Pornography, Relationship Alternatives, and Intimate Extradyadic Behavior

Andrea Marlea Gwinn1, Nathaniel M. Lambert2, Frank D. Fincham3, and Jon K. Maner3

Abstract
Two studies tested the hypothesis that exposure to pornography among romantically committed individuals would increase the likelihood of intimate extradyadic behavior and that this effect would be mediated by heightened perceptions of romantic alternatives. Study 1 (n = 74) found that participants primed with sexually explicit material reported having higher quality romantic alternatives. Study 2 (n = 291) showed that initial pornography consumption predicted intimate extradyadic behavior 12 weeks later even after controlling for initial extradyadic behavior, sociosexuality, relationship length, baseline relationship satisfaction, social desirability, and participant gender and race. The relationship between pornography and intimate extradyadic behavior was mediated by perceptions of the quality of romantic alternatives. These results suggest that sexually explicit material can provoke intimate extradyadic behavior via its effect on perceptions of alternative partners.

Keywords
pornography, dating, relationships, alternatives, infidelity

Among college students, approximately 87% of males and 31% of females reported using pornography (Carroll et al., 2008). In 2003, the N2H2 database (a searching tool that provides filtering and authentication for websites) recognized a total of 260 million adult webpages, nearly 20 times the amount since 1998 (Greenspan, 2003). With the growth of the Internet, texting, webcams, and picture mail, means of communicating have increased, making it likely that access to pornographic images or sexual content has increased as well.

Pornography use has been related to sexual aggression (e.g., Allen, D’Alessio, & Emmers-Sommer, 1999; Malamuth, Addison, & Koss, 2000; Vega & Malamuth, 2007), hyperactive sexual disorder (Stein, Black, Shapira, & Spitzer, 2001), and intimate partner violence (Lambert et al., 2012). These outcomes may reflect problems with maintaining healthy, ongoing romantic relationships. However, rigorous attempts to understand whether and how pornography consumption might undermine romantic relationships are notably absent.

The current studies therefore examined the effect of pornography consumption on perceived quality of alternatives to a current relationship as well as the propensity to engage in intimate extradyadic behavior. We hypothesized that (1) pornography increases people’s perceptions of the quality of relationship alternatives; (2) pornography consumption predicts intimate extradyadic behavior; and (3) perceived quality of alternatives mediates the relationship between pornography consumption and intimate extradyadic behavior.
The investment model (Rusbult, 1980) suggests that relationship commitment is a function of relationship satisfaction, investment, and quality of alternative relationship partners (Rusbult, Martz, & Agnew, 1998). Inattention to attractive alternatives has been linked to relationship longevity, satisfaction, and adjustment (Maner, Gailliot, & Miller, 2009; Miller, 1997), and the devaluation of attractive alternatives has been related to high commitment (Johnson & Rusbult, 1989; Miller & Maner, 2010). If pornography increases people’s perceptions of high-quality alternatives, it might undermine commitment and increase the likelihood of intimate extradyadic behavior.

Although there is little research on pornography and intimate extradyadic behavior among young adults, a relationship has been found in married couples. Specifically, those who engaged in infidelity were 3.18 times more likely to have watched cyber pornography (Stack, Wasserman, & Kern, 2004). This is the only published research to our knowledge that has established a relationship between pornography and intimate extradyadic behavior.

Overview of Studies

In one experiment and one longitudinal study, the current research examines the links among pornography, perceptions of relationship alternatives, and intimate extradyadic behavior. Study 1 determined whether simply thinking of sexually explicit material would increase perceived quality of relationship alternatives. We hypothesized that participants randomly assigned to a sexually explicit thought condition, compared to a control condition, would report their relationship alternatives to be more desirable.

Study 2 extended the investigation by examining the relationship between pornography and actual intimate extradyadic behavior. We hypothesized that pornography consumption at Time 1 would predict intimate extradyadic behavior 12 weeks later and that reported quality of alternatives would mediate this relationship.

Study 1

Method

Participants

Participants were 74 undergraduate students (27 male and 47 female) who participated for course credit (age range = 18–25, median = 19). All participants reported being in an exclusive romantic relationship.

Procedure

Participants first answered a demographic questionnaire and then were randomly assigned to either a sexually explicit priming condition or a control condition. Participants in the sexually explicit priming condition were instructed to “Please take five minutes to write about a pornographic video you have seen in the past 30 days. If you have not viewed one, please write about a sexually explicit scene from another type of video.” In the control condition, participants were instructed to choose an action video and write a 5-minute essay about it. After the manipulation, participants completed a computer task in which they viewed faces of the opposite sex.1 Following this task, they completed a self-report measure of alternative quality.

Measures

Perceived Quality of Relationship Alternatives. Perceived quality of alternatives was measured with a 5-item scale created by Rusbult, Martz, and Agnew (1998). These items were rated on a 7-point Likert-type scale. A sample item was How appealing are your alternatives (e.g., a different relationship or spending time without a serious romantic relationship)? These 5 items were averaged (α = .90).

Relationship Length. Because we anticipated that participants’ responses might be affected by how long they have been romantically involved with their partner, we had participants complete a 1-item measure of relationship length. Specifically, we asked participants “How long have you been with your romantic partner?” (1 = less than 2 months, 6.8% of participants; 2 = 2–3 months, 13.5%; 3 = 4–6 months, 10.8%; 4 = 7–12 months, 18.9%; 5 = 13–18 months, 10.8%; 6 = 19–24 months, 6.8%; and 7 = 24 months or more, 32.4%).

Relationship Satisfaction. To account for individual differences in relationship satisfaction, participants completed a 5-item satisfaction scale (Rusbult et al., 1998). These items were rated on a 7-point Likert-type scale. A sample item was “Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.” (α = .96). Although this measure was collected after the manipulation, there were no significant differences between groups, F(1, 73) = .04 p = .85. This finding is consistent with literature indicating that previous exposure to attractive alternatives reduces relationship commitment while leaving perceptions of the long-term partner unaffected (Kenrick, Neuberg, Zierk, & Krones, 1994). Because relationship satisfaction tends to be negatively correlated with alternative quality and it did not seem affected by our manipulation, we controlled for relationship satisfaction in order to examine the unique effect of a sexually explicit prime on alternative quality.

Results and Discussion

Two objective coders (r = .87) rated essays on how sexually graphic the content was, 1 = not at all graphic and 7 = extremely graphic. Within the sexual explicit priming condition, graphicness ranged from 1 to 6.50 (median = 3.5, M = 3.83, SD = 1.43). About half (48.6%) wrote on a pornographic video, while 43.2% wrote on a sexual scene from
another type of video. In three cases (8.1%), the type of video was not indicated.

Because there are sex differences in pornography use (Carroll et al., 2008), we controlled for gender in all analyses. Additionally, we controlled for race based on evidence that races vary somewhat in their likelihood of engaging in intimate extradyadic behavior with alternative partners (e.g., Treas & Giesen, 2000). Analyses also controlled for relationship length and satisfaction. As hypothesized, participants in the pornography prime condition reported higher quality of alternatives (M = 3.30, SD = 2.00) compared with those in the control condition (M = 2.63, SD = 2.00), F(1, 68) = 3.91, p = .05, d = 0.33. Gender did not moderate the relationship between condition and perceived quality of alternatives, F(1, 70) = .50, p = .48.

Thus, consistent with our hypotheses, participants primed with sexually explicit material perceived themselves as having higher quality relationship alternatives. In Study 2, we tested the hypothesis that sexually explicit material would again be associated with perceptions of high-quality relationship alternatives which, in turn, would correspond with increased likelihood of extradyadic romantic behavior.

**Study 2**

Study 2 investigated whether pornography consumption predicted changes in intimate extradyadic behavior over time. We hypothesized that participants reporting higher pornography consumption would be more likely to report engaging in intimate extradyadic behavior 12 weeks later, even when controlling for initial intimate extradyadic behavior, sociosexuality, relationship length, baseline relationship satisfaction, social desirability, and participant gender and race. We also hypothesized that heightened perceptions of the quality of alternatives would mediate the relationship between pornography consumption and intimate extradyadic behavior.

**Method**

**Participants**

Participants were 291 undergraduate students (53 men and 238 women) from a southeastern university who participated for course credit (age range = 18–28, median = 20); Participants reported being in an exclusive romantic relationship. Relationship length ranged from 1 month to 5 years and 11 months (median = 13 months, M = 18.03 months).

**Measures**

**Pornography Consumption.** Pornography consumption was measured at Time 1. We asked participants “Approximately how many times in the past 30 days have you viewed porn (e.g., website, magazine, video)?” Answer choices were rated on a 7-point scale, with 1 = never, 2 = once, 3 = a few times, 4 = about weekly, 5 = a few times a week, 6 = daily, and 7 = a few times a day.

**Perceived Quality of Relationship Alternatives.** Quality of alternatives was measured at Time 2, 6 weeks later. We again used the 5-item scale created by Rusbult et al. (1998). A sample item was, “If I weren’t dating my partner, I would do fine—I would find another appealing person to date” (α = .86). We measured this construct at Time 2 so that it could appropriately serve as a putative mediator of intimate extradyadic behavior measured 6 weeks later.

**Intimate Extradyadic Behavior.** Intimate extradyadic behavior was measured initially at Time 1 and then again at Time 3 (12 weeks later) with a 3-item scale. Participants indicated whether they had engaged in three behaviors with someone other than their relationship partner within the past 2 months: kissing, sexual intimacy without intercourse, and sexual intercourse. Answer choices were 0 = no and 1 = yes. Intimate extradyadic behavior was computed by taking the sum of these 3 items.

**Sociosexuality.** Sociosexuality was measured using the 5-item Sociosexual Orientation Inventory (Simpson & Gangestad, 1991). This scale assesses the extent to which individuals are willing to engage in uncommitted sexual relations by measuring behaviors (e.g., “With how many different partners have you had sex?”) and attitudes (e.g., “Sex without love is OK”). Within gender standardized scores on these 5 items were aggregated (α = .67), with higher scores indicating more unrestricted sexual strategies.

**Relationship Length.** Relationship length was measured at Time 1 with a 1-item question asking participants to “Please indicate the amount of time, in months, that you have been dating your romantic partner.” Relationship length was controlled for in all analyses.

**Relationship Satisfaction.** Because relationship satisfaction is related to intimate extradyadic behavior (Emmers-Sommer, Warber, & Halford, 2010), we included this variable to rule out the possibility that relationship satisfaction was driving the link between pornography and intimate extradyadic behavior. Relationship satisfaction was assessed at Time 1 with the 4-item Couple Satisfaction Index, a psychometrically optimized measure developed using item response theory (Funk & Rogge, 2007). A sample item was, “How rewarding is your relationship with your partner?” (1 = not at all, 6 = extremely; α = .90).

**Social Desirability.** Given that sensitive questions such as intimate extradyadic behavior and pornography consumption may be susceptible to socially desirable responding, we asked participants to complete a 10-item version of the Marlowe–Crowne Social Desirability scale at Time 1 (Strahan & Gerbasi, 1972; α = .61). Despite the reliability of this scale being relatively low, social desirability was correlated with both Time 1 pornography consumption (r = −.10, p < .05) and Time 3 infidelity (r = −.17, p < .01), so we included it as a covariate in all analyses.
In sum, all covariates and demographic variables (initial intimate extradyadic behavior, sociosexuality, relationship length, relationship satisfaction, social desirability, age, gender, and race) consumption were measured at Time 1. Our independent variable, pornography, was also measured at Time 1. Our proposed mediator, quality of alternatives, was measured 6 weeks later, at Time 2. Finally, our dependent variable of intimate extradyadic behavior was measured 6 weeks after Time 2 (and thus 12 weeks after Time 1).

Results

Descriptive Data

For men reporting on pornography use within the past month, 26.4% claimed to never view pornography, 7.5% reported viewing it once, 39.6% viewed it a few times, 11.3% reported viewing it about weekly, 11.3% viewed it a few times a week, and 3.8% reported viewing it daily. For women reporting on pornography use within the past month, 83.6% claimed to never view pornography, 7.1% reported viewing it once, 7.6% viewed it a few times, 8% (two people) reported viewing it about weekly. One female (.4%) reported viewing it a few times a week and one more female reported viewing it a few times a day. Given the gender difference in pornography consumption, we controlled for gender in all analyses. In terms of intimate extradyadic behavior, responses ranged from 0 (did not engage in any intimate extradyadic behaviors) to 3 (engaged all three: kissing, sexual intimacy without intercourse, and sexual intercourse with someone other than their current partner) at both Time 1 and Time 2 (Time 1 $M = .23$, $SD = .67$; Time 2 $M = .19$, $SD = .63$).

The Main Effect of Pornography Consumption on Intimate Extradyadic Behavior

Multiple regression was used to test the hypothesis that initial pornography consumption would predict intimate extradyadic behavior 12 weeks later. Our overall model of pornography consumption predicting intimate extradyadic behavior when controlling for initial extradyadic behavior, sociosexuality, relationship length, baseline relationship satisfaction, social desirability, gender, and race was significant, $F(8, 290) = 6.29, p < .001$. Our hypothesis was supported, as participants who more frequently viewed pornography were more likely to report having engaged in intimate extradyadic behavior at Time 3, $\beta = .14$, $t = 2.04, p < .05$, partial $r^2 = .01$. In terms of covariates, Time 1 intimate extradyadic behavior significantly predicted Time 3 intimate extradyadic behavior above and beyond the other predictors, $\beta = .19$, $t = 2.97, p < .01$. Higher scores on the sociosexuality scale also uniquely predicted more extradyadic behavior at Time 3, $\beta = .17$, $t = 2.53, p < .05$. We found no evidence for moderation by gender ($\beta = -.02$, $p = .79$).

Mediation by Attention to Alternatives

To test the hypothesis that perceived quality of alternatives mediated the relationship between pornography consumption and intimate extradyadic behavior, we used a bias-corrected bootstrapping analysis (Preacher & Hayes, 2004). Bootstrapping avoids assumptions about the shape of sampling distributions by regenerating and replacing samples from the data through random sampling. A thousand samples were estimated, and we were able to calculate effect sizes without assuming a normal distribution.

The indirect path through alternative quality was statistically significant; the 95% bias-corrected confidence interval for the indirect path through this mediator did not include 0 (.001 to .045), even after controlling for initial extradyadic behavior, sociosexuality, relationship length, baseline relationship satisfaction, social desirability, race, and participant gender. These results indicate that perceptions of relationship alternatives at Time 2 statistically mediated the relationship between Time 1 pornography consumption and Time 3 intimate extradyadic behavior.

General Discussion

In two studies, we found that pornography consumption was related to increased perceptions of the quality of relationship alternatives. In Study 1, participants primed with thoughts of pornography reported having higher quality alternatives. Study 2 demonstrated that exposure to pornography was associated with intimate extradyadic behavior over time and that this relationship was mediated by self-reported quality of alternatives to the current relationship. Notably, these findings held even after controlling initial extradyadic behavior, sociosexuality, relationship length, baseline relationship satisfaction, social desirability, and participant gender and race. In sum, our studies suggest that sexually explicit material enhances perceptions of relationship alternatives which, in turn, increase the likelihood of intimate extradyadic behavior. One possible explanation for these findings involves the investment model, which posits that there are three components underlying commitment: perceived quality of alternatives, relationship satisfaction, and investment (Rusbult, 1980; Rusbult et al., 1998). Individuals who are committed, satisfied, and invested in their relationships spend less time attending to attractive alternatives (Miller, 1997) and are less likely to engage in infidelity (Drigotas, Safstrom, & Gentilia, 1999). Our findings build upon the investment model by positing that pornography affects intimate extradyadic behavior by making alternatives seem more attractive and accessible. It is worth noting that effects of pornography use did not appear to operate via reduced satisfaction to one’s current partner. Findings held even after controlling for satisfaction, and the sexually explicit prime in Study 1 enhanced perceived relationship alternatives without reducing satisfaction. This speaks to the fact that, although the two constructs are correlated, they are distinct; people can perceive relationship alternatives as available and of high quality without necessarily becoming highly dissatisfied with one’s current relationship.
Limitations and Future Directions

One limitation of the current work is our focus on university students, who typically are engaged in relatively young “fledgling” relationships. Future research would benefit from testing whether the current findings generalize to other populations (e.g., married couples).

Also, studies could examine whether pornography inhibits emotions that promote commitment, such as love. From an evolutionary perspective, biological mechanisms may have evolved to foster maintenance of long-term relationships, because long-term relationships can foster the well-being of one’s offspring. For example, the emotion of love could act as a “commitment device” that fosters long-term relationships because it encourages foregoing immediate gains in exchange for long-term bonds (Frank, 1988; Gonzaga, Haselton, Smurda, Davies, & Poore, 2008; Maner, Rouby, & Gonzaga, 2008).

Pornography could hinder or work against the effect of commitment devices such as love. For instance, pornography is likely to elicit sexual arousal, and sexual arousal—even toward one’s long-term partner—tends to increase thoughts about relationship alternatives (Gonzaga et al., 2008). Pornography even when viewed with a long-term partner could shift a person’s emotional focus away from love toward sexual arousal, thus inadvertently reducing commitment to the relationship. Indeed, frequent pornography consumption has been linked to the detachment of sex and emotional involvement and to less feelings of love toward a romantic partner (Schneider, 2000).

Conclusion

Attention to attractive alternatives can be detrimental to relationships. With the growth of the pornography industry, it is important to consider the effects this material has on relationships. Our research suggests a powerful association between pornography consumption and increased attractiveness of alternative partners—an association that has direct implications for intimate extradyadic behavior. Future research should continue to examine the implications of pornography for relationship functioning.

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Notes

1. This was a version of the dot probe task (Maner, Gailliot, Rouby, & Miller, 2007) that was used to examine potential effects on attention. Given that no effects were found, this task is not discussed any further.

2. Without any of the listed covariates, participants in the pornography prime condition reported higher quality of alternatives than those in the control condition, $F(1, 72) = 4.02, p < .05, d = .34$.

3. Without any covariates, more frequent pornography consumption significantly predicted more extradyadic behavior, $\beta = .25$, $t = 4.47, p < .001, r^2 = .07$.

References


Author Biographies

Andrea Marlea Gwinn is a graduate student of statistics at the University of Central Florida.

Nathaniel M. Lambert is an associate professor in the School of Family Life at Brigham Young University.

Frank D. Fincham is an eminent scholar and professor at Florida State University where he is head of the Family Institute.

Jon K. Maner is a professor of social psychology at Florida State University.