Internet pornography and relationship quality: A longitudinal study of within and between partner effects of adjustment, sexual satisfaction and sexually explicit internet material among newly-weds

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Abstract

Several studies have established a negative relation between the use of sexually explicit Internet material (SEIM) and relationship quality. While most studies imply SEIM use decreases relationship quality, the opposite might also be true: lower relationship quality might increase people's SEIM use. This article aims to shed light on the directionality of the relation between SEIM use and relationship quality among married couples. We used prospective dyadic data to examine the short- and long-term relation between SEIM use, sexual satisfaction, and relationship adjustment among adult SEIM users and their partners. The results showed that, among husbands, adjustment and SEIM use are negatively and reciprocally related. Also, sexual satisfaction among husbands predicted a decrease in their wives' SEIM one year later, while wives' SEIM did not affect their husbands' sexual satisfaction. The findings have important implications for theories on the link between relationship quality and SEIM use.

1. Introduction

Sexually explicit material (SEM), material which depicts sexual activity in obvious and unconcealed ways (Kelley, Dawson, & Musialowski, 1989), is easily and seemingly anonymously available on the Internet (Cooper, Scherer, Boies, & Gordon, 1999; Freeman-Longo, 2000). Sex-related words are at the top of search terms used in search engines (Cooper et al., 1999; Freeman-Longo, 2000; Goodson, McCormick, & Evans, 2001). There are clear indications that people in committed relationships regularly consume sexually explicit Internet materials (SEIM) (Bridges & Morokoff, 2011). SEIM use has often been found to be negatively (Bridges & Morokoff, 2011; Clark & Wiederman, 2000; Yucel & Gassanov, 2010) and sometimes positively (Bridges & Morokoff, 2011) associated with relationship quality. However, only a few studies can weigh in on the directionality of the relation between relationship quality and SEIM use (Lambert, Negash, Stillman, Olmstead, & Fincham, 2012; Peter & Valkenburg, 2009). In this study, we aim to shed more light on the directionality of the relation between relationship quality and SEIM use among married couples, and use prospective dyadic data to examine the short- and long-term positive and negative effects on both SEIM users and their partners.

1.1. Literature review

1.1.1. SEIM use and relationship quality

SEIM use plays a considerable role in many committed relationships (Bridges & Morokoff, 2011; Olmstead, Negash, Pasley, & Fincham, 2013). For example, in a sample of heterosexual couples, 72% of the men and 56% of the women reported SEIM use (Bridges & Morokoff, 2011). Because of its prevalence, the question rises which role SEIM use plays in adult relationships. One of the most widely used constructs to denote relationship quality is relationship adjustment, which consists of relationship satisfaction, consensus, cohesion and expression of affection (Spanier, 1976). Another important component of relationship quality in romantic relationships, which has been linked to relationship quality, is sexual satisfaction (Bradbury & Karney, 2010). Given the sexual content of SEIM, it is important to examine both relationship quality and sexual satisfaction. Not surprisingly therefore, most studies that examine SEIM and relationship quality examine both relationship adjustment and sexual satisfaction.
While most correlational studies among couples have shown that for both men and women, SEM is related to lower relationship quality and sexual satisfaction (Maddox et al., 2011; Short, Black, Smith, Wetterneck, & Wells, 2012; Stack, Wasserman, & Kern, 2004; Yuvel & Gassanov, 2010), others found negative associations between SEM and relationship quality for men but not for women (Bridges & Morokoff, 2011). Furthermore, cross-sectional studies among couples show cross-partner associations between SEM, relationship quality, and sexual satisfaction. Women’s SEM use relates positively to her male partner’s relationship quality and sexual satisfaction (Bridges & Morokoff, 2011), whereas men’s SEM use and their female partner’s relationship quality and sexual satisfaction are negatively associated (Bridges & Morokoff, 2011; Stewart & Szymanski, 2012). These differences might be explained by a difference for men and women in their primary reason for SEM use: for men it is to create arousal for masturbation purposes, for women this is part of lovemaking (Bridges & Morokoff, 2011). Other studies have confirmed that the solo use of SEM has a negative association with relationship quality and sexual satisfaction (Daneback, Traeen, & Månsson, 2009; Maddox et al., 2011; Yuvel & Gassanov, 2010), while some studies find no (Yuvel & Gassanov, 2010) or a positive (Maddox et al., 2011) association between SEM use as a couple. However, all of these studies are cross-sectional, and thus cannot make claims about the direction of these effects.

1.1.2. Directionality

To our knowledge, only one published study assessed the directionality of the relation between relationship quality and SEM use. A three-wave survey study among adolescents (Peter & Valkenburg, 2009) showed that exposure to SEM reduced adolescents’ sexual satisfaction. Conversely, lower sexual satisfaction also increased the use of SEM over time. The results did not differ among male and female adolescents. While this study shows a reciprocal relation between SEM use and sexual satisfaction among adolescents, the question remains what the role of SEM is in ongoing, long-lasting adult relationships and how SEM use affects relationship partners.

Theoretically, there are several mechanisms through which SEM might affect relationship quality and sexual satisfaction. A commonly used argument is that such materials cause people to contrast their sexual experiences and partners’ attractiveness with their SEM experiences (Albright, 2008; Kenrick, Gutierrezes, & Goldberg, 1989; Olmstead et al., 2013). It is also possible that SEM serves as an alternative to sexual activities in the relationship, which, according to the Investment Model, might decrease satisfaction and commitment (Rusbult, Martz, & Agnew, 1998). Indeed, an experimental study showed that participants who refrained from SEM reported higher levels of commitment than those who continued using it (Lambert et al., 2012). From a communication perspective, SEM use may give partners (especially women) the impression that one is not satisfied with the (sexual) relationship (Clark & Wiederman, 2000) and is related to lower self-esteem in women (Bergner & Bridges, 2002; Stewart & Szymanski, 2012), which mediates the negative effect on relationship quality (Stewart & Szymanski, 2012). Thus, theoretically SEM use may negatively affect relationship quality and sexual satisfaction through contrast effects which may favor SEM above real life experiences, through lowering commitment by making sexual alternatives available, and by communicating relational or sexual dissatisfaction to relationship partners.

Theoretically, there are also good reasons to expect that relationship quality and/or sexual satisfaction affect SEM use. It has been well documented that people select media that satisfy specific needs, in this case the need for a satisfactory sex life. Partners may increase their use of SEM to compensate for or “spice up” a dull sex life (Olmstead et al., 2013). Another plausible mechanism is that people might use SEM as a mood elevator to manage negative feelings caused by an unhappy relationship (Zillmann, 1988). Furthermore, people in unhappy relationships may seek to engage in escapism: ‘Escaping’ the reality of their situation by using SEM (Peter & Valkenburg, 2010). Thus, actively seeking out sexual media for reasons of mood management or compensation may serve as mechanisms that lead to the reverse causal mechanism in the relation between SEM use and sexual or relationship satisfaction.

Both directions have been shown to occur in adolescents (Peter & Valkenburg, 2009), and there are plausible reasons for both directions in romantic couples. However, so far no direct test of the relationship between SEM use and relationship quality and sexual satisfaction has been conducted, and no study used prospective dyadic data to examine the possible short- and long-term relation between these variables.

1.2. The present study

As described above, only a few studies can speak to the directionality of the relation between relationship quality and SEM use (Lambert et al., 2012; Peter & Valkenburg, 2009), of which only one investigates long-term effects (Peter & Valkenburg, 2009). Because long-term effects have only been studied in adolescents, and it is unknown if short-term effects on adult relationships translate into long-term effects, this study aims to shed light on the long-term directionality of the link between SEM use and relationship quality within and across partners, and uses prospective dyadic data to examine the short- and long-term positive and negative effects on both SEM users and their partners.

We expected to replicate cross-sectional findings for husbands and wives (Bridges & Morokoff, 2011; Daneback et al., 2009; Maddox et al., 2011; Yuvel & Gassanov, 2010), and, because both directionalities are theoretically possible, extend these findings by exploring the long-term effects of SEM and relationship quality among newlywed couples. In the early years of marriage, couples establish relationship habits and rules that are for a large part predictive of later relational characteristics (Huston, Caughlin, Houts, Smith, & George, 2001). Therefore newlyweds are an ideal group to examine relationship effects. They allow us to investigate change and relationship development, that are representative of the relationship in later years.

Gender plays an important role in all research about SEM, for example, because it has been shown that men and women differ in their primary reason for SEM use (Bridges & Morokoff, 2011). Therefore we formulate different hypotheses for husbands and wives. Specifically, we advanced the following hypotheses and research question: Because most correlational studies among couples have shown that for men, SEM is related to lower relationship quality and sexual satisfaction (Maddox et al., 2011; Short et al., 2012; Stack et al., 2004; Yuvel & Gassanov, 2010), we hypothesize that greater SEM use is associated with lower adjustment and sexual satisfaction among husbands (H1). However, because a correlational study among couples showed a negative association between SEM and relationship quality for men but not for women (Bridges & Morokoff, 2011), we hypothesize that greater SEM use is not associated with adjustment and sexual satisfaction among wives (H2).

Furthermore, cross-sectional studies among couples show cross-partner associations between SEM, relationship quality, and sexual satisfaction. Among couples, men’s SEM use and their female partner’s relationship quality and sexual satisfaction are negatively associated (Bridges & Morokoff, 2011; Stewart &
Szymanski, 2012). On the contrary, women’s SEM use relates positively to her male partner’s relationship quality and sexual satisfaction (Bridges & Morokoff, 2011). Therefore, we hypothesize that greater SEM use among husbands is associated with a decrease in their wives’ adjustment and sexual satisfaction (H3), but greater SEM use among wives should be associated with greater adjustment and sexual satisfaction in husbands (H4). Furthermore, we formulate the research question on directionality: How do husbands’ and wives’ SEM use and their own and their partner’s adjustment and sexual satisfaction affect each other over time (RQ)?

To examine the associations as well as the directionality of effects, we use data from a 3-year prospective study among a large sample of newlywed couples. By involving both relationship partners, we were able to examine both within person and cross-partner effects. Given the longitudinal design of our study, we are able to show long-term directional effects of SEM use and sexual satisfaction and adjustment. These results will not only contribute to our understanding of relationship quality’s association with SEM but also contribute to the societal debate about the deleterious effects of SEM (Becker & Stein, 1991; Peter & Valkenburg, 2006).

2. Materials and methods

2.1. Participants and procedure

The data used for this study are derived from the VU University Panel on Marriage and Well-Being, a 5-wave, longitudinal study among newlywed couples in the Netherlands. Couples were recruited through the municipalities in which they were married, about one month after their wedding, and surveyed four more times on one year intervals. Because the measures used in this research were only assessed in the last three waves, only wave 3, 4 and 5 were included in this research. In the third, fourth, and fifth wave, 190, 157, and 140 newlywed couples participated, respectively. Thus, 73.7% of the couples who participated in the third wave also participated in the fifth wave. In Wave 3, couples had been romantically involved on average for 7.71 (SD = 3.03) years and had been living together for an average of 5.81 (SD = 2.31) years. The mean age of husbands was 34.07 years, and the mean age of wives was 31.20 years. Nearly all the couples (98.5% of the husbands and 96.4% of the wives) were Dutch.

Participants were recruited via the municipalities in which they got married. The municipalities were average sized Dutch cities. Selection criteria were that (a) for all participants this was their first marriage; (b) at the first data collection, couples had no children from this marriage or from previous relationship partners; (c) both partners were between 25 and 40 years old; and (d) couples were heterosexual. Nineteen percent of the couples who were sent a letter of invitation to participate in the study agreed to participate. This response rate is similar to other studies recruiting participants from public records in the United States (Kurdek, 1993). After they completed the questionnaire, couples received 15 euros and a small gift (e.g., pen-set, gift voucher). For more details on the procedure and recruitment, see earlier publications involving this sample (Finkenauer, Wijngaards-De Meij, Reis, & Rusbult, 2012; Kerkhof, Finkenauer, & Muusses, 2011; Muusses, Finkenauer, Kerkhof, & Righetti, 2013). Only scales relevant to the present hypotheses and research question are described below.

2.2. Measures

2.2.1. Use of sexually explicit Internet material

We assessed SEM with 1 item. Among other purposes, participants were asked to rate whether they use the Internet for erotic purposes (1 = not at all to 5 = very much) (for descriptive statistics, see Table 1).

Although the one-item measure of SEM has face validity and appears to map onto the construct of interest, it has uncertain validity. To provide empirical evidence for the validity of this measure, we conducted a pilot study. Thirty-three participants in a relationship filled out an online questionnaire. Results showed that the one-item measure for SEM correlated highly with the Exposure to Sexually Explicit Material on the Internet scale (x = .91). The Exposure to Sexually Explicit Material on the Internet scale shows both concurrent and construct validity, good internal consistency and contains sensitive questions designed to prevent response bias due to social desirability (Peter & Valkenburg, 2006a, 2006b). The one-item measure also correlated highly with SEM offline and did not correlate with non-SEM on the Internet (see Table 2). These findings provide evidence for the validity of the one-item measure for SEM in the longitudinal study.

2.2.2. Relationship quality

Adjustment was assessed using the Dyadic Adjustment Scale (Cronbach’s x = .96) (Carey, Spector, Lantinga, & Kraus, 1993; Spanier, 1976; Spanier & Thompson, 1982). Sexual satisfaction was assessed with the passion subscale of the Perceived Relationship Quality Components (PRQC) Inventory (x = .89) (for descriptive statistics see Table 1) (Fletcher, Simpson, & Thomas, 2000).

3. Results

3.1. Strategy of analysis

Data that is provided by a given participant on multiple research occasions are nonindependent, as are data from the two

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. One-item measure SEM use</td>
<td>.66</td>
<td>.66</td>
<td>.66</td>
<td>.66</td>
</tr>
<tr>
<td>2. Exposure to SEM</td>
<td>.39</td>
<td>.39</td>
<td>.39</td>
<td>.39</td>
</tr>
<tr>
<td>3. SEM offline</td>
<td>.52</td>
<td>.52</td>
<td>.52</td>
<td>.52</td>
</tr>
<tr>
<td>4. Non-SEM internet video</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>M</td>
<td>2.55</td>
<td>2.45</td>
<td>1.42</td>
<td>3.73</td>
</tr>
<tr>
<td>SD</td>
<td>1.23</td>
<td>1.43</td>
<td>1.00</td>
<td>1.89</td>
</tr>
</tbody>
</table>

*p = .05.

**p = .01.

Table 1

Means and standard deviations for all the assessed variables in wave 3, 4 and 5.

<table>
<thead>
<tr>
<th></th>
<th>Wave 3</th>
<th>Wave 4</th>
<th>Wave 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>SEIM use</td>
<td>1.97 (1.16)</td>
<td>1.94 (1.13)</td>
<td>2.01 (1.05)</td>
</tr>
<tr>
<td>Relationship adjustment</td>
<td>110.78 (11.09)</td>
<td>110.62 (10.87)</td>
<td>110.27 (10.59)</td>
</tr>
<tr>
<td>Sexual satisfaction</td>
<td>3.64 (.87)</td>
<td>3.53 (.85)</td>
<td>3.52 (.89)</td>
</tr>
</tbody>
</table>
partners in a given relationship. Accordingly, we analyzed our data using hierarchical linear modeling (Kenny, Mannetti, Pierro, Livi, & Kashy, 2002). This technique accounts for the nonindependence of observations by simultaneously examining variance associated with each level of nesting, thereby providing unbiased hypothesis tests. Following recommended procedures for couples research, we represented intercept terms as random effects and represented slope terms as fixed effects (Kenny et al., 2002).

The literature suggests the hypothesized effects differ for men and women, and husband-wife dyads should thus be treated as distinguishable. To test if the data supports this assumption, we performed preliminary analyses to explore possible moderation of the criterion. These analyses allowed us to assess how much the gender effects and the improved model fits, and given that the preliminary analyses, we regressed SEIM use at a later time point onto earlier own and partner adjustment and sexual satisfaction and the earlier measure of SEIM use (see Table 3). The critical relations were tested for all three time points (Time 1, 2, and 3) simultaneously. Both husbands' adjustment and sexual satisfaction were significantly negatively associated with their own SEIM use ($\beta = -.17$, $p < .01$; $\beta = -.19$, $p < .01$ respectively). For wives, no link between their adjustment and their sexual satisfaction and their own SEIM use emerged ($\beta = -.06$, $p = .21$; $\beta < -.01$, $p = .92$ respectively).

No partner effects were found: Neither husbands' adjustment and sexual satisfaction were significantly related to the wives' SEIM ($\beta = .03$, $p = .52$; $\beta = .02$, $p = .73$, respectively), nor was the wives' adjustment and sexual satisfaction significantly related to the husbands' SEIM ($\beta = -.05$, $p = .32$; $\beta = -.04$, $p = .41$, resp.).

3.3. Longitudinal analyses

We present residualized lagged regression analyses. In these analyses, we regressed SEIM use at a later time point onto earlier own and partner adjustment and sexual satisfaction and the earlier measure of SEIM use. These analyses allowed us to assess how much adjustment and sexual satisfaction account for change in SEIM use over time. We also tested the reverse directions, using SEIM use as predictor and adjustment and sexual satisfaction as criterion respectively. Husbands' adjustment marginally significantly lowered their own SEIM use one year later ($\beta = -.08$, $p = .08$). The opposite direction was also marginally significant: Husbands' SEIM use marginally decreased their own adjustment one year later ($\beta = -.07$, $p = .06$). No effects were found for sexual satisfaction: Husbands' sexual satisfaction did not predict change in their own SEIM use one year later ($\beta = -.03$, $p = .55$), nor did husbands' SEIM use predict change in their own sexual satisfaction one year later ($\beta = -.03$, $p = .47$) (see Fig. 1). For wives, we found no longitudinal effects ($\beta = -.07$, $p = .18$; $\beta = -.00$, $p = .92$; $\beta = -.05$, $p = .35$; $\beta = .01$, $p = .86$) (see Fig. 2).

No significant partner effects were found for husbands' or wives' adjustment ($\beta = -.01$, $p = .86$; $\beta = .01$, $p = .92$, respectively). However, husbands' sexual satisfaction did significantly decrease

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**Table 3**

Means, standard deviations and correlations for all the assessed variables in wave 3, 4 and 5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship adjustment husbands</td>
<td>110.58</td>
<td>10.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Relationship adjustment wives</td>
<td>109.73</td>
<td>11.12</td>
<td>.38**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sexual satisfaction husbands</td>
<td>3.57</td>
<td>.87</td>
<td>.52**</td>
<td>.17**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sexual satisfaction wives</td>
<td>3.51</td>
<td>.80</td>
<td>.28**</td>
<td>.49**</td>
<td>.52**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. SEIM use husbands</td>
<td>1.97</td>
<td>1.11</td>
<td>-.25**</td>
<td>-.06</td>
<td>-.24**</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>6. SEIM use wives</td>
<td>1.21</td>
<td>.76</td>
<td>.04</td>
<td>-.05</td>
<td>-.02</td>
<td>.00</td>
<td>.03</td>
</tr>
</tbody>
</table>

*p < .05.

**Table 4**

Coefficients and significance of predicting SEIM use, sexual satisfaction and relationship quality for husbands and wives derived from HLM model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intercept (SE)</th>
<th>Coefficient (SE)</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship adjustment husbands</td>
<td>-0.01 (.06)</td>
<td>0.05 (.05)</td>
<td>-0.85</td>
<td>.18; 0.03</td>
</tr>
<tr>
<td>2. Relationship adjustment wives</td>
<td>-0.01 (.07)</td>
<td>-0.05 (.05)</td>
<td>-1.30</td>
<td>.02; 0.08</td>
</tr>
<tr>
<td>3. Sexual satisfaction husbands</td>
<td>-0.01 (.06)</td>
<td>-0.19 (.04)</td>
<td>-2.21</td>
<td>.02; 0.03</td>
</tr>
<tr>
<td>4. Sexual satisfaction wives</td>
<td>-0.01 (.07)</td>
<td>-0.04 (.04)</td>
<td>-1.00</td>
<td>.19; 0.01</td>
</tr>
</tbody>
</table>

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*p < .01; **p < .001.

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### 3.2. Predicting key model variables cross-sectionally

We present hierarchical linear modeling results including both self-reports and partner-reports to examine the effects of own and partner's adjustment and sexual satisfaction on SEIM use (see Table 4). The critical relations were tested for all three time points (Time 1, 2, and 3) simultaneously. Both husbands' adjustment and sexual satisfaction were significantly negatively associated with their own SEIM use ($\beta = -.17$, $p < .01$; $\beta = -.19$, $p < .01$ respectively). For wives, no link between their adjustment and their sexual satisfaction and their own SEIM use emerged ($\beta = -.06$, $p = .21$; $\beta < -.01$, $p = .92$ respectively).

No partner effects were found: Neither husbands' adjustment and sexual satisfaction were significantly related to the wives' SEIM ($\beta = .03$, $p = .52$; $\beta = .02$, $p = .73$, respectively), nor was the wives' adjustment and sexual satisfaction significantly related to the husbands' SEIM ($\beta = -.05$, $p = .32$; $\beta = -.04$, $p = .41$, resp.).
their wives’ SEIM use one year later ($\beta = -.06, p < .05$), while wives’ SEIM use did not predict change in their husbands’ sexual satisfaction one year later ($\beta = -.02, p = .78$). No significant partner effects were found for wives’ adjustment and sexual satisfaction ($\beta = -.04, p = .43; \beta = -.01, p = .82; \beta = -.02, p = .68; \beta = -.01, p = .84$) (see Figs. 3 and 4, respectively).

4. Discussion

This study aimed to replicate previous findings (Bridges & Morokoff, 2011; Peter & Valkenburg, 2009) cross-sectionally and extend these findings by exploring directionality in long-term effects. Consistent with the existing literature, both H1
and H2 were confirmed: Greater SEIM use was associated with a decrease in adjustment and sexual satisfaction among husbands (H1) but not among wives (H2). However, H3 and H4 were not confirmed: Greater SEIM use among husbands was not associated with a decrease in their wives’ adjustment and sexual satisfaction (H3) and greater SEIM use among wives was not associated with an increase in adjustment and sexual satisfaction in husbands (H4).

Fig. 3. The double-lagged longitudinal effects above stability between husbands and wives. Note: Stability effects represented in this model are within gender. E.g., the stability effect for relationship adjustment represents the effect of the earlier score on relationship adjustment for the husband, on the later score on relationship adjustment for the husband. Furthermore, the stability effects for variable SEIM are stated respectively for the analysis of the effect of relationship adjustment and the effect of sexual satisfaction.

Fig. 4. The double-lagged longitudinal effects above stability between wives and husbands. Note: Stability effects represented in this model are within gender. E.g., the stability effect for relationship adjustment represents the effect of the earlier score on relationship adjustment for the wife, on the later score on relationship adjustment for the wife. Furthermore, the stability effects for variable SEIM are stated respectively for the analysis of the effect of relationship adjustment and the effect of sexual satisfaction.
The exploration of the directionality of the link between SEIM use and relationship quality yielded interesting answers to our research question. While husbands’ adjustment both negatively predicted and was predicted by SEIM use over time, albeit marginally, no effects emerged for wives. Effects involving sexual satisfaction and SEIM use were found neither for husbands nor for wives. When looking at cross-partner effects, we found no effects for adjustment and the partner’s SEIM use. However, more sexual satisfaction in husbands did predict a decrease in their wives’ SEIM use one year later, while wives’ SEIM use did not change their husbands’ sexual satisfaction. No effects were found for wives’ sexual satisfaction and husbands’ SEIM use. These results suggest that not all of the associations that are found in cross-sectional studies translate into long-term effects. Furthermore, these results suggest that some of the long-term effects are bi-directional, while others are not.

4.1. Implications, strengths and limitations

The most important implication of these results is that longitudinally, the link between SEIM use and relationship quality seems to work both ways, but only for husbands. Husbands in poor relationships use more SEIM and more SEIM among husbands leads to poorer relationships. Future research should examine the mechanisms underlying these effects. Possibly the effect is reciprocal: Husbands might use SEIM as a mood elevator to manage negative feelings caused by low relationship quality (Zillmann, 1988), or seek to escape the reality of their unsatisfying relationship (Peter & Valkenburg, 2010). SEIM use, in turn, might serve as an attractive alternative to sexual activities in the relationship. Following the Investment Model, this might decrease satisfaction and commitment (Lambert et al., 2012; Rusbult et al., 1998). SEIM use did not affect sexual satisfaction in the long-run. Thus, our findings suggest that is implausible that SEIM causes husbands to contrast their sexual experiences and partner’s attractiveness with their SEIM experiences with long-lasting effects (Albright, 2008; Kenrick et al., 1989; Olmstead et al., 2013). Because SEIM use did not affect wives’ relationship quality over time, our findings also fail to support the suggestion that SEIM use gives wives the impression that their husband is not satisfied sexually. Perceiving their husbands’ low sexual satisfaction may result in lower self-esteem among wives, which is suggested to mediate the negative effect on relationship quality (Berger & Bridges, 2002; Clark & Wiederman, 2000; Stewart & Szymanski, 2012). Our findings fail to provide evidence for these mechanisms, however.

Existing studies on SEIM use and relationship quality suggest that people’s motivation for SEIM use may explain some of the gender differences (Bridges & Morokoff, 2011; Maddox et al., 2011; Yucel & Gassanov, 2010). It is possible that secrecy surrounding SEIM use partly explains why solitary SEIM use is more harmful than shared SEIM use. Both keeping secrets and the perception of the partner keeping a secret reduces relationship quality over time (Finkenauer, Kerkhof, Righetti, & Branje, 2009). The present study did not differentiate between solitary and shared SEIM use, and more research is needed to not only examine the differential effects of shared versus solitary SEIM use but should also investigate their determinants and consequences for relationship quality among men and women.

Furthermore, we found that more sexual satisfaction in husbands predicted a decrease in wives’ SEIM use one year later, while wives’ SEIM use did not affect their husbands’ sexual satisfaction. These findings challenge previous findings (Bridges & Morokoff, 2011), which found an association between women’s SEIM use and husbands’ satisfaction. Although correlational, these results were mostly interpreted as a positive effect of women’s SEIM use on men’s satisfaction. The findings of the present study suggest that the association may have the opposite direction: the more husbands are sexually satisfied, the less likely it is that their wives will use SEIM. It has been well documented that people select media that satisfy specific needs, in this case the need for a satisfactory sex life. The literature suggests that wives may use SEIM together with their husbands to compensate for or “spice up” a dull sex life (Olmstead et al., 2013). Because our longitudinal results suggest different mechanisms than cross-sectional research, future research should examine possible behavioral, emotional, and cognitive mechanisms underlying SEIM use and relationship quality across gender. Moreover, this research should aim at including behavioral measures and observations to complement self-report measures.

The present study focused on SEIM rather than general SEIM use. The Internet is quickly becoming the predominant channel for SEIM and a large part of the Internet is devoted to pornography (Cooper et al., 1999; Freeman-Longo, 2000). In one study (Bridges & Morokoff, 2011), 52% of the men and 39% of the women who reported using SEIM used the Internet as the most common medium. The SEIM that is available on the Internet is sometimes described to have different content and characteristics than the SEIM in other media (e.g., on VHS or DVD) (Jacobs, 2004; Lee, 2008; Lehman, 2007; Mehta & Plaza, 1997). On the Internet there is more noncommercial, user-generated content available than on any other kind of media. Also, the Internet is highly interactive and offers the opportunity to easily interact with producers and consumers of SEIM (Jacobs, 2004; Lee, 2008; Lehman, 2007; Mehta & Plaza, 1997). Perceived realism of SEIM is found to increase recreational attitudes about sex (Peter & Valkenburg, 2006b). One can imagine that user-generated-content will be perceived as more realistic. Therefore, it is possible that SEIM use, because of its different content, will have different results than SEIM in other media. By focusing on SEIM, this study has shed light on the effect SEIM specifically has on relationship quality in newlyweds. Furthermore, future research should include other types of relationships (e.g., dating relationships, homosexual relationships) to examine the generalizability of our results. Future research should also adopt a qualitative approach to be able to shed more light on different types of SEIM use, in-depth information on the sharing of SEIM and its functions in the relationship.

Although wives’ mean score for SEIM use is relatively low, something that is consistently found in the literature, this study has many strengths. It measures the concepts for both partners in a large sample of married couples. Taken together with the prospective longitudinal design, this study was able to answer questions that remained unanswered so far.

5. Concluding remarks

The data from a considerable sample of newlyweds showed that SEIM use has more negative than positive consequences for husbands and wives. Importantly, husbands’ adjustment decreased SEIM use over time and SEIM use decreased adjustment. Furthermore, more sexual satisfaction in husbands predicted a decrease in their wives’ SEIM use one year later, while wives’ SEIM use did not change their husbands’ sexual satisfaction. This could suggest wives use SEIM to spice up their sex life when husbands show they are not satisfied. The findings have important implications for our theories on the link between relationship quality and SEIM and open a host of new avenues for research and societal debates surrounding the effects of SEIM and relationship quality.

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References


