.67***	0.75***
CB 4	0.72***	0.71***	0.72***	0.66***	0.65***	0.82***	0.71***	0.74***	0.74***	0.78***	0.67***	0.79***	0.65***	0.83***	0.75***	0.84***	0.77***	0.77***
CB 5	0.82***	0.76***	0.76***	0.81***	0.52***	0.73***	0.76***	0.84***	0.62***	0.66***	0.74***	0.75***	0.62***	0.62***	0.61***	0.60***	0.60***	0.70***
CB 6	0.72***	0.72***	0.69***	0.69***	0.70***	0.80***	0.73***	0.71***	0.75***	0.81***	0.69***	0.78***	0.72***	0.83***	0.76***	0.85***	0.80***	0.74***
CB 7	0.71***	0.74***	0.81***	0.77***	0.70***	0.77***	0.79***	0.80***	0.83***	0.77***	0.79***	0.83***	0.76***	0.77***	0.84***	0.86***	0.86***	0.72***
CB 8	0.65***	0.68***	0.60***	0.59***	0.76***	0.78***	0.64***	0.68***	0.89***	0.87***	0.66***	0.77***	0.82***	0.88***	0.91***	0.90***	0.84***	0.73***
CB 9	0.68***	0.75***	0.72***	0.73***	0.46***	0.77***	0.79***	0.78***	0.69***	0.67***	0.74***	0.77***	0.62***	0.75***	0.79***	0.76***	0.78***	0.68***
CB 10	0.70***	0.63***	0.68***	0.63***	0.64***	0.70***	0.70***	0.79***	0.85***	0.81***	0.64***	0.72***	0.79***	0.78***	0.86***	0.84***	0.85***	0.59***
CB 11	0.64***	0.65***	0.59***	0.58***	0.67***	0.73***	0.65***	0.72***	0.79***	0.81***	0.63***	0.76***	0.69***	0.83***	0.83***	0.83***	0.79***	0.61***
CB 12	0.71***	0.72***	0.70***	0.67***	0.65***	0.80***	0.76***	0.81***	0.82***	0.82***	0.75***	0.88***	0.70***	0.82***	0.83***	0.88***	0.85***	0.75***
CB 13	0.62***	0.70***	0.67***	0.59***	0.76***	0.80***	0.74***	0.73***	0.84***	0.84***	0.75***	0.81***	0.84***	0.90***	0.88***	0.89***	0.83***	0.69***
CB 14	0.81***	0.87***	0.86***	0.88***	0.57***	0.78***	0.87***	0.85***	0.68***	0.67***	0.78***	0.79***	0.70***	0.69***	0.72***	0.75***	0.73***	0.67***
CB 15	0.74***	0.82***	0.83***	0.79***	0.64***	0.76***	0.82***	0.81***	0.66***	0.75***	0.73***	0.75***	0.70***	0.75***	0.75***	0.73***	0.68***	0.61***
ATT 1	0.04	-0.02	-0.03	0.02	0.14*	0.06*	-0.06	0.02	0.15	0.17	-0.05	0.02	0.18	0.15*	0.21**	0.26**	0.10*	-0.13
ATT 2	-0.02	-0.03	-0.07	-0.04	0.03	0.01	-0.11	-0.04	0.05	0.00	0.06	-0.03	0.01	0.02	0.14*	0.20**	0.04	-0.08
ATT 3	-0.02	-0.01	0.00	-0.01	0.01	0.04	0.03	0.15*	0.19**	0.26**	0.07	0.13	0.26**	0.23**	0.33***	0.29***	0.19**	0.00
ATT 4	-0.11	0.05	0.03	0.02	-0.03	-0.09	-0.01	0.05	0.12	-0.08	-0.01	0.01	0.14	0.04	0.05	0.13	0.09	-0.02
ATT 5	0.04	0.03	0.03	0.03	-0.10	-0.03	0.02	-0.07	-0.17*	-0.13	0.02	-0.04	-0.19**	-0.15**	-0.29***	-0.21**	-0.20**	0.04
ATT 6	-0.06	0.01	0.01	-0.01	0.08	-0.03	-0.01	0.10	0.14*	0.11	-0.01	0.07	0.18*	0.09	0.14*	0.10	0.17*	0.01
ATT 7	-0.10	0.02	-0.03	-0.03	0.06	-0.06	-0.08	-0.05	0.09	0.10	-0.09	0.04	0.14*	0.19**	0.10	0.08	0.04	0.04
ATT 8	0.07	0.07	0.05	0.03	0.24***	0.18**	0.01	0.11	0.26***	0.24***	0.05	0.14*	0.29***	0.26***	0.29***	0.31***	0.22***	0.00
ATT 9	0.27***	0.21**	0.17*	0.17*	0.00	0.14*	0.22**	0.12	-0.04	-0.05	0.20**	0.05	-0.08	-0.01	-0.15*	-0.02	-0.07	0.10
ATT 10	0.07	0.14*	0.17*	0.09	0.08	0.10	0.17*	0.23**	0.20**	0.22**	0.14	0.20**	0.29***	0.22**	0.26***	0.26***	0.21**	0.25***
ATT 11	-0.08	0.05	-0.01	0.05	0.01	-0.12	0.02	-0.01	0.07	0.03	-0.11	-0.07	0.13	0.05	0.03	-0.03	0.09	0.02
ATT 12	-0.03	0.15*	0.07	0.13	0.05	-0.02	0.09	0.08	0.14	0.05	0.01	0.10	0.06	0.16	0.09	0.08	0.08	0.15*
ATT 13	0.16*	0.00	0.02	0.02	0.25***	0.19**	0.01	0.07	0.23***	0.10	0.11	0.08	0.18*	0.11	0.05	0.23***	0.05	0.13
ATT 14	-0.02	0.08	0.05	0.09	0.09	-0.04	0.01	-0.09	-0.03	-0.11	-0.10	-0.09	0.06	0.15*	-0.06	-0.10	0.07	0.13
ATT 15	0.12	-0.04	-0.01	-0.04	0.06	0.13	-0.04	-0.03	0.12	0.01	0.07	0.02	0.05	0.08	0.00	0.21**	0.01	0.11
M	1.66	1.67	1.77	1.83	1.46	1.55	1.79	1.56	1.29	1.20	1.66	1.47	1.15	1.20	1.12	1.14	1.24	1.53
SD	1.09	1.02	1.13	1.12	0.99	1.05	1.07	1.03	0.82	0.63	1.02	0.90	0.54	0.68	0.51	0.56	0.68	1.08
Skewness	1.82	1.66	1.60	1.40	2.63	2.10	1.21	1.94	3.38	3.63	1.43	2.12	4.18	4.16	5.01	4.93	3.40	2.49
Kurtosis	2.92	2.48	2.05	1.37	7.28	3.85	0.76	2.88	12.01	13.78	1.06	4.57	19.30	19.06	27.38	26.54	12.32	6.11

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
OC 2	--																
OC 3	0.77***	--															
OC 4	0.72***	0.64***	--														
OC 5	0.77***	0.70***	0.77***	--													
OC 6	0.82***	0.64***	0.54***	0.72***	--												
OC 7	0.88***	0.78***	0.68***	0.81***	0.82***	--											
OC 8	0.82***	0.74***	0.55***	0.83***	0.73***	0.95***	--										
OC 9	0.76***	0.67***	0.53***	0.57***	0.68***	0.73***	0.74***	--									
OC 10	0.65***	0.70***	0.43***	0.60***	0.62***	0.64***	0.56***	0.50***	--								
OC 11	0.82***	0.79***	0.64***	0.69***	0.72***	0.81***	0.67***	0.71***	0.72***	--							
CB 1	0.70***	0.69***	0.50***	0.64***	0.76***	0.66***	0.64***	0.60***	0.69***	0.82***	--						
CB 2	0.74***	0.61***	0.41***	0.53***	0.72***	0.65***	0.62***	0.67***	0.66***	0.77***	0.84***	--					
CB 3	0.82***	0.76***	0.61***	0.70***	0.72***	0.80***	0.80***	0.72***	0.71***	0.81***	0.81***	0.74***	--				
CB 4	0.83***	0.75***	0.60***	0.67***	0.75***	0.83***	0.75***	0.77***	0.61***	0.80***	0.77***	0.79***	0.89***	--			
CB 5	0.70***	0.68***	0.53***	0.54***	0.72***	0.64***	0.54***	0.60***	0.69***	0.73***	0.88***	0.79***	0.80***	0.71***	--		
CB 6	0.81***	0.69***	0.52***	0.67***	0.83***	0.86***	0.81***	0.79***	0.60***	0.72***	0.77***	0.77***	0.85***	0.94***	0.68***	--	
CB 7	0.78***	0.69***	0.54***	0.66***	0.81***	0.75***	0.69***	0.69***	0.60***	0.78***	0.81***	0.80***	0.74***	0.78***	0.75***	0.83***	--
CB 8	0.78***	0.61***	0.51***	0.65***	0.84***	0.84***	0.84***	0.83***	0.54***	0.68***	0.78***	0.82***	0.84***	0.92***	0.69***	0.94***	0.82***
CB 9	0.66***	0.71***	0.48***	0.59***	0.75***	0.65***	0.67***	0.67***	0.67***	0.75***	0.84***	0.84***	0.84***	0.83***	0.78***	0.86***	0.81***
CB 10	0.72***	0.50***	0.46***	0.55***	0.75***	0.79***	0.72***	0.82***	0.44***	0.71***	0.76***	0.82***	0.84***	0.91***	0.67***	0.93***	0.87***
CB 11	0.69***	0.59***	0.44***	0.49***	0.71***	0.76***	0.75***	0.78***	0.48***	0.65***	0.75***	0.78***	0.78***	0.89***	0.68***	0.92***	0.81***
CB 12	0.79***	0.72***	0.55***	0.67***	0.85***	0.82***	0.76***	0.77***	0.60***	0.77***	0.86***	0.85***	0.85***	0.95***	0.80***	0.92***	0.88***
CB 13	0.75***	0.66***	0.51***	0.59***	0.82***	0.84***	0.83***	0.74***	0.68***	0.71***	0.76***	0.81***	0.83***	0.89***	0.68***	0.90***	0.82***
CB 14	0.71***	0.64***	0.50***	0.59***	0.68***	0.68***	0.56***	0.57***	0.70***	0.76***	0.82***	0.83***	0.76***	0.69***	0.77***	0.74***	0.82***
CB 15	0.69***	0.65***	0.48***	0.53***	0.64***	0.60***	0.57***	0.57***	0.60***	0.70***	0.77***	0.80***	0.74***	0.74***	0.72***	0.74***	0.77***
ATT 1	-0.05	-0.04	-0.13	-0.01	0.20**	0.11	0.09	-0.02	-0.04	0.04	0.05	0.01	0.07	0.12	-0.07	0.17*	0.11
ATT 2	-0.07	-0.05	-0.07	-0.01	0.04	-0.15*	-0.08	-0.07	-0.12	-0.09	-0.01	-0.04	-0.15*	0.01	-0.13	-0.03	0.05
ATT 3	-0.02	0.10	-0.02	-0.04	0.13	0.17*	0.14	0.09	-0.07	0.09	0.09	0.14	-0.01	0.13	0.04	0.14	0.05
ATT 4	0.02	0.06	0.02	-0.04	0.08	0.18*	0.09	0.06	0.00	0.06	0.02	-0.06	-0.14*	0.00	-0.06	0.00	0.07
ATT 5	-0.07	0.07	0.11	-0.05	-0.14	-0.10	-0.11	-0.14*	0.19**	-0.05	0.01	-0.06	-0.08	-0.11	0.00	-0.14*	0.18**
ATT 6	0.02	0.02	-0.02	-0.01	0.15*	0.12	0.04	0.08	0.00	0.08	0.06	0.00	-0.06	0.07	-0.01	0.10	0.11
ATT 7	0.06	0.06	-0.01	-0.03	0.02	0.30***	0.24***	0.08	0.00	0.09	-0.04	-0.06	-0.04	0.09	-0.11	0.07	-0.04
ATT 8	0.13	0.10	-0.11	0.05	0.19**	0.21**	0.24***	0.12	-0.01	0.14	0.14*	0.14*	0.12	0.26***	0.08	0.18**	0.26***
ATT 9	0.13	0.17**	0.07	0.03	0.01	-0.04	-0.04	0.08	0.17*	0.12	0.09	0.16*	0.22**	0.13	0.17*	0.07	0.10
ATT 10	0.21**	0.17**	0.07	0.06	0.29***	0.29***	0.21**	0.21**	0.15*	0.25***	0.17*	0.24***	0.10	0.27***	0.18**	0.29***	0.19**
ATT 11	0.03	0.03	0.08	-0.01	0.16*	0.04	-0.04	-0.08	0.01	0.10	0.04	-0.02	-0.12	-0.19**	-0.04	-0.07	0.08
ATT 12	0.13	0.18**	0.18*	0.08	0.09	0.29***	0.15*	0.09	0.04	0.15*	0.00	-0.04	-0.08	0.03	-0.05	0.09	0.07
ATT 13	0.26***	0.04	0.08	0.17*	0.20**	0.18*	0.20**	0.21	-0.04	0.19**	0.06	0.06	0.13	0.14	0.12	0.10	0.18*
ATT 14	0.14*	0.07	0.15*	0.14*	0.13	0.19**	0.17*	0.01	0.04	0.10	0.01	-0.03	-0.06	-0.02	-0.11	0.05	0.04
ATT 15	0.10	0.09	0.02	0.14*	0.12	0.17*	0.21**	0.07	-0.04	0.07	-0.01	0.06	0.04	0.02	0.06	0.05	0.04
M	1.48	1.91	2.04	1.48	1.38	1.29	1.29	1.34	2.16	1.55	1.67	1.33	1.37	1.22	1.51	1.28	1.28
SD	1.06	1.24	1.33	1.03	0.86	0.87	0.94	0.85	1.37	1.07	1.06	0.84	0.91	0.71	0.98	0.86	0.75
Skewness	2.43	1.37	1.22	2.41	2.79	3.55	3.49	3.04	1.02	2.06	1.75	3.17	3.01	3.76	2.28	3.56	3.00
Kurtosis	5.53	1.13	0.74	5.42	8.51	12.97	11.89	9.87	0.24	3.63	2.57	11.08	9.65	14.58	5.45	13.01	8.92

	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
CB 8	--																						
CB 9	0.89***	--																					
CB 10	0.95***	0.83***	--																				
CB 11	0.95***	0.89***	0.95***	--																			
CB 12	0.94***	0.92***	0.94***	0.96***	--																		
CB 13	0.95***	0.87***	0.90***	0.94***	0.91***	--																	
CB 14	0.71***	0.77***	0.71***	0.68***	0.82***	0.73***	--																
CB 15	0.73***	0.73***	0.66***	0.66***	0.75***	0.80***	0.84***	--															
ATT 1	0.16*	0.00	0.32***	0.20**	0.14*	0.20**	-0.01	0.11	--														
ATT 2	-0.02	0.04	-0.04	-0.04	-0.03	-0.07	-0.09	-0.04	-0.10	--													
ATT 3	0.24***	0.11	0.27***	0.28***	0.26***	0.30***	0.05	0.16*	0.49***	0.00	--												
ATT 4	0.08	-0.04	0.21**	0.07	0.02	0.15*	0.04	-0.07	0.46***	-0.15*	0.33***	--											
ATT 5	-0.26***	-0.18*	-0.30***	-0.27***	-0.24***	-0.25***	0.01	0.00	-0.26***	0.27***	-0.04	-0.09	--										
ATT 6	0.15**	0.01	0.20**	0.08	0.02	0.13	0.01	0.12	0.59***	-0.16*	0.35***	0.62***	-0.14	--									
ATT 7	0.09	-0.08	0.09	0.11	0.05	0.21**	-0.04	0.00	0.47***	-0.11	0.32***	0.57***	-0.15**	0.53***	--								
ATT 8	0.32***	0.16*	0.29***	0.30	0.27***	0.32***	0.05	0.17*	0.68***	-0.08	0.47***	0.36***	-0.19**	0.51***	0.37***	--							
ATT 9	-0.09	0.08	0.02	-0.02	0.00	-0.09	0.20**	0.12	-0.30***	0.32***	-0.24***	-0.29***	0.54***	-0.32***	-0.32***	-0.20**	--						
ATT 10	0.29***	0.18*	0.29***	0.27***	0.19**	0.32***	0.15*	0.18**	0.34***	-0.17*	0.21**	0.39***	-0.06	0.41***	0.35***	0.32***	-0.19**	--					
ATT 11	-0.10	0.00	-0.01	-0.02	-0.18**	-0.06	-0.03	-0.04	0.39***	-0.09	0.28***	0.47***	-0.02	0.46***	0.35***	0.34***	-0.26***	0.34***	--				
ATT 12	0.08	0.06	0.11	0.13	0.03	0.16*	0.07	0.11	0.33***	-0.06	0.38***	0.61***	0.00	0.46***	0.53***	0.26***	-0.31***	0.36***	0.43***	--			
ATT 13	0.12	-0.07	0.25***	-0.01	0.05	0.05	0.03	0.00	0.06	0.23**	0.07	0.00	0.25***	0.03	0.07	0.09	0.28***	-0.02	-0.10	0.02	--		
ATT 14	0.01	0.01	0.00	-0.03	0.14*	-0.01	-0.06	-0.03	0.33***	-0.09	0.11	0.45***	-0.01	0.48***	0.39***	0.30***	-0.19**	0.32***	0.72***	0.45***	0.00	--	
ATT 15	0.01	-0.08	0.06	-0.06	-0.01	-0.01	-0.08	-0.03	0.06	0.21**	0.12	-0.03	0.27***	-0.03	0.09	0.05	0.27***	-0.05	-0.17	-0.02	0.73***	-0.07	--
M	1.19	1.37	1.15	1.18	1.17	1.15	1.48	1.40	1.67	4.84	2.17	2.77	6.23	2.64	2.48	1.82	5.65	2.17	2.83	3.06	3.76	3.18	3.76
SD	0.75	0.90	0.65	0.64	0.68	0.65	0.91	0.85	1.12	1.72	1.60	1.60	1.32	1.80	1.53	1.30	1.56	1.32	1.62	1.65	1.70	1.82	1.65
Skewness	4.31	2.74	4.86	4.03	4.74	5.24	2.25	2.50	2.10	-0.78	1.34	0.49	-2.45	0.68	1.06	1.96	-1.47	1.06	0.61	0.35	0.03	0.43	-0.03
Kurtosis	19.00	7.54	23.96	16.98	24.11	29.05	5.42	6.45	4.42	-0.17	0.65	-0.93	6.09	-0.90	0.58	3.66	1.58	0.25	-0.54	-0.89	-0.79	-0.89	-0.71

Note: GSI = gathering and sharing sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. ATT 2, 5, and 9 were not reverse-coded in this table. Polychoric correlations were computed between GSI, IVH, OC, and CB items. Polyserial correlations are presented between the GSI, IVH, OC, and CB items and the ATT items. Pearson's correlations were computed for the ATT items. Correlations were computed using Mplus and significance values were computed using the *cor_to_p* function in the *correlation* R package (Makowski et al., 2019). * $p < .05$, ** $p < .01$, *** $p < .001$

Table 12

Confirmatory Factor Analysis Model Fit Information

Model	χ^2	*df*	RMSEA	CFI	SRMR	AIC	BIC
5-Factor Model	1,271.52***	935	.04 [.04, .05]	.98	.08	16,481.42†	17,242.17†
4-Factor Model	719.08***	554	.04 [.03, .05]	.99	.06	12,263.07†	12,857.66†

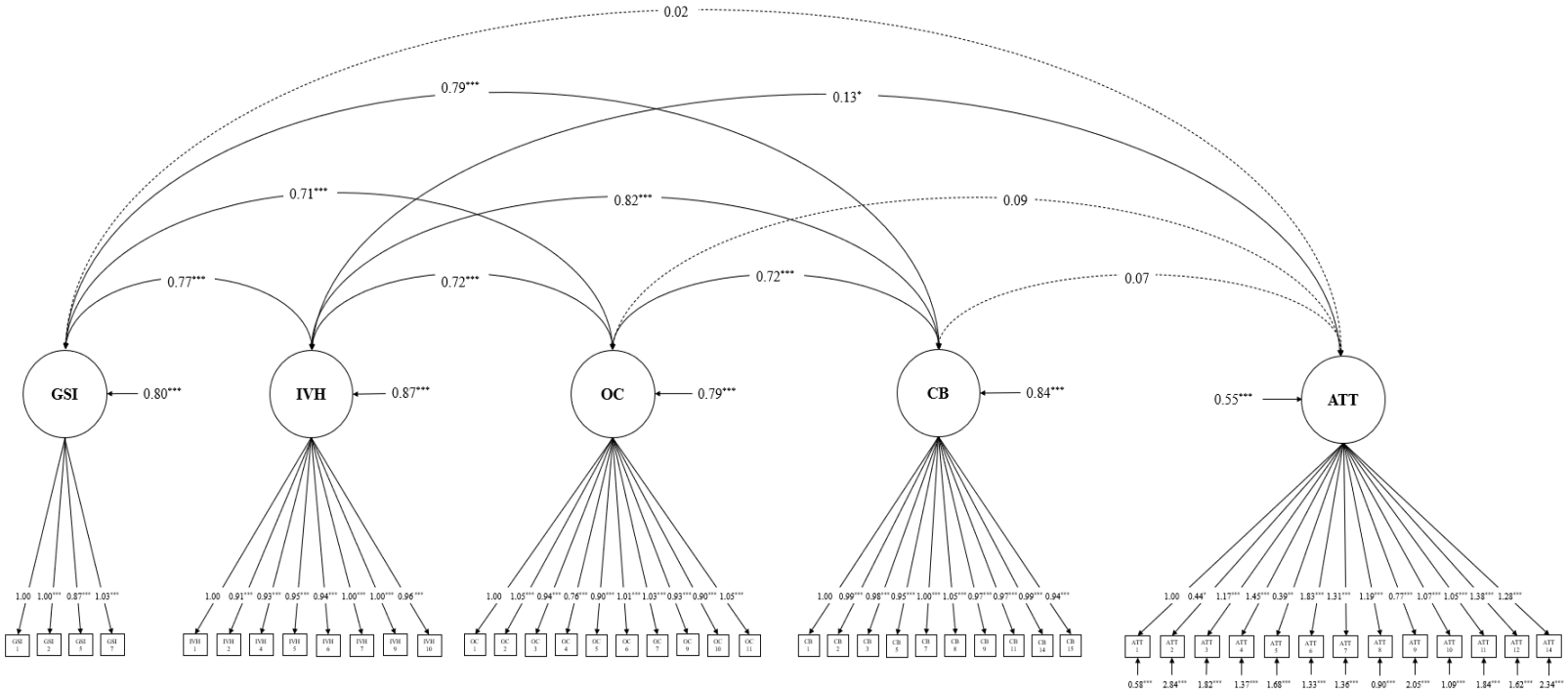
Note: 5-Factor Model = measurement model with five latent factors: gathering and sharing sexual information online (GSI), image and video-based harassment (IVH), offensive comments online (OC), coercive behaviors online (CB), and attitudes about cyber-sexual harassment (ATT); 4-Factor Model = measurement model with four latent factors: dyadic cyber-sexual harassment, cyber-sexually harassing behaviors that affects one's reputation, seriousness of cyber-sexual harassment, and cyber-sexual harassment victim-blaming behaviors. * $p < .05$; ** $p < .01$ *** $p < .001$; † These values were estimated using a robust maximum likelihood estimator.

variables. The scale factors for each of these ordinal items was set to 1, one indicator of each factor was fixed to 1, and the factor means were constrained to zero for identification. As shown in Table 12, the 5-factor model fit relatively well, $\chi^2(935) = 1271.52$, $p < .001$; *RMSEA* = .04 [90% *CI*: .04, .05]; *CFI* = .98. However, the 4-factor model also fit the data well, $\chi^2(554) = 719.08$, $p < .001$; *RMSEA* = .04 [90% *CI*: .03, .05]; *CFI* = .99. Once again, although the chi-square statistic for both models was significant, this fit index is sensitive to sample size and all other indices were within acceptable cut-offs (March et al., 1988). Therefore, given that both models showed adequate fit, no model modifications were performed. Based on a comparison of the BIC values from the 4-factor and 5-factor models, the 4-factor model appeared to fit the data significantly better; as a result, only parameter estimates from the 4-factor model will be discussed in greater detail.

As shown in Figure 5, all of the items on the dyadic CSH, CSH that affects one's reputation, seriousness of CSH, and CSH victim-blaming factors were significant positive indicators of their respective factors ($p < .001$). However, not all of the factors were

Figure 4

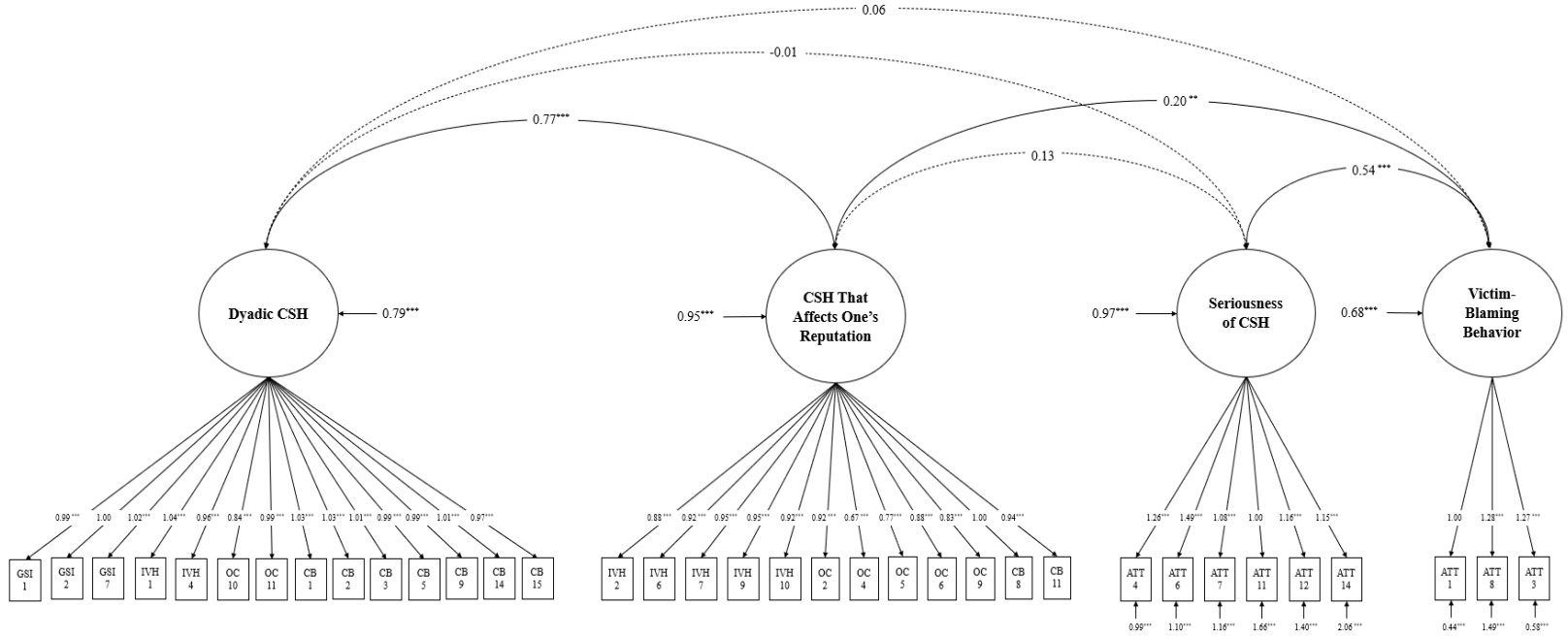
Path Diagram of the 5-Factor Confirmatory Factor Analysis Model (N = 199).



Note: GSI = gathering and sharing sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. ATT 2, 5, and 9 were reverse-coded. Values represented are unstandardized parameter estimates. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5

Path Diagram of the 4-Factor Confirmatory Factor Analysis Model (N = 201).



Note: GSI = gathering and sharing sexual information online; IVH = image and video-based harassment; OC = offensive comments online; CB = coercive behaviors online; ATT = attitudes about cyber-sexual harassment. Values represented are unstandardized parameter estimates. * $p < .05$, ** $p < .01$, *** $p < .001$

significantly correlated with one another. Whereas dyadic CSH and CSH that affects one's reputation were significantly positively correlated ($r = .77$, $p < .001$) and seriousness of CSH and CSH victim-blaming behaviors were positively correlated ($r = .54$, $p < .001$), the relation between CSH that affects one's reputation and CSH victim-blaming behaviors ($r = .20$, $p = .001$) was the only significant correlation between the CSH victimization experiences factors and the CSH attitudes factors.

Evaluating the thresholds for the ordinal variables (see Table A3 in Appendix A) revealed several items with lower thresholds compared to Study 2, suggesting that it was easier in Study 3 for individuals to endorse them (i.e., participants indicating they experienced the CSH behavior described in that item). Within the dyadic CSH behaviors factor, GSI 2 and CB 1 had the lowest threshold of endorsement compared to the other items on this factor. On the CSH behaviors that affect one's reputation factor, OC 5 had the lowest threshold. This might be explained by the content of the item (i.e., offensive comments posted publicly), which may be more common compared to threats of violence. The items on the CSH that affects one's reputation factor also had higher thresholds compared to the dyadic CSH behaviors factor, indicating, as a whole, these behaviors were harder to endorse.

The intercorrelations between the MCSHEA-V, online exposure, risky online behaviors, and previously developed measures of CSH were similar to those from Study 2 (see Table 13). Compared to Study 2, the correlations between dyadic CSH behaviors and CSH that affects one's reputation with the two previously developed CSH measures, while still positive and significant ($p < .001$), were larger, providing further evidence of

Table 13

Bivariate Correlations of Study Variables (N = 207)

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Dyadic CSH Behaviors	1.58	0.82	.96										
2. CSH that Affect One's Reputation	1.34	0.61	.79***	.92									
3. Seriousness of CSH	2.83	1.28	-.03	.06	.86								
4. Victim-Blaming Behaviors	1.88	1.10	.07	.14*	.54***	.74							
5. TFSV-V	24.89	4.47	.60***	.56***	.13	-.08	.89						
6. CSH Scale	1.78	0.69	.63***	.57***	-.06	.05	.61***	.92					
7. Online Exposure	43.61	8.38	.35***	.35***	.09	.13	.15*	.20**	.77				
9. ROL-SNS	2.45	1.05	.16*	.22**	.05	-.09	.13	.15*	.34***	.91			
10. ROL-LEI	2.49	1.11	.21**	.12	.15*	.09	.10	.07	.30***	.20**	.61		
11. ROL-VOC	1.64	0.79	.23**	.26***	.11	.09	.06	.07	.33***	.21***	.33***	.76	
12. Cyberbullying Victimization	1.35	0.66	.53**	.70***	.02	.12	.36***	.29***	.36***	.33***	.22**	.31***	.94

Note. TFSV-V = Technology-Facilitated Sexual Violence Victimization Scale; CSH = Cyber-sexual Harassment Scale; ROL-SNS = Risky Online Lifestyle Social Networking Site Behaviors; ROL-LEI = Risky Online Lifestyle Leisure Behaviors; ROL-VOC = Risky Online Lifestyle Vocational Behaviors. Cronbach's alpha values are on the diagonal; * $p < .05$; ** $p < .01$ *** $p < .001$.

convergent validity. However, the correlation of dyadic CSH behaviors (r = .53, p < .001) and CSH that affects one's reputation (r = .70, p <.001) with cyberbullying victimization were still high and even stronger in Study 3, once again failing to provide evidence of divergent validity. There were also consistent relations of dyadic CSH and CSH that affects one's reputation with online exposure and risky online behaviors. These findings not only corroborate the results of Study 2, but also align with previous studies indicating that these variables are risk factors for CSH (Baumgartner et al., 2010; Choi & Lee, 2017). As with Study 2, the MCSHEA-V subscales focusing on CSH attitudes were not significantly correlated with the previously developed measures of CSH, online exposure and risky online behaviors, or cyberbullying. This finding is beneficial, in that it indicates that individuals' perceptions of the seriousness of CSH and victim-blaming beliefs are not related to their previous victimization experiences. Therefore, this aspect of the scale can be utilized regardless of whether someone has been victimized. Lastly, Cronbach's alpha was also calculated for each subscale of the MCSHEA-V, as shown in the diagonal of Table 13. All of the alphas were high (i.e., > .70), indicating that each subscale demonstrated adequate internal reliability.

Finally, a series of independent samples t-tests were performed that indicated a number of significant gender differences on the MCSHEA-V. Specifically, gender differences emerged in dyadic CSH victimization, t(180.28) = -2.30, p = .023, with women (M = 1.70, SD = 0.91) reporting significantly more dyadic CSH victimization in the past year compared to men (M = 1.70, SD = 0.91). There were also significant gender differences in perceptions of the seriousness of CSH, t(183.18) = 4.96, p < .001, and CSH

victim-blaming behaviors, $t(169.22) = 3.86$, $p < .001$. Unsurprisingly, men ($M = 3.28$, $SD = 1.34$) reported that CSH was less serious compared to women ($M = 2.42$, $SD = 1.05$). Men ($M = 2.18$, $SD = 1.26$) also reported more CSH victim-blaming attitudes compared to women ($M = 1.59$, $SD = 0.82$). There were no significant gender differences in experiencing CSH that affects one's reputation, $t(194) = -0.32$, $p = .749$.

Discussion

The goal of Study 3 was to compare the originally hypothesized 5-factor structure of the MCSHEA-V with the 4-factor structure identified through the exploratory factor analyses in Study 2. While both models fit the data relatively well, the 4-factor model fit the data significantly better. Therefore, the final version of the MCSHEA-V, as defined in this research, is comprised of four factors, two of which measure CSH victimization experiences and two of which assess CSH attitudes. The victimization experiences captured by the MCSHEA-V represent two distinct types of interactions with a perpetrator in which several forms of CSH can be experienced: (1) dyadic CSH behaviors that involve direct interactions between the victim and perpetrator culminating in repeated requests for sexual information, nude or semi-nude images, and inappropriate comments; and (2) CSH behaviors that affect one's reputation, which involve interactions between the victim and perpetrator that might be witnessed or shared by others culminating in threats to share conversations or harm the victim's friends and family, the sharing or posting of nude or semi-nude images, or sexually offensive posts on the victim's social media page. While the 5-factor model was hypothesized to show superior model fit, the 4-factor structure, in fact, shares some similarities with the structure of the

CSH scale (Ritter, 2014), which has factors capturing passive and active forms of CSH. To some extent, it might be argued that the active CSH factor aligns with the direct interactions between the victim and the perpetrator captured by the MCSHEA-V's dyadic CSH factor, while the passive CSH factor aligns with the CSH interactions in public online spaces captured by the MCSHEA-V's reputational factor. Because no previous scale developed to measure victimization in general online spaces utilizes a factor structure that captures types of interactions with a perpetrator of CSH, the MCSHEA-V may be especially beneficial for building a deeper understanding of CSH victimization. Also, as previously mentioned, because the development of new technologies (e.g., virtual and augmented reality; deep fake technology) might lead to new types of CSH victimization, measures that focus on the types of interactions between the victim and the perpetrator may be particularly versatile.

Analyses were also performed to determine the relation between the MCSHEA-V and other currently developed measures of CSH, CSH risk factors (e.g., online exposure and risky online behaviors), and more general forms of online harassment, such as cyberbullying victimization. Bivariate correlations between the CSH experience factors of the MCHEA-V and the TFSV-V and CSH scales were strong and positive, indicating these scales are capturing some overlapping aspects of CSH. As expected, these measures were not correlated with perceptions of the seriousness of CSH or victim-blaming behaviors, as they only tap into victimization experiences (and not CSH attitudes). Furthermore, these findings corroborate previous research by indicating that online exposure and engaging in risky behavior online are associated with an increased

likelihood of experiencing victimization online (Choi & Lee, 2017; Holt et al., 2016). Unfortunately, the relation between the MCSHEA-V and cyberbullying victimization, while smaller than the relationship with measures of CSH, was still high, suggesting that CSH may be more similar to cyberbullying than expected.

As hypothesized, women reported higher levels of dyadic CSH experiences compared to men. While no study has evaluated gender differences in dyadic CSH, previous research has found that women experience the behaviors captured in this subscale, such as offensive comments (Megarry, 2014; Meyer & Cukier, 2006), receiving unwanted sexual nude images (Branch et al., 2017; Griffiths, 2000), and requests for nude photos and videos (Branch et al., 2017) at higher rates than men. However, there were no gender differences in experiencing CSH behaviors that affect one's reputation, suggesting that the threats of sharing or posting sexual information, sexual images or videos, and threats of self-harm or harm to the victim's friends and family are more universally experienced by victims of CSH regardless of gender. There were significant gender differences in CSH attitudes, such that men indicated CSH was less serious and endorsed more victim-blaming beliefs compared to women. Given that women are more likely to experience CSH (Barak, 2005; O'Conner et al., 2018; Powell & Henry 2016; Schenk, 2008), it is unsurprising that men considered CSH to be less serious. This is particularly concerning as previous research has found that those who view sexually harassing behaviors as less serious and more acceptable in online environments report greater intentions to perpetrate CSH in the future (Ritter, 2014). Additionally, because the items for the CSH victim-blaming factor were derived from the Acceptance of Modern

Myths about Sexual Aggression (Gerger et al., 2007) and the Perceptions of Sexting and Forwarding Private Pictures (Branch et al., 2017) scales, it is less surprising that men reported greater endorsement of victim-blaming beliefs. Previous research using these measures has, in fact, found that men report higher levels of victim-blaming beliefs (Hantzi et al., 2015; Megías et al., 2017).

Limitations

As with Study 2, Study 3 was limited by its sample size and relatively low prevalence of CSH experiences within the sample. Given the complexity of the models being tested, a larger sample size was needed to achieve adequate statistical power. According to the *N:q* ratio (Klein, 2015), for the most complex model (i.e., the 5-factor model), a sample size of at least 1,080 would be needed for this study. Therefore, with a sample of $N = 207$, Study 3 was not sufficiently powered to test these confirmatory factor analysis models. Further, this study sought to increase the reported prevalence of CSH experiences by expanding the time frame in which the victimization had to occur (from the past six months in Study 2 to the past year in Study 3), however, participants still reported a relatively low prevalence of CSH victimization. Whereas the thresholds of the victimization experiences did show an improvement in Study 3, this modification did little to improve the detection of the prevalence of more severe forms of CSH, including threats of violence. Given that previous studies have utilized a younger demographic (i.e., 18-24 years of age; Buchannan & Mahoney, 2021; Schenk, 2008), it is possible that the broader age demographic in this study might experience less CSH victimization, in part, because older adults are less reliant on electronic forms of communication (Pew Research

Center, 2019). Lastly, although all participants in this study reported experiencing at least one form of CSH in the prescreening, participants might have felt uncomfortable reporting other forms of CSH victimization assessed in the full MCSHEA-V scale. Indeed, the types of victimization experiences assessed in the prescreening were relatively mild compared to a number of the items in the full scale (e.g., they did not involve more severe coercion, such as threats of violence).

CHAPTER 5

GENERAL DISCUSSION

CSH is a serious issue that is increasing in prevalence as the use of information communication technology increases. Currently published research has reported varying degrees of prevalence in the general population, ranging from 1.1% to 84.3% of individuals being victims of CSH (Patel & Roesch, 2020; Snaychuk & O'Neill, 2020). Yet, there are relatively few validated scales that measure CSH victimization, which has likely contributed to inconsistent findings on its prevalence (Patel & Roesch, 2020). Further, most of the current research has been performed on adolescents, resulting in a limited understanding of the prevalence and impact of CSH in adults (Finkelhor et al., 2000; Mitchell et al., 2008; Patchin & Hinduja, 2018; Taylor et al., 2020). Therefore, across three studies, the present research sought to develop and psychometrically validate the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V). The MCSHEA-V was designed to capture four distinct forms of CSH victimization experienced by adults in general online settings (i.e., gathering sexual information online, image and video-based harassment, offensive comments online, coercive behaviors online) as well as attitudes regarding the seriousness and acceptability of CSH behaviors. By evaluating current literature on CSH and related phenomena (e.g., technology-facilitated sexual violence), an initial pool of 62 items was developed to tap into each of these five components.

In Study 1, the content validity and item adequacy of the MCSHEA-V was evaluated. By performing content validity analyses, seven items were removed and 34

items were reworded to improve clarity. It also became apparent that the items on the coercive behaviors online subscale had considerable conceptual overlap with the other subscales. As previous research on sexual coercion online focuses on sexting which can contain sexual images and offensive language and comments (Gasso et al., 2021; Klettke et al., 2014), it is understandable that a conceptual link was found between coercion items and the items developed for other subscales. As subsequent exploratory and confirmatory factor analyses in Study 2 and 3 indicated, having a factor specifically tied to coercive behaviors online was not ideal, as the coercive behavior items tended to evenly distribute across the dyadic and reputational CSH factors. Further, within the development of the OSHS, Buchanan and Mahoney (2021) found that a factor focusing solely on coercive behaviors did not emerge in their analyses. While the TFSV-V is the only currently developed CSH measure that has a distinct coercive behaviors subscale, Powell and Henry (2016) did not perform factor analyses on their items so it is possible that their sexual aggression and sexual coercion subscale might not emerge as a distinct factor when tested. Therefore, treating coercion as a distinct part of CSH may not be accurate, as CSH behaviors seem to be inherently coercive.

Overall, the results of Study 2 and 3 indicated that while the initial 5-factor structure capturing four types of CSH experiences and CSH attitudes fit the data well, a 4-factor structure capturing two dimensions of CSH experiences (dyadic CSH behaviors and CSH behaviors that affect one's reputation) and two dimensions of CSH attitudes (perceptions of the seriousness of CSH and CSH victim-blaming) was a better fit. The initial 5-factor structure was more in line with the design of the TFSV-V (Powell &

Henry, 2016) and the OSHS (Buchanan & Mahoney, 2021), as these scales and the hypothesized factor structure created distinctions between types of CSH victimization. Because previous research has almost exclusively focused on specific modes of CSH, such as image and video-based harassment (Cripps & Stermac, 2018; O'Conner et al., 2018) or sexting behaviors (Gasso et al., 2021; Klettke et al., 2014), the clear distinctions in types of CSH measured by the existing scales might be a byproduct of this narrower focus. In contrast, the 4-factor structure was more consistent with the CSH scale (Ritter, 2014), which distinguishes different types of *interactions* between the victim and perpetrator in various CSH behaviors. A structure that is more focused on the interactions between the victim and the perpetrator, as shown in the MCSHEA-V and the CSH scale (Ritter, 2014), may be especially beneficial for developing a more holistic understanding of CSH.

As hypothesized, women reported experiencing higher levels of dyadic cyber-sexual harassment and considered CSH to be more serious compared to men. However, men held more CSH victim-blaming beliefs compared to women. While these findings are certainly important and can shed light on how men and women differ in their experiences of and attitudes about CSH, measurement invariance was not assessed for the MCSHEA-V. The lack of this testing limits the ability to determine whether the current factor structure is similar for both men and women and whether the latent constructs of the subscales are equivalent across these groups (Putnick & Bornstein, 2016). Future research should evaluate the potential measurement invariance not only between men and women, but also between other groups that previous research has shown to be distinctly

vulnerable to and impacted by CSH (e.g., members of the LGBTQ community; Choi & Lee, 2017; Ybarra & Mitchell, 2008). One crucial direction for future research, for example, would be to investigate whether these factor structures hold across members of differing sexual orientations and gender identities.

Furthermore, the results of Studies 2 and 3 indicated that the subscales demonstrated good reliability and internal consistency. Correlations between the MCSHEA-V and other scales measuring CSH were moderately to strongly positive, providing evidence of convergent validity. Evidence of divergent validity was less clear, as the MCSHEA-V victimization experiences subscales had moderately high correlations with cyberbullying victimization—a construct that was expected to be moderately correlated but also distinct from CSH. Future research should more fully investigate if CSH, as measured by the MCSHEA-V, is subsumed under a broader construct of online harassment (along with cyberbullying victimization) or if CSH is truly distinct from other forms of online victimization. It will also be beneficial to evaluate the divergent validity with traditional forms of SH. There has been limited research aimed at understanding the relation between traditional SH and CSH (Hill & Kearl, 2011); thus, evaluating the relation of the MCSHEA-V to measures of traditional SH, such as the SEQ (Fitzgerald et al., 1999) and the Sexual Harassment Scale (Vogt et al., 2013), would be ideal.

Another future direction for research entails the development of a short form of the MCSHEA-V. The MCSHEA-V, comprised of 35 items, is the longest of the existing CSH measures. A large number of items can lead to a higher cognitive load for participants completing the scale and a lower likelihood that participants remain engaged

when completing multiple measures (DeVellis, 2017). Additionally, the MCSHEA-V can be translated into other languages to facilitate investigations of cross-cultural differences in the experiences of and attitudes about CSH, as well as whether the scale retains a similar factor structure. For example, some of the previous research on CSH was performed in South Korea, Egypt, and Australia, but it is unclear if individuals in these countries have different experiences online compared to those of individuals in the U.S. (Arafa et. al, 2018; Choi et al., 2017; Powell & Henry, 2016).

Limitations

Each of the studies had limitations that might have affected the reliability of the results. In Study 1, given the potential misinterpretation of the response scale, it was impossible to determine the relevance of the CSH attitudes items to a measure of CSH. As a result, it is possible that these items could have required more revision to capture all relevant attitudes surrounding CSH. Studies 2 and 3 were limited by relatively small sample sizes. Whereas guidelines for adequately powering factor analyses can vary (Cattell, 1978; Comrey & Lee, 1992; Guilford, 1954), the sample sizes in Studies 2 and 3 did not meet the required sample size based on the widely used *N:q* ratio (Klein, 2015). The smaller sample sizes could have impacted the reliability of the factor loadings, which may also have been exacerbated by the skewed distribution of the data, as research performed with WLSMV estimators tend to require larger sample sizes. Future research should seek to confirm the consistency of these findings with a larger sample.

The low prevalence of CSH within the samples for Studies 2 and 3 is also a concern. The low prevalence of CSH experiences contributed to considerable decreases

in sample size in both studies and also likely played a role in the highly skewed data distributions. Previous research has indicated that younger individuals are at greater risk of experiencing CSH due to their increased exposure and connectivity to online technologies (Office of Communications, 2020; Mitchell et al., 2008; Ybarra et al., 2015). Additionally, previous work by Ritter (2014) and Buchanan and Mahoney (2021) used a younger demographic (i.e., college students) for their scale development. Therefore, the wider range of ages included in Studies 2 and 3 might have been a contributing factor to the low prevalence of CSH observed in the present research. Additionally, in both studies, the sample was predominantly White and heterosexual. Given that research by Ybarra and colleagues (2015) found that members of the LGBTQ community often experience CSH at higher rates, for instance, it is possible that the factor structure in these studies would not be retained with more diverse samples of online users. Evaluating the psychometric properties of the MCSHEA-V with a more diverse sample would be beneficial for improving the generalizability of this research.

Lastly, it is also possible that individuals might have felt uncomfortable sharing their victimization experiences when completing the MCSHEA-V. Previous research has found that both men and women often fail to report their victimization experiences because they do not want to appear weak (Association of Alberta Sexual Assault Services, 2022; Cesario, 2020), they blame themselves (Cortina & Berdahl, 2008; Poteat & Espelage, 2007; Wright & Fitzgerald, 2007), or because they fear retaliation for sharing their experiences (Bonnes, 2017; Karami et al., 2019). While effort was taken to inform participants that personally identifying information (i.e., IP addresses, geographic

locations) would not be recorded and that victimization experiences can happen to anyone, participants still may have been reluctant to report their experiences when completing the MCSHEA-V.

Conclusion

As the world becomes increasingly connected and reliant on online technology, the development of scales designed to measure SH online is imperative. The MCSHEA-V improves upon previously developed measures through the use of gender and sexuality inclusive language, the inclusion of diverse victimization experiences, and a novel factor structure that captures the interactions between the perpetrator and victim. While work should still be done to evaluate the psychometric properties of the MCSHEA-V, it has the potential to become an accepted measure for testing this phenomenon and provide new understandings of CSH victimization.

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APPENDIX A

ADDITIONAL TABLES FOR STUDY 2 AND 3

Table A1

Item Thresholds for the Ordinal Variables from Study 2 (N=295)

	Response Thresholds					
Item	1	2	3	4	5	6
GSI 1	0.52***	1.12***	1.47***	1.93***	2.47***	--
GSI 2	0.43***	1.04***	1.31***	1.74***	2.47***	2.71***
GSI 3	0.41***	0.94***	1.29***	1.61***	2.21***	2.47***
GSI 5	0.97***	1.47***	1.61***	2.12***	2.32***	2.47***
GSI 7	0.18*	0.85***	1.13***	1.61***	2.05***	2.47***
IVH 1	0.62***	1.25***	1.61***	1.87***	2.32***	2.71***
IVH 2	1.35***	1.64***	1.78***	2.05***	2.47***	2.71***
IVH 3	1.49***	1.87***	2.05***	2.32***	2.71***	--
IVH 4	0.36***	0.97***	1.40***	1.61***	1.93***	2.32***
IVH 5	1.33***	1.78***	2.12***	2.32***	2.71***	--
IVH 6	1.58***	1.98***	2.21***	2.71***	--	--
IVH 7	1.58***	1.98***	2.12***	2.71***	--	--
IVH 9	1.67***	2.05***	2.32***	2.71***	--	--
IVH 10	1.17***	1.61***	1.93***	2.12***	2.71***	--
OC 1	0.67***	1.18***	1.44***	1.87***	2.05***	2.71***
OC 2	0.85***	1.47***	1.71***	2.05***	2.71***	--
OC 3	0.25**	0.81***	1.15***	1.74***	2.12***	2.71***
OC 4	0.02	0.54***	0.96***	1.40***	2.05***	2.71***
OC 5	0.94***	1.35***	1.49***	1.78***	2.05***	2.47***
OC 6	1.12***	1.61***	1.98***	2.21***	--	--
OC 7	1.37***	1.71***	2.05***	2.47***	--	--
OC 9	1.20***	1.71***	1.93***	2.32***	--	--
OC 10	-0.17**	0.41***	0.79***	1.18***	1.67***	--
OC 11	0.58***	1.12***	1.44***	1.67***	2.21***	2.71***
CB 1	0.47***	1.03***	1.44***	1.71***	2.05***	2.47***
CB 2	1.13***	1.44***	1.78***	2.21***	2.71***	--
CB 3	1.13***	1.58***	1.74***	2.05***	2.47***	2.71***
CB 4	1.44***	1.83***	2.12***	2.71***	--	--
CB 5	0.58***	1.12***	1.40***	1.87***	2.21***	2.71**
CB 6	1.47***	1.83***	2.12***	2.21***	2.32***	2.71***

CB 7	1.25***	1.61***	1.87***	2.32***	2.47***	--
CB 8	1.67***	1.93***	2.47***	--	--	--
CB 9	1.12***	1.44***	1.74***	2.21***	2.47***	--
CB 11	1.58***	1.93***	2.21***	--	--	--
CB 14	0.57***	1.20***	1.44***	1.87***	--	--
CB 15	0.62***	1.29***	1.47***	1.83***	2.47***	--

Note: Thresholds are one less than the number of response categories utilized by the participants. Blank values are due to the lack of responses in additional response categories. These thresholds are the same for the confirmatory and exploratory factor analysis models. *$p < .05$, **$p < .01$, ***$p < .001$

Table A2

Indicators of the Appropriateness of Exploratory Factor Analysis from Study 2

Model	KMO	Bartlett's Test of Sphericity	Determinant	Item removed
CSH Victimization				
1	0.75	$X^2\,(630) = 40736.56^{***}$	5.52e-63	OC 7†
2	0.74	$X^2\,(595) = 39695.50^{***}$	2.54e-61	OC 1††
3	0.75	$X^2\,(561) = 39066.40^{***}$	2.72e-60	CB 7†
4	0.71	$X^2\,(528) = 35859.85^{***}$	2.44e-55	GSI 5††
5	0.71	$X^2\,(496) = 35243.02^{***}$	2.45e-54	OC 3†
6	0.72	$X^2\,(465) = 34771.65^{***}$	1.47e-53	IVH 5†
7	0.72	$X^2\,(435) = 34247.48^{***}$	1.06e-52	OC 6†
8	0.68	$X^2\,(406) = 30336.67^{***}$	1.03e-46	
Attitudes About CSH				
1	0.87	$X^2\,(78) = 2503.48^{***}$	0.005	ATT 2†††
2	0.87	$X^2\,(66) = 1465.42^{***}$	0.006	ATT 10†††
3	0.86	$X^2\,(55) = 1359.10^{***}$	0.009	ATT 5†††
4	0.87	$X^2\,(45) = 1275.38^{***}$	0.012	ATT 9†††
5	0.86	$X^2\,(36) = 1215.84^{***}$	0.015	

Note: KMO = Kaiser-Meyer-Olkin Test of Sampling Adequacy; GSI = Gathering and Sharing of Sexual Information Online; IVH = Image and Video-based Harassment; OC = Offensive Comments; CB = Coercive Behaviors; ATT = Attitudes about CSH. * $p < .05$, ** $p < .01$, *** $p < .001$, † item removed due to no loadings higher than .40 on any factor, †† item removed due to cross-loading(s) higher than .40 on the non-dominant factor, ††† item removed due to communalities less than .40. Because removing item OC 6 caused the KMO to drop below acceptable levels, the factor structure for Model 8 was not interpreted.

Table A3

Item Thresholds for the Ordinal Variables in the 4-Factor Model from Study 3 (N=201)

	Response Thresholds				
Item	1	2	3	4	5
GSI 1	0.36***	0.94***	1.34***	1.88***	2.33***
GSI 2	0.28**	0.90***	1.48***	1.96***	2.58***
GSI 7	0.16	0.66***	1.38***	2.17***	2.58***
IVH 1	0.54***	1.08***	1.34***	1.88***	--
IVH 2	1.00***	1.52***	1.75***	2.06***	2.58***
IVH 4	0.36***	0.86***	1.44***	2.17***	--
IVH 6	1.34***	1.65***	2.33***	2.58***	--
IVH 7	1.26***	1.65***	1.81***	2.58***	--
IVH 9	1.44***	1.75***	2.17***	2.33***	--
IVH 10	1.13***	1.52***	1.96***	2.33***	--
OC 2	0.79***	1.08***	1.48***	1.88***	2.17***
OC 4	0.06	0.49***	1.20***	1.44***	1.96***
OC 5	0.74***	1.15***	1.48***	1.96***	2.33***
OC 6	0.76***	1.34***	1.81***	2.17***	2.58***
OC 9	0.85***	1.44***	1.75***	2.06***	2.58***
OC 10	-0.07	0.35***	1.02***	1.48***	1.88***
OC 11	0.66***	1.00***	1.38***	1.96***	2.33***
CB 1	0.31**	0.98***	1.38***	1.88***	2.58***
CB 2	0.92***	1.44***	1.65***	2.33***	--
CB 3	0.83***	1.34***	1.70***	1.96***	2.33***
CB 5	0.57***	1.06***	1.65***	1.96***	2.33***
CB 8	1.41***	1.56***	1.81***	2.06***	2.58***
CB 9	0.85***	1.23***	1.65***	2.06***	2.58***
CB 11	1.28***	1.60***	1.96***	2.33***	--
CB 14	0.56***	1.15***	1.70***	2.06***	2.58***
CB 15	0.71***	1.31***	1.56***	2.58***	--

Note: Thresholds are one less than the number of response categories utilized by the participants. Blank values are due to the lack of responses in additional response categories. * $p < .05$, ** $p < .01$, *** $p < .001$.

APPENDIX B

IRB APPROVAL

ASU Knowledge Enterprise Development

APPROVAL: EXPEDITED REVIEW

Deborah Hall
NCIAS: Social and Behavioral Sciences, School of (SSBS)
602/543-2832
d.hall@asu.edu

Dear Deborah Hall:

On 3/31/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	MCSHEA-V: Developing and Validating a New Measure of Cyber-Sexual Harassment
Investigator:	Deborah Hall
IRB ID:	STUDY00013706
Category of review:	
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Informed_Consent_Study_1, Category: Consent Form; • Informed_Consent_Study_2, Category: Consent Form; • MCSHEA-V IRB Protocol , Category: IRB Protocol; • Recruitment_Methods_3_25_2021, Category: Recruitment Materials; • Supplementary_Materials_Study_1, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Supplementary_Materials_Study_2, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

The IRB approved the protocol from 3/31/2021 to 3/30/2023 inclusive. Three weeks before 3/30/2023 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

ASU Knowledge Enterprise Development

APPROVAL: MODIFICATION

Deborah Hall
NCIAS: Social and Behavioral Sciences, School of (SSBS)
602/543-2832
d.hall@asu.edu

Dear Deborah Hall:

On 10/14/2021 the ASU IRB reviewed the following protocol:

Type of Review:	Modification / Update
Title:	MCSHEA-V: Developing and Validating a New Measure of Cyber-Sexual Harassment
Investigator:	Deborah Hall
IRB ID:	STUDY00013706
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• (UPDATED) Informed_Consent_Study_2, Category: Consent Form; • (UPDATED) MCSHEA-V IRB Protocol , Category: IRB Protocol; • (UPDATED) Supplementary_Materials_Study_2, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

The IRB approved the modification.

When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

REMINDER - All in-person interactions with human subjects require the completion of the ASU Daily Health Check by the ASU members prior to the interaction and the use of

ASU Knowledge Enterprise Development

APPROVAL: EXPEDITED REVIEW

Deborah Hall
NCIAS: Social and Behavioral Sciences, School of (SSBS)
602/543-2832
d.hall@asu.edu

Dear Deborah Hall:

On 4/12/2022 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Sexual Harassment in the Digital World: Developing and Validating a New Measure of Cyber-Sexual Harassment Part 2
Investigator:	Deborah Hall
IRB ID:	STUDY00015822
Category of review:	
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Informed_Consent_Study_1, Category: Consent Form; • Informed_Consent_Study_2, Category: Consent Form; • MCSHEA-V IRB Protocol - Part 2, Category: IRB Protocol; • Recruitment_Methods_4_10_2022, Category: Recruitment Materials; • Supporting Documents Study 1, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Supporting Documents Study 2, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

APPENDIX C

MATERIALS

Study 1

Dear Participant:

We are researchers in the School of Social & Behavioral Sciences at Arizona State University.

We are conducting research to develop a new measure of cyber-sexual harassment victimization for use in a general online environment. We are inviting your participation, which will involve answering questions about the relevancy and adequacy of scale items included in an initial version of the measure, as well as providing some basic demographic information.

This is an online study that takes approximately 15-20 minutes to complete.
Your participation in this study is voluntary. You can skip questions if you wish. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. You must be 18 years old or older, speak English, and be a member of the MS Psychology program (faculty or graduate student) or a member of the Resilience in Social Environments Initiative (RISE) to participate in this study.

Although there is no direct benefit of participating in this study, there is the potential for you to gain a better understanding of the process of psychological scale development. There might be some discomfort due to the topic of cyber-sexual harassment. However, you will not be asked to reflect on your personal experiences or attitudes regarding cyber-sexual harassment.

The responses you provide in this study will be anonymous—that is, the researchers can in no way link the responses you provide in the study to any personally identifying information including your computer IP address or geographic location.
The results of this study may be used in reports, presentations, or publications but your name will not be known. All data collected in this study will be reported in aggregate form.

If you have any questions concerning this research study, please contact the research team at d.hall@asu.edu / (602) 543-2382. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board at Arizona State University, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Deborah L. Hall, Ph.D.
Brittany Wheeler, B.A.

Evaluation of Item Relevancy for Study 1:

Dear Colleagues:

I am seeking your help in establishing the initial content validity of the Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V). Cyber-sexual harassment is defined in this research as unwelcome conduct of a sexual nature performed through electronic technology including unwanted and repeated sexual advances, persistent requests for sexual favors and information, negative and derogatory sexual messages and comments, and the unauthorized sharing of personal or sexual images and videos leading to negative psychological outcomes and diminished wellbeing. The scale is designed to measure how often cyber-sexual harassment experiences have occurred within the past 6 months using a 6-point scale ranging from *every day* to *never*. Detailed below is the initial pool of items that were developed from a thorough review of sexual harassment, online harassment, and technology-facilitated sexual violence literature. You will **not** be asked to fill out the survey based on your experiences with cyber-sexual harassment.

Please indicate your perceived relevance of each item to the overall construct of cyber-sexual harassment from *not relevant* to *highly relevant.*

Response scale: *not relevant* (1)*, somewhat relevant* (2)*, quite relevant* (3)*, highly relevant* (4)

1. Sexually harassed you online.
2. Asked you to share personal information (e.g., full name, address, age) about yourself when you did not want to?
3. Asked you to share sexual information about yourself when you did not want to?
4. Tried to get you to talk about sexual topics when you did not want to?
5. Repeatedly tried to ask sexual questions after you told them to stop?
6. Shared personal information with others online without your consent?
7. Shared sexual information about you with others online without your consent?
8. Asked you to share information about your sexual orientation when you did not want to?
9. Sent you excessively disclosive messages (e.g., inappropriately giving private information about his/her life, body, family, hobbies, sexual experiences, or fantasies, etc.)?
10. Asked you to send photos or videos of yourself?
11. Asked you to send nude or semi-nude photos or videos of yourself?
12. Shared a nude or semi-nude photo or video of you online without your consent?
13. Shared a nude or semi-nude photo or video of you with their friends without your consent?

14. Sent you a nude or semi-nude photo or video of themselves without you asking?
15. Sent you pornographic photos or videos of other people without you asking?
16. Taken nude or semi-nude photos or videos without your permission?
17. Used photoshop to alter your photos in a sexual way?
18. Edited a video of someone else performing sexual acts to look like you (i.e., deepfake)?
19. Posted sexual photos or videos on your social media profile?
20. Tagged you in a sexual photo or video?
21. Called you names that made you feel uncomfortable?
22. Said offensive things about how you look, your body, or your sex life in a private/direct message?
23. Said offensive things about how you look, your body, or your sex life in a public post/comment?
24. Told you offensive, dirty stories or jokes through instant/text messaging, email, or social networking sites?
25. Made offensive, dirty remarks about your gender in general (i.e., all women are whores, all men are pigs)?
26. Called you a gay or lesbian as an insult in a private/direct message?
27. Called you gay or lesbian as an insult in a public post/comment?
28. Left an offensive, dirty comment on your social media profile?
29. Spread rumors about your sex life online?
30. Spread rumors about your sexuality online?
31. Tagged you in an inappropriate/sexual post?
32. Used sexual nicknames when talking with you (i.e., daddy, baby, sugar)?
33. Sent you excessively "needy" or demanding messages (e.g., pressuring to see you, assertively requesting you go out on a date, arguing with you to give him/her "another chance", etc.)?
34. Sent you tokens of their affection (e.g., poetry, songs, electronic greeting cards, praise, etc.) when you did not want them to?
35. Pressured you to share sexual images of yourself to show your affection (i.e., "If you loved me you would do it?")
36. Threatened to share conversations or photos with friends and family if you did not perform a sexual act online?
37. Bribed you to conduct sexual acts (e.g., offering to send you money if you send him/her sexual pictures)?
38. Made you feel worried or threatened because someone was bothering you online?
39. Made promises to reward you if you performed a sexual act online?
40. Threatened to reveal your sexual orientation if you did not perform a sexual act online?

41. Sent you sexually violent threats (i.e., rape threats, threatening sexual assault)?
42. Threatened to share personal information about you online if you did not perform a sexual act online?
43. Blackmailed you to continue to perform sexual acts online?
44. Repeatedly requested a romantic or sexual relationship with you even though you let them know you were not interested?
45. Sent you threatening messages online (e.g., suggesting harming you, your property, family, friends, etc.) if you did not develop a relationship with them?
46. Asked you to do something sexual online when you did not want to?
47. Been threatened online because of the way you look or act online?
48. Asked you to engage in "cybersex"?

In addition to experiences, the scale will also measure attitudes towards cyber-sexual harassment by having individuals indicate their level of agreement using a 7-point scale ranging from *strongly disagree* to *strongly agree.* You will **not** be asked to fill out the survey based on your attitudes towards cyber-sexual harassment.

Please indicate your perceived relevance of each item to the overall construct of cyber-sexual harassment attitudes from *not relevant* to *highly relevant.*

Response scale: *not relevant* (1)*, somewhat relevant* (2)*, quite relevant* (3)*, highly relevant* (4)

1. People who get sexually harassed online must have done something to deserve it.
2. I would tell someone if I felt sexually harassed online.
3. People who send nude or semi-nude pictures over the internet or cell phone deserve it if the pictures are sent to other people.
4. If they don't go too far, suggestive remarks simply tell one they are attractive.
5. It is disturbing for a person to be forced into a romantic relationship.
6. An attractive person should expect sexual advances and learn how to handle them.
7. A lot of activities people call sexual harassment online are just normal flirtation.
8. Sexual harassment online is a serious social problem.
9. Others around me have shared sexual images of themselves and others, so it is not serious.
10. Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.
11. Sexual jokes online are usually meant to be harmless.
12. Sexual comments online are more serious than sexual comments made in-person because information on the internet can be permanent.
13. Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.

14. Sexual comments or posts online are more serious than sexual comments made in-person because they can be viewed by anyone (i.e., public).

Evaluation of Item Adequacy for Study 1:

This scale is designed to contain 5 subscales each tapping into 5 key components of cyber-sexual harassment including: gathering sexual information online, image and video-based sexual harassment, offensive comments or posts, coercive behaviors, and attitudes towards cyber-sexual harassment. **Please sort each item to the subscale you believe it fits the most with.**

Response categories: *Gathering sexual information online, Image and video-based sexual harassment, Offensive comments or posts, Coercive behaviors, and Attitudes towards cyber-sexual harassment*

1. Sexually harassed you online.
2. Asked you to share personal information (e.g., full name, address, age) about yourself when you did not want to?
3. Asked you to share sexual information about yourself when you did not want to?
4. Tried to get you to talk about sexual topics when you did not want to?
5. Repeatedly tried to ask sexual questions after you told them to stop?
6. Shared personal information with others online without your consent?
7. Shared sexual information about you with others online without your consent?
8. Asked you to share information about your sexual orientation when you did not want to?
9. Sent you excessively disclosive messages (e.g., inappropriately giving private information about his/her life, body, family, hobbies, sexual experiences, or fantasies, etc.)?
10. Asked you to send photos or videos of yourself?
11. Asked you to send nude or semi-nude photos or videos of yourself?
12. Shared a nude or semi-nude photo or video of you online without your consent?
13. Shared a nude or semi-nude photo or video of you with their friends without your consent?
14. Sent you a nude or semi-nude photo or video of themselves without you asking?
15. Sent you pornographic photos or videos of other people without you asking?
16. Taken nude or semi-nude photos or videos without your permission?
17. Used photoshop to alter your photos in a sexual way?
18. Edited a video of someone else performing sexual acts to look like you (i.e., deepfake)?
19. Posted sexual photos or videos on your social media profile?
20. Tagged you in a sexual photo or video?
21. Called you names that made you feel uncomfortable?
22. Said offensive things about how you look, your body, or your sex life in a private/direct message?

23. Said offensive things about how you look, your body, or your sex life in a public post/comment?
24. Told you offensive, dirty stories or jokes through instant/text messaging, email, or social networking sites?
25. Made offensive, dirty remarks about your gender in general (i.e., all women are whores, all men are pigs)?
26. Called you a gay or lesbian as an insult in a private/direct message?
27. Called you gay or lesbian as an insult in a public post/comment?
28. Left an offensive, dirty comment on your social media profile?
29. Spread rumors about your sex life online?
30. Spread rumors about your sexuality online?
31. Tagged you in an inappropriate/sexual post?
32. Used sexual nicknames when talking with you (i.e., daddy, baby, sugar)?
33. Sent you excessively "needy" or demanding messages (e.g., pressuring to see you, assertively requesting you go out on a date, arguing with you to give him/her "another chance", etc.)?
34. Sent you tokens of their affection (e.g., poetry, songs, electronic greeting cards, praise, etc.) when you did not want them to?
35. Pressured you to share sexual images of yourself to show your affection (i.e., "If you loved me you would do it?")
36. Threatened to share conversations or photos with friends and family if you did not perform a sexual act online?
37. Bribed you to conduct sexual acts (e.g., offering to send you money if you send him/her sexual pictures)?
38. Made you feel worried or threatened because someone was bothering you online?
39. Made promises to reward you if you performed a sexual act online?
40. Threatened to reveal your sexual orientation if you did not perform a sexual act online?
41. Sent you sexually violent threats (i.e., rape threats, threatening sexual assault)?
42. Threatened to share personal information about you online if you did not perform a sexual act online?
43. Blackmailed you to continue to perform sexual acts online?
44. Repeatedly requested a romantic or sexual relationship with you even though you let them know you were not interested?
45. Sent you threatening messages online (e.g., suggesting harming you, your property, family, friends, etc.) if you did not develop a relationship with them?
46. Asked you to do something sexual online when you did not want to?
47. Been threatened online because of the way you look or act online?
48. Asked you to engage in "cybersex"?
49. People who get sexually harassed online must have done something to deserve it.
50. I would tell someone if I felt sexually harassed online.

51. People who send nude or semi-nude pictures over the internet or cell phone deserve it if the pictures are sent to other people.
52. If they don't go too far, suggestive remarks simply tell one they are attractive.
53. It is disturbing for a person to be forced into a romantic relationship.
54. An attractive person should expect sexual advances and learn how to handle them.
55. A lot of activities people call sexual harassment online are just normal flirtation.
56. Sexual harassment online is a serious social problem.
57. Others around me have shared sexual images of themselves and others, so it is not serious.
58. Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.
59. Sexual jokes online are usually meant to be harmless.
60. Sexual comments online are more serious than sexual comments made in-person because information on the internet can be permanent.
61. Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.
62. Sexual comments or posts online are more serious than sexual comments made in-person because they can be viewed by anyone (i.e., public).

Free Response Items:

To what extent do you think the currently sorted items within the gathering sexual information online subscale adequately capture the subscale construct? *(not at all adequate* (1)*, somewhat adequate* (2)*, quite adequate* (3)*, very adequate* (4)*)*

> (If very adequate is not selected) Are there any experiences/items related to gathering sexual information online that you think could be included to adequately cover all aspects of the subscale? *(Free Response)*

To what extent do you think the currently sorted items within the image and video-based sexual harassment subscale adequately capture the subscale construct? *(not at all adequate* (1)*, somewhat adequate* (2)*, quite adequate* (3)*, very adequate* (4)*)*

> (If very adequate is not selected) Are there any experiences/items related to image and video-based sexual harassment that you think could be included to adequately cover all aspects of the subscale? *(Free Response)*

To what extent do you think the currently sorted items within the offensive comments or posts subscale adequately capture the subscale construct? *(not at all adequate* (1)*, somewhat adequate* (2)*, quite adequate* (3)*, very adequate* (4)*)*

> (If very adequate is not selected) Are there any experiences/items related to offensive comments or posts that you think could be included to adequately cover all aspects of the subscale? *(Free Response)*

To what extent do you think the currently sorted items within the coercive behaviors subscale adequately capture the subscale construct? *(not at all adequate* (1)*, somewhat adequate* (2)*, quite adequate* (3)*, very adequate* (4)*)*

> (If very adequate is not selected) Are there any experiences/items related to coercive behaviors that you think could be included to adequately cover all aspects of the subscale? *(Free Response)*

To what extent do you think the currently sorted items within the attitudes towards cyber-sexual harassment subscale adequately capture the subscale construct? *(not at all adequate* (1)*, somewhat adequate* (2)*, quite adequate* (3)*, very adequate* (4)*)*

> (If very adequate is not selected) Are there any experiences/items related to attitudes towards cyber-sexual harassment that you think could be included to adequately cover all aspects of the subscale? *(Free Response)*

Are there any experiences/content areas related to cyber-sexual harassment that were not included that you think should be? *(Free Response)*

Were there any items that you had trouble understanding (i.e., unclear wording)? *(Free Response)*

Do you have any additional comments? *(Free Response)*

Demographic Items for Study 1:

1. What is your age? *(Free Response)*
2. What is your gender? (*cisgender male, cisgender female, transgender male, transgender female, intersex, non-binary, other, prefer not to answer*)
3. What is your ethnicity? (*Hispanic/Latinx, Non-Hispanic/Non-Latinx*)
4. What is your race? (*Caucasian, Black or African American, American Indian or Alaska Native, Asian, Multiracial, Other)*
5. How do you typically access the internet? Check all that apply. *(phone/smartphone, personal laptop computer, tablet/ iPad, personal desktop computer)*
6. How much time do you spend daily on the internet? *(1 hour or less, 2 to 4 hours, 5 to 7 hours, 8 to 10 hours, 11 or more hours)*

Study 2

Dear Participant:

We are researchers in the School of Social & Behavioral Sciences at Arizona State University.

We are conducting research investigating the prevalence of and attitudes about cyber-sexual harassment online. We are inviting your participation, which will involve answering questions about your social media use, online behavior, and experiences of sexual harassment online, as well as providing some basic demographic information.

This is an online study that takes approximately 20-25 minutes to complete. In return for participating in the survey, you will be paid $3.00.

Your participation in this study is voluntary. If you feel uncomfortable sharing your experiences, you can choose not to participate, withdraw from the study at any time, and/or skip any questions you wish without penalty. You must be 18 years old or older, speak English, and reside in the U.S. to participate in this study.

Although there is no direct benefit of participating in this study, there is the potential for you to gain a better understanding of the process of conducting psychological research.

The responses you provide in this study will be anonymous—that is, the researchers can in no way link the responses you provide in the study to any personally-identifying information including your computer IP address or geographic location. The only record of your participation will be in the form of your study completion code, which will allow PROLIFIC to process your payment upon study completion. The results of this study may be used in reports, presentations, or publications but your name will not be known. All data collected in this study will be reported in aggregate form.

If you have any questions concerning this research study, please contact the research team at d.hall@asu.edu / (602) 543-2382. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board at Arizona State University, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Deborah L. Hall, Ph.D.
Brittany Wheeler, B.A.

Study 3

Dear Participant:

We are researchers in the School of Social & Behavioral Sciences at Arizona State University.

We are conducting research investigating the prevalence of and attitudes about cyber-sexual harassment online. We are inviting your participation, which will involve answering questions about your social media use, online behavior, and experiences of sexual harassment online, as well as providing some basic demographic information.

This is an online study that takes approximately 20-25 minutes to complete. In return for participating in the survey, you will be paid $2.30.

Your participation in this study is voluntary. If you feel uncomfortable sharing your experiences, you can choose not to participate, withdraw from the study at any time, and/or skip any questions you wish without penalty. You must be 18 years old or older, speak English, and reside in the U.S. to participate in this study.

Although there is no direct benefit of participating in this study, there is the potential for you to gain a better understanding of the process of conducting psychological research. The responses you provide in this study will be anonymous—that is, the researchers can in no way link the responses you provide in the study to any personally-identifying information including your computer IP address or geographic location. The only record of your participation will be in the form of your study completion code, which will allow PROLIFIC to process your payment upon study completion.

The results of this study may be used in reports, presentations, or publications but your name will not be known. De-identified data collected as a part of the current study may be shared with other investigators for future research purposes. All data collected in this study will be reported in aggregate form.

If you have any questions concerning this research study, please contact the research team at d.hall@asu.edu / (602) 543-2382. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board at Arizona State University, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Deborah L. Hall, Ph.D.
Brittany Wheeler, B.A.

Online Exposure Scale (OES) for Study 2 and Study 3:

The following items focus on different activities that can be performed on the internet. **In the average week**, how often do you use the Internet for the following activities?

Response scale: *never* (1), *rarely* (2), *sometimes* (3), *very often* (4), *always* (5).

1. Email
2. Downloading or streaming music, movies, or TV episodes
3. Playing multiplayer online games (MMOs, MMORPG, MOBA)
4. Message Boards
5. Banking
6. Shopping (e.g., eBay)
7. Gambling (e.g., online poker)
8. Playing computer-based games
9. Chat rooms
10. Instant messaging
11. Browsing sports sites
12. Online dating
13. Browsing celebrity entertainment or gossip sites
14. Doing school or course work
15. Social networking (e.g., Facebook)
16. Listservs/Newsgroups
17. Blogs
18. Other (Please Specify)

Risky Online Lifestyles Scale (ROL-SNS; ROL-LEI; ROL-VOC) for Study 2 and Study 3:

The following items describe statements about activities performed on social networking sites and on the internet. With the following statements, please indicate your agreement or disagreement.

Response scale: *strongly disagree* (1), *slightly disagree* (2), *neither agree nor disagree* (3), *slightly agree* (4), *strongly agree* (5).

1. I share most of my life events through social networking sites.
2. I express my opinions and feelings through social networking sites.
3. I offer a lot of personal information through social networking sites.
4. I frequently write about my life on social networking sites.
5. I express my opinions with honesty on social networking sites.
6. I express my feelings on social networking sites.
7. I express myself on sensitive issues through social networking sites.
8. I downloaded free games.
9. I downloaded free music.
10. I downloaded free movies.
11. I opened any email attachments.
12. I opened any files sent via instant messaging.
13. I clicked on any website links.
14. I clicked on any pop-ups.

Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V) From Study 2 and Study 3:

Cyber-sexual harassment can refer to a range of behaviors that are nonconsensual or unwanted. These can include repeated and unwanted sexual advances, requests for sexual favors, sexual comments, and the non-consensual sharing of sexual images or videos through electronic technology. These behaviors could be initiated by someone you know, an unknown individual, or someone you are in or have been in a relationship with. Cyber-sexual harassment can happen anywhere and to anyone.

With the following statements, please honestly state how often you have experienced these different types of behaviors. Your responses will be completely anonymous and there will be no way to tie you to your responses.

Question Prompt for Study 2: In your experiences on the internet during the **past 6 months**, how often has someone:

Response Scale for Study 2: *Every day* (7), *almost every day* (6), *once or a few times a week* (5), *once or a few times a month* (4), *once or a few times in the past 3 months* (3) *once a few times in the past 6 months* (2), *never* (1).

Question Prompt for Study 3: In your experiences using electronic or online communication **during the past year**, how often has someone:

Response Scale for Study 3: *Never* (1)*, Rarely* (2)*, Occasionally* (3)*, Sometimes* (4)*, Very Often* (5)*, Always* (6)

1. Sexually harassed you online.
2. Asked you to share sexual information about yourself when you did not want to?
3. Repeatedly tried to get you to talk about sexual topics (e.g., sexual history, sexual fantasies) when you did not want to?
4. Repeatedly asked questions of a sexual nature?
5. Shared sexual information about you (e.g., sexual orientation, previous sexual behavior) with others through electronic or online messages without your consent?
6. Repeatedly asked questions about your sexual orientation/sexual identity after you told them to stop?
7. Sent you inappropriate messages about personal topics such as their body, sexual experiences, or fantasies, etc.?
8. Repeatedly, asked you to send nude or semi-nude photos or videos of yourself after you told them no?
9. Shared a nude or semi-nude photo or video of you online without your consent?

10. Shared a nude or semi-nude photo or video of you with their friends without your consent?
11. Sent you a nude or semi-nude photo or video of themselves without you asking?
12. Sent you pornographic photos or videos of other people without you asking?
13. Taken nude or semi-nude photos or videos of you without your permission?
14. Used photo editing software to alter your photos in a sexual way?
15. Edited a video of someone else performing sexual acts to look like you (i.e., deepfake)?
16. Posted sexual photos or videos on your social media page?
17. Tagged you in a sexual photo or video?
18. Said offensive things about how you look, your body, or your sex life in a private/direct message?
19. Said offensive things about how you look, your body, or your sex life in a public post/comment?
20. Told you offensive, sexual stories or jokes through electronic or online communication (e.g., instant/text messaging, email, posts on social networking sites)?
21. Made offensive, sexual remarks about your gender, in general (e.g., “All women are whores”, “All men are pigs”)?
22. Referred to your gender/sexual identity as an insult in a public post/comment?
23. Left an offensive, sexual comment on your social media profile?
24. Spread rumors online about your sexual experiences?
25. Spread rumors online about your sexuality/sexual identity?
26. Tagged you in an online post that you felt was inappropriately sexual?
27. Used flirty or sexual nicknames (e.g., baby, daddy, sugar, sexy) when talking with you in electronic or online messages?
28. Made inappropriate comments about your ability to perform sexual acts (e.g., “I bet you are good in bed”, “You look like you give good blowjobs”)?
29. Sent you excessively “needy” or demanding electronic or online messages (e.g., pressuring you to perform a sexual act or go on a date)?
30. Bribed you to conduct sexual acts (e.g., offering you money if you send them sexual pictures)?
31. Made you feel worried or threatened because they were sexually harassing you online?
32. Sent you sexually violent threats in an electronic or online message (e.g., rape threats, threatening sexual assault)?
33. Repeatedly requested a romantic or sexual relationship with you through electronic or online messages even though you let them know you were not interested?
34. Sent you threatening electronic or online messages (e.g., threatening to harm you, your property, family, friends, etc.) if you did not develop a relationship with them?

35. Pressured you in an electronic or online message to perform a sexual act to show your affection (i.e., "If you loved me, you would do it?")
36. Threatened in an electronic or online message to share conversations or photos with friends and family if you did not perform a sexual act online?
37. Made promises in an electronic or online message to reward you if you performed a sexual act online?
38. Threatened in an electronic or online message to reveal your sexual orientation if you did not perform a sexual act online?
39. Threatened in an electronic or online message to share personal information about you online if you did not perform a sexual act online?
40. Threatened in an electronic or online message to harm themselves or other individuals if you did not perform a sexual act?
41. Blackmailed you in an electronic or online communication to perform or continue to perform sexual acts?
42. Repeatedly asked you to do something sexual online when you did not want to?
43. Repeatedly asked you to engage in "cybersex" or perform sexual acts online?

The following items will ask about your **personal** beliefs about cyber-sexual harassment. Your responses will be completely anonymous and there will be no way to tie you to your responses. With the following statements, please indicate your agreement or disagreement.

Response scale: *Strongly disagree* (1), *disagree* (2), *somewhat disagree* (3), *neither agree nor disagree* (4), *somewhat agree* (5), *agre*e (6), *strongly agree* (7).

1. People who get sexually harassed online must have done something to deserve it.
2. I would tell someone if I felt sexually harassed online.
3. People who send nude or semi-nude pictures over the internet or cell phone deserve it if the pictures are sent to other people.
4. If they don't go too far, suggestive remarks simply tell one they are attractive.
5. It is disturbing for a person to be forced into a romantic relationship.
6. An attractive person should expect sexual advances and learn how to handle them.
7. A lot of activities people call sexual harassment online are just normal flirtation.
8. Sexual harassment online is a serious social problem.
9. Others around me have shared sexual images of themselves and others, so it is not serious.
10. Cyber-sexual harassment is less serious than sexual harassment that occurs in-person because it is not physical.
11. Sexual jokes online are usually meant to be harmless.
12. Sexual comments online are more serious than sexual comments made in-person because information on the internet can be permanent.

13. Sexual harassment online is less serious than sexual harassment that occurs in-person because you can block and report harassers easily.
14. Sexual comments or posts online are more serious than sexual comments made in-person because they can be viewed by anyone (i.e., public).

Cyber-Sexual Harassment Scale (CSH) from Study 2 and Study 3:

With the following statements, please honestly state how often you have experienced these different types of behaviors. Your responses will be completely anonymous and there will be no way to tie you to your responses.

For the following statements, please indicate to what extent have you experienced each of the following **in your lifetime**.

Response scale: *not at all* (1), *very little* (2), *somewhat* (3), *quite a bit* (4), *a great deal* (5)

1. Sent you dirty jokes to your email.
2. Sent you erotic pictures to your email.
3. Someone used an erotic term for a user id or account when communicating with you.
4. Asked you for personal information online.
5. Viewed pornographic pictures online next to or near you.
6. Sent you links to sites containing pictures of pornography.
7. Sent links to erotic sites via e-mail.
8. Sent emails to you joking that women are inferior to men.
9. Sent you an email making sexually oriented comments about the way you dressed.
10. Sent you sexually stereotyped jokes via email.
11. Post comments in an online forum about your appearance.
12. Sent you multiple emails asking you to go out with them.
13. Sent you an email pressuring you for sexual favors.
14. Surfed pornographic websites next to or near you.

Technology-Facilitated Sexual Violence Victimization Scale (TFSV-V) from Study 2 and Study 3:

The following items will ask about your experiences with sexual violence online. Sexual violence online is defined as non-consensual sexual behaviors/harassment that occurs online or are made possible via digital technology. With the following statements, please honestly state if you have experienced these different types of behaviors during your lifetime. Your responses will be completely anonymous and there will be no way to tie you to your responses.

For the following statements, please indicate if you have experienced any of the following **during your lifetime**.

Response scale: *yes* (2), *no* (1)

1. Someone sexually harassed you.
2. Someone sent you unwanted sexually explicit images, comments, emails, or text messages.
3. A partner has checked up on location/activities multiple times a day.
4. Someone sent repeated and/or unwanted sexual requests online or via email or text message.
5. A partner gained access to your emails or other online accounts without permission.
6. Someone publicly posted online an offensive sexual comment about you.
7. Someone posted personal details online saying you are available to have sex.
8. Nude or semi-nude images were taken without permission.
9. Nude or semi-nude images were posted online/sent to others without permission.
10. Someone threatened to post/send nude or semi-nude images to others.
11. An image/video of an unwanted sexual experience was posted online/sent to others.
12. Someone threatened to post online/send an image/video of an unwanted sexual experience to others.
13. Had an unwanted sexual experience with someone you met online.
14. Had an unwanted sexual experience with someone you met on a dating site/app.
15. Someone sent you gender-based offensive and/ or degrading messages, comments, or other content.
16. Someone sent you sexuality or sexual identity-based offensive and/ or degrading messages, comments, or other content.
17. Gender-based offensive and/ or degrading messages, comments, or other content in a virtual world (e.g., videogame or MMORPG)
18. Someone sent you sexually violent threats.

19. Described or visually represented unwanted sexual acts against your avatar or game character.
20. Described or visually represented unwanted sexual acts against you using an online/ email/messages.

Cyberbullying Victimization Scale (CBV) from Study 2 and Study 3:

The following items will ask about your experiences with cyberbullying. "Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices" (Hinduja & Patchin, 2015).

With the following statements, please indicate how often in the **past 30 days** the following events occurred.

Response scale: *never* (1), *once* (2), *a few times* (3), *several times* (4), *many times* (5)

1. I have been cyberbullied.
2. Someone posted mean or hurtful comments about me online.
3. Someone spread rumors about me online, through text messages, or emails.
4. Someone posted mean names, comments, or gestures about me with a sexual meaning.
5. Someone threatened to hurt me through a cell phone text message
6. Someone threatened to hurt me while online.
7. Someone posted a mean or hurtful picture online of me.
8. Someone pretended to be me online and acted in a way that was mean or hurtful to me.
9. Someone posted mean names or comments online about my race or color.
10. Someone posted a mean or hurtful video online of me.
11. Someone created a mean or hurtful web page about me.

The Balanced Inventory of Desirable Responding Short Form (BIDR-16) from Study 2 and Study 3:

The following items will ask about activities that could occur in daily life. With the following statements, please indicate your level of agreement or disagreement.

Response scale: *strongly disagree* (1), *disagree* (2), *somewhat disagree* (3), *neither agree nor disagree* (4), *somewhat agree* (5), *agree* (6)*, strongly agree* (7)

1. I am not always honest.
2. I know why I like things.
3. It is hard to shut off a disturbing thought.
4. I never regret decisions.
5. I can't make up my mind.
6. I am completely rational.
7. I am confident in my judgments.
8. I doubted my abilities as a lover.
9. Sometimes I tell lies.
10. I never cover up mistakes.
11. I have taken advantage of someone.
12. Sometimes I try to get even.
13. I said something bad about a friend.
14. I avoid listening.
15. I never take things.
16. I don't gossip.

Demographic Items from Study 2, Study 3 Prescreening, and Study 3:

1. What is your age? (*Free Response*)
2. What is your gender? (*cisgender male, cisgender female, transgender male, transgender female, intersex, non-binary, other (free response), prefer not to answer*)
3. What is your sexual orientation? (*asexual, bisexual, gay, straight (heterosexual), lesbian, queer, other (free response), prefer not to answer*)
4. What is your ethnicity? (*Hispanic/Latinx, Non-Hispanic/Non-Latinx*)
5. What is your race? Check all that apply. (*White, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander, Other (free response)*)
6. How do you typically access the internet? Check all that apply. (*phone/smartphone, personal laptop computer, tablet/ iPad, personal desktop computer*)
7. How much time do you spend daily on the internet? (*1 hour or less, 2 to 4 hours, 5 to 7 hours, 8 to 10 hours, 11 or more hours*)
8. Are you currently: (*Single, In a relationship but not living with a partner, In a relationship but living with a partner, Married, Divorced or separated, Other (free response)*)

Study 3 (Prescreening)

Dear Participant:

We are researchers in the School of Social & Behavioral Sciences at Arizona State University.

We are conducting research investigating the prevalence of and attitudes about cyber-sexual harassment online. We are inviting your participation, which will involve answering questions about your online behavior and experiences of sexual harassment online, as well as providing some basic demographic information.

This is an online study that takes approximately 5 minutes to complete. In return for participating in the survey, you will be paid $0.55.

Your participation in this study is voluntary. If you feel uncomfortable sharing your experiences, you can choose not to participate, withdraw from the study at any time, and/or skip any questions you wish without penalty. You must be 18 years old or older, speak English, and reside in the U.S. to participate in this study.

Although there is no direct benefit of participating in this study, there is the potential for you to gain a better understanding of the process of conducting psychological research. The responses you provide in this study will be anonymous—that is, the researchers can in no way link the responses you provide in the study to any personally-identifying information including your computer IP address or geographic location. The only record of your participation will be in the form of your study completion code which will allow PROLIFIC to process your payment upon study completion and your PROLIFC ID which will be used to invite your participation in a future study.

The results of this study may be used in reports, presentations, or publications but your name will not be known. De-identified data collected as a part of the current study may be shared with other investigators for future research purposes. All data collected in this study will be reported in aggregate form.

If you have any questions concerning this research study, please contact the research team at d.hall@asu.edu / (602) 543-2382. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board at Arizona State University, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Deborah L. Hall, Ph.D.
Brittany Wheeler, B.A.

Risky Online Lifestyles Scale (ROL-SNS) for Study 3 Prescreening:

The following items describe statements about activities performed on social networking sites and on the internet. With the following statements, please indicate your level of agreement or disagreement.

Response scale: *strongly disagree* (1), *slightly disagree* (2), *neither agree nor disagree* (3), *slightly agree* (4), *strongly agree* (5).

1. I share most of my life events through social networking sites.
2. I express my opinions and feelings through social networking sites.
3. I offer a lot of personal information through social networking sites.
4. I frequently write about my life on social networking sites.
5. I express my opinions with honesty on social networking sites.
6. I express my feelings on social networking sites.
7. I express myself on sensitive issues through social networking sites.

Multidimensional Cyber-Sexual Harassment Experiences and Attitudes Scale for Victimization (MCSHEA-V) for Study 3 Prescreening:

With the following statements, please honestly state how often you have experienced these different types of behaviors when using electronic or online communication (e.g., mobile phone, internet). Your responses will be completely anonymous and there will be no way to tie you to your responses.

In your experiences using electronic or online communication **during the past year**, how often has someone:

Response Scale: *Never* (1)*, Rarely* (2)*, Occasionally* (3)*, Sometimes* (4)*, Very Often* (5)*, Always* (6)

1. Sexually harassed you online?
2. Asked you to share sexual information about yourself when you did not want to?
3. Repeatedly asked questions of a sexual nature?
4. Sent you inappropriate messages about personal topics such as their body, sexual experiences, or fantasies, etc.?
5. Repeatedly asked you to send nude or semi-nude photos or videos of yourself after you told them no?
6. Sent you a nude or semi-nude photo or video of themselves without you asking?
7. Told you offensive, sexual stories or jokes through electronic or online communication (e.g., instant/text messaging, email, posts on social networking sites)?
8. Made offensive, sexual remarks about your gender, in general (e.g., “All women are whores”, “All men are pigs")?
9. Used flirty or sexual nicknames (e.g., baby, daddy, sugar, sexy) when talking with you in electronic or online messages?
10. Said offensive things about how you look, your body, or your sex life in a private/direct message?
11. Sent you excessively “needy” or demanding electronic or online messages (e.g., pressuring you to perform a sexual act or go on a date)?
12. Repeatedly requested a romantic or sexual relationship with you through electronic or online messages even though you let them know you were not interested?