The Influence of Internet Pornography on College Students: An Empirical Analysis of Attitudes, Affect and Sexual Behavior

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ABSTRACT
Pornography use today is becoming more mainstream and normalized, especially since the advent of high-speed Internet (Freeman-Longo 2000). This study was designed to examine the relation between Internet pornography use, attitudes and affect by taking a survey of college students. MANOVA and correlational procedures were used to test the hypotheses that greater pornography use would result in more negative attitudes toward women, more positive attitudes toward sexual assault, more sexual partners and less distress by a partner’s use of pornography. Every hypothesis was supported with a significance level of .05. The results replicated past research despite the sample being 80% female with an average age of 21.

The influence of Internet pornography has been debated and researched by numerous disciplines as the Internet is expanding throughout the world (Allen, Emmers-Sommer, D’Alessio, Timmerman, Hanzal, and Korus 2007). The Internet has become the central vehicle for the distribution of pornography, which has altered the way in which individuals use pornography. The Internet makes pornography available, because nearly everyone has Internet access; the use of pornography has become anonymous, because one can access pornography without anyone else knowing about it; the Internet makes pornography affordable, because one no longer has to spend upwards of 60 dollars on a VHS tape or DVD because the majority of Internet pornography is free; and finally, the Internet makes pornography increasingly addictive, because it removes all barriers to access, and because of the sheer quantity of content, both of which have contributed to heightened levels of arousal that were not prevalent in pornography users before the Internet.

In discussing the influence of pornography use, it is important to define pornography and its distinction from erotica. In one study, Senn and Radtke (1990) differentiated between violent pornography, non-violent pornography and erotica:
1. “Violent pornography” contains “images that portray explicit violence of varying degrees perpetrated against one individual (usually female) by another (usually male).”

2. “Non-violent pornography” contains “images that have no explicitly violent content but may imply acts of submission or violence by the positioning of the models or the use of props. They may also imply unequal power relationships by differential dress, costuming, positioning or by setting up the viewer as a voyeur (e.g., the model is engaged in some solitary activity and seems totally unaware or very surprised to find someone looking at her).”

3. “Erotica” contains “sexual images that have as their focus the depiction of mutually pleasurable sexual expression between people who have enough power to be there by positive choice. They have no sexist or violent connotations and are hinged on equal power dynamics between individuals as well as the camera/photographer” (144).

LITERATURE REVIEW

When you visit most pornographic Web sites, they simply ask you to “click here if you are 18 years of age or older.” The only thing a minor has to do is lie about her or his age in order to visit a pornographic site (Freeman-Longo 2000). Today, the majority of adolescents are exposed to Internet pornography before the age of 18 (Sabina et al. 2008). This new trend is most likely due to people beginning regular use of the Internet in their preteen years (Freeman-Longo 2000). Krauss and Russell (2008) found that early exposure to pornography greatly increases the chance of earlier onset of sexual contact. Furthermore, exposure to pornography accounts for more of the variability in an adolescent’s decision to have sex than influence from parents, religion or schools combined (Kingston, Malamuth, Fedoroff and Marshall 2009).

Peter and Valkenburg (2006) found that the majority of participants had their first sexual encounter within a year of first exposure to Internet pornography. Additionally, they found that exposure to Internet pornography is related to more recreational attitudes about sex, but this relationship is mediated by how realistic the participant perceived the material to be. For example, male adolescents judge the reality of Internet pornography as more real than female adolescents, and young adults judge the reality of Internet pornography as less real than adolescents. These factors influence the relationship between Internet pornography use and attitudes toward recreational sex, making it imperative to investigate if recreational attitudes toward sex that stem from pornography...
exposure actually translate into recreational sexual behavior, such as multiple sexual partners or unprotected sex.

**Pornography Use and Attitudes Toward Women and Sexual Assault**

Anti-pornography feminists argue that pornography only depicts women as sexual objects that are inferior to men, which reinforces sexist attitudes (Dworkin 1985; MacKinnon 1984, 1989). Pro-pornography feminists argue that pornography is sexually empowering for women, and is a celebration of the human body (Baron 1990). Brosius, Weaver and Staab (1993) used a random sample of 50 pornographic video tapes to analyze the themes depicted in the sexual scenes. Overall, they found that women were depicted as sexual objects that were there only for the purpose of the male to have an orgasm. This dynamic is portrayed the most clearly when identifying the number of orgasms each sex is depicted as experiencing. In 100% of the scenes, the male had an orgasm; in less than 1% of the scenes the female had an orgasm. This ratio, along with other sexual acts found in the footage, suggests that pornography has a chauvinistic approach to sex, which supports the objectification of women. Thus, it is important to evaluate whether or not repeated exposure to pornography will result in more negative attitudes toward women as individuals, in both men and women, because of the degradation of women that routinely occurs in pornographic scenes.

Garcia (1984) found that the more men were exposed to pornography, the more negative their attitudes were toward women and the more positive their attitudes were towards acts of sexual aggression. As a result, pornography users are more likely than non-pornography users to disrespect women sexually, accept acts of sexual aggression as normal, and blame rape victims (Bowen 1987). However, Padgett, Brislin-Slutz, and Neal (1989) found that participants who reported watching less than one hour of pornography per month expressed more positive attitudes toward women than women themselves. It should be noted that this study pre-dates the Internet. Before Internet pornography, the typical pornography user was exposed to significantly less pornography than the typical pornography user today who gets the bulk of her/his pornography from the Internet.

Additionally, pornography varies in type and theme. Sabina et al. (2008) were particularly concerned with the degree of exposure to deviant sexual activity online before the age of 18. Boys in their study who had repeated exposure to pictures of sexual violence were more likely to view acts of sexual aggression positively. Kingston et al. (2008) predicted that pornography use would only be a predictor of recidivism of sexual assault for individuals who were already at high risk for re-offending. They found that pornography use made a significant contribution to recidivism of sexual assault regardless
of the individual’s baseline risk level. This means that individuals who had been incarcerated for sexual assault and exposed themselves to a high level of Internet pornography after incarceration, re-offended more often than individuals who did not expose themselves to pornography after incarceration for sexual assault, regardless of their baseline risk level for re-offending. However, the type of pornography viewed was a stronger predictor of recidivism than the frequency of use. Sexual assault offenders who engaged in even a low level of violent pornography re-offended more frequently than those who exposed themselves to a high level of nonviolent pornography (Kingston et al. 2008).

Pornography Use and Romantic Heterosexual Relationships
Understanding the differences in how men and women experience pornography psychologically and physiologically is crucial to the understanding of pornography use in romantic relationships. Schneider (2000) found that “[the ways in which] women use Internet pornography differed from men’s Internet pornography use.” Both genders can be equally physiologically aroused by viewing sexual activities online; however, men were more psychologically aroused than women. Additionally, men tended to be drawn to pictures and movies that are based on arousing images and women tended to be drawn to stories and online sex chat rooms, or anything that more closely resembled a relationship. Allen et al. (2007) theorized that the different gender experiences of pornography might be due to the fact that men and women have similar physiological responses to different types of pornography, but women have a more negative psychological response to pornography. For example, women were more likely to rate a pornographic scene as disturbing, wrong, or degrading, regardless of their physiological arousal.

Couples have a unique experience with Internet pornography and if a preoccupation with pornography occurs from one or both partners, there is typically a deterioration of romantic, family and work life (Zitzman and Butler 2005). Bergner and Bridges (2002) found that the dynamics of a relationship change if one partner is using pornography. That partner begins to use pornography in a secretive way. The act of using it, hiding it, and feeling guilty about it makes the other partner feel inadequate, and the user is emotionally withdrawn from her or his partner, which leads to sexual dysfunction and deteriorated emotional intimacy. Gana, Trouillet, Martin, and Toffart (2001) found that when younger people or males grow bored in a relationship, they are more likely to masturbate to pornography than older people or females. Additionally, Hosley, Canfeild, O’Donnel and Roid (2008) found that men are more likely to masturbate to pornography when in a relationship if they do not have a close relationship with their
fathers. Explanation for the results indicates that men, who have strong communications growing up with their fathers, learn about sexuality from their fathers instead of from Internet pornography. If they have a father who teaches them that women need to be respected sexually and that one of the ways to show that respect is by practicing monogamy without use of pornography, the adult son is more likely not to use pornography in his romantic relationships.

Bridges, Bergner, and Hesson-Mcinnis (2003) conducted a study that revealed that women experience a negative view of themselves, their partner, and their relationship once they learn of their partner’s pornography use. They exhibit almost identical behaviors and emotions as someone who experiences infidelity in a relationship. This dynamic has been identified as “pornography distress” (Bridges et al. 2003).

**PROBLEM STATEMENT**

In an attempt to expand on previous research, the current study investigated the association between pornography use and college men and women’s attitudes and affect, because the chosen variables have not been measured in a female or post-Internet era sample. The purpose of this study was to evaluate differences in distress by a partner’s pornography use, number of sexual partners, and attitudes toward women and sexual assault between participants who engage in low levels of pornography use versus high levels of pornography use. This researcher hypothesized that those who engage in a high level of pornography use will have more sexual partners, have more positive attitudes toward sexual assault, more negative attitudes toward women and be less distressed by a partner’s pornography use.

**METHODOLOGY**

The participants ($N = 179$) were 80% female and 20% male students from introductory psychology classes at California State University, Sacramento who participated in this study to fulfill a course requirement. They did not receive any payment for their participation. Questionnaires were used to measure all the variables.

The first questionnaire was the *Attitudes Toward Women Scale* (Spence and Helmerich 1972). This scale measures attitudes toward women in the areas of vocational and intellectual roles, freedom, independence, dating and courtship, etiquette, drinking, swearing, sexual behavior, and marriage. There were a total of 15 questions. A five-point Likert Scale with anchors from
*strongly disagree* to *strongly agree* was used to measure attitudes toward women. Higher scores indicate a more positive attitude toward women.

The second questionnaire was the *Acceptance of Modern Myths About Sexual Aggression Scale* (Gerger et al. 2007). This scale measures attitudes about sexual aggression. There were a total of 30 questions. The researcher used a five-point Likert Scale with anchors from *strongly disagree* to *strongly agree* to measure attitudes toward sexual assault. Higher scores indicate stronger beliefs that women should be responsible for preventing their own rape, women cause sexual aggression through their dress or behavior, Sexual assault offenders are punished justly, some acts of sexual aggression are warranted, and sexual violence is exaggerated.

The fourth questionnaire was the *Pornography Distress Scale* (Bridges et al. 2003). This scale measures the amount of distress an individual feels in the areas of self esteem, emotional intimacy, trust, sexual connection, well-being, anxiety and depression due to her/his partner’s pornography use. There were a total of 50 questions. A five-point Likert Scale with anchors from *strongly disagree* to *strongly agree* was used. Higher scores indicate a higher level of distress from their partner’s pornography use. Participants were given the option to skip this inventory if they had never been in a relationship with someone who uses pornography.

The fifth questionnaire was the *Sex and the Internet Survey* (Goodson et al. 2000). This scale measures exposure to Internet pornography, motivations to use Internet pornography, attitudes toward Internet pornography use, and emotional arousal from Internet pornography use with a total of 21 questions. It also measures non-sexual use of the Internet, but those sections were left out for the purposes of this study. The researcher used a five-point Likert Scale with anchors from *strongly disagree* to *strongly agree* and *never* to *always*. Higher scores indicate either a higher rate of exposure to Internet pornography, a high level of arousal from Internet pornography, or a positive attitude toward Internet pornography use.

**RESULTS**

Reliability, Descriptives, Correlation, and MANOVA procedures were used to analyze the relations between the chosen variables. The items from the inventories that were negatively worded needed to be recoded into opposite values, and then the variables were computed based on calculating a mean score for each variable. There was a 29-person attrition rate for the Pornography Distress variable, which was to be expected because not every participant had been in a relationship where the partner used pornography.
The *Sex and the Internet Survey* ($\alpha = .93$), Pornography Distress Scale ($\alpha = .97$), *Acceptance of Modern Myths about Sexual Aggression Scale* ($\alpha = .86$), and *Attitudes Toward Women Scale* ($\alpha = .70$) were all reliable measures.

Table 1 shows the descriptive statistics for all of the measures. Table 2 shows the Pearson Correlation Coefficients for the following variables: number of sexual partners, age when Internet use began, age when Internet pornography use began, attitudes toward women, pornography usage, attitudes toward sexual assault, and pornography distress.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>$M$</th>
<th>$D$</th>
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<td>Sex Partners</td>
<td>0</td>
<td>90</td>
<td>6.77</td>
<td>13.12</td>
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<td>Age Internet Use</td>
<td>6</td>
<td>30</td>
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<td>Age Internet Porn</td>
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<td>Attitude Women</td>
<td>26</td>
<td>73</td>
<td>59.17</td>
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<td>Porn Usage</td>
<td>0</td>
<td>16</td>
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<td>4.48</td>
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<tr>
<td>Age Intercourse</td>
<td>8</td>
<td>26</td>
<td>16.52</td>
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<tr>
<td>Age</td>
<td>17</td>
<td>37</td>
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<td>Attitude Sex Assault</td>
<td>42</td>
<td>146</td>
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<td>19.37</td>
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<td>Pornography Distress</td>
<td>58</td>
<td>237</td>
<td>126.61</td>
<td>48.55</td>
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Table 1. Range, Mean and Standard Deviation for All Measures. **Notes:** $N = 82-111$. Attitude Women was measured by the *Attitudes Toward Women Scale*. Attitude Sex Assault was measured by the *Acceptance of Modern Myths about Sexual Aggression Scale*. Porn Usage was measured by the *Exposure to Sexually Explicit Materials on the Internet Survey*. Pornography Distress was measured by the *Pornography Distress Scale*.

<table>
<thead>
<tr>
<th>Measure</th>
<th>NSP</th>
<th>AgInt</th>
<th>AIP</th>
<th>ATW</th>
<th>PornU</th>
<th>AMMSA</th>
<th>PDS</th>
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<td>AgInt</td>
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<td>AIP</td>
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<td>.81**</td>
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<tr>
<td>ATW</td>
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<td>.08</td>
<td>.03</td>
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<tr>
<td>PornU</td>
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<td>-.05</td>
<td>-.13</td>
<td>-.24*</td>
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<td></td>
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<tr>
<td>AMMSA</td>
<td>.05</td>
<td>.21**</td>
<td>-.20**</td>
<td>-.35**</td>
<td>.34**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDS</td>
<td>-.24**</td>
<td>.27*</td>
<td>.31**</td>
<td>.01</td>
<td>-.35**</td>
<td>-.28*</td>
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Table 2. Intercorrelations between all variables. **Notes:** ** = Correlations are significant at the .01 alpha level, * = Correlations are significant at the .05 alpha level. $N = 135-179$. NSP = Number of Sexual Partners; AgInt = Age when weekly Internet use began; ATW = Age when Internet pornography use began; AMMSA = *Acceptance of Modern Myths about Sexual Aggression Scale*; PornU = Pornography Usage.

Participants who used more pornography had more positive attitudes toward sexual assault, more negative attitudes toward women, more sexual partners, and were less distressed by a partner’s pornography use. Participants who had more positive attitudes toward sexual assault started using the Internet and Internet pornography at a younger age. They also had more negative attitudes...
toward women and used more pornography. Additionally, participants who had more positive attitudes toward sexual assault were less distressed by a partner’s use of pornography. The age at which the participants began using the Internet on a weekly basis was strongly correlated with the age at which participants were first exposed to Internet pornography.

In addition to a correlation procedure, a MANOVA was used to distinguish differences in attitudes toward women and sexual assault, pornography distress, and the number of sexual partners between participants with low levels of pornography use and those with high levels of pornography use. A Wilks’ Lambda criterion was used to evaluate multivariate significance and a Bonferroni correction was used to decrease the chance of a Type I error and to distinguish statistical significance from a trend.

Table 3 displays the multivariate analysis results. Participants who had a lower level of pornography use differed significantly from participants with a high level of pornography use among the measures, $F(3, 131) = 7.80, p = .00$. Those who had a high level of pornography use had significantly more sexual partners ($M = 21.15, SD = 13.04$) than those who had a low level of pornography use ($M = 4.26, SD = 8.86$). Additionally, participants who had a high level of pornography use were less distressed by a partner’s use of pornography ($M = 113.90, SD = 44.22$) than participants with a low level of pornography use ($M = 137.72, SD = 49.73$). Moreover, those who had a high level of pornography use ($M = 88.63, SD = 16.70$) had more positive attitudes toward sexual assault than those who had a low level of pornography use ($M = 76.79, SD = 16.93$).

| Variable                        | Low Usage | High Usage | | | |
|---------------------------------|-----------|------------|---|---|
| Attitudes Toward Women          | 2.89      | 60.75      | 7.31| 58.63 | 7.11 |
| Pornography Distress           | 8.54**    | 137.72     | 49.73| 113.90 | 44.21 |
| Sexual Partners                 | 13.41**   | 4.26       | 8.86| 21.15 | 25.53 |
| Attitudes Toward Sexual Assault | 16.65**   | 76.79      | 16.93| 88.63 | 16.70 |

Table 3. Multivariate Analysis of Variance Summary for Pornography Use. Notes: **p = .01. N = 82-111. Attitudes Toward Women was measured by the Attitudes Toward Women Scale. Attitudes Toward Sexual Assault was measured by of the Acceptance of Modern Myths about Sexual Aggression Scale. Porn Usage was measured by the Exposure to Sexually Explicit Materials on the Internet Survey. Pornography Distress was measured by the Pornography Distress Scale.

DISCUSSION

As seen in the results, participants who used more pornography had more positive attitudes toward sexual assault, more negative attitudes toward women, more sexual partners, and were less distressed by a partner’s pornography use. Although it cannot be concluded that pornography use
caused these outcomes, this research and other research suggests that pornography is a significant contributor to these outcomes. Moreover, the current research implies that pornography could be negatively impacting people despite their age or gender. That is, even though the sample in the present study was 80% female and the average participant was 21 years old, negative effects were still exhibited. This result suggests that young women, who are repeatedly exposed to pornography, and the degradation and objectification of women that is inherent in it, may be influenced by these themes and, therefore, may develop more negative attitudes toward themselves as individuals and women as a whole.

Finally, a potentially important factor that could lead to a better understanding of results would have been to include the type or genre of pornography used by the participant. According to Donnerstien and Penrod (1987), the aggressive content of pornography is the main contributor to aggression against women. With past research emphasizing a difference in aggression in individuals who use mainstream pornography versus violent types of pornography, it would have been beneficial to collect that data as well, especially since, “results found throughout literature have been generally consistent, such that pornography exposure [regardless of genre] is associated with attitudes and beliefs supportive of sexual aggression” (Kingston et al. 2009, 220).

In many marriages, pornography substitutes for a sex life (Zitzman and Butler 2005), allowing little room for emotional intimacy. Griffiths (2000) argued that, “The anonymity [of Internet pornography] may increase feelings of comfort because there is a decreased ability to look for, and thus detect, signs of insecurity, disapproval, or judgment in facial expression, as would be in typical face-to-face interactions” (544). In other words, there is no emotional intimacy that is practiced or learned from using pornography, because the Self is removed from the experience. Pornography use is mostly a solitary act in which sexual gratification is reached by masturbating to an image, whereas, a mutual sexual experience requires the exchange of verbal and non-verbal communication, emotional intimacy and compromise to reach mutual sexual gratification. Consequently, pornography use is essentially conditioning sexual gratification to be image-based and solitary, instead of intimacy-based and mutual. As a result, pornography use in a marriage can deteriorate the sexual bond between partners. On one hand, the partner who uses pornography is conditioning him/herself to reach sexual gratification alone with an image by repeated exposure to pornography and repeated reward by orgasm, while, on the other hand, trying to attain sexual gratification with a partner who requires communication, trust and intimacy. This dichotomous sexual experience may be the impetus for the breakdown
of the relationship and increased distress by the partner who is not using pornography, but wanting sexual intimacy from the partner who is.

LIMITATIONS AND FUTURE RESEARCH

Several limitations deserve mention. First, generalizability is limited because the average participant in the present study was a 21-year-old female. With research implying that pornography use is more prevalent in males and that there are more negative effects for individuals who are older and in a committed relationship, a different sample could better highlight effects shown in prior research. Therefore, future research should attempt a sample that contains more males, older and married individuals, as well as younger and single individuals. Additionally, the current sample was collegiate, which may imply a cohort effect. With the Internet being used more frequently by adolescents and college students, access to Internet pornography may be more frequent for these groups than for others. Therefore, future research needs to include longitudinal studies to see if there is a decrease in pornography exposure over one’s lifespan. Additionally, future research needs to compare Internet pornography use between generations. With younger generations growing up on the Internet and consequently being exposed to Internet pornography at a young age, the influence of pornography may be more significant for this age group than for an older generation that did not grow up with the Internet and instant access to Internet pornography.

Additionally, there was not a question that asked if the participant was homosexual or exposing themselves to homosexual pornography. Consequently, these results cannot be generalized beyond heterosexuals. Moreover, it is necessary to compare and contrast between themes in heterosexual pornography and homosexual pornography, which may differ in treatment toward women and thus, may gain further knowledge about the influence of pornography on attitudes toward women.

As previously discussed, the present study focused on the individual’s level of distress caused by their current or previous partner’s use of pornography. There was no measurement of the partner’s distress due to the participant’s pornography use. Additionally, there was not a way for the participant to state if they were filling out the Pornography Distress Scale based on their current or past relationship. Therefore, future research should allow the participant to make that distinction. Additionally, there should be a question that asks, “If you are filling out this questionnaire based on a previous relationship, did that relationship end because of pornography use?” Moreover, it would be important to ask participants how distressed they are about their own pornography use.
CONCLUSION

Pornography has never been as accessible by and popular with young adults as it is today. The Internet has made pornography use mainstream and commonplace, influencing attitudes about sexuality, women, and relationships. What we need now is a re-conceptualization of harm from repeated exposure to pornography. Past and current research indicate a significant difference between individuals who are exposed repeatedly to pornography and those who are not, in the areas of attitudes toward women and sexual assault, number of sexual partners, and relationship satisfaction. This finding indicates that repeated exposure to pornography is not harmless, and that the cultural acceptance of pornography use as merely entertainment is imprecise. It is clear that more research needs to be done, and more awareness needs to spread about the influence of repeated pornography exposure. However, it is crucial that research not be fueled by morality, religiosity or sexual liberation, as it was in the 1980s (MacKinnon 1985). A new research agenda should concentrate on pornography use as a social, behavioral and health issue in order to fully understand its impact on society and human sexual development.
REFERENCES


