

# Pornography Use as a Risk Marker for an Aggressive Pattern of Behavior Among Sexually Reactive Children and Adolescents

Eileen M. Alexy, Ann W. Burgess, and Robert A. Prentky

*Sexually reactive children and adolescents (SRCAs), sometimes referred to as juvenile sexual offenders, may be more vulnerable and likely to experience damaging effects from pornography use because they are a high-risk group for a variety of aggressive behaviors. The purpose of this study is to describe the characteristics of those who use pornography and those who do not and to examine the associations between pornography use and aggressive behaviors among SRCAs. This secondary analysis used a descriptive, exploratory design to study 160 SRCAs. Chi-square and individual odds ratio analyses were employed to examine the associations between use of pornography and aggressive behaviors. SRCAs who used pornography were more likely to display aggressive behaviors than their nonusing cohort. Recommendations for nurses and mental health professionals encountering these children and adolescents are offered. **J Am Psychiatr Nurses Assoc, 2009; 14(6), 442-453. DOI: 10.1177/1078390308327137***

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Pornography is a multibillion dollar industry in the United States that has come under increased scrutiny from the U.S. government (Kroft, 2003). In addition, concerns about pornography are increasing because of its widening accessibility as a result of new media devices, such as computers, mobile phones, interactive gaming systems, and personal digital assistants. Although two U.S. government reports (Attorney General, 1986; Commission on Obscenity and Pornography, 1971) and one surgeon general's workshop (Koop, 1987) examined pornography use and its effects among the U.S. population,

the findings of those reports continue to be the subject of scientific and public debate. However, despite the controversy and uncertainty surrounding these governmental reports, the ensuing years have produced little significant research addressing pornography use and its effects. Some questions that remain unaddressed center on the availability of pornography and the potential negative influence pornography can have on youth. Moreover, a review of the literature indicates that few studies investigate pornography use among sexually reactive children and adolescents (SRCAs), sometimes referred to as juvenile sexual offenders. SRCAs may be more vulnerable and likely to experience damaging effects from pornography use because they are a high-risk group for a variety of aggressive behaviors.

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## Background

SRCAs are individuals who engage in sexually inappropriate and/or coercive acts with other youth

and adults. These children and adolescents are often victims of a variety of child maltreatment (e.g., neglect, sexual, physical, and/or emotional abuse). Some of the behaviors that SRCAs exhibit include sexual touch, fondling, penetration, peeping, exposure, and/or use of sexual language (Araji, 1997; Prentky, Schwartz, Pimental, Cerce, & Cavanaugh, 2003; Ray et al., 1995). For young children, the prior list of behaviors is considered sexually inappropriate. In most states, these same behaviors are considered criminal sexual offenses when carried out by older adolescents or adults and accomplished by force and/or coercion (Ray et al., 1995). The literature reports that SRCAs are composed predominantly of boys; however, girls may also display such sexually inappropriate behaviors (Fehrenbach & Monastersky, 1988; Johnson, 1989; Mathews, Hunter, & Vuz, 1997; Ray & English, 1995).

SRCAs comprise a very heterogeneous group, and numerous characteristics have been examined to explain the etiology of their behavior. In addition to sexually aggressive behaviors, studies of the SRCA population have explored nonsexual criminal, antisocial, and delinquent behaviors. Nonsexual criminal behaviors specifically include (a) vandalism, (b) other nonsexual victimless crimes (i.e., major and minor drug charges), (c) nonassaultive offenses (i.e., burglary, theft, trespassing), (d) fighting and interpersonal violence (i.e., assault and battery), and (e) other serious rule violations, such as using a weapon (Becker, Cunningham-Rathner, & Kaplan, 1986; Fehrenbach, Smith, Monastersky, & Deisher, 1986; Prentky et al., 2003; Ryan, Miyoshi, Metzner, Krugman, & Fryer, 1996; Shaw, Applegate, & Rothe, 1996; Smith & Monastersky, 1986; Zolondek, Abel, Northey, & Jordan, 2001). Antisocial and delinquent behaviors include (a) bullying (i.e., physical and/or verbal), (b) arson or firesetting behavior, (c) cruelty to animals, (d) a prominent pattern of lying, (e) persistent conning/manipulation, (f) high risk-taking (i.e., drag racing, hopping trains, etc.), (g) running away, and (h) truancy (Lewis, Shankok, & Pincus, 1979; Prentky et al., 2003; Ryan et al., 1996; Shaw et al., 1996; Smith & Monastersky, 1986; Wieckowski, Hartsoe, Mayer, & Shortz, 1998; Zolondek et al., 2001).

Ryan et al. (1996) conducted one of the largest surveys, over 1,600 juvenile sexual offenders (ages 5-21) from 30 states. Sixty-three percent of these juveniles had committed at least one prior nonsexual offense. Additionally, of those who committed a prior nonsexual offense, more than one fourth were

known to have committed more than three nonsexual offenses. Shoplifting (41.4%) and theft (30.7%) were the most frequently reported offenses, followed by assault (26.4%), runaway (26%), vandalism (20.4%), burglary (17.1%), arson (15.3%), and animal cruelty (8.1%).

Many investigators use the term *sexually aggressive behaviors* to describe a wide variety of abusive behaviors that possess both a sexual and aggressive element (Araji, 1997; Hall, Hirschman, Graham, & Zaragoza, 1993). According to Ray and English (1995), "Aggressive is defined as physical force used to accomplish the act. Coercion, which includes direct or implied threat or inequality in size, age, or development, or deception, is included in the construct definition of aggression" (p. 441). The earlier literature described many sexually aggressive behaviors as "hands-on" or as minor, nuisance "hands-off" offenses (Awad & Saunders, 1991; Becker et al., 1986; Fehrenbach et al., 1986; Friedrich, Beilke, & Urquiza, 1988; Ryan et al., 1996; Smith & Monastersky, 1986). Hands-on offenses include behaviors such as forced or coerced digital, oral, penile, or foreign object penetration (completed or attempted) of the mouth, vagina, or anus; fondling; simulated sex (frotteurism, "humping"); and sexual touching. Hands-off behaviors have been described as "nuisance" offenses and include behaviors such as peeping, exposing genitals, sexually explicit threats, sexual drawings, sex with animals, obscene phone calls, and obscene gestures. Although sex with animals is a hands-on behavior, it was included in hands-off behaviors because it involved contact with nonhuman animals (Burton, 2003; Fehrenbach et al., 1986; Gray, Busconi, Houchens, & Pithers, 1997; Gray, Pithers, Busconi, & Houchens, 1999; Johnson, 1988, 1989; Mathews et al., 1997; Ryan et al., 1996; Shaw et al., 1993; Veneziano, Veneziano, & LeGrand, 2000; Wieckowski et al., 1998).

## Pornography

Pornography is a difficult concept to examine and define. For years, investigators have tried to explore links between pornography and aggressive behavior, especially sexually aggressive behavior; however, studies of pornography use at different levels (i.e., population vs. individual) and among different populations (i.e., college students, sexual offenders, nonsexual offenders) have produced ambiguous results (Kingston, Fedoroff, Firestone, Curry, & Bradford, 2008).

Studies of adult sexual offenders have investigated the use of or exposure to pornography in the sexual victimization of women, children, and adolescents (Carter, Prentky, Knight, Vanderveer, & Boucher, 1987; Kingston et al., 2008; Marshall, 1988). Kingston et al. (2008) examined the relationship between pornography use and aggressive behavior and the risk of recidivism among 341 adult male child molesters. Investigators found that pornography use was a predictor of aggression when examined together with other risk factors (e.g., hostile masculinity and impersonal sex) for aggression. Specifically, investigators found that among child molesters who scored high on risk factors, frequent pornography use increased the risk for aggression and recidivism.

Carter et al. (1987) investigated exposure to and use of pornography in 64 adult incarcerated sexual offenders (38 rapists and 26 child molesters). Child molesters indicated significantly more exposure to pornography in adulthood than rapists and were significantly more likely to use such materials before ( $p < .005$ ) and during their offenses ( $p < .005$ ). Marshall (1988) conducted a comparison study of exposure to and use of "hard"-core sexually explicit material with 15 incest offenders, 51 child molesters, 23 rapists, and 24 nonoffenders. Sexual materials were limited to magazines, films, or videotapes found in specialized stores or from illegal and "underground" sources. The content of these materials left nothing to the imagination and included scenes depicting consensual sex between a man and woman, a man forcing sex upon a woman, and sex between an adult man and a child. More than one third of child molesters and rapists reported using this type of pornography in pubescence compared to none of the incest offenders and 21% of the nonoffenders. As adults, 67% of child molesters and 83% of rapists reported using these materials compared to 53% of incest offenders and 29% of nonoffenders. Marshall also investigated the use of pornography as a trigger to commit a sexual offense. Thirty-seven percent of child molesters and 35% of rapists compared to 13% of incest offenders reported that pornography did incite their offenses. Of those that claimed pornography provoked their offenses, 53% of child molesters and 33% of rapists reported deliberately using pornography in their planned preparation to commit their offenses.

Little research has been devoted to understanding the role of pornography in the lives of SRCAs.

Friedrich et al. (1988) reported that mothers of sexually abused boys ages 3-8 observed that their sons were obsessed with looking at pornographic material. Zolondek et al. (2001) analyzed self-report data from 485 male juvenile sexual offenders and found that approximately 32% reported using pornography at an average age of 11.4 years. Mathews et al. (1997) provided evidence that nearly 51% of female sexual offenders used pornography. A final study of 30 youth who had committed sexual offenses demonstrated that exposure to pornographic materials was common. Twenty-nine out of 30 of these juveniles reported being exposed to pornographic material such as X-rated magazines or videos (Wieckowski et al., 1998).

Only two studies of juvenile sexual offenders have comprehensively evaluated exposure to and use of pornography (Becker & Stein, 1991; Ford & Linney, 1995). Becker and Stein (1991) investigated 160 male adolescent sexual offenders ( $M = 15.4$  years) and found that 89% reported using sexually explicit materials (35% magazines, 26% videos, 15% television, and 13% books). When questioned about use of sexually explicit materials and self-reported arousal, 67% reported that pornography increased their arousal. Becker and Stein also examined the relationships between use of pornography and the number of victims per offender and self-reported arousal. There were no significant relationships found between use of pornography and the number of victims or self-reported arousal. Interviews were conducted with 20 participants to explore whether sexually explicit materials played a role in the commission of their offenses. Fourteen (70%) reported that it played no role and 4 (20%) denied committing a sexual offense. Only 2 (10%), said that pornography may have played a role in the commission of their sexual offenses, claiming that pornography had been used in their own sexual abuse, and they were reenacting their personal abuse experiences.

Ford and Linney (1995) conducted a comparison study of exposure to and use of pornography among juvenile sexual offenders, juvenile violent nonsexual offenders, and juvenile status offenders (youth who were charged as runaways or truant). For further comparison, the juvenile sexual offenders were divided into two groups: juvenile rapists (those who sexually assaulted peer-age or adult victims) and juvenile child molesters (those who sexually assaulted a child 5 or more years younger than

the offender). Findings indicated that most of the juveniles were exposed to both soft- and hard-core pornographic materials. Soft-core pornographic materials were defined as materials with naked women and hard-core materials were those that displayed “graphic pictures of humans having sexual intercourse while in bondage, engaged in violent sexual acts, and other types of paraphilia” (Ford & Linney, 1995, p. 66). Forty-two percent of the sexual offenders reported exposure to hard-core sex magazines compared to 29% of the other offenders. Additionally, significant differences were found with regard to age of first exposure to these materials among the groups. The juvenile sexual offenders were exposed to pornographic magazines at the youngest ages (between 5 and 8 years old). Moreover, among juvenile sexual offenders, the child molester group reported the most frequent exposure. Although there were no statistically significant differences between the offender groups in exposure to X-rated pornographic movies or television programs, statistical means indicated that juvenile child molesters had earlier and more frequent exposure to X-rated movies.

Results from studies of both adult and juvenile sexual offenders demonstrate that little is known about the relationships of pornography and aggressive behaviors. Clearly, there is a paucity of knowledge about pornography in the lives of SRCAs. The recognition of exposure to and use of pornography found in prior studies of SRCAs and in adult populations underscores the necessity to examine the associations between pornography and aggressive behaviors in child and adolescent populations. For the current study, pornography is defined as “any material depicting sexually explicit activities” (Seto, Maric, & Barbaree, 2001, p. 37). The specific aim of the present study is to examine pornography use among SRCAs as a possible risk marker for the development of an aggressive pattern of behavior.

## METHOD

This descriptive, exploratory study employs a secondary analysis to answer two questions: (a) What are the characteristics (demographic, nonsexual criminal, antisocial, delinquent, and sexually aggressive behaviors) of SRCAs who use pornography and those who do not? (b) What are the associations between pornography use and nonsexual

criminal, antisocial, delinquent, and sexually aggressive behaviors (aggressive behaviors) among SRCAs?

## Participants

The present study is a secondary analysis of data from the study, “Risk Management of Sexually-Reactive Children and Adolescents” (2002-IJ-CX-0029). The parent study examined children and adolescents who had been removed from abusive homes and placed elsewhere, usually in foster care. These children and adolescents were part of the Commonwealth of Massachusetts program, Assessment for Safe and Appropriate Placement (ASAP), which was designed to enhance the management and care of abused youth who were at risk to sexually victimize other children (Prentky et al., 2003). Data collected from the first 251 cases of ASAP youth, covering June 2002 to May 2003, are presented in this analysis. A convenience sample of participants who reported positive use of pornography was initially drawn from the archival data. These are participants who were coded with a “yes” response to clearly documented use and interest in pornography in the parent study. This yielded a sample of 80 participants. A comparison sample of 80 participants was randomly selected from the remaining 171 available cases. The final sample available for analysis consisted of 80 participants in each of the positive use and negative use of pornography groups ( $N = 160$ ). Institutional review board approval was granted for the study.

Eighty-five percent of the total sample consisted of males ( $n = 136$ ); the remaining 15% of the sample consisted of females ( $n = 24$ ). The majority of the participants for which data on race were available ( $n = 157$ ) were Caucasian (61%). Regarding age, 2 participants were missing data ( $n = 158$ ). The SRCAs ranged in age from 6 to 20 with a mean age of 13.01 ( $SD = 2.801$ ). The mean age for males was 13.10 ( $SD = 2.592$ ) and the mean age for females was 12.54 ( $SD = 3.799$ ). Of the 158 SRCAs, no children were in the early childhood age group (ages 0-5). Nineteen percent ( $n = 30$ ) were in the latent childhood group (ages 6-10), 50% ( $n = 79$ ) were in the early adolescence group (ages 11-14), close to 29% ( $n = 45$ ) were in the middle adolescence group (ages 15-17), and nearly 3% ( $n = 4$ ) were in the late adolescence group (ages 18-21).

## Data Collection

Information regarding data collection and procedures was obtained from the parent study. Data on children and adolescents who had been ASAP evaluated for sexual behavior problems were extracted from archival records in 14 area offices of the Massachusetts Department of Social Services (DSS). A dictionary that included 213 variables was used to code the data found in the ASAP records. These records essentially fell into four categories: (a) DSS (ASAP evaluation, service plans, abuse investigations and reports, family history, detailed information on parents, siblings, and placements), (b) residential/group treatment plans (progress notes and reports, incident and behavior reports), (c) school reports (academic and progress reports, psychoeducational evaluations), and (d) therapy (admission and discharge summaries, inpatient and outpatient treatment notes, medication trials and progress reports, and diagnoses). Additionally, a random sample of 50 ASAP records was double-coded to examine interrater reliability. The average percentage agreement across all variables was 84.35, with a range from 60 to 100. Approximately 36% of the variables had a Cronbach's alpha reliability of .90 or higher, and 69% had a reliability of .80 or higher. Only four items of interest (verbal bullying, physical bullying, sexual touching, and genital touching) had alpha reliabilities falling below a minimum acceptable level of .70 (Prentky et al., 2003). For more information on data collection the reader is referred to Prentky et al. (2003).

## Variables Included in Analysis

Variables from the parent study were selected for analysis in the current study: use of pornography and aggressive behaviors (arson/firesetting; cruelty to animals; truancy; runaway; lying; verbal or physical bullying; conning/manipulating; theft/stealing; weapon use; risk-taking behavior; sexual touching; sexually touching someone  $\geq 4$  years younger; genital touching; coerced vaginal or anal penetration; forced sexual acts; forced vaginal, anal, or foreign object penetration; simulated sex with agemates or strangers; pulling down other's skirt/pants; sexually explicit orders/threats; sexually aggressive remarks; sexual drawings/graffiti; obscene gestures or phone calls; violating other's body space; exposing or peeping with agemates or strangers; and sex with animals).

## Data Analysis

Data for the variables were originally collected as three-way information (unclear, no evidence, yes); however, to allow for low frequencies for some variables and to test associations, all variables were conservatively collapsed and coded dichotomously for the current study. As a result, those that were coded as *unclear* in the parent study were collapsed into the *no evidence* category. Data for the age variable (age at time of ASAP evaluation) were originally collected at an interval level of age in years. For this analysis the ages were combined into five groups based on developmental age ranges (i.e., ages 0-5, 6-10, 11-14, 15-17, and 18-21). The majority of participants were Caucasian, with smaller numbers of African American, Hispanic, Asian, and other racial backgrounds. Because the data did not follow a normal distribution, nonparametric statistics including chi-square and individual odds ratio analyses were employed for all dichotomous variables. The odds ratios compared the associations of SRCAs who used pornography and those who did not with two domains of variables (demographics and aggressive behaviors). Each of the dichotomous variables was tested independently for a significant association ( $p < .05$ ) with use of pornography. Additionally, dichotomous variables that approach significant association ( $p < .10$ ) are presented. Furthermore, because the constructed age group variable was categorical, a Kruskal-Wallis test was performed to examine whether the age groups differed significantly on pornography use. Post hoc Mann-Whitney U tests were also performed on the age groups to make pairwise comparisons.

## RESULTS

Table 1 contains summary information about aggressive behaviors for both positive and negative use of pornography groups.

### SRCAs Who Used Pornography

The first analysis examined the association of demographic characteristics and pornography use. The number of boys who used pornography (approximately 94%,  $n = 75$ ) was much greater than the number of girls (approximately 6%,  $n = 5$ ). However, the number of female participants was too small to conduct meaningful analysis. The Kruskal-Wallis

**TABLE 1. Frequencies of Pornography Use and Aggressive Behaviors**

Aggressive Behavior	Positive Use of Pornography (n = 80)		Negative Use of Pornography (n = 80)		Total (N = 160)	
	n	(%)	n	(%)	n	(%)
Arson/firesetting						
Yes	52	(32.5)	38	(23.8)	90	(56.3)
No	28	(17.5)	42	(26.3)	70	(43.8)
Cruelty to animals						
Yes	22	(13.8)	17	(10.6)	39	(24.4)
No	58	(36.3)	63	(39.4)	121	(75.6)
Truancy						
Yes	39	(24.4)	24	(15.0)	63	(39.4)
No	41	(25.6)	56	(35.0)	97	(60.6)
Runaway						
Yes	43	(26.9)	32	(20.0)	75	(46.9)
No	37	(23.1)	48	(30.0)	85	(53.1)
Lying						
Yes	64	(40.0)	43	(26.9)	107	(66.9)
No	16	(10.0)	37	(23.1)	53	(33.1)
Verbal bullying						
Yes	66	(41.3)	58	(36.3)	124	(77.5)
No	14	(8.8)	22	(13.8)	36	(22.5)
Physical bullying						
Yes	62	(38.8)	59	(36.9)	121	(75.6)
No	18	(11.3)	21	(13.1)	39	(24.4)
Conning/manipulative						
Yes	56	(35.0)	42	(26.3)	98	(61.3)
No	24	(15.0)	38	(23.8)	62	(38.8)
Theft/stealing						
Yes	63	(39.4)	44	(27.5)	107	(66.9)
No	17	(10.6)	36	(22.5)	53	(33.1)
Weapon use						
Yes	27	(16.9)	16	(10.0)	43	(26.9)
No	53	(33.1)	64	(40.0)	117	(73.1)
Risk-taking behavior						
Yes	31	(19.4)	31	(19.4)	62	(38.8)
No	49	(30.6)	49	(30.6)	98	(61.3)
Sexual touching						
Yes	44	(27.5)	38	(23.8)	82	(51.3)
No	36	(22.5)	42	(26.3)	78	(48.8)
Sexually touching someone ≥ 4 years younger						
Yes	47	(29.4)	42	(26.3)	89	(55.6)
No	33	(20.6)	38	(23.8)	71	(44.4)
Genital touching						
Yes	52	(32.5)	53	(33.1)	105	(65.6)
No	28	(17.5)	27	(16.9)	55	(34.4)
Coerced vaginal penetration						
Yes	17	(10.6)	4	(2.5)	21	(13.1)
No	63	(39.4)	76	(47.5)	139	(86.9)
Coerced anal penetration						
Yes	11	(6.9)	8	(5.0)	19	(11.9)
No	69	(43.1)	72	(45.0)	141	(88.1)
Forced sexual acts						
Yes	30	(18.8)	16	(10.0)	46	(28.8)
No	50	(31.3)	64	(40.0)	114	(71.3)

(continued)

**TABLE 1. (continued)**

<b>Aggressive Behavior</b>	<b>Positive Use of Pornography (n = 80)</b>		<b>Negative Use of Pornography (n = 80)</b>		<b>Total (N = 160)</b>	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Forced vaginal penetration						
Yes	8	(5.0)	3	(1.9)	11	(6.9)
No	72	(45.0)	77	(48.1)	149	(93.1)
Forced anal penetration						
Yes	10	(6.3)	6	(3.8)	16	(10.0)
No	70	(43.8)	74	(46.3)	144	(90.0)
Forced foreign object penetration						
Yes	2	(1.3)	3	(1.9)	5	(3.1)
No	78	(48.8)	77	(48.1)	155	(96.9)
Simulated sex with agemates						
Yes	28	(17.5)	23	(14.4)	51	(31.9)
No	52	(32.5)	57	(35.6)	109	(68.1)
Simulated sex with strangers						
Yes	4	(2.5)	1	(0.6)	5	(3.1)
No	76	(47.5)	79	(49.4)	155	(96.9)
Pulling down skirt or pants						
Yes	17	(10.6)	17	(10.6)	34	(21.3)
No	63	(39.4)	63	(39.4)	126	(78.8)
Sexually explicit orders/threats						
Yes	34	(21.3)	25	(15.6)	59	(36.9)
No	46	(28.8)	55	(34.4)	101	(63.1)
Sexually aggressive remarks						
Yes	48	(30.0)	31	(19.4)	79	(49.4)
No	32	(20.0)	49	(30.6)	81	(50.6)
Sexual drawings/graffiti						
Yes	13	(8.1)	9	(5.6)	22	(13.8)
No	67	(41.9)	71	(44.4)	138	(86.3)
Obscene gestures						
Yes	23	(14.4)	15	(9.4)	38	(23.8)
No	57	(35.6)	65	(40.6)	122	(76.3)
Obscene phone calls						
Yes	4	(2.5)	2	(1.3)	6	(3.8)
No	76	(47.5)	78	(48.8)	154	(96.3)
Violating other's body space						
Yes	44	(27.5)	43	(26.9)	87	(54.4)
No	36	(22.5)	37	(23.1)	73	(45.6)
Exposing to agemates						
Yes	43	(26.9)	33	(20.6)	76	(47.5)
No	37	(23.1)	47	(29.4)	84	(52.5)
Exposing to strangers						
Yes	13	(8.1)	6	(3.8)	19	(11.9)
No	67	(41.9)	74	(46.3)	141	(88.1)
Peeping at agemates						
Yes	11	(6.9)	6	(3.8)	17	(10.6)
No	69	(43.1)	74	(46.3)	143	(89.4)
Peeping at strangers						
Yes	4	(2.5)	2	(1.3)	6	(3.8)
No	76	(47.5)	78	(48.8)	154	(96.3)
Sex with animals						
Yes	9	(5.6)	2	(1.3)	11	(6.9)
No	71	(44.4)	78	(48.8)	149	(93.1)

**TABLE 2. Associations Between Use of Pornography and Aggressive Behaviors (N = 160)**

Aggressive Behavior	Use of Pornography Odds Ratio (95% CI)		$\chi^2$	<i>p</i>
Lying	3.442	(1.705 to 6.947)	12.44	.000 <sup>†</sup>
Theft/stealing	3.032	(1.515 to 6.066)	10.19	.001**
Truancy	2.220	(1.160 to 4.246)	5.89	.015*
Conning/manipulative	2.111	(1.103 to 4.040)	5.16	.023*
Arson/firesetting	2.053	(1.087 to 3.875)	4.98	.026*
Weapon use	2.038	(0.994 to 4.176)	3.85	.050
Runaway	1.743	(0.931 to 3.264)	3.04	.081
Sexually aggressive remarks	2.371	(1.257 to 4.471)	7.23	.007**
Coerced vaginal penetration	5.127	(1.641 to 16.019)	9.26	.002**
Forced sexual acts	2.400	(1.179 to 4.885)	5.98	.014*
Sex with animals	4.944	(1.033 to 23.657)	4.78	.029*
Exposing to strangers	2.393	(0.861 to 6.651)	2.93	.087

\**p* < .05. \*\**p* < .01. <sup>†</sup>*p* < .0005, two-tailed.

test indicated that the age groups differed significantly,  $\chi^2(3) = 8.525, p = .036$ , on use of pornography. The results of the post hoc Mann–Whitney U tests with a Bonferroni correction ( $.05/6 = .008$ ) indicated that the latent childhood group scored significantly lower with regard to pornography use than the middle adolescence group ( $p = .007$ ). The other age groups did not differ significantly on use of pornography.

Various nonsexual criminal, antisocial, and delinquent behaviors were engaged in by SRCAs who used pornography. The most frequently occurring acts were verbal bullying (83%), lying (80%), and theft (79%). Additionally, acts such as physical bullying (78%), conning (70%), arson/firesetting (65%), running away (54%), and truancy (49%) were frequently found among the SRCAs who used pornography. Although SRCAs who did not use pornography also engaged in the latter behaviors, SRCAs who used pornography were 3.442 (95% confidence interval [CI] = 1.705 to 6.947,  $p < .0005$ ) times more likely to demonstrate a prominent pattern of lying, and 3.032 (95% CI = 1.515 to 6.066,  $p < .001$ ) times more likely to engage in theft/stealing than their nonusing cohort.

Approximately 59% of SRCAs who used pornography committed some form of inappropriate touching, as compared to approximately 56% of SRCAs who did not use pornography. Sixty-five percent of those who used pornography engaged in genital touching, 59% sexually touched someone greater than or equal to 4 years younger than them, and 55% engaged in sexual touching. The latter behaviors demonstrate the high-risk sexualized behaviors of SRCAs.

Common hands-off behaviors among SRCAs who used pornography were sexually aggressive remarks (60%) and violation of another’s body space (55%). Again, these hands-on and hands-off behaviors were also found among nonusing pornography SRCAs; however, SRCAs who used pornography were 5.127 (95% CI = 1.641 to 16.019,  $p < .002$ ) times more likely to engage in coerced vaginal penetration than their nonusing cohort.

Table 2 presents the odds ratios, confidence intervals, chi-squares, and significance values for significant associations ( $p < .05$ ) and variables that approach significant associations ( $p < .10$ ) between use of pornography and aggressive behaviors.

## DISCUSSION

The purpose of this study was to examine pornography use among SRCAs as a possible risk marker for the development of an aggressive pattern of behavior. Recent investigations of pornography use among samples of male college students (Vega & Malamuth, 2007) and adult male child molesters (Kingston et al., 2008) indicate that pornography use is a risk factor for aggression, particularly sexual aggression, in populations of men who possess various risk characteristics associated with aggression. The results of this study support the efficacy of pornography as a possible risk marker for aggression in SRCAs when examined with other risk factors for aggression.

This is the first study of SRCAs to examine associations between pornography use and nonsexual



criminal, antisocial, delinquent, and sexually aggressive behaviors. Specifically, we found that SRCAs who used pornography compared to those who did not use pornography were more likely to engage in a prominent pattern of lying, a persistent pattern of theft/stealing, to be truant, to frequently con/manipulate others, to engage in arson/firesetting behaviors, to engage in coerced vaginal penetration and forced sexual acts such as oral or digital penetration, to express sexually aggressive remarks (obscenities), and to engage in sex with animals. Three other associations between use of pornography and aggressive behaviors approached significance at  $p < .10$ . SRCAs who used pornography were more likely to have used a weapon, run away, and exposed themselves to strangers than their nonusing cohort. Although these latter associations are not statistically significant, from a clinical standpoint they may indicate an escalation in a pattern of impulsive and aggressive behaviors found in SRCAs who use pornography.

The fact that several significant positive associations were found is noteworthy. No prior studies of SRCAs have examined links between use of pornography and aggressive behaviors. These findings support arguments for social learning theory, the victim-to-victimizer theory, and the progression of aggressive problematic behaviors (Bandura, 1973; Burgess, Hartman, & McCormack, 1987; Burgess, Hartman, McCormack, & Grant, 1988; Burton & Meezan, 2004; Kingston et al., 2008; Malamuth, Addison, & Koss, 2000; Seto et al., 2001; van der Kolk, 1989). The SRCA population consists of high-risk individuals, specifically, young individuals with a predisposition for aggression. Individuals with a predilection for aggression have been shown to be drawn to sexually explicit images and are more likely to expose themselves in the future to such pornography than are low-risk individuals (Kingston et al., 2008; Shim, Lee, & Paul, 2007). Malamuth et al. (2000, 2003) have begun examining the impact of exposure to deviant pornography on attitudes that support sexual aggression among nonoffender populations. Results have supported the negative influence that deviant pornography has on aggressive behaviors. These findings are important in confluence with findings from the present study because pornography is more easily accessible to SRCAs because of changes in technology. Furthermore, findings from this study support the contention that pornography use for those with a

predilection for aggressive behavior may act as a catalyst for a higher degree of aggressive behavior.

This study found that SRCAs who used pornography were more likely to be male. Although the number of female participants was too small for meaningful analysis, this study was one of the few that included female participants. Findings from this study concerning use of pornography by male SRCAs fall within the range of previously reported investigations of male SRCAs (Becker & Stein, 1991; Wieckowski et al., 1998; Zolondek et al., 2001). Most studies of SRCAs involve only male participants. For statistical analyses, many times female offenders are dropped from the sample because of small numbers. Additionally, based on a review of the literature on victims and victimizers, studies of victims tend to have more female participants and studies of victimizers tend to have more male participants. Future studies of pornography use, as well as studies of victimizers, need to include more female participants to provide more complete descriptions.

### Limitations

Although we had a larger sample size of SRCAs than many other studies, caution is needed in the interpretation of these results. These data are limited in that they are retrospective. As a secondary analysis, data were also limited by a finite set of variables to assess pornography use and the associated aggressive characteristics. In addition, data regarding the type of pornographic media that SRCAs were accessing, the age at which SRCAs were first exposed to pornography, and the frequency of pornography use were not available for analysis. The assessment of pornography use is often problematic as it is usually based on self-report or retrospective data. This type of limitation is consistent among research on pornography use (Kingston et al., 2008; Malamuth et al., 2000; Vega & Malamuth, 2007). The sample size of 80 participants in each group (use pornography, do not use pornography) posed some limitations regarding the power with which some statistically significant findings could be detected. Additionally, the generalizability of these findings is somewhat limited because the convenience sample of SRCAs was obtained from one state in the Northeastern region of the United States, which may not be representative of other regions. Although several authors suggest that early

exposure and use of pornography is connected to later behavioral problems (including aggressive behavior) in SRCAs, ethically it is impossible to test for a direct causal link (Righthand & Welch, 2001; Ryan & Lane, 1997; Seto et al., 2001; Shaw, 1999). Investigators of SRCAs emphasize the dynamic and multifaceted nature of behavioral problems, which cannot be explained by the presence (or absence) of a single component; however, individual components, such as pornography use, need to be explored to establish their role in the progression of behavioral difficulties.

### Future Research

Despite these limitations, the present study is unique in that it describes pornography use and multiple characteristics found in SRCAs. These data are groundbreaking in that they also describe several significant positive associations between pornography use and aggressive behaviors in SRCAs. Future studies of pornography use among SRCAs need to include larger sample sizes and more female participants to provide a better description of similarities and differences found in this population. Larger sample sizes also would allow for more in-depth regression analyses. In addition, prospective approaches examining use of pornography among SRCAs would provide an understanding of the temporal aspects of the progression of aggressive behaviors. An examination of the type of pornographic media that SRCAs access is important to consider in future studies, given that new technologies, such as the Internet, allow SRCAs of any age easy access to all types of pornography (i.e., child, violent, and paraphilic) that before the mid-1990s was difficult to obtain.

### Clinical Implications

Nurses and mental health professionals are positioned in facilities where both victims and victimizers seek services. For children and adolescents who are victims of any type of child maltreatment or present as victimizers, use of pornography needs to be assessed upon intake and on an ongoing basis. Providers need to identify and understand the role that pornography plays in the lives of SRCAs. Pornography appears to intensify aggressive behaviors and can add to a sexualized understanding of relationships among SRCAs

(Burton & Meezan, 2004; Seto et al., 2001). Assessment of pornography use will help nurses and mental health professionals recognize whether a SRCA is imitating or repeating a behavior, thus aiding in the possible prevention of further trauma to the individual and his or her family and community. Additionally, assessment of pornography use may help providers identify children and adolescents at risk for developing aggressive behavioral response patterns.

Currently, practice with SRCAs is predominantly based on cognitive behavioral therapy models (Burton & Meezan, 2004). A major treatment goal for the SRCA population is to extinguish thoughts about pornographic images that can trigger the acting out or aggressive behavior. By helping SRCAs to reframe negative thoughts, SRCAs can learn to attach and begin to care about others. Reframing will aid SRCAs in developing more normal coping mechanisms. It is critical that *structured environments* are provided for these youth, (e.g., foster or adopted parents need to be educated on the underlying nature of the youth's behavior). SRCAs need behavior modification and the opportunity to learn how to attach. An example of a structured activity to meet this attachment goal is engaging youth to care for animals under careful supervision. Once this goal is met, another level of caring for something or someone could be added. The SRCAs sexualized understanding of relationships appears to underlie their inability to form healthy relationships. This lack of relationships more than likely occurred early in their lives and is a core emotional issue that needs to be addressed in treatment.

In conclusion, SRCAs are a high-risk group for a variety of aggressive behaviors. In this study SRCAs who used pornography were more likely to display aggressive behaviors than their nonusing cohort. Upon admission for services, psychiatric and mental health nurses can assess the use of pornography and provide treatment that may prevent further trauma to victims within the family and community.

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