Pornography, Sexual Socialization and Satisfaction among Young Men

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RUNNING HEAD: Pornography and Sexual Satisfaction

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**Abstract** In spite of a growing presence of pornography in contemporary life, little is known about its potential effects on young people's sexual socialization and sexual satisfaction. In this article, we present a theoretical model of the effects of sexually explicit materials (SEM) mediated by sexual scripting and moderated by the type of SEM used. An on-line survey dataset that included 650 young Croatian men aged 18-25 years was used to explore empirically the model. Descriptive findings pointed to significant differences between mainstream and paraphilic SEM users in frequency of SEM use at the age of 14, current SEM use, frequency of masturbation, sexual boredom, acceptance of sex myths, and sexual compulsiveness. In testing the model, a novel instrument was used, the Sexual Scripts Overlap Scale, designed to measure the influence of SEM on sexual socialization. Structural equation analyses suggested that negative effects of early exposure to SEM on young men's sexual satisfaction, albeit small, could be stronger than positive effects. Both positive and negative effects—the latter being expressed through suppression of intimacy—were observed only among users of paraphilic SEM. No effect of early exposure to SEM was found among the mainstream SEM users. To counterbalance moral panic but also glamorization of pornography, sex education programs should incorporate contents that would increase media literacy and assist young people in critical interpretation of pornographic imagery.

**KEY WORDS:** pornography, sexually explicit materials, youth, sexual socialization, sexual scripts, intimacy, sexual satisfaction

**INTRODUCTION**

**Sexually Explicit Materials and Young People**

The use of pornography in Western culture has been controversial. Since the 1880s, sexually explicit materials (SEM) have been deemed not just morally problematic, but dangerous due to the medical and social hazards its consumption allegedly entails (Abramson & Pinkerton, 1995). While in the 19th century these concerns focused primarily on individual health hazards (the disease model of masturbation), in the second half of the 20th century the emphasis shifted to social harms, ranging from objectification and degradation of women to encouragement of sexual violence (Dines, Jensen, & Russo, 1998; McKee, 2005; Russell, 1997). The research agenda formed around these concerns is known as the standard social science model of studying pornography (Malamuth, 2001).

According to the standard model, exposure to SEM can affect both attitudes and behaviors (Allen et al, 1995a, 1995b; Barwick, 2003; Davis & Bauserman, 1993; Fisher & Grenier, 1994; Malamuth et al, 2000). So far, social research in this area has focused on social harms, analyzing potential effects of SEM consumption on the acceptance of rape myths, prevalence and intensity of sexist attitudes, sexual callousness, proclivity to sexual offenses, as well as micro- and macro-dynamics of sexual violence. Although no consensus has been reached over whether SEM cause any of these social problems, this standard approach still carries substantial political weight, especially in the U.S.

Only recently have new suggestions regarding the direction of research on SEM been introduced, arguing for the need to understand the production of sexual meanings, displays, and performative norms in contemporary SEM (Attwood, 2002; Hardy, 2004; Zillmann, 2000). To a large extent, these claims reflect the new reality of a "pornified" world (Paul, 2005), the one that came into existence through the digital revolution and the Internet (Cooper et al, 2000; Binik, 2001; Fisher & Barak, 2001). Available, affordable, and

anonymous, pornography–especially cyberpornography–has become a part of contemporary

lifestyles (Cooper & Griffin-Shelley, 2002; Paul, 2005; Traen, Sorheim Nilsen, & Stigum,

2006). This normalization and mainstreaming of SEM is evident not only at the micro level,

in the ease with which young people talk about pornography and the role it plays in their

lives, but also in contemporary art and popular culture (McNair, 2002). Pornography has

become an integral part of the contemporary Western culture of permissiveness (Scott, 1998).

Paradoxically, an accelerated rise in the SEM supply and the related increase in SEM

exposure among young people–mostly voluntary, but sometimes also involuntary (Flood,

2007; Rideout, 2001; Wolak et al., 2007)—has not been met by adequate scholarly response.

According to Zillmann (2000), "next to nothing is known about the consequences of the

steadily increasing amount of such exposure" (p. 41). Moreover, recent calls for a more

active role of social research focused primarily on presumed harms (Manning, 2006; Paul,

2005), especially when discussing exposure to SEM among young people (Flood, 2007;

Thornburgh & Lin, 2002; Ybarra & Mitchell, 2005; Zillmann, 2000). Although a number of

correlation-based studies of young people's SEM use has been recently published (Hald,

2006; Lam & Chan, 2006; Stella, Mazzuco, & Dalla Zuanna, 2005; Ven-Hwei & Ran, 2005;

Wallmyr & Welin, 2006; Wolak, Mitchell, & Finkelhor, 2007; Ybarra & Mitchell, 2005),

clear understanding of the ways SEM consumption contributes to contemporary construction

of adolescent sexuality is still largely missing.

Two possible directions for future research have been recently proposed: a

"reconceptualization of harm from exposure to erotica" (Zillmann, 2000, p. 42) that would

focus on detrimental relationship-related effects of SEM, and a more broad and sex-positive

approach to the myriad of ways SEM can affect the totality of young people's sexuality

(Attwood, 2005). To contribute to this emerging new research agenda, we present a model of

the effects of early exposure to SEM on sexual satisfaction, based on the sexual scripting theory (Gagnon & Simon, 1973).

**Beyond the Standard Social Science Model: Sexually Explicit Materials, Sexual Socialization and Satisfaction**

The questions that initiated and steered our study were straightforward: does SEM use contribute–and if so, how—to the construction of young people's "internalized working models of… sexuality" (Hardy, 2004, p. 16) and, consequently, their sexual satisfaction? We were particularly interested in the interaction between SEM, related fantasies, and real-life experiences, which include partners' desires and demands, as well as the influence of peer readings of pornography. In contrast to the dominant emphasis on social harms, we decided to focus on possible links between SEM use and sexual satisfaction. Apart from a well-known experimental study published in the 1980s, which found that participants of both sexes reported diminished sexual happiness and satisfaction with partner's appearance, sexual curiosity, and sexual performance after being exposed to non-violent SEM during six one-hour weekly sessions (Zillman & Bryant, 1988), quantitative research studies of the relationship between SEM consumption and sexual satisfaction are sparse. One other study, not available in English, that surveyed habitual SEM users, members of a U.S.-based association of porn enthusiasts, found no effects of SEM on participants' sexual satisfaction (Štulhofer, Matković, & Elias, 2004).

When examining the potential impact of SEM exposure among young people, an operative theory of sexual socialization seems necessary. Originally conceived as a social learning approach to human sexuality and never intended to be a comprehensive theory, the sexual scripting perspective has been widely accepted as the social constructionist framework for exploring the process of social organization of sexuality (Frith & Kitzinger, 2001; Simon

& Gagnon, 2003).[1] According to Gagnon and Simon (1973), the process of sexual socialization occurs through a combination of three sources of influence: intrapersonal, interpersonal and environmental or sociocultural. Their impact is organized through the formation of sexual scripts, which are specific cognitive schemata or personalized systems for defining sexual reality (Frith & Kitzinger, 2001; Simon & Gagnon, 1986). These everyday heuristics, like cognitive shortcuts, enable and guide sexual decision making.

Although it could appear that there are as many operational sexual scripts as there are people, the scripting theory views sexuality as social conduct partially determined by historical traditions, culture, and societal norms (Gagnon, 1990; Gagnon & Simon, 1973; Irvine, 2003; Lenton & Bryan, 2005; Simon & Gagnon, 2003). The theory allows for variations and innovations in sexual scripting, but postulates, nonetheless, that only a limited number of scripts are commonly pursued within a certain (sub)culture (Simon & Gagnon, 1999).

In theory, SEM exposure can affect the scripting process via several interrelated routes. Explicit imagery and symbolic normative order presented in SEM may influence one's scripting of their sexual role, as well as cognitive and affective shaping of the perception of partners' sexual role and expectations. The scripting of what constitutes good or "successful" sex may also be influenced by SEM. In such a case, the criteria for evaluation of sexual performance are provided by the way SEM depicts sexual exchange and concomitant pleasure. SEM may also contribute to the scripting of sexiness and cognitive mapping of one's own body. Finally, as argued by many critics of pornography (Dines et al., 1998; McKee, 2005), SEM consumption might affect young people's conceptualization of the linkage among emotions, intimacy, and sexuality, and strengthen power inequality within sexual relationship.

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[1] The scripting approach has also been used in the context of SEM use, but as yet only qualitatively (Hardy, 2004; Attwood, 2002).

Mediated effects of SEM on sexual satisfaction are schematically presented in Figure 1. The model stipulates the role of early SEM exposure in the process of intrapersonal sexual scripting that affects sexual and relationship experiences, which, in turn, determine sexual satisfaction. The choice of sexual satisfaction as the outcome variable was governed by two reasons. In contrast to the usual emphasis on possible risks of SEM use, our intention was to focus on young people's sexual well-being and reframe the discussion about SEM in sex-positive terms. In addition, the satisfaction issue is of substantial (and reinforcing) importance for the process of sexual scripting. Although little is know about the life-course dynamics of intrapersonal sexual scripts, successful sex therapeutic interventions, based on cognitive restructuring techniques, seem to suggest that the process of sexual scripting may never be finished (Hawton, 1996).

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FIGURE 1 ABOUT HERE

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Although not presented in the proposed model, a bidirectional association between sexual scripting and real-life experience should be briefly mentioned. Sexual scripts guide sexual reactions and behaviors (Simon, 1996), but they are also affected by the reality they helped to create. Sexual reality provides material–sexual triumphs and traumas, emotional investments and exchanges, communication and shared meanings–for re-writing intrapersonal sexual scripts. Another fact is the impact of sexual and relationship experiences (through, for example, partner's objection to SEM or their insistence on using pornography for initiating sex), and sexual (dis)satisfaction on the continuity of SEM use. In the latter case, increase in SEM use could be the consequence of sexual frustration and sexual marginality, in which case it would serve as a substitute for real-life sexual activities. Since our model focused on early SEM exposure, these issues were not further explored.

Two hypotheses were proposed based on the outlined model. Firstly, effects of early SEM exposure on sexual satisfaction–positive, negative or combined—would be mediated by sexual scripting. In regard to positive effects, our analyses focused on educational benefits or the informational effect of SEM, which was expected to result in a more varied sex life. As for the possible negative effects, we measured relationship intimacy to assess the level of emotional involvement. The indicator of intimacy served as a proxy for sexual callousness (absence of intimacy) which was suggested to increase with SEM use (Manning, 2006; Paul, 2005; Zillmann, 2000). The second hypothesis postulated that SEM genre or a type of pornography used would moderate the impact of early exposure to SEM on sexual satisfaction. It was expected that negative effects would be more likely observed among men with paraphilic SEM preferences.

In the first article from this research project, we reported on mediated effects of SEM use on sexual satisfaction among young women and men (Štulhofer, Landripet, Momčilović, Matko, Kladarić, & Buško, 2007). SEM genre was not included in the analyses. Since negative effects were observed only among young men, in this study we focus exclusively on male participants.

**METHOD**

An on-line study on SEM use and sexual behavior was recently carried out among young adults in Croatia (Štulhofer et al., 2007). The main purpose of the study was to explore possible links between SEM exposure/use and sexual socialization. In November 2006, a generic e-mail message was sent to college students' mailing lists at several Croatian universities and a number of electronic forums. It contained a brief explanation of the research study, the link to on-line questionnaire, and a request which asked the recipient to forward the message to their friends and acquaintances of a certain age (18-25).

From November 14 until December 7, 6,443 individuals visited the site. Of those, 4,605 started the questionnaire (71% response rate) and 3,136 completed the task (49% completion rate). After excluding participants of ineligible age (under 18 and over 25), those who did not provide information about their age or sex, those whose answers contained over 10% of missing values, and those who did not use pornography at any of the time points retrospectively assessed (at the age of 14, at the age of 17, and in the last 12 months), the sample was reduced to 2,092. In this article, we focused exclusively on men who used pornography at all three time points and reported the experience of sexual intercourse ($n = 650$).

The questionnaire application was based on Microsoft ASP.NET version 2 technology. Raw data were recorded as a flat text file, which was later preprocessed into Microsoft Excel compatible format. To ensure anonymity, neither IP address recording nor permanent cookies were used. Only a session cookie, lasting for 20 minutes from the last access, was used to identify a user session.

The questionnaire consisted of 244 items—including sociodemographic indicators, experience with SEM, attitudes toward SEM, sexual experience, and sex attitudes—and required up to 40 minutes to complete. The first and lengthier version of the questionnaire was pre-tested on 277 college students to assess reliability and validity of composite variables. The second, shortened version was pre-tested again for comprehensibility and time requirements on a dozen students.

The study was approved by the Ethical Review Board for the Protection of Human Subjects at the Faculty of Humanities and Social Sciences, University of Zagreb.

*Measures*

The *Sexual Scripts Overlap Scale* (SSOS), a new tool for measuring the linkage between SEM and sexual scripting, was developed by asking two groups of college students

(76 young women and men in total) to make inventories of things/activities/sensations that are (1) important for pornographic depiction of sex and (2) personally important for great sex. The two inventories, the *porn script inventory* and the *"great sex" inventory*, were then merged. (If an item was mentioned only once in either lists and was judged irrelevant by all members of the research team, it was removed from the final inventory.) In total, the list included 42 items (the complete list of items is provided in the Appendix).

In the first part of the questionnaire, participants were asked to assess the importance of the listed items for "great sex" using a 5-point scale (ranging from 1 = "not important at all" to 5 = "exceptionally important"). At the end of the questionnaire, participants were asked to assess the inventory again, but this time they were asked about each item's importance "for pornographic presentation of sex." The SSOS scores were computed on the paired (the great sex vs. the porn) items by subtracting the second from the first. If, for example, the item "cuddling after sex" was judged as "somewhat important" (3) for good sex life and "completely unimportant" (1) for pornographic presentation of sex, the pair was scored 2. Participant's SSOS score was additive, representing the sum of scores for all 42 pairs of items. Although factor analysis suggested the existence of several subdimensions of the instrument (sexual performance and activity, emotions and communication, physical appearance, bodily features, and power aspects), internal consistency of the total scores proved to be rather high (Cronbach's $\alpha$ = .91). The results ranged from 0 to 143 and were normally distributed. The SSOS scores were then reversely recoded, so that larger scores indicate greater overlap between the great sex and the porn script; the mean score was 79 (*SD* = 21). Keeping in mind that early SEM exposure precedes first sexual experiences, higher SSOS scores reflected stronger influence of pornography on personal sexual script.

*Early exposure to SEM* was measured by one 5-point (1 = every day, 5 = never) indicator assessing frequency of SEM use at the age of 14. The answers were recoded so that

higher scores would denote more exposure. The indicator was significantly correlated with the average number of hours per week that participants spent using SEM at the time of the survey ($r = .22$, $p < .001$).

*Varied Sexual Experience Scale* was composed of 11 yes/no format items that measured the range of participant's sexual experience. A variety of sexual activities were assessed, including oral and anal sex, same-sex sex, group sex, role playing, bondage and dominance, sadomasochistic role playing, sex with stranger, and sex in a public place. Affirmative answers were coded 1 and negative (no experience) 0; the higher the score, the more varied or extensive personal sexual experience.

*The degree of intimacy* in current relationship–or, if currently not in a relationship, in the most recent one—was assessed by five items based on the Miller Social Intimacy Scale (Miller & Lefcourt, 1982). The items measured the degree to which one feels close to a partner, readiness to help the partner when he/she has problems or feels low, the need to open up emotionally to one's partner, to share highly personal information, and to spend time together. Responses were given on a 5-point scale (1 = almost never to 5 = almost always) with higher composite scores denoting higher levels of intimacy. The scale scores computed in the study sample proved to have acceptable internal consistency (Cronbach's $\alpha = .79$).

*Satisfaction with one's sexual life* was measured by the modified Snell's Index of Sexual Satisfaction (Snell et al, 1993). The original instrument was reduced from five to three Likert-type items to include satisfaction with the way in which one's sexual needs are being met, the degree in which one feels sexually fulfilled, and the appraisal of whether something is presently missing in one's sexual life. The scale ranged from 3 to 15, higher scores indicating higher level of sexual satisfaction, with a mean score of 9.88 ($SD = 3.46$). Cronbach's $\alpha$ for the scale was .92. Sexual satisfaction was also assessed by a single item indicator ("All things considered, how satisfied are you with your sexual life at present?")

with a 7-point scale (1 = fully satisfied to 7 = extremely dissatisfied). The correlation between the sexual satisfaction scale and the single-item indicator was strong ($r_S = .77$, $p <$ .001).

*Sexual boredom* was assessed by a brief version of the 18-item Sexual Boredom Scale (Watt & Ewing, 1996). Ten items that loaded highly on the two dimensions of the scale (Sexual Monotony and Sexual Sensation factors) were included in the initial version of the questionnaire used in this study. After pre-test, the scale was further reduced to five items. Responses were recorded on a 5-point scale (from 1 = completely disagree to 5 = completely agree); larger scores reflected being more easily and rapidly bored with sexual routine. Internal consistency of this shortened scale was satisfactory (Cronbach $\alpha = .88$).

*Myths about Sexuality Scale* was comprised of eight 5-point items (1 = completely disagree to 5 = completely agree) that measured agreement with common myths about sexuality, such as "Men are always ready for sex," "In order to be successful, sexual intercourse has to end with orgasm," or "Good sex can save even the worst relationship." Most of the items were clinically encountered sexual myths reported and discussed in a well-known sex therapy manual (Hawton, 1986). Cronbach's $\alpha$ for the scale was .70. The larger the score, the stronger acceptance of sexual myths.

*Sexual compulsiveness* was assessed with Kalichman's Sexual Compulsiveness Scale (Kalichman & Rompa, 1995), composed of 10 items asking about participant's experience of sexually compulsive behaviors and thoughts, such as: "My desires to have sex have disrupted my daily life", "I sometimes fail to meet my commitments and responsibilities because of my sexual behaviors". All items were anchored on a 5-point scale ranging from "not at all like me" to "exactly like me."[2] The scale was found to have satisfactory reliability ($\alpha = .87$).

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[2] The original measure has a 4-point answering scale.

*Mainstream vs. paraphilic SEM genre* dichotomy was based on four yes/no format questions regarding preferred sexually explicit contents ("In the last 12 months, which of the following pornographic genres did you use most often? /Multiple answers are possible./"). The four listed genres were: S & M and B & D, fetishism, bestiality, and violent/coercive sexual activities. Participants who reported preference for one or more of the four types were defined as users of paraphilic SEM. Others, i.e. participants who stated that none of the four genres described their preferred content, were coded as mainstream SEM users.

**RESULTS**

As shown in Table I, no significant differences in sociodemographic characteristics were found between mainstream ($n$ = 445) and paraphilic SEM users ($n$ = 205). The majority of participants in both groups were living in a metropolitan setting, had parents with above average education, and reported being in steady relationship. Of the three measures of sexual activity, significant differences were found in two: users of paraphilic SEM reported significantly higher masturbation frequency ($\chi^2$ = 6.82, $df$ = 2, $p$ < .05) and a higher number of lifetime sexual partners ($\chi^2$ = 9.75, $df$ = 3, $p$ < .05).

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TABLE I ABOUT HERE

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Next, we compared the patterns of SEM exposure in the two groups (Table II). Median age at first exposure to SEM was 10 in both groups. As expected, cyberpornography was the most popular form of SEM. Over two thirds of all participants reported the Internet as their primary source of SEM. Significant between-group differences were found in the frequency of SEM use at the age of 14 and the average amount of time spent on SEM. In comparison to mainstream users, paraphilic SEM users were exposed to SEM more often at the age of 14 ($\chi^2$ = 11.69, $df$ = 3, $p$ < .01). Also, at the time of the survey, they consumed

pornography more extensively: 44% reported using it three or more hours per week ($\chi^2 =$ 32.90, $df = 4$, $p < .001$).

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TABLE II ABOUT HERE

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In order to assess adequacy of the mainstream vs. paraphilic SEM users distinction, statistical significance of group differences on a number of indicators theoretically associated with SEM genre preferences was tested. The two groups differed significantly on all the four composite indicators (Table III). The paraphilic SEM user group was characterized by a greater overlap between the porn and the "great sex" script ($t = -3.13$, $df = 534$, $p < .01$), a higher level of sexual boredom ($t = -3.75$, $df = 641$, $p < .001$), greater acceptance of sexual myths ($t = -3.17$, $df = 638$, $p < .01$), and higher average score on the sexual compulsiveness scale ($t = -3.60$, $df = 634$, $p < .001$). Effect size calculations pointed to small to medium magnitude of the observed differences (Cohen, 1988).

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TABLE III ABOUT HERE

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Our theoretical model assumed indirect effect of early SEM exposure on sexual satisfaction (Figure 1). In addition, we hypothesized a moderating effect of SEM genre. The finding that exposure to SEM at the age of 14 was weakly, but significantly correlated with sexual satisfaction only among paraphilic SEM users ($r = -.13$, $p < .05$) substantiated those theoretical expectations. To examine the nature of relationships among the measures of pornography-affected sexual socialization, experiences, intimacy, and sexual satisfaction, we performed structural equation modeling using LISREL 8.7 statistical package (Jöreskog & Sörbom, 1996). The initial structural model was specified following theoretical expectations

and previous findings on gender-moderated relations among the stated constructs (Štulhofer et al., 2007). The analyses were based on covariance matrices of SEM exposure, sex scripts overlap, sexual experiences, relationship intimacy, and sexual satisfaction observables that served as indicators of the 5 latent variables included in the model; Maximum Likelihood was used as an estimation method. It was hypothesized that the pattern, that is, the strength of the examined relationships, may be different depending on a type of SEM used. Therefore, hypothetical structural models were tested by two-group multi-sample analyses. This approach was used to allow for the direct test of the hypothesized moderating role of the SEM contents.

The two multi-group analyses included the same set of observed and latent variables, as well as the paths to be estimated among them. In the first analysis, it was assumed that all sets of model parameters were invariant over groups (Model 1). Since the same model was set to account for the observed covariances within each group, the pattern of relationships among the studied constructs was not expected to vary with the content of pornographic materials used. In other words, the proof of this model would speak in favor of nul-hypothesis stating that there are no moderating effects of SEM type. The second analysis included a less constrained model where the values of structural parameters were allowed to vary between the groups (Model 2). This model assumed a different structure of relationships among the examined constructs between the two groups, pointing to the moderating role of pornographic genre. As the two models were nested, a direct comparison of their fit to the data was possible.

The main results of the analyses of fit regarding the tested structural models are given in Table 4; the obtained solutions for the two groups are presented in Figures 2a and 2b.

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TABLE 4 ABOUT HERE

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Reasonably acceptable goodness-of-fit measures were obtained for both models. However, the less constrained Model 2 with freed structural parameters over the groups showed significantly better fit to the data ($\Delta\chi^2$= 24.47, $\Delta df$=6, p<.001; table 4) and was used to calculate path and other estimates.

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FIGURES 2a AND 2b ABOUT HERE

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Although somewhat different in absolute values, path coefficients obtained in both groups pointed to the importance of varied sexual experience and relationship intimacy for sexual satisfaction (Figure 2a and 2b). Interestingly, the findings suggested that intimacy might be more important for sexual satisfaction among young men than the range of sexual experience. In both groups, intimacy was significantly predicted by sexual scripting. The lesser the overlap between the porn and the "great sex" script, the greater the intimacy achived.

The main differences in the parameter estimates obtained for the two groups pertained to the role of early SEM exposure, that is, to the pattern of paths between the exposure, sexual scripting, varied sexual experience, and intimacy. Our results clearly support the hypothesized moderating role of SEM genre preferences on the nature and extent of the effects of early SEM exposure on sexual satisfaction among young men. Early SEM exposure was found to be directly and indirectly associated with the range sexual experience, but only among paraphilic SEM users. Mediated effect of early SEM exposure on relationship intimacy was also confirmed only in this group.

The hypothesis about mediated impact of pornography on sexual satisfaction was confirmed only in the paraphilic SEM user group. Although both positive and negative

effects of SEM were observed, the model parameters obtained for this group suggested that early exposure to SEM may affect later sexual satisfaction primarily by suppressing intimacy. Since the mediated effects of early SEM exposure were confirmed only in the group of paraphilic SEM users, comparing the strength of the paths between sexual scripting, intimacy and sexual satisfaction between the two groups can provide some insight into the magnitude of SEM effects. Negative effect of SEM exposure on relationship intimacy appeared small. Although significant, it did not greatly improve our understanding of the determinants of relationship intimacy among men. This conclusion was supported by the lack of significant difference in the average levels of relationship intimacy and sexual satisfaction reported by the two groups of participants.

**DISCUSSION**

In an earlier study, we found both positive and negative mediated effects of SEM on sexual satisfaction, but only among young men (Štulhofer et al., 2007). While the observed positive effects were associated with the range of sexual experiences, the negative effects were related to relationship intimacy. No direct effects of either SEM exposure or sexual scripting on sexual satisfaction were observed in the sample of 915 women and 565 men aged 18-25.

Focusing exclusively on men, the present study extended the previous analyses by introducing the effect of SEM genre and focusing on early SEM exposure. To assess possible influence of SEM use on sexual scripting, we used an original measure of the overlap between the "great sex" and the porn script. Instead of asking participants directly about the effect SEM has on their attitudes toward sex and sexual behavior, as recently done by Hald and Malamuth (2008), we developed an approach less affected by social desirability. Distinguishing between the preferential use of mainstream and paraphilic SEM, we explored

an assumption that the effects of early SEM exposure would not only be mediated by sexual scripting, but also moderated by a type of preferred SEM.

The finding that paraphilic SEM genre influenced the relationship between other latent variables in our model is hardly surprising. It seems reasonable that the nature of sexually explicit imagery—especially if the exposure preceded first sexual experiences— would have some impact on young people's conceptualization of sex and sexual expectations. SEM can serve as a normative system that provides clues about what sex "really is" and "how it should feel like". Our retrospective study suggested that the interaction between early exposure to SEM and paraphilic SEM preferences should be further explored. The role and mechanism of sexual scripting (associated with early exposure) in the development of paraphilic preferences remains unclear. Is it a *vandalized love map* (Money, 1986), certain personal characteristics—as suggested by the confluence model (Bogaert, 2007; Malamuth, Addison, & Koss, 2000; Malamuth & Huppin, 2005)—or the effect of excitatory habituation that predispose one to search for non-standard SEM (Zillmann, 2000)? All three explanatory models could account for the higher frequency of SEM use at 14 among participants in the paraphilic SEM user group, but the cross-sectional nature of our study precludes their testing.

If the confluence model fits the reality, the lack of systematic knowledge of the etiology of paraphilias taken into account, great caution should be exercised when interpreting the finding regarding the effect of paraphilic SEM use on intimacy and sexual satisfaction. It could well be that suppression of intimacy is the consequence of one's *native* (or consolidated) love map and not of one's exposure to paraphilic SEM. In other words, a specific intrapersonal sexual script might be the cause of interest in specific (paraphilic) SEM *and* suppression of intimacy. The role of early exposure to SEM in this process remains to be explored.

The concept of sexual scripts overlap proved useful for understanding sexual satisfaction among male SEM users. Regardless of the type of SEM consumed, sexual scripting was found to affect sexual satisfaction through relationship intimacy. A noteworthy finding was that intimacy proved an important ingredient of overall sexual satisfaction among young men. As reported in our previous article, relationship intimacy was an equally strong predictor of male and female sexual satisfaction (Štulhofer et al., 2007). Leaving aside popular stereotypes about gender-specific emotional and sexual needs that are occasionally reinvigorated by pop-psychology (Potts, 1998), the role of intimacy in male sexual satisfaction points to an interesting question. What are the factors that determine the overlap between the pornographic and the "great sex" script? In addition to SEM consumption and the fact that SEM are based, at least partially, on real sexual experiences and sensations, could it be that some of the overlap between the pornographic and the "great sex" script should be attributed to the contemporary culture of sexual explicitness and self-exposure (McNair, 2002)? The *porno-chic* trend, which, according to McNair (2002: IV), describes the growing representation of pornography in popular art and culture, seems to point it that direction. If so, sexual self-centeredness, defined as problematic for developing or sustaining intimate sexual relationships, could be a by-product of a culture of hyper-individualism (Bauman, 2003; Štulhofer & Miladinov, 2004) rather than the result of much maligned exposure to pornography.

**Study limitations**

Several study limitations should be noted. Our sample was not probabilistic, which makes it impossible to assess how well (or how poorly) it represents the surveyed age group. It should be assumed that the data collection procedure was substantially biased by self-selection, most probably resulting in over-representation of sexually permissive individuals (Wiederman, 1999). This is supported by the fact that parents' education in our sample was

well above national average. In addition, although we attempted to minimize the problem by limiting participants' age to 25, it is likely that recall bias was introduced when asking about the early exposure to SEM.

Finally, we focused on individual and not couple sexual satisfaction. As highlighted by a recent finding of only a moderate correlation between heterosexual partners' satisfaction (McNulty & Fisher, 2007), our research strategy left unexplored the possibility that exposure to SEM may have a different effect on user's sexual satisfaction in comparison to their partner's.

**Conclusion**

As our study suggested, there may be important links between early SEM exposure, sexual socialization, and sexual satisfaction—particularly among men with specific SEM preferences. Overall, the observed mediated effects of SEM exposure on sexual satisfaction were either small, as in the case of suppression of intimacy, or marginal, as in the case of the educational effect expressed in a more varied sexual experience. Nevertheless, the importance of comprehensive sex education that would address the issue of contemporary pornography should not be disregarded. Inclusion of contents designed to improve media literacy among young people and help them to critically evaluate pornographic images, as well as the fantasies and fears they produce, could be invaluable to advancing young people's sexual well-being. Neither moralistic accusations, nor uncritical glorification of contemporary pornography can do the job.

**Appendix:** List of items included in the Sexual Scripts Overlap Scale

| The "great sex" inventory | The "porn" inventory items (when different from the "great sex" inventory) |
|---|---|
| *How important for great sex do you personally find:* | *How important for pornographic depiction of sex do you find:* |
| 1 = not at all; 2 = somewhat; 3 = moderately; 4 = a great deal; 5 = exceptionally | |
| I am always ready for sex | Men are always ready for sex[a] |
| My partner is always ready to have sex | Women are always ready for sex |
| Sex that includes a variety of sexual acts | |
| Free experimenting | |
| No forbidden activities, no taboos | |
| It is easy to initiate sex | |
| Sex is possible in any situation | |
| Long foreplay | |
| Threesome (*ménage à trois*) | |
| Enacting sexual fantasies | |
| Long lasting sex | |
| Oral sex | |
| Anal sex | |
| Use of protection | |
| Partner's sexual pleasure | |
| Romance | |
| Emotions, love | |
| Intimate communication | |
| After-sex cuddling and tenderness | |
| Sex presumes relationship | |
| Tender sex | |
| Partner has a great body | Actors/actresses have great bodies |
| Partner is beautiful | Actors/actresses are beautiful |
| Partner is well endowed | Actors/actresses are well endowed |
| Shaven genital area | |
| Sex that occasionally involves humiliation | |
| Sex that occasionally includes coercion | |
| Ejaculation on partner's face or body | |
| Penetration | |
| Use of sex toys | |
| Sexual role playing | |
| Being constantly horny | Men are constantly horny |
| Partner is constantly horny | Women are constantly horny |
| Trust in partner | |
| Commitment | |
| Intense passion | |
| Felling safe and well-cared for | |
| Spontaneity | |
| Sexual variety | |
| Imagination | |
| Unselfishness | |
| "Pumping" (fast, vigorous and deep penetration) | |

[a] If respondent was male, the item was paired with the first item on the "great sex" inventory list; if respondent was female, the item was paired with the second item on the "great sex" inventory list

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**Table I** – Sociodemographic and sociosexual characteristics of the sample by type of sexually explicit material (SEM) used

| Variables | Users of mainstream SEM (*n* = 445) | | Users of paraphilic SEM (*n* = 205) | | All (*n* = 650) | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Age | | | | | | |
| 18-21 | 170 | 38.2 | 92 | 44.9 | 262 | 40.3 |
| 22-25 | 275 | 61.8 | 113 | 55.1 | 388 | 57.9 |
| Parents' education | | | | | | |
| Both parents without college education | 180 | 40.5 | 81 | 39.7 | 261 | 40.3 |
| One parent with college education | 126 | 28.4 | 58 | 28.4 | 184 | 28.4 |
| Both parents with college education | 138 | 31.1 | 65 | 31.9 | 203 | 31.3 |
| Place of residence at the age of 14 | | | | | | |
| Metropolitan setting | 267 | 60.1 | 125 | 61.0 | 392 | 60.4 |
| City | 102 | 23.0 | 45 | 22.0 | 147 | 22.7 |
| Town | 50 | 11.3 | 21 | 10.2 | 71 | 10.9 |
| Village | 25 | 5.6 | 14 | 6.8 | 39 | 6.0 |
| Currently in a relationship | | | | | | |
| Yes | 279 | 63.0 | 128 | 63.1 | 407 | 63.0 |
| No | 164 | 37.0 | 75 | 36.9 | 239 | 37.0 |
| Sexual partners | | | | | | |
| Exclusively of the other sex | 365 | 82.8 | 154 | 75.1 | 519 | 80.0 |
| Mostly of the other sex | 7 | 1.6 | 10 | 4.9 | 17 | 2.6 |
| Of both sexes | 6 | 1.4 | 6 | 2.9 | 12 | 1.8 |
| Mostly of the same sex | 8 | 1.8 | 4 | 2.0 | 12 | 1.8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Exclusively of the same sex | 58 | 13.1 | 31 | 15.1 | 89 | 13.7 |
| **Lifetime number of sexual partners** | | | | | | |
| 1 | 119 | 26.9 | 37 | 18.3 | 156 | 24.2 |
| 2-3 | 133 | 30.0 | 60 | 29.7 | 193 | 29.9 |
| 4-7 | 125 | 28.2 | 58 | 28.7 | 183 | 28.4 |
| $\geq 8$ | 66 | 14.9 | 47 | 23.3 | 113 | 17.5 |
| **Frequency of masturbation** | | | | | | |
| Few times a month or less | 67 | 15.1 | 16 | 7.8 | 83 | 12.8 |
| Once a week | 82 | 18.4 | 38 | 18.5 | 120 | 18.5 |
| Few times a week or more | 296 | 66.5 | 151 | 73.7 | 447 | 68.8 |

**Table II** – Differences in SEM consumption and patterns of use between users of mainstream and paraphilic contents

| | Users of mainstream SEM | | Users of paraphilic SEM | | All | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Age at first exposure to SEM | | | | | | |
| ≤ 11 | 270 | 60.8 | 135 | 66.2 | 405 | 62.5 |
| 12 | 98 | 22.1 | 36 | 17.6 | 134 | 20.7 |
| 13 | 46 | 10.4 | 25 | 12.3 | 71 | 11.0 |
| ≥ 14 | 30 | 6.8 | 8 | 3.9 | 38 | 5.9 |
| SEM exposure at 14 | | | | | | |
| Once a month of less | 89 | 20.0 | 30 | 14.6 | 119 | 18.3 |
| Several times a month | 149 | 33.5 | 54 | 26.3 | 203 | 31.2 |
| Several times a week | 162 | 36.4 | 85 | 41.5 | 247 | 38.0 |
| Daily | 45 | 10.1 | 36 | 17.6 | 81 | 12.5 |
| Main source of SEM | | | | | | |
| Internet | 307 | 69.0 | 153 | 74.6 | 460 | 70.8 |
| VCR, CD and DVD | 99 | 22.2 | 40 | 19.5 | 139 | 21.4 |
| Cable/satellite TV | 22 | 4.9 | 9 | 4.4 | 31 | 4.8 |
| Other | 17 | 3.8 | 3 | 1.5 | 20 | 3.1 |
| Average SEM consumption per week (in hrs) | | | | | | |
| 0 | 16 | 3.6 | 2 | 1.0 | 18 | 2.8 |
| 1 | 221 | 50.1 | 60 | 29.3 | 281 | 43.5 |
| 2 | 83 | 18.8 | 53 | 25.9 | 136 | 21.1 |
| 3 or more | 121 | 27.4 | 90 | 43.9 | 211 | 32.7 |

Frequency of SEM used as an

overture to having sex (last 12

months)

| | | | | | | |
|---|---|---|---|---|---|---|
| Never | 286 | 64.6 | 115 | 56.1 | 401 | 61.9 |
| Rarely | 102 | 23.0 | 59 | 28.8 | 161 | 24.8 |
| Sometimes | 46 | 10.4 | 23 | 11.2 | 69 | 10.6 |
| Often to always | 9 | 2.0 | 8 | 3.9 | 17 | 2.6 |

**Table III** – Differences in sexual scripts overlap, sexual boredom, acceptance of sexual myths, viewing sex as emotional experience, and sexual compulsiveness between users of mainstream and paraphilic SEM

|  | Mainstream SEM users | | Paraphilic SEM users | | |
|---|---|---|---|---|---|
|  | M | SD | M | SD | Cohen's *d* |
| SSOS | 77.25 | 21.33 | 83.42 | 21.14 | -.29 |
| Sexual boredom | 9.45 | 3.71 | 11.17 | 4.10 | -.44 |
| Myths about sexuality | 20.57 | 4.48 | 21.90 | 5.13 | -.28 |
| Sexual compulsiveness | 23.41 | 6.57 | 25.53 | 7.65 | -.30 |

**Table IV** - Main goodness-of-fit statistics: Multi-sample analyses of the hypothesized impact of SEM-affected sexual socialization on sexual satisfaction among the groups of mainstream and paraphilic SEM users

| Model | $\chi^2$ | df | p | RMSEA | $\chi^2/df$ | $\Delta\chi^2$ | $\Delta df$ | p | CFI | GFI |
|-------|----------|-----|------|-------|-------------|----------------|-------------|--------|-----|-----------|
| 1 | 46.30 | 28 | .016 | .051 | 1.65 | | | | .96 | .98 / .95 |
| 2 | 29.58 | 22 | .318 | .022 | 1.34 | 16.72 | 6 | <.001 | 1 | .99 / .97 |

LIST OF FIGURES

**Figure 1** – A theoretical model of sexual socialization affected by the early exposure to SEM

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┌──────────────────┐     ┌──────────────────┐     ┌──────────────────┐     ┌──────────────────┐
│ Early exposure to│ ──▶ │   Intrapersonal  │ ──▶ │    Sexual and    │ ──▶ │Sexual satisfaction│
│    pornography   │     │ sexual scripting │     │   relationship   │     │                  │
│                  │     │                  │     │    experiences   │     │                  │
└──────────────────┘     └──────────────────┘     └──────────────────┘     └──────────────────┘
```
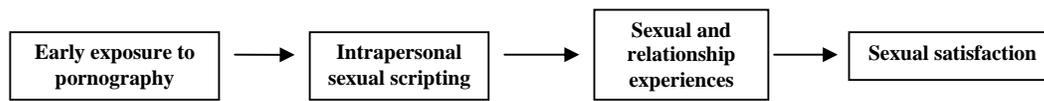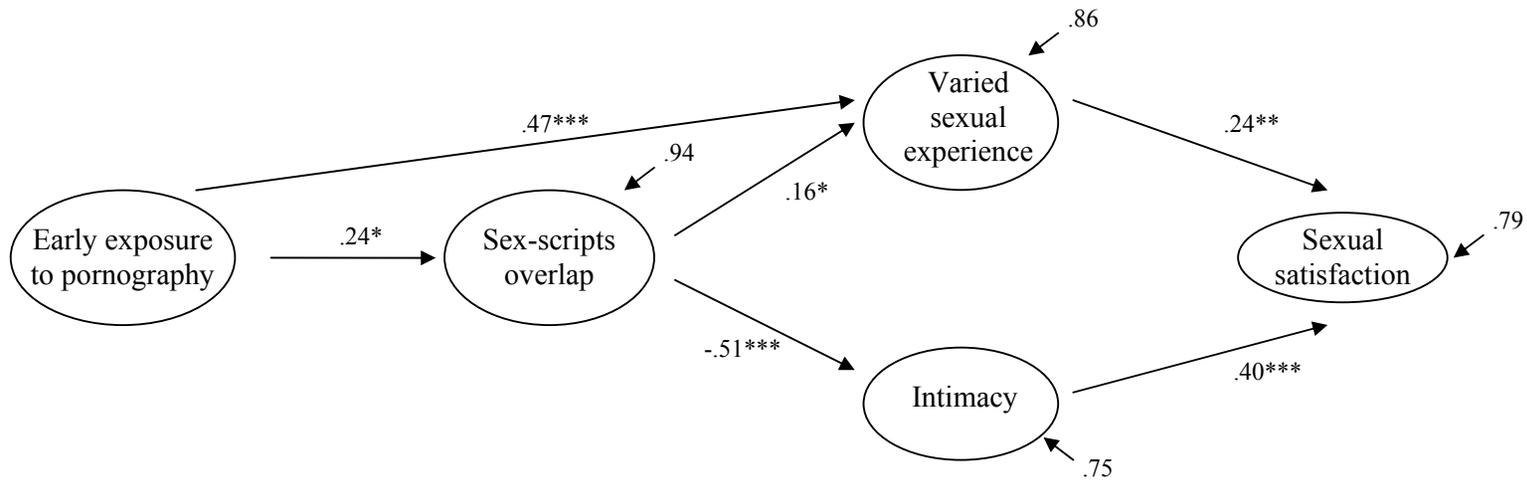
**Figure 2a** – Path diagram of the hypothesized impact of SEM-affected sexual socialization on sexual satisfaction among users of mainstream contents (n = 334)[a]
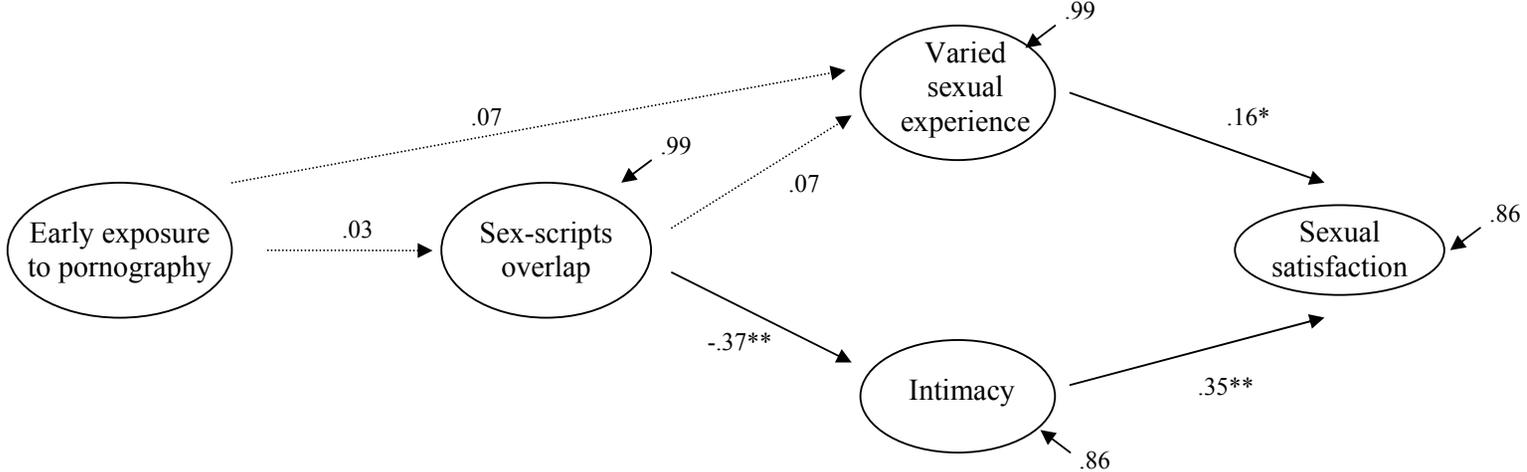


[a]Standardized path coefficients
*p* < .01, ** *p* < .001

**Figure 2b** – Path diagram of the hypothesized impact of SEM-affected sexual socialization on sexual satisfaction among users of paraphilic contents (n = 165)[a]



[a]Standardized path coefficients
* *p* < .05, ** *p* < .01, *** *p* < .001