Does pornography consumption lead to intimate partner violence perpetration? Little evidence for temporal precedence

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The relationship between pornography use and violence has been extensively researched. Numerous studies suggest that the violent content depicted in pornography may be a risk factor for relationship violence. The current study, therefore, seeks to examine whether pornography use prospectively predicts a particular form of relationship violence—intimate partner violence. Using a large longitudinal sample of university students (N = 892) over a three-month time lag with two waves and a cross-lagged panel design, we found that pornography use does not prospectively predict the perpetration of intimate partner violence, and that the perpetration of intimate partner violence does not prospectively predict pornography use. Further, gender does not moderate these relationships. Finally, strengths, limitations, and directions for future research are discussed.

KEYWORDS: intimate partner violence, pornography, The Confluence Model of Sexual Aggression, violence

One relationship that has created considerable debate in both scientific and public spheres is the relationship between pornography use and violence. Presidential Commissions have weighed in on the subject (see Burger, 1987), Ted Bundy, the infamous serial killer, noted: "I've met a lot of men who were motivated to commit violence just like me and without exception, every one of them was deeply involved in pornography" (Broadwin, 2019), and the scientific literature is replete with debates on the subject (see Fisher & Grenier, 1994; Malamuth, Addison, & Koss, 2000; Kingston & Malamuth, 2011). This has led some to suggest that "pornography is becoming one of the most fiercely contested moral issues of our time" (Segal, 1990, p. 29), and the research in this area appears to mirror this perspective.

Prevalence estimates for pornography itself are quite divergent, ranging from 0–99% in a recent review (Kohut et al., 2019a). Similarly, recent content analyses suggest that levels of violence within pornography are low or high depending on the investigators' definition of violence (see a review by Bridges, 2010). For instance, a study analyzing 45 different online pornographic videos found that violence was rare with only one of the videos including violence against a woman; however, 11% of their sample did include acts of force, 7% contained

verbal aggression, 33% contained male dominance, and 47% of the sample contained a woman in a submissive role (Gorman, Monk-Turner, & Fish, 2010). Similarly, Vannier, Currie, and O'Sullivan (2014) reported that spanking occurred in approximately one-third of the videos. Bridges, Wosnitzer, Scharrer, Sun, and Liberman (2010) took a unique approach to their content analysis by focusing on aggression instead of violence. In their analysis, 89.8% of scenes contained aggressive acts and physical aggression was approximately four times more frequent than verbal aggression. Spanking was the most common physically aggressive act (35.7%), followed by slapping (14.9%), hair pulling (10.1%), choking (6.7%), and bondage or confinement (1.1%). Women were most likely to be the target of the physically aggressive acts (94.4% of the time) and men were likely to be the perpetrators of the violence (70.3%). Aggressive acts by women were most frequently performed on other women (17.7%; Bridges et al., 2010). Though differing methods of sampling were employed, and various definitions of violence and aggression were used, all content analyses found some form of violent or aggressive behaviour in their analysis. Indeed, these violent undertones in pornography may be problematic if these acts could become associated with sexual pleasure creating a

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conditioned effect that could make violence a meaningful part of the sexual experience (Malamuth & Spinner, 1980).

One of the primary theories in this area of research that seeks to describe the relationship between pornography consumption and sexual aggression is the Confluence Model of sexual aggression (Malamuth, Linz, Heavey, Barnes, & Acker, 1995). This model finds that several markers—e.g., high levels of hostile masculinity, sexual promiscuity, and pornography use—interact in a probabilistic fashion leading men to react in a sexually aggressive manner (Baer, Kohut, & Fisher, 2015; Malamuth et al., 1995; Malamuth et al., 2000). However, much like the findings of the content analyses, findings in this area appear to be mixed specifically in regards to the role pornography plays in increasing sexual aggression. Some have argued that the early studies investigating the relationship between pornography consumption and sexual aggression possess conceptual and methodological shortcomings that have yet to be addressed including measurement limitations, the type of pornography being consumed, as well as ruling out possible confounding variables (Baer et al., 2015). Although, Baer and colleagues (2015) replicated previous findings noting that 1) pornography consumption is associated with an increase in sexual coercion when hostile masculinity and sexual promiscuity is high, they also found 2) that those with high levels of hostile masculinity and sexual promiscuity are likely to consume more violent pornography than those with low levels, and 3) that having a high sex drive accounts for similar variance that may have been previously attributed to pornography consumption. These findings suggest that pornography consumption may not play as potent of a role in sexual aggression as has been originally discussed. However, a recent meta-analysis has argued that the relationship between pornography consumption and sexual aggression is positive (r = 0.28, 95% CI [0.24, 0.32]) and that biological sex does not moderate this relationship ($r_{\text{Males}} = 0.29, 95\% \text{ CI } [0.24, 0.33]; r_{\text{Females}} = 0.26,$ [0.18, 0.34]; Wright, Tokunaga, & Kraus, 2016). Additionally, though the relationship between violent pornography and sexual aggression was strong (r = 0.37, 95% CI [0.28, 0.45]), it was not significantly stronger than the relationship between nonviolent pornography and sexual aggression (r = 0.27, 95% CI [0.07, 0.45]). Finally, pornography consumption was associated physical sexual aggression (r = 0.20, 95% CI [0.13, 0.26]), and whether the data were cross-sectional or longitudinal had no moderating effect on the relationship between pornography and sexual aggression (Wright et al., 2016). These findings, in addition to the evidence supporting a link between pornography and underling violent attitudes (Allen, Emmers, Gebhardt, & Giery, 1995; Hald, Malamuth, & Yuen, 2010; Foubert, Brosi, & Bannon, 2011), suggest a relationship worthy of longitudinal investigation.

Longitudinal and experimental studies have tried to take steps towards examining the temporal relationship between pornography consumption and violence; however, much like the previously summarized research, the findings appear to be mixed. Using a longitudinal aggregate approach to data analysis, Diamond and Uchiyama (1999) found that despite an increase in the availability of pornographic material over 23 years in Japan, the rates of rape, the total number of

gang rapes, and the proportion of sexual assault decreased during this period. Using this same approach in Diamond, Jozifkova, and Weiss (2011) found no change in reported rapes after pornography was legalized. Given that some investigators conclude there to be a reliable relationship between pornography consumption and sexual aggression, this finding may be surprising. Indeed, these findings suggest that as pornographic materials become legalized and increasingly available, rates of sexual aggression appear to decrease. However, studies that have used the aggregate approach to data analysis have been criticized because conclusions have been drawn from the wrong units of analysis and applied to others (e.g., applying what transpired historically to an individual), the behaviors are over-determined (i.e., when there are two or more causes for an effect), and the importance of individual differences is neglected (Kingston & Malamuth, 2011), but even some of the studies that consider individual units of measurement also appear to have mixed findings.

For instance, in a sample of Brazilian university students, an individual's pornography use predicted later sexual aggression indirectly through sexual scripts and risk factors in sexual behaviour (D'Abreu & Krahé, 2014). Additionally, in a younger sample from the United States, youth who reported intentional exposure to violent pornographic material were 5.8 times more likely to report sexually aggressive behaviour at a later time than those that did not (Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011). However, in the same study, youth who reported exposure to nonviolent pornographic material had similar levels of sexual aggression over time compared to youth that did not report viewing pornography (Ybarra et al., 2011). Finally, in a longitudinal examination of the Confluence Model of sexual aggression, Kohut, Landripet, and Štulhofer (2019b) were not able to support the causal role of pornography consumption in sexual aggression.

Sexual aggression is not the only type of violence theorized to proceed pornography consumption. For example, Donnerstein and Berkowitz (1981) exposed undergraduate students to violent forms of pornography and found that those who had consumed violent pornography were more likely to administer a violent shock towards a woman, indicating that pornography may lead to other forms of violence besides sexual violence. Although, some earlier meta-analyses of experimental studies found that exposure to pornography may, in fact, reduce aggression (r = -0.14, p < 0.05; Allen, D'Alessio, & Brezgel, 1995). Despite these differing findings, this led us to question whether pornography impacted more than sexual violence, such as relationship violence more generally. Specifically, we were curious whether pornography use temporally preceded the perpetration of intimate partner violence (IPV) or "the physical injury to one's partner in the context of an intimate relationship" (McHugh & Frieze, 2006, p. 122).

More than 71% of females and 55% of males report experiencing their first IPV-related incident before the age of 25 (Black et al., 2011). Interestingly, those that belong within this age range also comprise more than a quarter of the online pornography viewership (Pornhub, 2019). Due to these demographic findings, because the content analyses found

that the majority of aggression was directed towards women, and because pornography use has been shown to predict later violence in undergraduate samples (D'Abreu & Krahé, 2014), we wanted to investigate in a large sample of college students whether pornography consumption temporally precedes the perpetration of IPV and whether gender moderates the relationship between pornography use and the later perpetration of IPV while controlling for the stability of these constructs over time.

H1: We hypothesize that pornography use will prospectively predict higher perpetration of IPV after controlling for the stability of both of these constructs over time.

H2: We hypothesize that gender will moderate the relationship between pornography use and the later perpetration of IPV.

METHOD

These data come from a large data collection effort from a university in the Southeastern USA. Following institutional review board approval, student respondents were asked to complete a survey at the beginning and end of a semester—a three-month time lag. In return for their responses, students were granted a small amount of course credit. Responses (N=2,610) were collected from three separate semesters then aggregated to obtain a statistically powerful sample.

Forty participants were excluded from the analysis because they incorrectly answered 75% or more of the embedded validity questions, 1,666 were excluded because they were not in a romantic relationship at both time points, and 12 outside the age range of emerging adulthood. In total, 892 ($n_{\text{Males}} = 174$; $n_{\text{Females}} = 718$) students were included in the final analysis; 71% of participants reported being White, 10% Black, 12% Latino, 3% Asian, and the last 5% reported belonging to an ethnicity not listed (Other). The average age of respondents was 19.61 (SD = 2.14).

Measures

The Revised Conflict Tactics Scale

IPV perpetration was measured using the minor physical assault subscale from the Revised Conflict Tactics Scale (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The CTS-2 minor physical assault subscale is a 5-item questionnaire in a Likert-style format that includes items such as "I twisted my partner's arm or hair." Students were asked to respond to how often these incidents occurred when they were trying to settle their differences with their partner over the past eight weeks. Responses were recoded according to the frequency of IPV perpetration set forth by Straus et al. (1996). The CTS-2 minor physical assault subscale has historically displayed good psychometric properties. In this sample, internal consistency was excellent ($\alpha = 0.98$). Additionally, the physical assault scale is correlated (r = 0.71 for men; r = 0.67 for women) with the CTS-2 psychological aggression scale, providing evidence of convergent validity.

Pornography Use

Pornography use was measured using the response to the item, "Approximately how many times in the past 30-days have you viewed porn (e.g., website, magazine, video)?" on a seven-point Likert-style scale.

Gender

Participants were asked the question, "I am a" and were asked to respond with either male (coded as 0) or female (coded as 1).

Preregistration of Data Analysis

Before viewing our data, we preregistered our research question, hypotheses, sample size, methodology, and data analysis plan with the Center for Open Science (osf.io/qp9pw). The mission of the Center for Open Science (2017), "is to increase openness, integrity, and reproducibility of research" (p. 3). Any substantial changes made to our preregistered research question, hypotheses, sample size, methodology, or data analysis plan is labeled as post-hoc.

Data Analysis Plan

Originally, we planned to perform a cross-lagged panel path analysis with pornography consumption at baseline predicting pornography consumption and IPV perpetration at the end of the semester, and IPV perpetration at baseline predicting pornography consumption and IPV perpetration at the end of the semester, with gender as a grouping variable. Then, we intended to constrain and freely estimate model coefficients for both men and women to test for statistically significant differences. However, *Stata* only allows for grouping, or the ability to freely estimate two models between groups within the *sem()* command used for the analysis of normal data. Because our data were not normally distributed (see Results section), we had to utilize the *gsem()* command for the analysis which does not currently allow the user to perform the aforementioned grouping function.

Post-hoc changes to our preregistered analysis. A simple way to overcome this limitation and arrive at a similar conclusion is to include a gender and baseline pornography consumption interaction term as an additional predictor variable within our design. We did this by multiplying a given student's coded gender and pornography consumption score at baseline. Doing this allows us to detect whether gender moderates the relationship between pornography consumption at baseline and IPV perpetration at the end of the semester (see Figure 1). Also, this model suits our hypotheses well because it subsequently allows us to infer temporal precedence while controlling for the stability of both outcome variables over time while determining whether gender moderates the relationship between pornography consumption at baseline and of IPV perpetration at the end of the semester.

RESULTS

In total, 74% of men reported viewing pornography in the past 30 days, 9% of men reported viewing pornography once in the

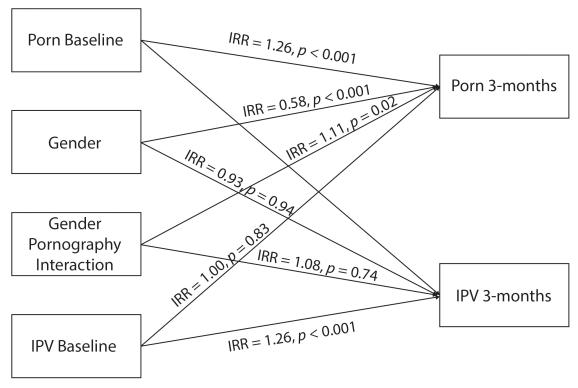


Figure 1. Theorized cross-lagged panel design

past 30 days, 35% reported viewing pornography a few times a month, 11% reported viewing pornography about weekly, 11% a reported viewing pornography a few times a week, 5% reported viewing pornography daily, 1% reported viewing pornography several times a day, and 2% of the participants did not respond. At T2, 72% of men reported viewing pornography in the past 30 days, 9% reported viewing pornography once, 25% reported viewing pornography few times a month, 13% reporting viewing about weekly, 16% a reported viewing few times a week, 6% reported viewing pornography daily, and 4% reported viewing pornography a few times a day, and < 1% of the observations were missing.

At least one incident of IPV perpetration was reported in 17.37% of the male sample at baseline. The average number of IPV perpetrations in the past eight weeks was 1.21 (SD = 4.86, Range_ $_{\rm TIMales}$ = 0 to 35). At the end of the semester, 14.97% of male students reported at least one incident of IPV perpetration in the past eight weeks, and the average number of reported incidences was 0.84 (SD = 3.02, Range_ $_{\rm T2.Males}$ = 0 to 20)

In the past 30 days, 28% of women reported viewing pornography, 9% reported viewing pornography once, 7% reported viewing pornography few times a month, 1% reported viewing pornography about weekly, 1% a reported viewing few times a week, < 1% reported viewing pornography several times a day, and 1% did not answer at baseline. At the end of the semester, 20% of women reported viewing pornography in the past 30 days, 8% a reported viewing pornography once, 8% a reported viewing pornography few times a month, 1% reported viewing about weekly, 2% reported viewing a few times a week, 0%

reported viewing pornography daily, < 1% reported viewing pornography several times a day, and 1% did not respond.

At least one incident of IPV perpetration was reported in 22.22% of the female sample at baseline. The average number of IPV perpetrations in the past eight weeks was 1.54 (SD = 6.39, Range_ $_{\rm T1Females}$ = 0 to 77). At T2, 20.77% of females reported at least one incident of IPV perpetration in the past eight weeks and the average number of reported perpetrations was 0.97 (SD = 4.21, Range_ $_{\rm T2\,Females}$ = 0 to 81)

Data Screening

Approximately 1% of data were missing for pornography consumption at both baseline and the end of the semester. For IPV perpetration, 7% of the data were missing at baseline and 6% were missing at the end of the semester. Baseline pornography consumption missingness was related to the end of the semester IPV perpetration (r = 0.09, p < 0.05) and the end of the semester IPV perpetration missingness was related to baseline levels of IPV perpetration (r = 0.10, p < 0.05). Because of our non-normal data, traditional ways of dealing with the effects of non-random missingness were determined to be ineffective. Therefore, all missing observations were handled in line with Stata's *gsem* commands rules for missing observations—equationwise deletion—which maximizes the number of observations included in the analysis by utilizing all the information available on an equation-by-equation basis (StataCorp, 2013).

After plotting the data, reviewing the right-skewness of both pornography consumption and IPV perpetrations, and applying various transformations, it was determined that our data did not fit normality assumptions. To maintain each of the distribution's mean and variance, values determined to be outliers were fenced to the nearest whole value of their respective distribution that most closely corresponded to the 97.5 percentile instead of being deleted from the analysis.

Examining Model Fit

Upon viewing the data, it became apparent that both outcome distributions—i.e., pornography consumption and IPV perpetration at the end of the semester—followed count distributions. The pornography consumption distribution at the end of the semester, for instance, possessed a near equal mean and variance (M=1.69, Variance = 1.46). Fit indices derived from a multiple Poisson regression with pornography consumption at the end of the semester as the outcome variable, and pornography consumption at baseline, IPV perpetration at baseline, the pornography consumption by gender interaction, and gender as predictors indicated good model fit (χ^2 (813) = 317.96, p = 0.99). In light of this, Poisson regression was utilized to predict pornography consumption at the end of the semester in our model.

The distribution of values of IPV perpetration at the end of the semester, however, possessed a variance more than eight times larger than its mean (M = 1.00, Variance = 8.64). Following our previous methodology, we derived fit indices from a multiple negative binomial regression with IPV perpetration at the end of the semester as the outcome variable, and pornography consumption at baseline, IPV perpetration at baseline, the pornography gender interaction, and gender as predictors. This indicated the presence of an over-dispersion parameter, and good model fit $(\log(\alpha) 1.93, 95\% \text{ CI } [1.70, 2.16]; G^2(1) = 821.99, p < 0.001).$ This led us to conclude that negative binomial regression would be the most appropriate method to predict IPV perpetration at the end of the semester in our model. Lastly, because we utilized Poisson and negative binomial regression in our analysis, we report incidence rate ratios (IRR) instead of OLS regression coefficients indicating the percent of change in expected counts per unit increase for both pornography consumption and IPV perpetration.

Does Pornography Consumption Prospectively Predict Intimate Partner Violence?

Our model indicated that stability coefficients were significant both for pornography consumption (IRR = 1.26, 95% CI [1.18,1.34], p < 0.001) and IPV perpetration (IRR = 1.26, 95% CI [1.14,1.38], p < 0.001) indicating that these effects are stable over time. Both gender (IRR = 0.58, 95% CI [0.45,0.75], p < 0.001) and the gender and pornography interaction (IRR = 1.11, 95% CI [1.02,1.22], p = 0.02) predicted pornography consumption at the end of the semester with males reporting significantly more pornography consumption than women. Contrary to our hypotheses, pornography consumption did not predict later IPV perpetration (IRR = 0.99, 95% CI [0.75, 1.30], p = 0.94), and gender did not moderate the relationship between pornography and

the later perpetration of IPV (IRR = 1.08, 95% CI [0.70, 1.66], p = 0.74). Also, gender did not predict later IPV perpetration (IRR = 0.93, 95% CI [0.33, 2.64], p = 0.94) and IPV perpetration at baseline did not predict pornography consumption at the end of the semester (IRR = 1.00, 95% CI [0.98, 1.02], p = 0.83; see Figure 1). These results indicate that over a three-month time period there is little evidence to suggest that pornography consumption prospectively predicts IPV perpetration nor that IPV perpetration prospectively predicts pornography consumption while controlling for the stability of these constructs over time.

DISCUSSION

The current study sought to examine the temporal precedence of the relationship between pornography consumption and IPV perpetration and whether gender moderated this relationship. Generally, we found no indication that pornography use prospectively predicted IPV perpetration or that IPV perpetration prospectively predicts pornography use. Additionally, we found little evidence that gender moderated this relationship.

Although our data did not support our original hypotheses, they do seem to share some consistency with the Confluence Model of sexual aggression in that isolated general pornography consumption alone may not predict later relationship aggression. Rather, pornography consumption may have to be accompanied by, and interact with, several predispositions such as high levels of hostile masculinity or sexual promiscuity before the effect can be detected (Malamuth et al., 1995). The choice to not include these potential moderators may explain why an effect between pornography use and IPV perpetration went undetected. However, we remain suspicious of this interpretation of our null findings because of some of the recent longitudinal research.

Our findings also mirror some of the current longitudinal and some of the earlier experimental research in this area. Kohut and colleagues (2019b), for example, were unable to detect a relationship between pornography use and later relational aggression, even after including variables measuring the previously described trait dispositions. Similarly, Ybarra et al. (2011) found that although violent pornography use was related to sexually aggressive attitudes among youth, the attitudes of those exposed to nonviolent pornography were no more aggressive than their non-exposed peers. Additionally, Malamuth and Ceniti (1986) were unable to detect an effect between laboratory aggression and violent or nonviolent pornography a week after exposure in an all-male sample. Taken together, an interpretation consistent with the harmful effects of pornography orientation may suggest that the effects of violent pornography may be short-lived (Malamuth & Ceniti, 1986). In other words, it is possible that the effects of pornography consumption possess a "half-life." In this explanation, pornography use would inspire greater aggressive behaviors immediately after use but the effects of pornography dissipate dramatically shortly thereafter making these effects difficult to detect. Another interpretation of these results calls into question the causative role that pornography consumption plays in increasing relational aggression.

The current findings appear to be inconsistent with the effects of pornography posited by the 3AM model and a recent meta-analysis investigating the subject (Wright, 2011; Wright et al., 2016). Wright (2011) has argued that a behaviour (e.g., IPV perpetration) is more likely to be primed and activated following recent exposure to that behaviour and, once activated, IPV perpetration would be more likely to be applied. Learning theories would posit that viewing pornography for a long enough time would result in these behaviors being activated in the current relationship (Wright, 2011). Because we were unable to detect the prospective effect of pornography consumption on IPV perpetration, and due to the findings that a lot of mainstream pornography appears to be aggressive (Bridges et al., 2010), this leads us to question how much mainstream pornography consumption is required for these behaviors to become activated and continually applied? Additionally, although we acknowledge that sexual violence and IPV perpetration are separate constructs, we were surprised to see the total lack of a connection between IPV perpetration pornography consumption especially given the recent meta-analysis that found that sizable effects exist between pornography use and sexual aggression (Wright et al., 2016). As more longitudinal research continues to investigate the relationship between pornography consumption and violence, we wonder whether these sizable effects will be maintained.

Like many other studies in this area of research, one of the primary limitations in this study was that we utilized a sample of college students which limits the generalizability of our findings but is not uncommon in this area of research. Another limitation of the current study was the zero-inflation of our IPV perpetration measure. This variance limitation could be explained by our reliance on self-report methods: pornography consumption and IPV perpetration are potentially sensitive subjects, and social desirability bias could have led some students to underreport their true pornography consumption or how frequently they were violent—which may have been confirmed by the missingness of our data. Although controlling for social desirability would likely be recommended in future studies, determining whether participants are truthfully reporting is a limitation of any study that relies on self-report findings and it is possible that social desirability would bias these constructs in the same direction. Next, to measure pornography consumption, we were only able to utilize a single-item measure of pornography consumption and a short time-lag between assessments. However, this single-item measure for pornography consumption and similar time lags between assessments have been utilized in several other published studies (see Braithwaite, Aaron, Dowdle, Spjut, & Fincham, 2015; Lambert, Negash, Stillman, Olmstead, & Fincham, 2012) helping to provide a consistent measure of pornography consumption something desperately needed in the pornography consumption research (Hatch et al., under review; Kohut et al., 2019a). Another limitation of the current study was that we failed to measure the amount of violence in the pornography that was viewed. It is possible that the null results arose because the current sample was not viewing violent pornography. A final limitation was that our current paper was not completely consistent with our preregistration and we were not able to use gender as a

grouping variable. Thus, we were unable to test whether the theorized model provided better fit after estimating unique coefficients between men and women and whether the strength of the coefficients between measured variables differed between genders. Indeed, because a majority of our sample is made up of females, caution should be taken when generalizing this pattern of findings. However, as we started to examine our data, we noticed that there were certain limitations (e.g., departures from normality) that prevented us from answering our original research questions.

Despite these limitations, this study also has considerable strengths. Although we did not follow the preregistration plan exactly, we view the preregistration of the current study as one of its notable strengths. One limitation in the current literature is the inability to compare findings from individual studies (Short, Black, Smith, Wetterneck, & Wells, 2012). These data have been uploaded to the Center for Open Science for further review which enables future researchers to utilize them for further analysis and review. Another strength of the current study was the use of generalized structural equation modeling. The model and type of regression that we selected for our analysis fit our data well and were justified by the data. Only one other study of which we are aware has utilized generalized structural equation modeling when analyzing pornography use (see Braithwaite et al., 2015). A final strength of the current study was the longitudinal design. In some reviews of the topic, cross-sectional studies comprise over half of the analysis (see Short et al., 2012). While cross-sectional studies provide valuable information regarding the relationship between pornography consumption and its correlates, these findings cannot be used to establish temporal precedence—one of the primary qualifications for establishing causation.

In conclusion, we offer two potential avenues future researchers may wish to pursue to better understand the relationship between pornography and IPV perpetration. First, simply because the current study was unable to corroborate claims that pornography use prospectively predicts relational aggression does not necessarily mean that pornography consumption does not influence aggressive behaviors; indeed, the effects of pornography use on aggressive behaviour may be short-lived. However, with the research as presently constituted, we are unable to deduce the half-life of these effects; or, in other words, how long a sexual script may stay "active" and influential. To better answer this question, future research may wish to use daily diary surveys to understand these nuanced developments. Second, we agree with the recommendation put forth by Fisher and Barak (2001) over 15 years ago: findings related to the antecedents and consequences of pornography consumption are limited. To research antecedents accurately and thoroughly, future research should focus on developing a standardized pornography consumption scale that measures the frequency and duration of exposure, as well as the consumer selected subject-content. Garnering all previously explored facets of pornography consumption into a single psychometric scale, then investigating the antecedents and consequences of pornography exposure, may alleviate some of the conflicting findings evident in the current literature.

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