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Valerie M. Gonsalves
Sand Ridge Secure Treatment Center, Mauston, Wisconsin, valerie.gonsalves@wi.gov

Heath Hodges
University of Nebraska-Lincoln

Mario Scalora
University of Nebraska-Lincoln, mscalora1@unl.edu

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Exploring the Use of Online Sexually Explicit Material: What Is the Relationship to Sexual Coercion?

Valerie M. Gonsalves
Sand Ridge Secure Treatment Center, Mauston, Wisconsin

Heath Hodges & Mario J. Scalora
Department of Psychology, University of Nebraska-Lincoln, Lincoln, Nebraska

Corresponding author — Valerie M. Gonsalves, Sand Ridge Secure Treatment Center, 1111 North Rd., P.O. Box 700, Mauston, WI 53948-0700. *email* valerie.gonsalves@wi.gov

Abstract
With the popularity of the Internet, it is easy to access online sexually explicit material (OSEM). However, little is known about the possible relationship that viewing OSEM may have to sexually coercive behaviors. The purpose of this study was to examine whether the viewing habits of OSEM related to self-reported sexual aggression. Results indicated that individuals who identified as having engaged in sexually aggressive behavior endorsed more online sexually compulsive behaviors. Analyses revealed that the amount, as opposed to the type, of OSEM viewed appears to be more related to adverse outcomes. Additionally, sexually aggressive individuals reported viewing a greater range of OSEM content and engaging in a broader range of OSEM behaviors compared to those who engaged in less sexual coercion.

Compared with the speed at which technology advances, little is known about the impact the Internet may have on behavior. Some researchers have suggested increased use of the Internet may have a negative impact on one's social and psychological functioning (Kraut et al., 1998; Petrie & Gunn, 1998; as cited in Hills & Argyle, 2003;

Ward & Tracey, 2004) though studies have not uniformly arrived at such results (see Campbell, Cumming, & Hugh, 2006; Cooper & Sportolari, 1997). More specific arguments have been levied against the use of Online Sexually Explicit Material (OSEM) because of the perception of a relationship to problematic behaviors, such as sexual offending. As such, there has been a surge of academic publications on OSEM use and an increase in legislation aimed at OSEM regulation (Döring, 2009).

OSEM and Sexual Offending Behavior

As of 2012, there are over 2 billion Internet users, comprising 34.3% of the world population and reflecting a 566.4% growth in Internet use since the year 2000 (Miniwatts Marketing Group, 2013). With increased online activity, researchers are beginning to delve into the potential negative impact such use may have on daily functioning, particularly when using the Internet for sexual purposes (Döring, 2009). Recent estimates indicate that 34% of adults have viewed OSEM at least once in their lives, with men (63%) being much more likely to have viewed OSEM than women (14%; Traeen, Nilsen, & Stigum, 2006). Yet, the extent to which viewing OSEM may be related to sexually problematic behavior remains scarce.

Sexually assaultive behavior has been behaviorally defined, and labelled, in variable ways (Christopher & Pflieger, 2007). Sexual assault includes a range of sexual contact (i.e., fondling, oral sex, intercourse) obtained without the consent of the other individual. Such behavior need not be a criminal act (Christopher & Pflieger, 2007; DeGue & DiLillo, 2004; Koss & Oros, 1982). Two, sometimes interrelated, forms of sexual assault have been identified in the literature (Christopher, 2001). Sexual coercion, the less severe of the two, consists of non-forceful tactics used to obtain sexual compliance. This behavior often involves manipulation or psychological pressure and may include persistence, deception, and/or the use of alcohol or drugs for sexual contact. Sexual aggression, which is more severe, involves the threat or actual use of force for obtaining sexual ends. Estimates of sexual coercion or aggression by male perpetrators in college samples have ranged from 7 to nearly 70% (Abbey & McAuslan, 2004; Hall, DeGarmo, Eap, Teten, & Sue, 2006; Koss & Dinero, 1988; Koss & Gidycz, 1985; Malamuth, Sockloski, Koss, & Tanaka, 1991; Mosher &

Anderson, 1986; Zinzow & Thompson, 2014). This rate is at least comparable to prevalence rates of sexual coercion in the community (e.g., 22%; Calhoun, Bernat, Clum, & Frame, 1997). Given the high rates of sexual assault by male college students, it is critical to understand secondary behaviors that may sustain, or be associated with, sexually coercive behaviors.

In the literature thus far, previous authors have examined OSEM by comparing the characteristics of sexual offenders who utilize the Internet to those who do not. Research has revealed notable differences between Internet and contact sex offenders. Contact sex offenders tend to be older and are more likely to have previous sexual offense convictions, previous convictions in general, perpetrate against one gender, and sexually reoffend. By contrast, Internet sex offenders demonstrate more victim empathy and greater deviant sexual interests than contact sex offenders (Babchishin, Hanson, & Hermann, 2011; Bates & Metcalf, 2007; Eke, Seto, & Williams, 2011; Elliott, Beech, & Mandeville-Norden, 2013; Elliott, Beech, Mandeville-Norden, & Hayes, 2009; Hanson & Morton-Bourgon, 2005; Seto, Cantor & Blanchard, 2006; Seto, Hanson, & Babchishin, 2011).

What is known about Internet sex offenders suggests the need for a closer look at a non-correctional population in order to determine how OSEM use generalizes to sexually coercive men and if there is an impact on other attitudes or behaviors, including problematic online behaviors. Cooper and colleagues (2001) found that in a sample of over seven thousand participants about 6.5% of males endorsed items suggestive of problematic online behavior, including more time spent engaging in online sexual activities (e.g., masturbation, cybersex), reduced sex with a partner, and significantly stronger histories of drug and alcohol abuse and compulsive gambling. Further, researchers have identified that there are attitudinal, behavioral, and personality differences between sexually coercive and sexually non-coercive men (DeGue & DiLillo, 2004). With respect to traditional SEM, Lohr, Adams, and Davis (1997) examined the effects of exposure to erotic stimuli and found differences in physiologic arousal between sexually coercive and sexually non-coercive men, with sexually coercive men demonstrating greater arousal to forceful situations. These stimuli were presented via audio-tape and slide presentations.

Previous research has examined a variety of behavior characteristics and found that various factors relate to sexually coercive behavior.

For example, use of alcohol and pornography have been found to be significant predictors of perpetration of sexual violence (Abbey, McAuslan, Zawacki, Clinton, & Buck, 2001; Carr & VanDeusen, 2004). Additionally, higher levels of generalized aggression, delinquency, and sexual promiscuity have been associated with sexually coercive behavior (DeGue & DiLillo, 2004). Given the relationship among problematic online behaviors and characteristics associated with sexual coercion, it reasons that compulsive or problematic use of OSEM may represent a proxy for concerning behaviors related to sexual assault. Others studies have refuted the claim that there is any link between pornography and sexual violence (see Diamond, 2009). In fact, in some cases, there have been cultural studies that have shown a significant drop in sexualized violence with the legalization of pornography (Diamond, Jozifkova, & Weiss, 2011). Given the relative youth of Internet pornography, it remains important to evaluate the impact of exposure to this material on a variety of populations, particularly to determine what, if any, relationship this material may have to risky sexual behavior. Of particular relevance, it is important to examine the impact that different types (e.g., violent, non-violent, age) of OSEM may have on sexually assaultive behaviors.

The Present Study

Although researchers have examined the effects of exposure to OSEM, little research has been directed towards forensically relevant variables, such as those that may be risk factors for criminal behavior. Further, the field has yet to explore these variables with regard to 1) an individual's choice of whether to view OSEM and 2) the nature of the content that person is choosing to view. The purpose of this study was to examine the use, rather than the exposure effects, of OSEM among a college sample. Based on the literature surveyed above the following hypotheses were tested:

1. Individuals who endorse viewing violent or degrading OSEM are more likely to self-identify as sexually coercive.
2. Sexually coercive men are more likely than those who do not identify as sexually coercive to report sexually compulsive online behaviors.

Method

Participants

The sample included 237 male undergraduate students from a large Midwestern university. Participants ranged in age from 19 to 39 (M = 20.02, SD = 2.17). The sample was 88.6% Caucasian, 3.0% African-American, 1.7% Native American, 4.7% Latino, 1.3% Asian/Pacific Islander, and .8% identified as other. A little over half (57.6%) of the sample identified as single, 14.3% identified as dating, 26.0% indicated they were in a committed relationship, 0.9% were married, and 1.3% were separated. A majority (65.5%) stated that they had experienced sexual intercourse (defined as penetration). Most of the sample indicated looking exclusively at females when viewing OSEM (58.4%) while only 2.1% looked exclusively at males. Additionally, a majority of the sample endorsed watching female-to-male contact (68.9%) or female-to-female contact (49.2%) OSEM. Few individuals reported viewing male-to-male content (2.5%). The entire sample endorsed having access to a computer, and 93.6% of the sample stated that they had viewed OSEM. Participants spent between 1 and 5 hours per week (M = 2.46, SD = 0.75) using the computer for leisure activities, and between 0 to 3 hours (M = .94, SD = 0.70) looking at OSEM, and between 0 and 4 hours looking at traditional forms of SEM (M = .70, SD = 0.63). None of the participants indicated that they had been convicted of a sexual crime.

Measures

Sexual Experiences Questionnaire

The Sexual Experiences Questionnaire (SEQ; Lisak & Roth, 1988) is a modified version of the Sexual Experience Survey (Koss & Oros, 1982) and examines various tactics, including manipulation and force, used to obtain sexual contact. The SEQ is a 29-item instrument that asks respondents to rate items on a 5-point Likert scale from 1 (*never*) to 5 (*often*). Lisak and Roth (1988) report adequate validity for the sample. The alpha coefficient for the present sample was .84.

Internet Sex Screening Test

The Internet Sex Screening Test (ISST; Delmonico, 1997; Delmonico & Miller, 2003) is a 25-item self-report inventory designed to screen for sexually compulsive online behaviors. Participants rate items as either true or false. Factor analyses have revealed five subscales: (1) Sexual Compulsivity (i.e., online sexual problems; SC); (2) Sexual Behavior-Social (i.e., engaging with people on the Internet for sexual purposes; SBS); (3) Sexual Behavior-Isolated (i.e., engaging in solitary sexual behavior; SBI); (4) Online Sexual Spending (i.e., spending money for online sexual pursuits; SS); and (5) Sexual Behavior (i.e., using the computer for any sexual purpose; SB). Alpha coefficients for the five factors are low, and range from .51 to .86. However, the Online Sexual Compulsivity factor has the highest alpha. The alpha for the total score for the present sample was .82. Alpha coefficients for the scales ranged from .54 (SB) to .74 (SBI).

Online Sexually Explicit Material Survey

Given the lack of research in this area, a measure was created to assess the use of SEM. The Online Sexually Explicit Material (OSEM) Survey was designed by the first author to measure the frequency and type of OSEM accessed as well as behaviors associated with use of OSEM. The OSEM Survey entailed a total of 46 statements assessing computer competence, attitudes towards OSEM, OSEM viewing preferences (e.g., age of participants), and traditional SEM use. Additionally, certain items were grouped into one of two domains of OSEM use: Content Diversity and Behavioral Diversity. The Content Diversity domain consisted of 17 yes/no items that captured the types of sexually explicit films the individual had viewed online. Higher scores on Content Diversity equated to more variable viewing patterns of OSEM films. The alpha coefficient for the Content Diversity domain was .90, suggesting good reliability. An exploratory factory analysis was conducted in order to see if the various types of OSEM could be broken down into different factors. Using a varimax rotation, results revealed three factors accounting for 66.9% of the variance: Mainstream Heterosexual Pornography (α = .81), Group Sex and Fantasy (α = .88), and Fetishes (α = .88). Table 1 displays how the items loaded onto the three factors.

Table 1. Factor Loadings for the Content Diversity Domain of the OSEM Survey

	Factor Loading		
Item	*1*	*2*	*3*
1. Films of Penile-Vaginal Penetration	−.237	.050	**.684**
2. Films of Oral Sex	−.092	.122	**.769**
3. Films of Finger-Vaginal Penetration	.272	.139	**.608**
4. Films Involving Penile-Anal Penetration	.253	.095	**.750**
5. Films Involving Two Males and One Female	.495	.111	**.516**
6. Films Involving Two Females and One Male	.127	.191	**.778**
7. Films Involving Group Sex	.198	**.763**	.282
8. Films Involving Multiple Males and One Female	.510	**.634**	.172
9. Films Depicting Fantasy Portrayal	.095	**.781**	.226
10. Films Depicting Bondage	.766	.495	−.026
11. Films Showing a Man Ejaculating on his Partner	.269	**.760**	.220
12. Films Depicting a Woman in a Dominatrix Role	**.741**	.468	.017
13. Films Depicting Sexual Fetishes	**.691**	.537	−.034
14. Films Showing "Soft-Core" Images	.324	**.650**	−.007
15. Films Involving a Woman in a Submissive Role	**.600**	**.615**	.079
16. Films Involving a Woman in a Degrading Role	**.849**	.145	.207
17. Films That Involve Forced Intercourse	**.846**	.219	.087

Factor 1 = Fetishes; Factor 2 = Group Sex and Fantasy; Factor 3 = Mainstream Heterosexual. Numbers in bold indicate significant loadings for that factor.

The second domain, Behavioral Diversity, consisted of 19 true/false items that reflected purposes for which the viewing of OSEM is used (e.g., masturbation aid, online dating, within sexual relationships). Higher scores on this domain indicated endorsement of a larger variety of OSEM behaviors. The alpha coefficient for this domain was .72, suggesting acceptable reliability. Exploratory factor analysis did not reveal interpretable factors for this domain.

Procedure

Participants were recruited from undergraduate psychology courses in exchange for course credit. Individuals registered through an online system, and then e-mailed the investigator for a link to the study. Once they completed the informed consent, they were directed to a separate website, with a series of self-report questionnaires. This method allowed individuals' informed consent to be stored in a database separate from their responses. Participants were allowed to respond from

home or university computers. Data were collected from January 2009 to December 2009. Participation took approximately 90 minutes. Approval was obtained from the Institutional Review Board.

Results

Sexual Coercion and OSEM Use

To examine the relationship between OSEM use and sexual coercion, the sample was divided into three groups based upon endorsement of sexually coercive and aggressive behaviors. Individuals who endorsed the use of sexually coercive tactics, as measured on the SEQ, were classified into the sexually coercive group. Sexually coercive tactics included: threatening to end the relationship unless sex was provided, pressure/continual arguments for sex, feigning affinity for the person, or deliberately getting the woman too intoxicated to resist sexual advances. Individuals were classified as sexually aggressive if they endorsed forceful sexual behaviors, such as persisting in sexual intercourse despite verbal protests by the woman or attempted/successful use of threats or physical force to acquire sexual compliance. If an individual identified as engaging in both sexually coercive and sexually aggressive behavior, the individual was categorized into the sexually aggressive group since this behavior is more severe. Individuals who did not endorse any of these items were classified as non-sexually coercive or aggressive. Of the sample, 138 (58.2%) were classified as not sexually coercive or aggressive, 86 (36.3%) were classified as sexually coercive, and 13 (5.5%) were classified as sexually aggressive. The relatively small number of participants who reportedly engaged in sexually aggressive behavior may have influenced categorical comparisons. As such, analyses were also conducted for continuous exploration of sexual coercion and aggression.

Content and Use Diversity

Additional analyses were conducted on the OSEM Survey domains to determine whether sexually coercive behaviors were differentially related to types of OSEM or variable OSEM behaviors. An Analysis of Variance (ANOVA) examining the scores on the Content Diversity

domain for individuals classified as sexually aggressive, sexually coercive, or neither, revealed a significant relationship, $F(2, 221) = 5.16$, $p = .01$. Tukey follow-up results indicated a significant mean difference between the neither group (M = 3.59, SD = 4.15) and the sexually aggressive group (M = 5.71, SD = 4.10) such that sexually aggressive individuals reported viewing a greater range of OSEM content. There were no significant differences when considering the sexually coercive group (M = 5.03, SD = 4.21) in comparison with the other groups. Similarly, an examination of scores on the Behavioral Diversity domain revealed significant group differences, $F(2, 220) = 21.375$, $p < .001$. Follow-up analyses revealed significant mean differences among all the groups, with the neither group reporting the fewest number of OSEM behaviors (M = 2.75, SD = 2.10), followed by the sexually coercive (M = 4.26, SD = 2.68) and sexually aggressive group members (M = 5.47, SD = 3.08).

Violent and Degrading Content

To investigate whether viewing OSEM of a violent or degrading nature was categorically associated with sexual coercion, viewing habits were compared across each of the sexual coercion groups. Viewing habits were examined according to whether the participant endorsed the items on the OSEM that he had watched films involving a woman in a degrading role or films involving violent sex. If they endorsed watching both types of material, they were placed into a combined category, resulting in four final categories: viewing neither violent nor degrading material (n = 188, 79.3%), viewing degrading material (n = 11, 4.6%), viewing violent material (n = 4, 1.7%) or viewing both violent and degrading material (n = 33, 13.9%).

A chi-square analysis was utilized to examine whether individuals who endorse viewing violent or degrading OSEM are more likely to self-identify as sexually coercive or aggressive. Results of this analysis revealed a non-significant relationship between any of the groups on type of material viewed, $\chi^2(6) = 3.25$, $p = .78$. To rule out the possibility that OSEM viewing habits may be related to sexual coercions below a categorical threshold, the relationship was examined continuously using an ANOVA whereby the outcome variable was number of sexually aggressive and coercive acts endorsed. This analysis did not produce significant findings either.

Sexual Coercion and Online Sexual Compulsivity

Table 2 summarizes the results regarding online sexual compulsivity and sexually coercive behaviors. An ANOVA was conducted to test whether sexually coercive men were more likely to report compulsive viewing of OSEM (i.e., ISST Total Scores) compared to sexually aggressive or non-sexually coercive/aggressive individuals. Results indicated a significant difference between groups, $F(2, 216) = 10.59$ $p < .001$. Upon specific group comparison, Tukey post hoc tests revealed that sexually aggressive individuals reported more sexually compulsive online behaviors than individuals in the sexually coercive and neither groups (using HSDmmd = 1.47). No differences were observed between sexually coercive individuals and non-sexually coercive/aggressive individuals. To better understand the extent of this relationship, investigators examined whether sexual compulsivity became greater as the type or frequency of sexually coercive behaviors increased. As expected, these behaviors were positively correlated., $r(227) = .23$, $p = .001$. When examining sexually aggressive acts no significant relationship emerged. This trend remained when frequencies of sexually coercive and sexually aggressive behaviors were separately entered into a regression model, $R^2 = 0.229$, $F(2, 216) = 5.98$, $p < .001$. That is, the extent to which a person engaged in sexually coercive behavior predicted his sexual compulsivity score, yet the extent to which that same person engaged in sexually aggressive acts did not significantly improve prediction.

A MANOVA was conducted using the remaining scales of the ISST in an effort to investigate whether certain aspects of sexual compulsivity were differentially related to sexual coercion. Results demonstrated a significant difference overall, $F(10, 428) = 2.36$, $p = .01$. Specifically, mean differences were found for the SC scale, $F(2, 220) = 5.01$, $p = .01$, SBS scale $F(2, 220) = 3.97$, $p = .02$, and SBI scale, $F(2, 220) = 5.98$, $p < .001$. Tukey post hoc analyses revealed significantly higher mean scores on the SC scale for those who reported engaging in sexually aggressive behavior compared to those who did not use force for sexual compliance. Likewise, the sexually aggressive group reported significantly higher scores on the SBS scale than those who did not report any sexually coercive or forceful behaviors. However, this amounted to a relatively small difference in mean scores (i.e., 0.45 points). A similar pattern was revealed for the online sexual behavior-isolates scale.

Table 2. Mean Online Sexual Compulsivity Scores for Sexually Aggressive Subtypes

	Sexually Aggressive		*Sexually Coercive*		*Not Sexually Aggressive or Coercive*			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
ISST total	33.73	4.04	31.12[a]	4.10	30.63[a]	3.59	10.59	.00**
Multivariate Results								
ISST-SC	7.82	1.76	7.05[a]	1.43	7.09[a]	1.22	5.01	.01*
ISST-SBS	6.07	1.23	5.62	1.04	5.58[a]	0.88	3.97	.02*
ISST-SBI	7.41	1.02	6.98	1.37	6.63[a]	1.35	5.98	.00**
ISST-SS	3.41	0.73	3.57	0.63	3.19	0.52	2.20	.11
ISST-SB	2.36	0.61	2.15	0.40	2.20	0.53	2.36	.10

ISST = Internet Sex Screening Test; ISST total = ISST total score; ISST-SC = Sexual Compulsivity scale; ISST-SBS = Sexual Behavior-Social scale; ISST-SBI = Sexual Behavior-Isolated scale; ISST-SS = Sexual Spending scale; ISST-SB = Sexual Behavior scale.

a = Significantly lower mean score than the Sexually Aggressive group according to Tukey post-hoc tests.

* $p < .05$; ** $p < .001$

A series of analyses were conducted to test whether sexually coercive males viewed OSEM prior to engaging in coercive behavior. However, only four participants indicated they had forced someone to have sex after watching OSEM. Because so few participants endorsed these behaviors, it was not meaningful to run statistical analyses examining these variables.

Online Sexual Compulsivity and OSEM Content

In order to further understand the relationship between use of OSEM and sexually compulsive online behavior, additional analyses explored whether the type of OSEM viewed (i.e., violent, degrading, both, or neither) related to sexual compulsivity. These findings are displayed in Table 3. Results indicated a significant difference between groups, $F(3, 226) = 4.94$, $p < .001$. Tukey post hoc tests indicated that individuals who endorse viewing both types of OSEM scored significantly higher on the ISST than those who do not endorse viewing either type of material. To maintain consistency in the analytic approach used for sexual compulsivity and sexual coercion, a MANOVA was conducted with the scales of the ISST, revealing a significant overall difference,

Table 3. Mean Online Sexual Compulsivity Scores Different Types of Online Sexually Explicit Material

	Neither		*Violent*		*Degrading*		*Both*			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
ISST Total	30.93	3.97	33.25	6.24	33.09	3.21	33.45[a]	3.19	4.94	.00*
Multivariate Results										
ISST-SC	7.11	1.41	9.00[a]	1.83	7.82	1.24	7.55	1.35	3.81	.01*
ISST-SBS	5.68	1.06	5.75	0.96	5.64	0.81	6.12	1.02	1.67	.18
ISST-SBI	6.73	1.36	6.25	2.06	7.36	1.21	7.54[a]	0.83	4.46	.01*
ISST-SS	3.24	0.21	3.25	0.50	3.36	0.67	3.39	0.70	0.65	.59
ISST-SB	2.20	0.49	2.50	1.00	2.36	0.50	2.24	0.56	0.83	.48

ISST = Internet Sex Screening Test; ISST total = ISST total score; ISST-SC = Sexual Compulsivity scale; ISST-SBS = Sexual Behavior-Social scale; ISST-SBI = Sexual Behavior-Isolated scale; ISST-SS = Sexual Spending scale; ISST-SB = Sexual Behavior scale.

a = Significantly greater mean score than the Neither group according to Tukey post-hoc tests.

* $p < .05$; ** $p < .001$

$F(4, 228) = 2.35$, $p = .01$, $\eta_p^2 = .04$, particularly for the sexual compulsivity scale, $F(3, 231) = 3.81$, $p = .01$. Individuals who did not endorse viewing either type of OSEM had significantly lower scores than those who endorsed viewing violent OSEM. Another significant univariate ANOVA, $F(3, 232) = 4.46$, $p = .01$, revealed that individuals who endorse viewing both types of OSEM had higher scores on the scale examining isolative online sexual behavior than those who viewed neither. Univariate analyses examining the other subscales did not reveal significant results.

Discussion

This study was among the first to examine the relationship between sexually coercive behaviors and viewing of OSEM using self-report. The first hypothesis examined the relationship between viewing violent or degrading OSEM and identification of oneself as sexually coercive or aggressive. Results indicated no differences between individuals who reported watching either violent or degrading OSEM and individuals who failed to report watching this type of material with respect to sexually coercive behavior. One explanation for this finding

may be that the present sample focused on college students; factors such as promiscuity may not be related to online behaviors in this sample because viewing OSEM may be more normative in this age group and promiscuity has become an engrained part of young adult culture (Garcia, Reiber, Massey, & Merriwether, 2012). Within this sample, 11% of the participants in the sample admitted to watching OSEM with friends, suggesting that such material may be more socially acceptable and therefore not as often associated with deviant sexual arousal patterns. Interestingly, endorsement of sexual aggression was associated with greater variety in OSEM content viewed and the number of diverse OSEM behaviors incrementally increased for groups who reported engaging in sexually coercive/aggressive behaviors. Thus, it appears that the breadth of OSEM behaviors may be more tied to sexual coercion than the type of OSEM being observed.

The second hypothesis explored whether individuals who reported sexually aggressive or coercive behaviors identified as being sexually compulsive. Results indicated that sexually aggressive individuals endorsed more traits of sexual compulsivity than sexually coercive individuals as well as those individuals who were neither sexually coercive nor aggressive. It was further identified that the sexually aggressive group engaged in more socializing online behaviors (e.g., chat rooms about sex) and solitary behavior online than those who engaged in neither. Yet, no differences were observed with these subscales for the sexually coercive group. It is important to note, when interpreting these results, that the mean differences were often not strikingly different, despite statistical significance. Further complicating this finding, the alpha coefficients for the scales of the ISST are rather low. Therefore, it may be more useful to examine the total score, rather than the subscales of this measure, particularly when interpreting these results. This finding is consistent with previous research suggesting that Internet offenders demonstrate characteristics consistent with psychopathology, such as pedophilic disorder (Seto, Cantor, & Blanchard, 2006). It is possible then, that these individuals may be showing more signs of psychopathology (e.g., impulse control difficulties, compulsive behaviors) than individuals who do not engage in sexually aggressive behaviors, though further studies are needed.

Exploratory analyses further revealed individuals who endorsed viewing OSEM of violent and degrading natures were most likely to report sexually compulsive online behavior. More specifically, viewers of

violent OSEM were more sexually compulsive than those who viewed neither violent nor degrading OSEM. Nonetheless, the ISST is fairly broad as a measure of an individual's online sexual problems. It is possible that individuals who view only violent OSEM find the necessary stimulation to achieve arousal through the Internet, which is a more prosocial outlet than seeking out a partner who enjoys violent sexual activity. Alternatively, these individuals may report their online behavior as compulsive (and problematic) either because they can achieve arousal only by viewing sexual material that is violent, which may interfere with healthy sexual relationships, or because it is distressing to them that they enjoy viewing such material.

Unique differences in online behavior were observed among those who viewed different types of OSEM. Individuals who endorsed viewing both violent and degrading OSEM reported more online activity in isolation than individuals who endorsed viewing neither type. One explanation for this finding is that viewers of these types of OSEM are more isolative because they are secretive about the nature of what they are viewing. However, if this were the case, it would intuitively follow that individuals who are viewing only violent or only degrading material would also be more socially isolative as they may not want others to know either. Yet, this pattern was only observed for those viewing both. Thus, it would seem that the volume as well as the variety of OSEM has more to do with various socially isolative behaviors than the type of material. This conclusion is consistent with follow-up analyses conducted with the OSEM Survey, which explored the diversity of OSEM and found that sexually aggressive individuals endorsed viewing a wider variety of OSEM (i.e., mainstream heterosexual, group sex and fantasy, and fetishistic) than other participants.

Clinically, these results point to the need for routine, ongoing screening of online behavior to identify any potentially problematic behavior early. Notably, these results suggest that individuals with compulsive and diverse use of OSEM may be at higher risk for problematic sexual behavior or use of violent material. Clinicians will want to explore offline behaviors and how online material is being used in order to identify any potentially problematic behaviors and intervene early. Some individuals will experience distress about their use of OSEM, and implementing treatment tools designed to reduce the behavior and manage ruminative cognitions may be of assistance. For

individuals who have an identified history of aggressive offline behavior, an assessment of their use of OSEM may point to specific treatment needs. For example, our results suggest such individuals may socialize more online, pointing to the need for interventions targeted at enhancing socialization skills, particularly since development of a social and professional support network is identified as a protective factor for individuals with a history of sexual offending (de Vries Robbé, Mann, Maruna, & Thornton, 2015).

Though this study represents an important contribution to furthering the study of OSEM, there are several notable limitations. First, consistent with the limitation discussed by Jansma, Linz, Mulac, and Imirch (1997), several concepts lacked specific operational definitions. This issue plagues this body of literature and may have influenced the results, as some people may or may not have endorsed questions based on their subjective interpretation of the question. Sample selection is another limitation of the current study.

The sample size resulted in some of the analyses comparing small groups of individuals thus generalization of these findings is limited. Due to the sensitive nature of the material that was asked about in the present study, participants were able to read a description prior to signing up for participation that noted the study would be asking about OSEM. Therefore, it is possible that some individuals who use a lot of OSEM did not sign up, perhaps due to embarrassment or believing that they did not have any valuable answers to contribute. In addition, the sample was male, college students, so the generalizability of the results is limited. Other studies, utilizing samples with a wider demographic range (i.e., Cooper et al., 1999) report higher average amounts of time spent using the computer to view OSEM. Given usage rates may be impacted by privacy concerns associated with living in a residence hall or private dwelling with multiple roommates and only 11% of the sample reported watching OSEM with others, we concluded that this low frequency behavior may still highlight important differences. Finally, the use of self-report measures to assess sensitive information may have resulted in underreported sexually coercive behaviors, sexually aggressive behaviors, or use of OSEM. While this study represents an important first step in the exploration between OSEM and sexually coercive behaviors, it is necessary to continue the exploration of these two concepts.

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