

# Viewing Alone or Together: Linking the Viewing Context for Sexually Explicit Internet Materials to Sex-Related Attitudes

Jihyun Kim, Nicholson School of Communication, University of Central Florida, Orlando, FL, USA

C. Erik Timmerman, Department of Communication Studies, Texas State University, San Marcos, TX, USA

## ABSTRACT

Online sexually explicit materials (SEM) may be viewed in various viewing contexts (e.g., alone, with friends, with a partner). However, research has not yet determined whether the viewing context can have an impact upon sexual attitudes and perceptions. To this end, data were collected from 303 college students who view SEM and analyzed to determine the relationships. When controlling for gender, findings indicate that individuals who more frequently view SEM alone also report a heightened sexual interest and favorable view toward casual sex. In contrast, the frequency with which SEM was viewed with friends was associated with a decreased sexual interest. Finally, the frequency with which individuals view SEM with a partner is negatively associated with beliefs about the importance of condom use. The paper concludes with discussion of these findings as well as directions for future research.

## KEYWORDS

Condom Use, Internet, Online Sexual Materials, Sexual Attitudes, Sexual Media, Sexuality, Sexually Explicit Internet Materials, Viewing Context

DOI: 10.4018/IJICST.2016010104

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

## INTRODUCTION

“The Internet is a sexual medium” (Peter & Valkenburg, 2006a, p. 178). Approximately 84 percent of the US population has access to the Internet (Perrin & Duggan, 2015), and the Internet’s inherent properties such as the ‘triple-A’ (Accessibility, Affordability, and Anonymity) have made it possible to easily locate a wide-range of desired information, including sex-related information (Döring, 2009; Short, Black, Smith, Wetterneck, & Wells, 2012). Although it may be difficult to estimate the approximate amount of pornography available on the Internet (see Metz, 2015), some estimates suggest that viewers, in general, have access to several million sites on the Internet that include sexually explicit materials (Ropelato, 2009). In particular, college students are known as heavy consumers of sexually explicit materials (Boies, 2002; Goodson, McCormick, & Evans, 2001). Although information about sex can be gleaned from many different sources (e.g., schools, friends), the Internet has been frequently identified as one of the major sources for sex-related information (Chia, 2006). Acknowledging the heavy use of sexually explicit materials among college students, it is important to examine how consuming sexually explicit materials may be related to young adults’ sex-related attitudes and perceptions.

One of the key aims of research examining sexually explicit materials is to identify the effects that this content can have upon viewers. There is a fairly large amount of research that examines sexually explicit materials (e.g., Allen et al., 2007; Boies, 2002; Braithwaite, Coulson, Keddington, & Fincham, 2015; Brown & L’Engle, 2009; Carroll et al., 2008; Morgan, 2011; Peter & Valkenburg, 2006a, 2006b, 2008, 2010a, 2010b, 2011), but these studies often focus more upon viewing that takes place in isolation. However, media consumption does not always take a place in isolation. When information consumers engage in media-related activities (e.g., video game play), they tend to report different experiences, depending on social contexts (Song, Kim, & Lee, 2014). Given that viewing sexually explicit materials occurs in various contexts such as viewing alone or with others (Goodson et al., 2001), it is important to understand how viewing context is related to viewers’ responses about their media experiences. Thus, the present study explores the understudied research area in the sample of college students.

## RESEARCH ON SEXUALLY EXPLICIT MATERIALS

### Sexually Explicit Materials on the Internet

The term, sexually explicit materials, is often used as a euphemism for pornography, which usually portrays nudity and shows sexual behaviors (Fisher & Barak, 2001). In many other studies, the terminology has been interchangeably used with pornography (e.g., Allen, Emmers, Gebhardt, & Giery, 1995; Carroll et al., 2008). In this investigation, sexually explicit materials are any type of materials that show nudity, sexual behaviors, and sex-related information and techniques.

The online form of sexually explicit materials has its unique features compared to the offline form of sexually explicit content (Isaacs & Fisher, 2008). One of the most distinct features of the online form is the nature of interactivity. For example, sexually explicit materials in the online format have the potential for incorporation of live video, audio, and text. The interactive nature of online sexually explicit materials can allow consumers to directly correspond with the person(s) portraying sexual acts and may also increase the likelihood of simultaneously engaging in online sexual behaviors with other viewers of sexually explicit materials (e.g., cyber sex, erotic chat) (Ferree, 2003). Further, the online form of sexually explicit materials provides a wider range of options for choosing preferred content more easily (Isaacs & Fisher, 2008). That is, through Internet search engines and various types of sex-related websites, people can type keywords to tailor viewing to specific interests. The online form of sexually explicit materials also provides a secure context due to the anonymity afforded by the Internet, which can allow viewers to explore their own sexuality and act out fantasies in what may be perceived as a secure context (Traeen, Nilsen, & Stigum, 2006). Due to this feature, people tend to be more honest about expressing their sexual interest and desire with people they meet online (Bargh & McKenna, 2004). In sum, these unique features of online sexually explicit materials seem to allow consumers to more actively engage in and act out their sex-related behaviors and fantasies compared to the offline form of sexually explicit materials.

### **Effects of Sexually Explicit Material Consumption**

Social cognitive theory (SCT; Bandura, 1977) argues that humans' thoughts and behaviors can be markedly influenced by both direct and indirect experiences, such as observing others who are engaged in a certain activity. That is, individuals learn and obtain knowledge by observing others within a context of social interactions, experiences, and media influences, and imitate the behaviors of others who are observed. A central argument of SCT is that individuals may obtain a great deal of experience from their observations of others on media and implies that people could learn and develop their attitudes and behaviors about sex from watching sexually explicit materials.

One of the problems associated with sexually explicit materials is that they are not just limited to showing portrayals of nudity or sexual intercourse -- the medium implicitly, or sometimes explicitly, delivers messages that casual sex or sex without condoms may be acceptable (Harris & Scott, 2002). Because most of the sex partners appearing on sexually explicit materials are casual or one-time sex partners rather than long-term or committed partners, this type of portrayal may develop harmful effects on viewers. Supporting the argument, a substantial number of studies documented the negative effects of consuming sexually explicit materials upon viewers' sexual values and behaviors. Findings from these investigations point to belief that there may be an influence upon recreational attitudes about sex, sexual arousal/interest, sensation seeking, acceptance of premarital sex, casual sex, extramarital sexual behaviors, and promiscuity (e.g., Allen et al., 2007; Boies, 2002; Braithwaite et al., 2015; Brown & L'Engle, 2009; Carroll et al., 2008; Morgan, 2011; Peter & Valkenburg, 2006a, 2006b, 2008, 2010a, 2010b; 2011; Zillmann & Bryant, 1988). Further, consumption of sexually

explicit materials might lead to changes in attitudes towards the opposite gender (e.g. Barak, Fisher, Belfry, & Lashambe, 1999; Simons, Simons, Lei, & Sutton, 2012).

Research reveals that viewing sexually explicit material can have a significant influence on college students' sex-related attitudes and behaviors. Specifically, consuming sexually explicit materials is positively related to acceptance of premarital sex, casual sex, and extramarital sexual behaviors (Boies, 2002; Carroll et al., 2008; Zillmann & Bryant, 1988). Consistently, heavy consumers of sexually explicit materials are found to be more sexually experienced and more promiscuous (Boies, 2002; Wingood et al., 2001). In sum, there is consistent evidence that consuming sexually explicit materials has an adverse impact on college students' sex-related attitudes and behaviors. Thus, in order to better understand how and why these adverse effects develop, it is essential to examine viewing practices.

## Viewing Context

When examining how consuming sexually explicit materials is associated with viewers' sex-related attitudes and behaviors, one of the areas that has not been fully explored is the role of viewing context. Goodson and Colleagues (2001) reported that 35% of viewers of sexually explicit materials have watched alone; 18% watched with their partners; and 15% watched in a group context, such as with friends. Given these various social contexts, it is not clear how consuming sexually explicit materials in different viewing contexts may be related to viewer responses, such as interest in sexual behavior, attitudes about casual sex, and preferences for engaging in safe sex practices, such as condom use. Thus far, the current literature does not provide clear direction for understanding the role of viewing context and outcomes associated with viewing sexually explicit materials.

An investigation of the impact of viewing context upon viewers of sexually explicit materials may be informed, to some degree, by more general literature that explores a particular form of co-viewing, parental supervision of media consumption (e.g., Fisher et al., 2009; Nathanson, 2002). This line of investigation indicates that parents' interactions with children about media content can influence children's reactions to the content (Fisher et al., 2009). This type of participative co-viewing is called parental mediation, and it occurs through active mediation (e.g., talking about the content) while watching media.

One study (Fisher et al., 2009) examined the role of parental mediation in the effect of highly sexual television content on young people's sexuality. The study found that parental interaction with adolescents moderates some of these negative media influences. That is, a higher degree of discussion and co-viewing is positively associated with lower intention to engage in sexual behaviors. Particularly, when adolescents were highly exposed to such sexual materials, parental co-viewing played an important role in establishing a healthier concept of sexual behaviors. Similarly, another study (Collins et al., 2004) also indicates that parental co-viewing is beneficial in establishing adolescents' perceptions about condom use.

The form of active mediation has been similarly studied as educational interventions of exposure to sexually explicit materials among adult groups. Meta-analysis (Allen, D'Alessio, Emmers, & Gebhardt, 1996) reports that providing educational briefings, which contain messages that portrayals on the sexual materials are not

the representation of the reality, may reduce potential harmful effects of viewing sexually explicit materials. Although still not consistent with social co-viewing as might be found among typical college students, the co-viewer involved in this study was a source of information and expertise. To this end, a study indicates that people who have received educational intervention about sexually explicit materials report a significantly reduced level of sexual aggression and enjoyment of viewing violent sex-related materials (Isaacs & Fisher, 2008). Thus, particularly when the purpose of interaction with a co-viewer is focused upon reducing perceived harmful effects (see Allen et al., 1996; Fisher et al., 2009; Isaacs & Fisher, 2008), the type of social context may function as a way of negating what are generally perceived as harmful effects of viewing sexually explicit materials.

Although co-viewing with parents and other sources of information are not directly equivalent to variations of social contexts of viewing sexually explicit materials among college students, these lines of research do point to the potential for a link between the social context and viewing outcomes. Several studies indicate that viewers' major motives for exploring sexually explicit materials are to be sexually aroused, to resolve curiosity about sex, to learn new sexual techniques, and to improve sex life with a partner (e.g., Boies, 2002; Goodson et al., 2001; Wright, 2013). Given these varied motivations, it is possible that motivations and viewing contexts may co-occur. For example, when people are viewing sexually explicit materials alone, viewers may be easily immersed with the viewing activity and heavily influenced by the content. However, when people are viewing it with others, they may engage in conversations, which may lead to various interpretations of those materials. These various interactions and viewing circumstances may influence the way people interpret the media content and its influences on viewers.

Although research on sexually explicit materials has been extensively investigated in the field, there is a lack of research on how viewing context such as alone, with a partner, or with friends (Goodson et al., 2001) is related to viewers' reactions to those materials. Thus, the study aims to unveil this understudied area of research by examining how college students' viewing practices of sexually explicit materials are related to sex-related attitudes and perceptions. In particular, the study focuses on three particular outcome variables: participants' sexual interest, perceived importance of condom use, and attitudes towards casual sex. These variables were selected because they featured prominently in various expert-augmented studies of the effects of viewing sexually explicit materials as important variables that would lead to behaviors (e.g., Allen et al., 2007; Boies, 2002; Braithwaite et al., 2015; Carroll et al., 2008; Morgan, 2011; Peter & Valkenburg, 2006a, 2006b, 2008, 2010a, 2010b; 2011). Based on this rationale, the following research question is raised:

**RQ1a-c:** How is viewing sexually explicit Internet materials in different viewing contexts (viewing alone, viewing with partners, and viewing with friends) related to viewers' sex-related attitudes and perceptions: (a) sexual interest, (b) attitudes toward casual sex, and (c) perceived importance of condom use?

## METHODS

### Participants

The study initially recruited a total of 413 undergraduate students enrolled in introductory classes at a large public Midwestern University in the U.S. Of those, responses to a screening question found that 303 individuals have viewed sexually explicit materials on the Internet at least once. Because the focus of this research is to understand how viewing across different contexts is related to outcomes, participants who have viewed sexually explicit materials previously were only included to the study. Thus, a final sample consisted of 303 viewers. The average age was 20.66 years ( $SD = 2.27$ ). There were slightly more females ( $n = 161$ : 53.1%) than males ( $n = 142$ : 46.9%) in the sample.

### Procedure

Following IRB's approval, the researcher contacted instructors of undergraduate courses and asked whether they would be willing to notify students about the anonymous survey. Upon approval, a link to the online survey was sent to potential participants. Once participants accessed the survey, they were asked to read and acknowledge an informed consent document prior to completing the survey. Because survey items included somewhat sensitive topics such as sexual experiences and viewing experiences of sexually explicit materials, there was potential concern about the degree to which participants would be truthful when completing the survey. For this reason, participants were repeatedly informed that the study was being completed in an anonymous manner. When participants finished completing the questionnaires, they were redirected to a separate web site, independent from the original survey, where they could provide their information (e.g., email address) and course information for extra credit purposes.

### Measures

Measures for viewing sexually explicit materials across social contexts focused upon the three contexts noted by Goodson et al. (2001): viewing alone, viewing with partners, and viewing with friends. Using elements of extant measures (Peter & Valkenberg, 2006a), items were developed to measure frequency with which varied types of sexually explicit materials were viewed in different viewing contexts. Single items were used to assess viewing in each context. Examples of items include: "I look at sexual content on the Internet (e.g., porn videos, pictures, etc.) alone", "I ...with partners", and "I ...with friends." Participants were required to indicate frequency of viewing in each context on a 5-point, Likert-type scale (1 = Never, 5 = Very often).

The next set of items included measures for outcome variables. Sexual interest ( $\alpha = .81$ ) was measured with two items (adopted from Peter & Valkenburg, 2006a) (e.g., "I often think about sex"). Perceived importance of condom use ( $\alpha = .87$ ) was measured with four items modified from Zaichkowsky (1985) (e.g., "Condom use is vital for safer sex"). Responses for sexual interest and perceived importance of condom use were obtained on a 5-point Likert-type scale (e.g., 1 = Strongly Disagree, 5 = Strongly Agree). Attitude toward casual sex ( $\alpha = .83$ ) was measured with three items modified from Peter and Valkenberg (2006a) (e.g., "Sex without love is OK") on a 10-point Likert-type scale (1 = Strongly Disagree, 10 = Strongly Agree).

## RESULTS

Given that previous research identifies significant gender effects of consuming sexually explicit materials (e.g., Carroll et al., 2008; Goodson et al., 2001) all analyses reported here controlled for gender. Using multiple regression, gender was dummy coded (0 = females, 1 = males), and entered in the first step of the regression equation. Then, consumption of sexually explicit materials in each viewing context (alone, with partner, with friends) was entered in separate steps to examine independent contributions of each viewing context upon the focal outcome variables. This approach helps to determine how relative frequency of viewing sexually explicit materials in different contexts would account for separate variation in each of the outcomes. All the results are presented while controlling for gender.

The dependent variable for the first analysis was sexual interest. A positive relationship was found between viewing alone and sexual interest [change in  $R^2 = .07$ , change in  $F(2, 299) = 23.44$ ,  $\beta = .31$ ,  $p < .001$ ]. In contrast, viewing with friends was negatively related to sexual interest [change in  $R^2 = .02$ , change in  $F(4, 297) = 5.34$ ,  $\beta = -.17$ ,  $p = .002$ ], and viewing with partners did not account for significant variance [change in  $R^2 = .001$ ,  $\Delta F(3, 298) = 0.44$ ,  $\beta = .04$ ,  $p = .507$ ]. Thus, viewing alone is associated with increased sexual interest and viewing with friends is negatively related. Viewing sexually explicit materials with a partner does not appear to have a strong association with sexual interest.

Next, regarding attitudes toward casual sex, viewing alone was positively related to favorable attitudes toward casual sex [change in  $R^2 = .04$ , change in  $F(2, 300) = 15.06$ ,  $\beta = .25$ ,  $p < .001$ ]. However, neither viewing with partners nor with friends was significantly related [with partner: change in  $R^2 = .01$ , change in  $F(3, 298) = 2.67$ ,  $\beta = .09$ ,  $p = .103$ ; with friends: change in  $R^2 = .004$ , change in  $F(4, 297) = 1.43$ ,  $\beta = .09$ ,  $p = .234$ ]. That is, viewing alone is positively associated with favorable attitudes toward casual sex, but viewing with friends or partner is not.

With regard to perceived importance of condom use, viewing alone did not account for a significant proportion of variance [change in  $R^2 = .002$ , change in  $F(2, 299) = 0.48$ ,  $\beta = -.05$ ,  $p = .487$ ]. However, viewing with partners was negatively related to perceptions of the importance of condom use [change in  $R^2 = .04$ , change in  $F(3, 297) = 12.36$ ,  $\beta = -.21$ ,  $p = .001$ ]. Viewing with friends did not account for significant variance [change in  $R^2 = .002$ , change in  $F(4, 297) = 0.65$ ,  $\beta = .06$ ,  $p = .422$ ]. In sum, neither viewing alone nor viewing with friends appears to be related to the perceived importance of condom use; however, viewing with partners is negatively related to perceived importance of condom use. Results for RQ1a-c are summarized in Table 1. Additionally, correlations among variables used in RQ1a-c are presented in Table 2.

## DISCUSSION

### Primary Findings

This investigation examined the role of viewing context of sexually explicit materials (viewing alone, with friends, with a partner) in sex-related attitudes and perceptions (sexual interest, attitudes about casual sex, perceived importance of condom use). Data collected from 303 college students were analyzed to determine the research question.

**Table 1. Multiple regression: Viewing context for sexually explicit materials and viewing outcomes(N = 303)**

Predictor Variables			Outcome Variables		
			Sexual Interest	Attitude Toward Casual Sex	Perceived Importance of Condom Use
Model 1		$R^2$	.06	.12	.03
		$F$	17.74***	40.77***	9.22**
	Sex (control)	$\beta$	.24*	.35***	-.17**
Model 2		$\Delta R^2$	.07	.04	.002
		$\Delta F$	23.44***	15.06***	0.48
	Sex (control)	$\beta$	-.07	.21**	-.15*
	Alone	$\beta$	.31***	.25***	-.05
Model 3		$\Delta R^2$	.001	.01	.04
		$\Delta F$	0.44	2.67	12.36**
	Sex (control)	$\beta$	.07	.21**	-.14*
	Alone	$\beta$	.30***	.21*	.03
	Partner	$\beta$	.04	.09	-.21**
Model 4		$\Delta R^2$	.02	.004	.002
		$\Delta F$	5.34*	1.43	0.65
	Sex (control)	$\beta$	.09	.20*	-.15*
	Alone	$\beta$	.33***	.19**	.21
	Partner	$\beta$	.13	.05	-.25**
	Friend	$\beta$	-.17*	.09	.06

Alone: viewing alone, Partner: viewing with partners, Friend: viewing with friends

Sex (dummy coded: 0 = female, 1 = male)

$\Delta R^2$  indicates change in  $R^2$  from a previous model

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 2. Correlations (N = 303)**

	1	2	3	4	5	6	7
1 Sex	1						
2 Alone	.56***	1					
3 Friends	.45***	.73***	1				
4 Partner	.38***	.69***	.82***	1			
5 Sexual Interest	.24***	.35***	.19**	.25***	1		
6 Condom	-.17**	-.12*	-.14*	-.20**	-.04	1	
7 Casual Sex	.35***	.35***	.31***	.29***	.27***	-.12*	1

Alone: viewing alone, Partner: viewing with partners, Friend: viewing with friends

Condom: Perceived importance of condom use, Casual sex: Attitude toward casual sex

Sex (dummy coded: 0 = females, 1 = males)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$



Overall findings indicate that there are different association patterns between social context of viewing and viewing outcomes.

In particular, the study identifies that viewing alone and viewing with partners are related to potentially troubling aspects of sex-related attitudes and behaviors, whereas viewing with friends reduces some of these tendencies (e.g., sexual interest). Given the associative nature of these relationships, it is difficult to determine whether viewing context impacts the outcome measures or if the inverse is true—that individuals who hold certain attitudes and tendencies may be more likely to view sexually explicit materials with a partner or friend. For example, one argument suggests that partner-shared viewing of sexually explicit materials may be a means for satisfying curiosity about sex and/or arousal. When viewing with a partner, someone with whom a closer relationship is already established, individuals may be less inclined to use condoms because individuals in more committed relationships are less likely to transfer sexually-transmitted illnesses. Thus, particularly, when viewing with partners, there may be a higher chance of engaging in sexual behaviors while or after viewing sexually explicit materials. Thus, in this context, sexual acts without condoms, which typically appear on sexually explicit materials (abc News, 2008), may reduce viewers' perceived importance of condom use and may allow them to think sex without condoms may be more enjoyable.

Further, there is potential that the pattern of findings reported here is informed by consideration of the forms of interaction that may occur in different contexts while viewing sexually explicit materials. For instance, potential interaction with friends may serve a beneficial role of negating perceived harmful effects from viewing sexually explicit materials as individuals share publicly held views about sexuality and, in some cases, may reinforce norms for sexual behavior. Or, while viewing sexually explicit materials with others, some viewers may comment that the content portrayed on the materials is dramatized and not a representation of "real life" sexual behavior. In this sense, this sort of interactions may function in a manner that is similar to the educational briefings described in previous research (Allen et al., 1996). Also, viewers may engage in conversations that may not be necessarily related to the content they are viewing. They may talk about their relationship and dating issues or engage in other casual conversations. These types of conversations may lead viewers not to be fully immersed with the content consumed. However, when viewing alone, viewers may interpret messages passively as the way messages are portrayed in materials rather than critically engaging in message interpretation process. That is, without any interaction with others, viewers may be heavily affected by materials in a solitary context.

Another possible explanation for the patterns of findings may be due to various motivations for viewing sexually explicit materials in various viewing contexts. Several studies indicate that consumers' major motives for exploring sexually explicit materials, in general, are to be sexually aroused, to resolve curiosity about sex, to learn new sexual techniques, to improve sex life with a partner, and to enhance offline sexual encounters through the Internet (Boies, 2002; Goodson et al., 2001; Wright, 2013). However, viewers may have different motives in different viewing contexts and those differences may affect the way content of sexually explicit materials affects viewers. For example, when people view with friends, the main motives may be more of resolving curiosity about sex, enjoying viewing nudity and sexual acts, and having

conversations about the content with friends. Thus, this type of viewing circumstance may possibly lead viewers to filter out some of the content consumed during their interactions with friends. However, when viewing alone, major motives for viewing materials may be more focused upon being sexually aroused. So, in this case, viewers' reactions may be more agreeable with the content viewed.

Further, the negative association between viewing with partner and perceived importance of condom use should be addressed. With partners, there is a high chance of engaging in sexual behaviors while or after viewing sexually explicit materials. Thus, in this context, sexual acts without condoms, which typically appear on sexually explicit materials, may reduce viewers' perceived importance of condom use. This finding calls for a strong need to educate couples on the importance of condom use.

### **Contributions and Implications for Research and Practice**

The investigation reveals several contributions and implications. First, the current investigation contributes to the understanding of social context of viewing sexually explicit materials. While a substantial body of literature has explored the association between consumption of sexually explicit materials and viewers' sex-related attitudes and behaviors (e.g., Allen et al., 2007; Boies, 2002; Brown & L'Engle, 2009; Braithwaite et al., 2015; Carroll et al., 2008; Morgan, 2011; Peter & Valkenburg, 2006a, 2006b, 2008, 2010a, 2010b, 2011), little is known how consuming the materials in different viewing contexts matters.

The findings also indicate practical implications. The investigation identifies that educational interventions of viewing sexually explicit materials should target specific groups of people with different types of messages based upon frequently used viewing contexts. As illustrated in this investigation, viewing alone is significantly related to viewers' sexual interest and attitudes toward casual sex. This finding implies that educational interventions should specifically target people that frequently view sexually explicit materials alone. Additionally, as discussed previously, it is also important that specific messages on importance of condom use should be distributed to those viewing with partners.

### **Limitations and Future Research Directions**

Future research may wish to begin by addressing some of the inherent limitations of the current study. First, future researchers may employ more extensive sets of measures. For example, this study focused on sex-related attitudes and perceptions only. Future research may consider measuring actual behavior (e.g., number of sexual partner, promiscuity) and examine whether the role of viewing sexually explicit materials is also related to actual behaviors as well as perceptions. Additionally, multiple items measuring consumption of sexually explicit materials in each context could be useful. Although the item employed in this investigation was straightforward in terms of measuring consumption in each context, multiple items measuring various types of consumption might have been better to further enhance participants' responses.

Second, future research should examine viewing motives and nature of interactions in different viewing contexts. Because of the exploratory nature of this study, the scope of this research did not include how various motives for viewing sexually explicit materials and interactions, which may occur during viewing, affect consumers' sex-

related attitudes or behavioral tendencies. Future research should further explore this line of research.

Next, although the investigation found interesting associations between viewing context and outcomes, these findings are limited to explaining simple associations, rather than causal relationships due to a self-report survey design. To examine causal effects of viewing contexts upon viewers, future researchers may consider employing experimental designs. Although ethical considerations may be a potential issue for this type of research, carefully designed experiments with educational briefings may help researchers execute the study (for positive effects of educational briefings, see Allen et al., 1996).

Lastly, future researchers may investigate differences between the online and offline form of sexually explicit materials on viewers. The online form allows consumers to more actively engage in seeking, viewing, and interpreting the materials via interactive features such as live shows and cyber sex than the offline form (Ferree, 2003; Isaacs & Fisher, 2008). It will be interesting to see to which degree these unique features of online materials are associated with viewers' sex-related attitudes and behaviors.

## **CONCLUSION**

Overall, the investigation reveals that various contexts of viewing sexually explicit materials indicate various associations with sex-related outcomes. More specifically, viewing alone is positively related to sexual interest and favorable attitudes toward casual sex. Viewing with partners is negatively related to perceived importance of condom use. Interestingly, viewing with friends is negatively associated with sexual interest and indicates no association with any other outcomes. Given that this research is exploratory in nature, there is much more to discover to fully understand how and why viewing contexts affect viewing outcomes differently. Based upon initial findings reported in this investigation, future researchers are encouraged to advance and expand the important but understudied line of research.

## REFERENCES

- ABC News (January 14, 2008). *Porn industry still struggles with condom issue*. Retrieved from <http://abcnews.go.com/Health/AIDS/story?id=4130615&page=1>
- Allen, M., D'Alessio, D., Emmers, T. M., & Gebhardt, L. (1996). The role of educational briefings in mitigating effects of experimental exposure to violent sexually explicit material: A meta-analysis. *Journal of Sex Research, 33*(2), 135–141. doi:10.1080/00224499609551825
- Allen, M., Emmers, T., Gebhardt, L., & Giery, M. A. (1995). Exposure to pornography and acceptance of rape myths. *Journal of Communication, 45*(1), 5–24. doi:10.1111/j.1460-2466.1995.tb00711.x
- Allen, M., Emmers-Sommer, T. M., D'Alessio, D., Timmerman, L., Hanzal, A., & Korus, J. (2007). The connection between the physiological and psychological reactions to sexually explicit materials: A literature summary using meta-analysis. *Communication Monographs, 74*(4), 541–560. doi:10.1080/03637750701578648
- Bandura, A. (1977). *Social learning theory*. New Jersey: Prentice Hall.
- Barak, A., Fisher, W. A., Belfry, S., & Lashambe, D. (1999). Sex, guys, and cyberspace: Effects of Internet pornography and individual differences on men's attitudes toward women. *Journal of Psychology & Human Sexuality, 11*(1), 63–91. doi:10.1300/J056v11n01\_04
- Bargh, J. A., & McKenna, K. Y. A. (2004). The Internet and social life. *Annual Review of Psychology, 55*(1), 573–590. doi:10.1146/annurev.psych.55.090902.141922 PMID:14744227
- Boies, S. C. (2002). University students' uses of and recreations to online sexual information and entertainment: Links to online and offline sexual behavior. *The Canadian Journal of Human Sexuality, 11*, 77–89.
- Braithwaite, S. R., Coulson, G., Keddington, K., & Fincham, F. D. (2015). The influence of pornography on sexual scripts and hooking up among emerging adults in college. *Archives of Sexual Behavior, 44*(1), 111–123. doi:10.1007/s10508-014-0351-x PMID:25239659
- Brown, J. D., & L'Engle, K. L. (2009). X-rated: Sexual attitudes and behaviors associated with U.S. early adolescents' exposure to sexually explicit media. *Communication Research, 36*(1), 129–151. doi:10.1177/0093650208326465
- Carroll, J. S., Padilla-Walker, L. M., Nelson, L. J., Olson, C. D., Barry, C. M., & Madsen, S. D. (2008). Generation XXX: Pornography acceptance and use among young adults. *Journal of Adolescent Research, 23*(1), 6–30. doi:10.1177/0743558407306348
- Chia, S. C. (2006). How peers mediate media influence on adolescents' sexual attitudes and sexual behavior. *Journal of Communication, 56*(3), 585–606. doi:10.1111/j.1460-2466.2006.00302.x
- Collins, R. L., Elliott, M. N., Berry, S. H., Kanouse, D. E., Kunkel, D., & Hunter, S. B. (2004). Watching sex on television predicts adolescents' initiation of sexual activity. *Pediatrics, 114*(3), 280–289. doi:10.1542/peds.2003-1065-L PMID:15342887

- Döring, N. M. (2009). The Internet's impact on sexuality: A critical review of 15 years of research. *Computers in Human Behavior*, 25(5), 1089–1101. doi:10.1016/j.chb.2009.04.003
- Ferree, M. C. (2003). Women and the web: Cybersex activity and implications. *Sexual and Relationship Therapy*, 18(3), 385–393. doi:10.1080/1468199031000153973
- Fisher, D. A., Hill, D. L., Grube, J. W., Bersamin, M. M., Walker, S., & Gruber, E. L. (2009). Televised sexual content and parental mediation: Influences on adolescent sexuality. *Media Psychology*, 12(2), 121–147. doi:10.1080/15213260902849901 PMID:21546986
- Fisher, W. A., & Barak, A. (2001). Internet pornography: A social psychological perspective on Internet sexuality. *Journal of Sex Research*, 38(4), 312–323. doi:10.1080/00224490109552102
- Goodson, P., McCormick, D., & Evans, A. (2001). Searching for sexually explicit materials on the Internet: An exploratory study of college students' behavior and attitudes. *Archives of Sexual Behavior*, 30(2), 101–118. doi:10.1023/A:1002724116437 PMID:11329723
- Harris, R. J., & Scott, C. L. (2002). Effect of sex in the media. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2nd ed., pp. 307–331). Mahwah, NJ, US: Lawrence Erlbaum Associates Publications.
- Isaacs, C. R., & Fisher, W. A. (2008). A computer-based educational intervention to address potential negative effects of Internet pornography. *Communication Studies*, 59(1), 1–18. doi:10.1080/10510970701849354
- Metz, C. (2015, October 15). The porn business isn't anything like you think it is. *Wired Magazine*. Retrieved from <http://www.wired.com/2015/10/the-porn-business-isnt-anything-like-you-think-it-is/>
- Morgan, E. M. (2011). Associations between young adults' use of sexually explicit materials and their sexual preferences, behaviors, and satisfaction. *Journal of Sex Research*, 48(6), 520–530. doi:10.1080/00224499.2010.543960 PMID:21259151
- Nathanson, A. I. (2002). The unintended effects of parental mediation of television on adolescents. *Media Psychology*, 4(3), 207–230. doi:10.1207/S1532785XMEP0403\_01
- Perrin, A., & Duggan, M. (2015). Americans' Internet access: 2000-2015. *Pew Research Center*. [http://www.pewinternet.org/files/2015/06/2015-06-26\\_internet-usage-across-demographics-discover\\_FINAL.pdf](http://www.pewinternet.org/files/2015/06/2015-06-26_internet-usage-across-demographics-discover_FINAL.pdf)
- Peter, J., & Valkenburg, P. M. (2006a). Adolescents' exposure to sexually explicit material on the Internet. *Communication Research*, 33(2), 178–204. doi:10.1177/0093650205285369
- Peter, J., & Valkenburg, P. M. (2006b). Adolescents' exposure to sexually explicit online material and recreational attitudes toward sex. *Journal of Communication*, 56(4), 639–660. doi:10.1111/j.1460-2466.2006.00313.x
- Peter, J., & Valkenburg, P. M. (2008). Adolescents' exposure to sexually explicit Internet material and sexual preoccupation: A three-wave panel study. *Media Psychology*, 11(2), 207–234. doi:10.1080/15213260801994238

- Peter, J., & Valkenburg, P. M. (2010a). Processes underlying the effects of adolescents' use of sexually explicit Internet material: The role of perceived realism. *Communication Research, 37*(3), 375–399. doi:10.1177/0093650210362464
- Peter, J., & Valkenburg, P. M. (2010b). Adolescents' use of sexually explicit Internet material and sexual uncertainty: The role of involvement and gender. *Communication Monographs, 77*(3), 357–375. doi:10.1080/03637751.2010.498791
- Peter, J., & Valkenburg, P. M. (2011). The influence of sexually explicit Internet material on sexual risk behavior: A comparison of adolescents and adults. *Journal of Health Communication, 16*(7), 750–765. doi:10.1080/10810730.2011.551996 PMID:21476164
- Ropelato, J. (2009). Internet pornography statistics. Retrieved from [www.internet-filter-review.toptenreviews.com/internet-pornography-statistics.html](http://www.internet-filter-review.toptenreviews.com/internet-pornography-statistics.html)
- Short, M. B., Black, L., Smith, A. H., Wetterneck, C. T., & Wells, D. E. (2012). A review of Internet pornography use research: Methodology and content from the past 10 years. *Cyberpsychology, Behavior, and Social Networking, 15*(1), 13–23. doi:10.1089/cyber.2010.0477 PMID:22032795
- Simons, L. G., Simons, R. L., Lei, M. K., & Sutton, T. E. (2012). Exposure to harsh parenting and pornography as explanations for males' sexual coercion and females' sexual victimization. *Violence and Victims, 27*(3), 378–395. doi:10.1891/0886-6708.27.3.378 PMID:22852438
- Song, H., Kim, J., & Lee, K. M. (2014). Virtual body vs. real body in exergames: Reducing social physique anxiety in exercise experiences. *Computers in Human Behavior, 36*, 282–285. doi:10.1016/j.chb.2014.03.059
- Traeen, B., Nilsen, S. T., & Stigum, H. (2006). Use of pornography in traditional media and on the Internet in Norway. *Journal of Sex Research, 43*(3), 245–254. doi:10.1080/00224490609552323 PMID:17599247
- Wingood, G. M., DiClemente, R. J., Harrington, K., Davies, S., Hook, E. W. III, & Oh, M. K. (2001). Exposure to X-rated movies and adolescents' sexual and contraceptive-related attitudes and behaviors. *Pediatrics, 107*(5), 1116–1119. doi:10.1542/peds.107.5.1116 PMID:11331695
- Wright, P. J. (2013). US males and pornography, 1973–2010: Consumption, predictors, correlates. *Journal of Sex Research, 50*(1), 60–71. doi:10.1080/00224499.2011.628132 PMID:22126160
- Zaichkowsky, J. L. (1985). Measuring involvement construct. *The Journal of Consumer Research, 12*(3), 341–352. doi:10.1086/208520
- Zillmann, D., & Bryant, J. (1988). Effects of prolonged consumption of pornography on family values. *Journal of Family Issues, 9*(4), 518–544. doi:10.1177/019251388009004006

*Jihyun Kim obtained a Ph.D. from the University of Wisconsin-Milwaukee in 2012 and is Assistant Professor in the Nicholson School of Communication at the University of Central Florida in the United States. Her primary research interests are focused on (a) effects and implications of new media/communication technologies in diverse contexts (e.g., health, education, parasocial relationship) and (b) a theoretical notion of presence (particularly, social presence) in technology-mediated communication contexts.*

*C. Erik Timmerman obtained a Ph.D. from the University of Texas at Austin in 2000 and is Professor and Chair of the Department of Communication Studies at Texas State University. His research and teaching interests examine communication processes in organizations and applications of technology to instructional settings.*