

Pornography and Teenagers: The Importance of Individual Differences

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This article focuses on the effects of exposure to pornography on teenagers, particularly males, concentrating on sexually aggressive outcomes and on the characteristics of the individual as crucial in determining whether pornography consumption may or may not lead to sexually aggressive outcomes. The term “pornography” refers to sexually explicit media that primarily is intended to arouse the viewer sexually. Pornography may be distinguished from sexual material that is “embedded” or interwoven with primarily nonsexual content [1], although the line to be drawn between the two may be fuzzy. Also inviting occasional ambiguity is the distinction between pornography and obscenity. Although pornography is a descriptive term, obscenity is a legal definition that describes what a court may have determined is particularly unredeeming pornographic material that has crossed the bounds of social propriety and so may allow for criminal prosecution.¹

This article focuses primarily on the findings of the research that Malamuth and his associates have conducted, although other relevant research also is described. Because of ethical constraints about exposing children to pornography

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¹ Obscenity is defined by reference to a legal framework that was laid out in the 1973 U.S. Supreme Court decision, *Miller v. California*. To be adjudged obscene, the material in question must satisfy each of three conditions: (1) the average person, applying contemporary community standards, would find that the work, taken as a whole, appeals to the prurient interest, (2) the work depicts sexual conduct in a patently offensive way, and (3) the work, taken as a whole, lacks serious literary, artistic, political, or scientific value.

for research purposes, the participants in this research program mostly have been individuals between the ages of 18 to 21, typically 18 and 19. A variety of studies with participants younger than 18 recently has become available that also focused on the effects of sexual media [2,3]. Although such research primarily did not concern pornography per se, but rather sexual media generally, it found that there are significant causal effects of such exposure (eg, watching sex on television predicts the initiation of adolescent sexual behavior, statistically controlling for a large set of related factors) [2]. Such research lends additional support to the findings regarding the effects with pornography exposure described here. As well, on theoretic and empiric grounds, there is considerable basis to assert that the effects with pornography exposure described here would be at least as likely to occur with younger individuals as with the older teenage participants [4].

Our approach provides for the influence of multiple variables, not only media exposure. Our model may be described as similar to that labeled a “cumulative-conditional-probability” type by Belsky et al [5]. It suggests that the extent to which a person possesses certain combinations of risk factors determines how likely he is to be sexually aggressive following pornography exposure. Our model also emphasizes causal effects in the other direction—individual differences in risk characteristics may influence the extent to which a person seeks to be exposed to pornography, the type of pornography selected, and the degree of gratification (eg, sexual arousal) derived once exposure occurs.

In an earlier paper in this journal that focused on a similar topic [4], the senior author described some of same research described here. Since that earlier paper, additional research has extended this research program in important ways. In particular, the earlier research emphasized experimental studies in controlled settings, whereas the more recent research has tested whether the findings of experimental studies could be generalized meaningfully to ordinary daily life settings.

From the exclusive perspective of research design alone, addressing the questions of interest here would result in a study in which young boys would be assigned randomly to be exposed to pornography or not over a period of years and their later sexual aggression would be studied in natural settings. Obviously, ethical considerations preclude such a study. Instead, a realistic research program requires putting together relevant “pieces” of research that are feasible to conduct. Consequently, some of the research has proceeded in two parts; the first part focused on whether exposure to pornography may affect such factors as attitudes, sexual arousal patterns, and fantasies and the second part assessed whether such factors are actually predictive of sexual aggression. This research supports the possibility that exposure to certain pornography may change important factors, such as attitudes, arousal, and fantasies, and that these factors may, in turn, lead to changes in sexually aggressive behaviors. As well, research has examined effects on other less extreme behaviors, such as domineeringness in conversation or the way a person votes as a member of a jury in a rape trial. Although these latter types of changes may not be considered serious antisocial acts in and of themselves, they may affect the cultural climate that indirectly affects the likelihood of various antisocial acts, such as sexual aggression [6].

When it comes to the hypothesized effects of pornography exposure, there is considerable diversity in the assertions that are made and the supporting research that is used to support such assertions. Some have asserted that such experiences may have neutral or even beneficial effects on adolescent consumers, whereas others asserted such exposure may have negative effects [7,8]. Illustrative of the latter contention, some research with criminal populations suggests that childhood and adolescent exposure to certain pornography predicts later development of deviant sexual preferences (eg, preference for rape with humiliation) [9]. Our previous research strongly suggested that one of the key factors that may help to resolve such conflicting assertions pertains to individual differences among consumers [6]. Thus, although assertions about the effects of pornography exposure typically are “across the board” claims, the research summarized here reveals that the background of the consumer may be crucial to revealing which type of effects, if any, are discernable. The authors focus here on research that pertains to the hypothesized effects of pornography exposure, particularly certain content types (eg, sexually violent), on men’s sexually aggressive tendencies and behavior.

The pornography industry

The sale of pornography is a multibillion dollar industry that encompasses the sale of sexually explicit movies; magazines; books; videos; and, increasingly, Internet-based media. In all, *Forbes* magazine recently described the “pornography industry” as a \$56 billion global enterprise that has become much more mainstream in recent years [10]. The pornography industry in 1996 was estimated to have grossed more dollars than total receipts from all of Hollywood’s movies combined [11].

Frequency of exposure among teenagers

Pornography exposure among adolescents seems to be widespread. While acknowledging limitations in the research literature as a result of the sensitive nature of the topic, Bryant and Brown [12] reviewed relevant literature and noted with considerable confidence that “exposure to pornography typically occurs at least by high school years, and usually is facilitated by peers. Only small proportions of people report no voluntary exposure at all. The image of the pornography consumer as a loner who lacks socialization skills appears, as a general rule, to be inaccurate.” A study by Bryant [13] indicated that by the age of 15 years, 92% of boys had looked at or read *Playboy*, with average age of first exposure reported to be 11 years. Similarly, in regard to X-rated films, 92% of 13- to 15-years-olds reported that they had seen such a film. Most undergraduate

men, when asked whether they have used sexual media in the past year, answer in the affirmative, although results vary between studies [14,15]. Studies in other cultures have found similar exposure patterns as in America. A recent study of 517 young men aged 18 to 27 years in Hong Kong indicated that 15.8 years was the average age of the first purchase of sexual media; just over half reported having used sexual media in the past 6 months [16]. The overall prevalence of having read, watched, or listened to sexual media in this sample was 91% (see Pan [17] for a lower prevalence estimate among Chinese young adults).

Adolescents are exposed to much sexual material by way of television and the Internet. The American Academy of Pediatrics, citing data from two analyses of television content, reported that the average American adolescent views approximately 14,000 sexual references per year [18]. Although this always would not be considered pornographic material per se, one in seven television programs contains sexual intercourse, depicted or strongly implied [19]. A recent study of daytime soap operas found 156 incidents of sexual intercourse in 50 hours of programming [20]. Survey data from a 1999 Kaiser Foundation report indicated that 76% of teenagers believed that one reason why young people have sex is that the prevalence of sex on television and movies normalizes sex for teenagers [21]. Music television, as well, exposes adolescents to suggestive sexual imagery (it has been described as a “young male adolescent’s sexual fantasy”) [22]. One content analysis indicated that approximately 75% of concept videos (those that tell a story) contained sexual imagery, with more than half containing images of violence, mostly against women [23]. With most adolescents having Internet access readily available (ie, 75%–83% of adolescents have access at home), the Internet, too, is a prevailing source of pornography exposure [24]. A recent Kaiser Family Foundation survey documented that 70% of young people aged 15- to 17-years-old reported unintended exposure to pornography websites [24,25]. Fisher and Barak [26] described the situation thusly: “In a fashion never before imagined, males and women—and boys and girls—can acquire sexually explicit content on the Internet, effortlessly and privately, as a direct expression of their sexual and personal characteristics and inclinations. Sexually explicit materials so obtained, in turn, may act to alter, not at all or more or less profoundly, the sexual and personal dispositions that incline individuals to seek out Internet sexuality in the first place.”

Individual differences in attraction to pornography

An important question, but one that often has been neglected in pornography research, and mass media research, in general, concerns individual differences [27]. In this context, the first individual differences question concerns who is particularly attracted to different types of pornography?

Bogaert [28] examined the extent to which individual differences among undergraduates predict preferences for, and choices of, various forms of sexual (eg, erotic, female insatiability, violent) and nonsexual media (eg, violent, non-

violent). Individual differences generally were predictive of people's preferences for particular types of pornography, but were unrelated to their preferences for nonsexual media. For example, as regards female insatiability media (ie, films that present sexually eager, nondiscriminating women), higher levels of impersonal sexual attitudes/interest in sexual variation and of dominance/aggression motives were uniquely predictive of men's preferences. The men who particularly preferred sexually violent pornography were lower in intelligence and higher in dominance/hostility, impersonal sex, and aggressive/antisocial tendencies. As much as 50% of the variation in the preference for violent pornography was accounted for by such individual differences factors in combination with self-reported sexual arousal to these materials. Notably, a man's amount of sexual experience did not influence his tendency to prefer any of the various sexual or nonsexual media types.

In a study by Malamuth and McIlwraith [29], the researchers surveyed 106 undergraduate men. The researchers studied the relationship between the frequency of the men's use of sexually explicit magazines and the type and frequency of their fantasies, with particular focus on sexual fantasies (eg, While working intently at a job, my mind wanders to thoughts about sex; Whenever I am bored I dream about the opposite sex) and on hostile fantasies (e.g., In my fantasies, I see myself seeking revenge on those I dislike; I imagine myself physically hurting someone I hate). Consumption of sexual media was measured by frequency of exposure to *Playboy* or *Penthouse* magazines. Men who used sexually explicit magazines more frequently were more likely to have sexual and hostile fantasies. This association largely was due to the use of *Penthouse*, but not *Playboy* magazine.

Other research by Seidman [30] failed to find associations between frequency of pornography use and such variables as lack of access to sexual partners; interpersonal problems; or feelings of romantic ineffectiveness, anxiety, and depression. This research did find that those undergraduates who were exposed to pornography at an earlier age were more likely to use pornography later in life and that among women, but not men, experiencing sexual and physical abuse in childhood predicted higher levels of pornography use later in life.

Seidman [30] also conducted in-depth interviews with 15 men who were high pornography users. He concluded that:

The narratives of high-frequency pornography users suggest that early family and peer experiences left them with fragile self-structures and resultant difficulties regulating emotions. Early sexual experiences and early exposure to pornography pointed these males toward using sexuality, and pornography in particular, to aid in emotion regulation and the propping up of their fragile selves. Many are hypervigilant regarding betrayal and drive partners away with possessiveness and jealousy. Others remain defensively non-committal in relationships, or unable to have relationships at all. Pornography use provides them a risk-free immersion in a fantasy of connection with a non-threatening woman in a way that they can control, providing both stimulation and self-soothing.

Sexual arousal to pornography

Another way of examining who is likely to seek out pornography is to assess who is particularly likely to derive sexual gratification from it (ie, who is sexually aroused). A particular focus of our research has concerned who is sexually aroused by sexually violent pornography. In various studies, men with higher attraction to sexual aggression or greater history of sexually aggressive behavior were aroused highly by exposure to sexually violent depictions [31–33]. This was the case on self-report measures of males' sexual arousal and direct genital measures (penile tumescence) of such sexual arousal. Bernat et al [34] found that the penile tumescence of self-identified sexually aggressive men who also held calloused sexual beliefs increased when force was introduced into a rape scenario. Other research with undergraduate men found that levels of attraction to being sexually aggressive predicted increased sexual responsiveness to rape depictions [35].

Changes in attitudes from pornography exposure?

Although the research described above suggests that certain individual personality characteristics do predict who is likely to seek out opportunities to be exposed to various types of pornography, the next question is whether such exposure may change a person—in particular, whether exposure to sexually violent media causes changes in attitudes about violence against women.

More than 2 decades ago, to evaluate the hypothesis that exposure to sexually violent media may affect some viewers' attitudes, Malamuth and Check [36] assigned male and female undergraduates (typically ranging in age from 18 to 21) to view feature-length films on two different evenings in theaters on campus. The films in the experimental condition included scenes of women being victimized by sexual male aggression and portrayed men's aggressive behaviors as justifiable or resulting in positive consequences; the films in the control condition did not contain violent scenarios. Days later, participants in both conditions, and untreated controls (ie, fellow students who had not been exposed to either condition), were assessed as to various sexual attitudes in a classroom setting that ostensibly was unrelated to the experiment. Results indicated that men, but not women, who viewed the two films that fused sexuality and aggression evidenced greater acceptance of interpersonal violence against women and a tendency toward greater acceptance of rape myths than their undergraduate counterparts who were assigned to the nonviolent viewing condition and untreated controls. Since that time, other experimenters who conducted similar research have reached comparable conclusions and concluded that “viewing sexually aggressive films significantly increased males' but not females' acceptance of cultural stereotypes indicating that women deserve or secretly desire rape” [37].

To examine individual differences in susceptibility to the influences of aggressive pornographic stimuli, undergraduate men were classified in relation to

their self-reported likelihood to aggress sexually against women if assured of not being caught and punished [38,39]. Later, these men were assigned to hear one of four versions of a story—either depictions of mutually consenting sex in which the woman showed signs of sexual arousal or disgust, or depictions of rape in which the woman showed signs of sexual arousal or disgust. After a 10-minute interval, the men were presented a second passage that depicted rape or consenting sex and were asked several questions concerning their beliefs about the percentage of women who would enjoy various sexual acts, including being raped. In keeping with the earlier findings of Malamuth and Check [36], an “across the board” effect was found which indicated that participants who had been exposed to a rape portrayal in which the woman showed signs of sexual arousal came to believe that a higher percentage of women, in general, would derive pleasure from being sexually assaulted. When the researchers turned their attention to the individual differences variable, they found that this pornography exposure effect was particularly evident in men with higher self-reported inclinations to be sexually aggressive (ie, those who reported a higher likelihood of raping if they could avoid any negative consequences to themselves). More specifically, men who had a high likelihood of raping (LR) who had been exposed to the rape portrayal that showed a woman’s sexual arousal believed that more women would enjoy being raped (mean [M] = 36.9%) and forced into sexual acts (M = 38.5%) than high-LR men who had heard the rape depiction that showed a woman’s disgust or either consenting sex versions (means of about 20%). This pornography exposure effect was not similar for men who had a low LR. Other research yielded similar findings [35]. These studies, therefore, show that exposure to media depictions that glorify sexual aggression affects men’s attitudes about violence against women; the effect largely is due to men who already have some sexually aggressive tendencies or attractions.

Does exposure to sexually violent media prime sexually violent fantasies?

In laboratory settings, the effect of exposure to aggressive pornography on sexual fantasies also was examined [40], although there has not been much research of this type. Here, also, effects that are particular to men who already are predisposed to be sexually aggressive were found. This result supports the idea that the effect of exposure to sexually violent media depictions is different, and potentially more evocative of sexual aggression, for men who bring sexually aggressive tendencies to the situation.

Effects in naturalistic settings

Many of the effects that were described above were found in controlled settings—often, but not exclusively, laboratory settings. In natural settings, does

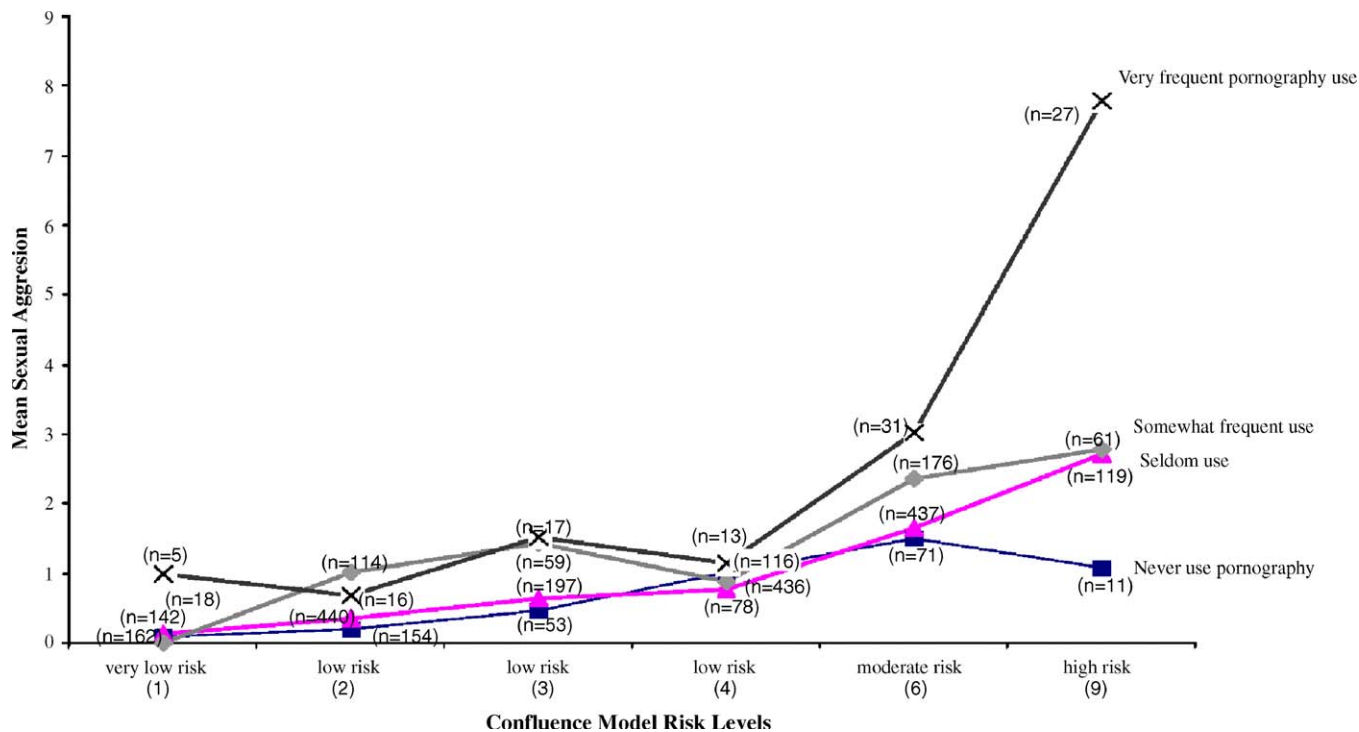


Fig. 1. Mean sexual aggression as a function of confluence model's risk levels (ie, the cross-product of hostile masculinity and sexual promiscuity) and four levels of reported use of sexually explicit magazines (pornography use). Numbers in parentheses indicate the number of participants in each condition. (From Malamuth N, Addison T, Koss M. Pornography and sexual aggression: are there reliable effects and can we understand them? *Annu Rev Sex Res* 2000;11:76; with permission.)

the amount of pornography that a person consumes predict their sexually aggressive behavior? Moreover, does exposure to pornography enable additional prediction of sexual aggression after controlling for other known risk factors? In other words, does pornography use in and of itself matter, or are observed relations between pornography use and sexual aggression in some sense illusory and merely the result of “guilt by association” with other variables, such as family violence or juvenile delinquency? These questions were addressed by Malamuth et al [6] and by Vega and Malamuth (unpublished data) by using various types of statistical analyses. For example, Malamuth et al [6] found that after controlling for key risk factors (eg, family violence, delinquency, attitudes accepting of violence, impersonal sex, and hostile masculinity), consumption of sexually explicit magazines remained a significant predictor of sexually aggressive behaviors. Similarly, Vega and Malamuth entered pornography use into an equation along with similar risk factors to those used by Malamuth et al [6] and adding measures of general antisocial tendencies (eg, impulsivity, grandiosity, irritability). A predictive role for pornography use in the commission of sexual aggression was evident in this research, even after taking into consideration all of the other risk factors. Carr and VanDeusen [41] also found that pornography use—assessed by various types of media—was an important risk factor that predicted sexual aggression after controlling for other factors, such as attitudes that are accepting of violence, alcohol use, and sexual victimization as a child.

The related question of whether an individual differences profile is useful for determining who is and who is not affected (ie, a moderator effect) by exposure to media in naturalistic settings also was addressed. Malamuth et al [6] examined the frequency of use of sexually explicit magazines as a possible predictor of aggression in the context of other risk factors. For most men, high pornography use did not predict sexual aggression. Among men who scored high on other key risk factors (eg, hostility toward women and an impersonal orientation to sex), however, those who also were frequent consumers of pornography were significantly more likely to have engaged in sexual aggression than those who used pornography seldom or not at all (Fig. 1). These findings were replicated successfully and extended by Vega and Malamuth, who also controlled for possible confounding between pornography use and general antisocial characteristics.

Summary

The research summarized here, particularly that which focuses on sexually violent pornography, shows a high degree of convergence between laboratory and field experiments and the findings in natural settings. The research suggests that individuals who are high in risk characteristics, such as hostility toward women, are more likely to choose to be exposed to sexually violent pornography and to be aroused sexually by it. Not only are they more likely to be exposed to such media

but when they are exposed, they are likely to be changed by such exposure, such as changes in attitudes about the acceptance of violence against women. Also, research indicates that high-risk individuals are the ones in whom pornography use makes the clearest difference in whether they are sexually aggressive.

It is unlikely that, in and of itself, any type of pornography exerts wide-sweeping changes on wide numbers of people; however, as summarized in the consensus statement of the social scientists that took part in the Surgeon General's workshop, "Pornography does have effects; it is just not yet known how widespread or powerful they really are" [42]. It may be likely that pornography's effects are important for some individuals, but not for others, and that they may prime behaviors only as they interact with certain other risk factors. This may be particularly so among adolescent populations—whose attitudes and behaviors are defined more ambiguously than those of adults—and among whom organizing effects of pornography exposure may be more significant in reinforcing developing constellations of personality characteristics. This proposition fits with the emphasis in social learning theory of the concept of reciprocal determinism, defined as "a continuous reciprocal interaction between personal, behavioral, and environmental determinants" [43]. It also suggests processes that involve activation or priming of what is already "brought by person to situation" (eg, hostile masculinity, impersonal sexuality) and strengthening of existing tendencies in ways that may create "tipping point" effects on behaviors if other risk factors are present. As Malamuth et al [6] speculated, "associations between pornography consumption and aggressiveness toward women could be explained by a circular relationship between high coercive tendencies and interest in certain content in pornography, whereby aggressive males are drawn to the images in pornography that reinforce and thereby increase the likelihood of their controlled, impersonal, and hostile orientation to sexuality. The way relatively aggressive males interpret and react to the same pornography may differ from that of non-aggressive males." In some cases, these reactions may be manifested in actual aggression. In many other cases, these effects may be found "only" in expressed social attitudes, interpersonal domineeringness, or similar constructs.

In future work, it is important not to use an overly simplistic lens of focus in which pornography exposure is seen as generally harmful or not. Depending on particular constellations of personality characteristics, the effects of pornography may differ considerably among different teenagers as well as within different cultures [6]. The research suggests that particular concerns may be needed for those who are highly frequent consumers of pornography, those who seek out sexually violent content, and those who also have other risk factors.

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