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The effects of sexually explicit material use on romantic relationship dynamics

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Background and aims: Pornography use has become increasingly common. Studies have shown that individuals who use sexually explicit materials (SEMs) report negative effects (Schneider, 2000b). However, Bridges (2008b) found that couples who use SEM together have higher relationship satisfaction than those who use SEM independently. A further investigation into various types of SEM use in relationships may highlight how SEM is related to various areas of couple satisfaction. Thus, the purpose of the current study is to examine the impact of SEM use related to different relationship dynamics. *Methods:* The current study included a college and Internet sample of 296 participants divided into groups based upon the SEM use in relationships (i.e., SEM alone, SEM use with partner, and no SEM use). *Results:* There were significant differences between groups in relationship satisfaction [$F(2, 252) = 3.69$, $p = .026$], intimacy [$F(2, 252) = 7.95$, $p = <.001$], and commitment [$F(2, 252) = 5.30$, $p = .006$]. Post-hoc analyses revealed additional differences in relationship satisfaction [$t(174) = 2.13$, $p = .035$] and intimacy [$t(174) = 2.76$, $p = .006$] based on the frequency of SEM use. *Discussion:* Further exploration of the SEM use function in couples will provide greater understanding of its role in romantic relationships.

Keywords: pornography, sexually explicit materials, couples, romantic relationships, relationship satisfaction, sexual satisfaction

INTRODUCTION

Significant increases in pornography [for the purposes of the study, it will be interchangeable with sexually explicit material (SEM)] has prompted researchers to further explore its impact on users and interpersonal relationships (Schneider, 2000a, 2000b). As technology has advanced, SEM distribution also has adapted to new digital formats, thus increasing availability and accessibility. Currently, there are 4.2 million pornography websites, and every second, over $3,000 is being spent on SEM (Ropelato, 2010). The "Triple-A Engine" theory, characterized by greater accessibility, affordability, and perceived anonymity, may account for the increased use of SEM on the Internet (Cooper, 1998).

Negative effects of use on individuals

Viewing pornography has been found to have many negative consequences for the individual, including impairment of academic and professional performance, distress, sexual compulsivity (Cooper, Putnam, Planchon, & Boies, 1999; Manning, 2006), and aggression (Allen, D'Alessio, & Brezgel, 1995; Donnerstein, Donnerstein, & Evans, 1975). Beyond the problems related to self, SEM use has increased difficulties in intimate relationships (Deloy, 2007; Oddone-Paolucci, Genuis, & Violato, 2000). More specifically, the use of pornography by an individual typically leads to a decline in relationship and sexual satisfaction (Bridges, 2008a; Deloy, 2007; Schneider, 2000a, 2000b; Yucel & Gassanov, 2010).

When examining these relationship difficulties, the use of SEM is the predictors of decreased marital satisfaction and intimacy (Schneider, 2000a, 2000b) and is a major contributor to separation and divorce (Schneider, 2000b). In fact, marriages with sexual addiction problems often have low relationship satisfaction, and the partners in those relationship report increase in secrecy, isolation, and relationship dysfunction (Carnes, 1992; Schneider, 2000b; Wildmon-White & Young, 2002). These difficulties are more pronounced in couples where only one partner regularly engages in SEM use, often resulting in a loss of interest in sex and sexual intimacy (Schneider, 2000b).

Negative impact of use on partners

With regard to the effects of partner use, Zillmann and Bryant (1984, 1988) found that viewing pornography led to decreased satisfaction in one's partner, increased callousness toward females, distorted perceptions of sexuality, and decreased values related to monogamy and marriage.

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Research also has shown that viewing pornography increases one's judgment of non-monogamous relationships as normal behavior (Drake, 1994).

In addition to the effects on partner, studies have examined female's reactions to male partner's SEM use. Male's SEM use can generate a variety of negative emotions (i.e., betrayal, rejection, and abandonment) for females, which frequently results in termination of relationships (Schneider, 2000a, 2000b). Females, who discover their male partner's pornography use, often begin to view themselves as sexually undesirable, worthless, weak, and stupid (Bergner & Bridges, 2002).

Positive effects of use on partners

Despite the negative effects of pornography, some studies have found that couples who use SEM together may have more positive outcomes than those who use SEM independently (Bridges, 2008b; Bridges & Morokoff, 2010; Schneider, 2000a, 2000b). Also, individuals who only viewed SEM with their partner reported as increased sexual satisfaction and dedication to their partner as compared to non-users. For example, couples, who reported sharing SEM, endorsed significantly higher scores of relationship and sexual satisfactions than couples who did not use SEM together (Bridges, 2008b).

Context of SEM use in romantic

Given the mixed results in previous research, it is understandable that shared use and partner use of SEM are complicated. One issue that complicates the results is level of sharing in the relationship related to SEM use. More specifically, the use of SEM in romantic relationships may be limited to one person or both individuals. Furthermore, when taking a partner's perception of the SEM presence into account, generally, there can be five groups of SEM use: individual users, partner users, separate users, shared users, and non-users. Of course, one person can belong to multiple SEM groups in a relationship. When examining each of these, the effects of use may differ for each person in each category. Understanding the complexity of SEM use may also be related to the function of SEM use. To further explain the role and dynamics of SEM use in romantic relationships (and its subsequent impact on reported satisfaction), it may be helpful to explore the constructs related to relationship satisfaction levels, such as intimacy or commitment.

The importance of the function of SEM use

A partner's interpretation of one's SEM use can impact the relationship and sexual satisfactions. In fact, Bridges (2008a) found that the frequency and effects of SEM use differed based on gender, perceptions of the partners' use, and function of SEM use. In couples where females used SEM, both partners rated having higher sexual and relationship satisfactions compared to couples in which females did not use SEM. In relationships where females did not use SEM, male's use of SEM negatively impacted scores of sexual satisfaction. Furthermore, findings revealed that the most endorsed function of SEM use for females was as a part of love making, while males generally reported using it as a solitary, masturbatory aid (Bridges, 2008a, p. 79).

Outside of the effects on relationship satisfaction, commitment, passion, and intimacy may be related to SEM use. In a qualitative study, pornography use would have mixed impacts in the reported relationship satisfaction (Benjamin & Tlusten, 2010). For instance, some females reported embracing pornography and using it as a resource to develop passion with their partner. On the other hand, other females reported that viewing pornographic images of intimacy resulted in an alienation in their sexuality.

The current study seeks to further explain the effects of SEM use within romantic relationships, specifically the relationship between the context of SEM use against love styles (as measured by Sternberg's theory), satisfaction measures, and self-reported consequences of SEM use. Exploring the impact of SEM use by both partners in romantic relationships is a new field; thus, this study is building on a fledgling body of research.

The current study

The current study examined the use of SEM in romantic relationships as reported by an individual. Measures assessed personal factors that may be related to SEM use including a measure of love styles [intimacy, passion, and commitment (IPC)], relationship satisfaction, sexual satisfaction, and the effects of SEM use. The current study examined the differences in the effects of SEM between groups of individuals in which: (a) only the participant uses SEM, (b) both partners use SEM together, or (c) neither partner use SEM. Bergner and Bridges (2002) addressed the reactions that females have when they discover their partner uses SEM, which indicate that SEM use is not always disclosed in a relationship. For this reason, partner users and separate users were not included. Further studies should address if there are inconsistent and sometime inaccurate perceptions of SEM use by the non-using partner.

METHODS

Recruitment

Participants, 18 years or older and in a romantic relationship, were recruited through an online study participant pool system at a mid-size university in Texas, class announcements at the same university, "snowball" emailing methods, website advertisements, and partner referrals. Recruitment through website advertisements involved posting study advertisements on general-purpose advertisement sites, such as www.craigslist.com, www.backpage.com, and www.facebook.com.

Data collection took place over 6 months. Upon navigating to the online survey, all participants were advised that their participation was voluntary and that they could withdraw from the study at any time. Due to the personal nature of the study questions, signature of consent was waived to maintain anonymity, and participants were instructed to check a box indicating their consent, in accordance with

the IRB approved procedures. After consenting to participate, participants completed the questionnaire. The first question of the survey asked was the participant's relationship status. Those endorsing "single/not currently in a romantic relationship" were informed that they were not eligible to participate and were exited out of the study.

Following completion of the study, if the participants wished to enter a drawing for a fifty-dollar raffle, they clicked a link leading to a separate data file, which prevented the survey answers from being connected to the raffle entry. The two participants, who won the raffle, were contacted by email to arrange to have the prize money mailed to them. Participants from the university were given the opportunity of extra credit for participating instead of entering the raffle. If they wanted extra credit, they clicked a link leading to a separate data file, where they left their name so extra credit could be assigned.

Participants

Most of the participants were from the non-student sample (65%, $n = 192$). Participants included 75 males (25%) and 221 females (75%) aged 18–87 years. Mean age of participants was 28.51 years ($SD = 9.40$). Individuals in their current relationship had been together for an average of 5.36 years ($SD = 6.60$). Of the participants, 97% were heterosexual and 3% were homosexual. In terms of ethnicity, this sample was mostly Caucasian (65.2%), followed by Hispanic (18.9%), African American (7.4%), and other (8.5%).

For analyses, marital status was dichotomized into married (38.1%) and unmarried (62.9%). Married participants were married for an average of 3.47 years ($SD = 7.11$). Most of the participants reported being in an exclusive relationship (85.2%), 8.0% were in somewhat exclusive relationships, and 6.8% were non-exclusive relationships. About 92% of participants were sexually active and reported being sexually active with their current partner for 5.37 years ($SD = 6.80$).

Participants were organized into three groups based upon the type of SEM use present in the relationship. The first group is individual users ($n = 72$–79; see Table 1), in which the participants are the only person in the relationship using SEM. The second group is shared users ($n = 68$–71), which are participants who reported that both partners use SEM in the relationship together. The third group is the non-users ($n = 93$–108), which are individuals who reported that no SEM use by either person in the relationship.

Measures

The study questionnaire included a number of self-report measures. Table 1 displays the means and standard deviations by group for each dependent variable.

Demographics. Demographics were obtained on all participants and included questions about age, sex, relationship status, ethnicity, sexual orientation, and religion.

SEM survey. This scale was developed for the purpose of the current study. SEM was defined as "any material depicting two adults consensually engaging in pleasurable, non-violent, non-degrading, sexual interactions." Current SEM use was measured using frequency (hours per month, times used per month) and functions or reasons for SEM use. Other variables, such as the type of SEM media used and the content of various kinds of SEM, were assessed. The same series of questions were asked in regards to their partner's use and shared use of SEM.

Dyadic adjustment scale (DAS-7). The DAS-7, a shortened version of the original 32-item scale, questionnaire contains seven Likert-type items (Hunsley, Best, Lefebvre, & Vito, 2001). The first three items consist of statements about agreement on three global issues (philosophy, goals, and time spent together) to which participants indicate their degree of agreement from 0 (Always Disagree) to 5 (Always Agree). The second three items consist of statements about the frequency of couple activities, and participants indicated the frequency of these activities from 0 (Never) to 5 (More often than once a day). The last item is a statement about the overall degree of happiness in the relationship to which participants indicate their degree of agreement on a 7-point scale ranging from 0 (Extremely unhappy) to 6 (Perfect). Overall, higher scores mean higher relationship satisfaction.

The DAS-7 has demonstrated adequate internal consistency (Cronbach's $\alpha = 0.78$), in addition to the test–retest reliability ranging from $\alpha = 0.75$ to 0.80 (Hunsley et al., 2001). Scores range from 0 (distressed) to 36 (non-distressed). Reliability analysis for this sample shows good consistency (Cronbach's $\alpha = 0.82$).

Index of sexual satisfaction (ISS). The ISS is a 25-item scale assessing the degree of sexual discord or dissatisfaction within relationships (Hudson, Harrison, & Crosscup, 1981). Answers range from 1 (Rarely or None of the Time) to 5 (Most or All of the Time), and are summed across the 25-items. Due to an administration error, an abridged 24-item scale was used; the original validation study reported that integrity of the reliability and validity of the scale is maintained even when up to two questions are missing (Hudson et al., 1981). Higher scores reflect more dissatisfaction, and the clinical cutoff is 30.

The ISS has excellent internal consistency of Cronbach's $\alpha = 0.92$ and test–retest reliability of $\alpha = 0.93$ (Hudson et al., 1981). In addition, the discriminate validity ability of the ISS is high (Hudson et al., 1981). Reliability analysis for this sample shows good consistency (Cronbach's $\alpha = 0.89$).

Pornography consumption effect scale (PCES). The PCES is a 47-item scale that assesses self-perceived positive and negative effects of pornography consumption (Hald & Malamuth, 2008). This measure consists of two main factors, including a positive effect dimension (PED) and a negative effect dimension (NED). There are also conceptual subscales, including sex life (SL), life in general (LG), perception of attitudes toward the opposite gender (PATOG), attitudes toward sex (ATS), and sexual knowledge (SK).

The PCES does not have a total score, rather is a set of 11 subscales (1–7 range for all subscales). Participant responses range from 1 (Not at All) to 7 (To an Extremely Large Extent). Global PED is obtained by averaging 27-items, and global NED is obtained by averaging 20-items. Higher scores indicate higher agreement.

Full-scale reliability (i.e., Cronbach's α) for the PED is 0.91 with reliability estimates of 0.91 (SL), 0.90 (SK), 0.90 (ATS), 0.87 (GL), and 0.73 (PATOG) for each construct. Full-scale reliability for the NED is 0.82 with reliability

Table 1. Means, standard deviations, and confidence intervals (95%) by three groups for each dependent variable

	Non-users	Individual users	Shared users
Range of *n*	93–108	72–79	68–71
Male (%)	13.9	43	35.2
Relationship satisfaction	25.22 (5.62)	23.19 (6.03)*	25.25 (4.89)
	(24.15–26.30)	(21.84–24.54)	(24.10–26.41)
Sexual satisfaction	20.54 (14.87)	23.07 (14.53)	21.46 (12.30)
	(17.48–23.60)	(19.68–26.43)	(18.53–24.39)
IPC			
Intimacy	6.22 (0.96)	5.56 (1.43)*	6.14 (0.93)*
	(6/03–6.40)	(5.24–5.88)	(5.92–6.36)
Passion	5.73 (1.34)	5.53 (1.29)	5.90 (1.17)
	(5.47–5.99)	(5.24–5.82)	(5.62–6.17)
Commitment	6.25 (1.17)	5.70 (1.66)*	6.35 (1.01)*
	(5.52–5.83)	(5.04–5.54)	(5.50–5.84)
PCES			
PED	–	14.46 (6.30)	14.87 (6.15)
		(13.14–16.05)	(13.35–16.41)
SL	–	3.05 (1.48)	3.33 (1.38)
		(2.73–3.43)	(3.01–3.69)
LG	–	2.39 (1.31)	2.48 (1.32)
		(2.11–2.74)	(2.17–2.83)
PATOG	–	1.86 (1.19)	1.75 (1.18)
		(1.61–2.15)	(1.49–2.06)
ATS	–	3.16 (1.40)	3.26 (1.42)
		(2.86–3.50)	(2.92–3.61)
SK	–	4.00 (1.68)	4.05 (1.64)
		(3.64–4.37)	(3.66–4.45)
NED	–	8.67 (2.86)	8.11 (3.34)
		(8.01–9.34)	(7.30–8.92)
SL	–	2.26 (0.86)	2.18 (0.96)
		(2.07–2.48)	(1.94–2.42)
LG	–	1.96 (0.86)*	1.68 (0.67)
		(1.76–2.16)	(1.53–1.86)
PATOG	–	2.63 (0.98)	2.53 (1.25)
		(2.40–2.87)	(2.24–2.84)
ATS	–	1.81 (0.78)	1.71 (0.83)
		(1.63–2.00)	(1.53–1.93)

Note. The *n* for each group varied among the dependent variables due to drop out, missing data, and whether or not the individual was sexually active. PED = positive effect dimension, NED = negative effect dimension, SL = sex life, LG = life in general, PATOG = perception of attitudes toward the opposite gender, ATS = attitudes toward sex, and SK = sexual knowledge.
*$p = .05$.

estimates of 0.83 (GL), 0.81 (ATS), 0.71 (SL), and 0.72 (PATOG) for each construct (Hald & Malamuth, 2008). Reliability analysis of the PED and NED for this sample showed excellent consistency (Cronbach's $\alpha = 0.95$ and $\alpha = 0.92$, respectively).

IPC scale. The IPC is a 19-item measure of the three components comprising the triangular theory of love (Sternberg, 1986): intimacy (7-items), passion (8-items), and commitment (8-items, Lemieux & Hale, 2000). The IPC does not have a total score, rather is a set of three subscales (7–49 range for intimacy, and 8–56 range for passion and commitment subscales). Participant responses range from 1 (Strongly Disagree) to 7 (Strongly Agree). Higher scores equal higher endorsement of that item. Good coefficient reliability was found for all three subscales: intimacy ($\alpha = 0.89$), passion ($\alpha = 0.94$), and commitment ($\alpha = 0.89$). IPC scales have good convergent validity with a relationship satisfaction measure ($\alpha = 0.96$). Reliability analysis of the IPC subscales for this sample showed excellent consistency (Cronbach's $\alpha = 0.91$, $\alpha = 0.94$, and $\alpha = 0.92$, respectively).

Analyses

The data were analyzed using SPSS 16.0. Statistical analyses focused on between-group differences comparing individual users, shared users SEM together, and non-users. A measure of analysis of covariance model was used to determine if there were significant differences found on the DAS-7 and ISS between the three groups of SEM use. The given research has shown difference in SEM use by gender, gender was also entered as a second independent variable to explore potential moderating effects as an interaction term.

Any significant differences ($p < .05$) from the analysis of variance (ANOVA) were further pursued with the post-hoc Tukey's Honestly Significant Difference test using a α level of .05. A series of ANOVAs were conducted to explore SEM group differences of perceived effects in the two groups who used SEM.

Post-hoc analyses looking at the frequency of SEM use were conducted to see if this variable affected the results. *t*-Tests were used to assess if the frequency of SEM use impacted relationship satisfaction, sexual satisfaction, and perceived effects of use. Groups were divided into high-frequency users (HFUs; i.e., more than 1 hr a month) and low-frequency users (LFUs; i.e., less than 1 hr a month) based on criteria used in a prior study (Bridges, 2008a).

Ethics

This study was approved by University of Houston-Clear Lake's Institutional Review Board. Due to the personal nature of the study questions, signature of consent was waived to maintain anonymity, and participants were instructed to check a box indicating their consent. After consenting to participate, participants completed the questionnaire.

RESULTS

Demographics and SEM use

Gender. Males were significantly more likely to be using SEM in their relationships (80%) compared to females (59%) [χ^2 (1) = 17.25, $p < .001$]. Looking at the three different types of SEM users, there were differences by gender [χ^2 (2) = 20.99, $p < .001$]. Males were significantly more likely to be individual users ($p = .008$) and significantly less likely to be a non-user ($p = .002$).

Relationship status. Looking at the three different types of SEM groups, there were no significant differences between those who are married and those who are not married [χ^2 (2) = .957, $p = .620$].

Effects of SEM use across satisfaction and relationship variables

Overall, there were a number of significant differences across relationship variables by SEM use, and Table 2 highlights the differences in relationship variables (relationship satisfaction and IPC) by gender and the type of SEM use. Furthermore, individual users had lower scores related to relationship satisfaction, intimacy, and commitment compared to non-users. In addition, individual users reported significantly lower scores on intimacy and commitment than relationships with shared use. There was a trend of significant gender differences for sexual satisfaction, $F(1, 230) = 3.36$, $p = .068$, with males indicating lower levels of satisfaction than females.

Perceived effects of SEM use

Since this questionnaire assesses the self-perceived overall positive and negative effects of pornography consumption, it was only presented to the individual users and shared users.

Table 2. Means and comparisons of dependent variables by gender and the type of SEM use in relationship

	Relationship satisfaction		Sexual satisfaction		Intimacy		Passion		Commitment	
	Mean	*F* and *p* value	Mean	*F* and *p* value	Mean	*F* and *p* value	Mean	*F* and *p* value	Mean	*F* and *p* value
Gender										
Males	25.14	$F(1, 252) = 1.06$, $p = .305$	24.34	$F(1, 230) = 3.36$, $p = .068$*	5.94	$F(1, 252) = 0.19$, $p = .661$	5.67	$F(1, 252) = 0.46$, $p = .499$	5.61	$F(1, 252) = 0.41$, $p = .551$
Females	24.31		20.38		6.02		5.79		5.53	
SEM use										
Individual user	23.24	$F(2, 252) = 3.69$, $p = .026$**	23.29	$F(2, 230) = 0.21$, $p = .812$	5.54	$F(2, 252) = 7.95$, $p \leq .001$***	5.50	$F(2, 252) = 1.67$, $p = .191$	5.29	$F(2, 252) = 5.30$, $p = .006$**
Shared user	25.39		22.05		6.14		5.87		5.69	
Non-user	25.55		21.74		6.23		5.81		5.74	
Interaction		$F(2, 252) = 0.01$, $p = .992$		$F(2, 230) = 0.03$, $p = .973$		$F(2, 252) = 0.64$, $p = .531$		$F(2, 252) = 0.96$, $p = .386$		$F(2, 252) = 0.41$, $p = .666$

*$p = .10$, **$p = .05$, ***$p = .001$.

PCES positive effects. An independent *t*-test of the PCES PED score revealed no significant differences between the individual users and shared users, $t(70) = -0.063$, $p > .05$. Furthermore, none of the PED's subscales revealed any significant differences between the three groups.

PCES negative effects. Similarly, an independent *t*-test of the PCES NED score did not reveal significant group differences, $t(70) = -0.194$, $p > .05$. On one of the NED subscales, LG, an independent *t*-test comparison revealed significantly greater negative perceptions from individual users ($M = 1.68$) than shared users [$M = 1.96$; $t(138) = -2.10$, $p = .036$].

Effects of sexual explicit material use frequency

Overall, means and standard deviations are presented in Table 3, and these descriptive were further broken down by the level of use (HFU vs. LFU).

Satisfaction measures and IPC. In general, LFU reported better outcomes than HFUs. LFU had higher scores of relationship satisfaction [$t(174) = 2.13$, $p = .035$] and higher intimacy scores [$t(174) = 2.76$, $p = .006$] than HFU. There were no differences for sexual satisfaction, passion, and commitment across the frequency of SEM use.

Perceived effects of SEM use. Overall, HFU ($M = 15.74$) reported greater positive perceived effects than LFU [$M = 13.70$; $t(138) = -1.95$, $p = .053$]. There were significant and marginally significant differences on the following positive subscales: SL [HFU $M = 3.45$; LFU $M = 2.96$; $t(138) = -2.02$, $p = .045$], ATS [HFU $M = 3.45$; LFU $M = 2.99$; $t(138) = -1.95$, $p = .053$], and SK [HFU $M = 4.33$; LFU $M = 3.75$; $t(138) = -2.08$, $p = .040$]. There were no significant differences on any other subscales.

There were no significant differences for the NED PCES across the frequency of SEM use; however, there were significant differences on the SL subscale where HFUs ($M = 2.43$) reported greater negative effects than LFU [$M = 2.04$; $t(138) = -2.57$, $p = .011$]. There were no significant differences on any other subscales.

Table 3. Means, standard deviations, and confidence intervals (95%) by two groups for each dependent variable

	Low-frequency user	High-frequency user
Range of *n*	75–84	65–92
Male (%)	32.1	34.8
Relationship satisfaction	25.18 (5.72)** (24.01–26.51)	23.28 (5.47) (22.78–25.02)
Sexual satisfaction	21.06 (12.91) (18.45–23.95)	23.37 (14.08) (11.90–16.06)
IPC		
Intimacy	6.08 (0.99)** (5.85–6.28)	5.57 (1.43) (5.47–6.03)
Passion	5.87 (1.12)* (5.62–6.10)	5.52 (1.35) (5.37–5.94)
Commitment	6.20 (1.31)* (5.41–5.78)	5.88 (1.46) (5.20–5.59)
PCES		
PED	13.70 (6.33)* (12.27–15.16)	15.74 (5.98) (14.26–17.29)
SL	2.96 (1.47)** (2.63–3.33)	3.45 (1.37) (3.11–3.80)
LG	2.24 (1.30) (1.96–2.55)*	2.65 (1.31) (2.33–2.98)
PATOG	1.75 (1.13) (1.49–2.00)	1.87 (1.25) (1.56–2.18)
ATS	2.90 (1.42)* (2.66–3.32)	3.45 (1.36) (3.11–3.80)
SK	3.75 (1.73) (3.38–4.14)**	4.33 (1.52) (3.97–4.71)
NED	7.94 (3.35)* (7.22–8.71)	8.90 (2.75) (8.22–9.59)
SL	2.04 (0.89)** (1.85–2.24)	2.43 (0.90) (2.20–2.64)
LG	1.72 (0.77)* (1.55–1.90)	1.95 (0.78) (1.76–2.15)
PATOG	2.46 (1.18) (2.21–2.72)	2.72 (1.04) (1.6–2.18)
ATS	1.73 (0.91) (1.5–1.94)	1.81 (0.66) (1.65–1.97)

Note. The *n* for each group varied among the dependent variables due to drop out, missing data, and whether or not the individual was sexually active. PED = positive effect dimension, NED = negative effect dimension, SL = sex life, LG = life in general, PATOG = perception of attitudes toward the opposite gender, ATS = attitudes toward sex, and SK = sexual knowledge. *$p = .10$, **$p = .05$.

DISCUSSION

This study examined how the use of SEM in couples was related to relationship and sexual satisfaction, perceived consequences of use, and relationship constructs (e.g., IPC). Overall, the SEM use was related to relationship satisfaction, but not related to sexual satisfaction. More specifically, couples, where no one used, reported more relationship satisfaction than those couples that had individual users. This is consistent with the previous research (Cooper et al., 1999; Manning, 2006), demonstrating that the solitary use of SEM results in negative consequences. Thus, it may be that couples are actually suffering when one or both individuals are using SEM. However, given that couples who had shared use of SEM did not differ from non-users or individual user, it may be best on relationship if couples either refrained from using SEM, and if they want to use SEM, they should at least use it as a couple, instead of individually.

In summary, relationship constructs such as IPC vary based upon the SEM use in the relationship. With gender effects held constant, individual users reported significantly less intimacy and commitment in their relationships than non-users and shared users. This suggests that the reduction of intimacy and commitment with the presence of solitary SEM use in a relationship may be negated if both partners use SEM. The data imply those relationships where both partners used SEM or where both partners abstained from SEM use had similar levels of intimacy, commitment, and relationship satisfaction present. An association between relationship constructs (such as intimacy and commitment) could be related to the way SEM use is introduced in the relationship. For example, those with lower levels of

intimacy or commitment may choose to view SEM individually, while those with higher levels may choose to abstain from use or view SEM together. Another explanation is that repeated use of SEM may change an individual's sexual interests and increasing their desire for sexually novel stimulus. More specifically, using the same repeated SEM may not be as desirable or novel.

Overall, how frequently someone views SEM can have an impact on users' consequences. Our study found that HFU is more likely to have lower relationship satisfaction and intimacy in their romantic relationships. However, HFU reported greater perceived positive effects of use, across multiple domains, than LFU, while they also reported fewer perceived negative consequences. This may suggest that those who use SEM more frequently are heavily invested in their use. Regardless of whether HFU results in lowered intimacy or relationship satisfaction, or the latter variables lead to greater SEM usage, the investment in SEM usage appears to be at the detriment to their romantic relationship. Furthermore, perhaps due to this investment, the users may have a positive selective memory bias of their use.

This study included a number of strengths. First, it was a mixed sample of college student and community participants. Having the majority of our sample (65%) come from community participants increases the generalizability. Second, it was one of the first studies to examine multiple variables across multiple types of SEM use in couples, which enhances our understanding of the effects of SEM use in couples. However, there were a number of limitations when interpreting the results of our study. This survey was collected online and the topics covered in this survey are sensitive in nature; thus, there is a potential for a self-selection bias. Also, perhaps a larger sample size along with greater power would better allow for any of the suggested existing differences to illuminate themselves. Finally, we were only able to assess the SEM use of one person within the dyadic relationship. There may be confounding variables within our sample, such as whether or not the partner is unknowingly viewing SEM.

Future studies could assess SEM use of both partners to provide more information about the variables of interest. Since SEM use often involves deception, future studies should assess both partners in the relationship, in order to obtain the effects of SEM use on romantic relationships, when the partner use is secretive. Furthermore, given the lack of experimental component, directionality of effect could not be determined. Furthermore, there may be potential mediators and moderators related to use, and these have yet to be explored. Future studies with a longitudinal design would have the ability to assess these variables at multiple times points, which would be important to advancing our understanding of SEM use in romantic relationships. Understanding the specific variables that determine positive and negative outcomes for couples and exploring directionality of SEM usage and relationship variables will be the next important steps.

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