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## THE CONFLUENCE MODEL AS AN ORGANIZING FRAMEWORK FOR RESEARCH ON SEXUALLY AGGRESSIVE MEN: RISK MODERATORS, IMAGINED AGGRESSION, AND PORNOGRAPHY CONSUMPTION

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This chapter describes recent developments in a research program studying the characteristics of sexually aggressive men identified in general population samples. This chapter has attempted to organize this line of research in a way that earlier studies are used to build upon and inform subsequent ones, with the goal of benefiting from the cumulative character of a systematic research program. The efforts of the recent studies highlighted here centered on three areas: (1) a dimension moderating the relationship between risk factors that could lead to aggression and manifested aggression, (2) the role of imagined sexual aggression, and (3) the association between use of pornographic material and sexual aggression in “real world” settings.

In order to present a cogent discussion of these developments, it is necessary to first describe theoretical and empirical underpinnings of our research. The confluence model of sexual aggression has been used as an organizing framework for the research to be described here and it can be similarly useful for addressing

other questions in related areas. The analogy of a jigsaw puzzle may apply. Once certain key pieces have been identified, it is much easier to find the “right” positioning of the others. Similarly, it is suggested that the two major constellations of characteristics of sexually aggressive men identified in this model provide such key pieces, which can help position the role of other factors.

### THE CONFLUENCE MODEL OF SEXUAL AGGRESSION

Malamuth, Sockloskie, Koss, and Tanaka (1991) proposed a model of some key characteristics of sexual aggressors that includes developmental factors as well as features present at the time of aggression. This approach may be described as a “cumulative conditional probability” model (Belsky, Teinberg, & Draper, 1991). It suggests two interrelated aspects: (1) The likelihood for a certain factor to occur is affected by the presence/absence of other factors, although the presence of any one factor does not constitute a necessary condition for other factors to occur in a particular order nor is any one factor always necessary for the occurrence of the final outcome. (2) When a combination of certain antecedent factors in a sequence exists, the probability of a particular outcome is greater than when only some of these exist. Although each antecedent factor independently contributes to a higher probability of the outcome, the combination of certain factors has more than a simple additive effect on the likelihood of the outcome (e.g., a “synergistic” effect).

Malamuth et al.’s model suggests that coercive sex may reflect the convergence of two sets of characteristics or paths: The first consists of relatively high orientation to promiscuous/impersonal sex and the second of hostile, dominating personality features.

### PROMISCUOUS/IMPERSONAL SEXUAL ORIENTATION

According to our model, early (e.g., home) exposure to certain conflicted and/or “harsh” environments can have important effects on increasing the likelihood of a promiscuous/impersonal sex orientation, mediated by various other “acting out” behaviors as the individual matures. Belsky et al. (1991) published a model of reproductive strategies that has clear parallels to this configuration. Both models stress the impact of early environments (e.g., family, home) on later development via the mediation of cognitive and emotional/attachment mechanisms. Following an evolutionary<sup>1</sup> paradigm, early experience may func-

<sup>1</sup>This chapter applies some recent ideas from evolutionary psychology theory to the topic of sexual aggression. For a general discussion of this theory, the reader is referred to Buss (1995). For applications to the area of sexual conflict and related topics, see Buss and Malamuth (1996).

tion as “switches” or “triggers” during a critical early formative period (e.g., the first 5 to 7 years) that shape an enduring reproductive strategy (Draper & Harpending, 1982). The environmental input, at this critical stage, informs the developing child whether the social circumstances (e.g., the trustworthiness of others and the stability of close personal relationships) and physical surroundings (e.g., the availability of resources) are relatively benign or harsh.<sup>2</sup> Evolutionary pressures would be expected to favor differing reproductive strategies in these contrasting environments: More benign environments favor a long-term “quality” strategy that involves high investment in relatively few offspring whereas harsh environments favor a short-term orientation, a high “quantity” of offspring, and relatively little investment in each (Belsky et al., 1991). Of particular relevance to the development of the promiscuous/impersonal sexual orientation<sup>3</sup> are “harsh” familial stressors such as marital discord, rejection, and violent/abusive parenting.

Both Malamuth et al. (1991) and Belsky et al. (1991) propose that harsh circumstances during early childhood may lead to “problem” behavior patterns involving nonconformity, impulsivity, and antisocial behaviors (labeled delinquency in one model and externalizing symptoms in the other). According to the Belsky et al. model, this oppositional behavior stimulates earlier biological maturation which fosters, among boys, indiscriminate and “opportunistic” sexuality, which increases the likelihood of becoming fathers before their peers. The biological mechanism mediating this process is not yet identified, but androgenic activity is hypothesized. Malamuth et al. also suggest that such nonconforming behaviors are likely to be expressed in various forms of sexual “acting out” involving short-term, promiscuous relationships.

### HOSTILE MASCULINITY

Although the Belsky model did not address the topic of sexual coercion, Malamuth et al. contend that the “promiscuity/impersonal sex” orientation (reproductive strategy) is expressed in sexual aggression when a man also possesses

<sup>2</sup>Following an evolutionary perspective, such information would be important, if the environment in our ancestral history varied markedly in different geographical areas, but was relatively stable for any one person over the course of their life.

<sup>3</sup>The impersonal sex construct is similar to the concept of “sociosexuality,” which refers to differences in the willingness to engage in sexual relations without intimacy or commitment (Gangestad & Simpson, 1990; Simpson & Gangestad, 1991). Individuals inclined to “unrestricted” sexuality report having engaged in sex earlier in relationships, to have more than one concurrent sexual partner, to have had many sexual partners in the past, to have had many sexual encounters, and to foresee many sexual partners in the future. In contrast, those ascribing to “restricted” sexuality report to seek intimacy and commitment before they engage in sex and appear, in general, to possess the opposite set of behavioral characteristics to those reported by the unrestricted individuals. These two profiles were supported by Simpson and Gangestad (1991) who gathered independent reports from sexual partners.

characteristics identified as comprising the “hostile masculinity” path. This path includes attitudes condoning aggression<sup>4</sup> toward women, contributing to the construct of hostile masculinity, which includes hostility toward women (e.g., feelings of rejection, hurt, anger) and gratification from dominating them (e.g., becoming sexually aroused by a sense of power over women).

From an evolutionary framework the mobilization of the type of attitudes and emotions encompassed in this path may increase the likelihood and effectiveness of aggressive behaviors used in a sexual context (Malamuth, in press). These characteristics may operate via several processes: They may decrease the impact of internal inhibitions and anxiety. For example, hostility may reduce sympathy for the victim and make the woman seem less powerful by denigrating her. Attitudes accepting of violence may nullify prohibitions against using aggression. Further, such characteristics may reduce the strength of external barriers or inhibitions. For instance, anger accompanying the hostility may increase the likelihood of overcoming a woman’s resistance due to the vigor with which the act is carried out. Finally, the sexual arousal and gratification derived from dominating women may make high hostile masculine men less anxious about women’s potential rejection of them (Malamuth, Feshbach, & Jaffe, 1977) and may reinforce the use of aggressive behaviors. In certain ancestral environments, such aggression may have increased some males’ fitness by reducing women’s choice and enabling sex with a woman who otherwise would have rejected the man.

#### EMPIRICAL TESTING OF THE MODEL

Belsky et al. (1991) review extensive data consistent with the links described in the promiscuity/impersonal sex path part of the confluence model. Malamuth et al. (1991, 1995) present data directly testing the confluence model of sexual aggression using structural equation modeling.<sup>5</sup>

An example of such analyses, shown in Figure 9.1, can be found in Malamuth et al. (1991). Data were gathered from a nation-wide representative sample of about 3000 males enrolled in any form of post high school education. Data consisted of subjects’ responses to self-report measures and recollections of earlier experiences. The model was tested by using half of the sample for analysis and the second half for cross-validation purposes. The results produced by both “half”

<sup>4</sup>Because this chapter incorporates evolutionary theorizing, it is useful to note the general approach taken by this perspective regarding the topic of aggression. Nonevolutionary models tend to conceptualize aggression in pathological terms due to the pain and suffering it causes. From an evolutionary viewpoint, pathology involves the failure of a set of mechanisms to function in the way they were designed by evolutionary processes due to such factors as decay or subversion by competitive forms of life (e.g., viruses). Most aggressive acts (with some important exceptions) do not reveal such characteristics. Instead, aggression shows characteristics of functional design revealing an evolved adaptation that resulted in fitness promoting consequences for the aggressors, at least in some recurring ancestral environments (Daly & Wilson, 1994).

<sup>5</sup>These are tests of the developmental and current characteristics of sexual aggressors but not of the evolutionary-based explanations for the associations between variables.

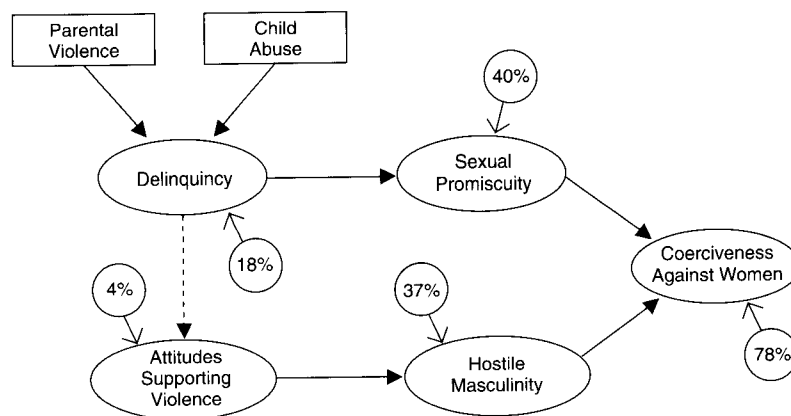


FIGURE 9.1 Structural model of the characteristics of sexual aggressors supported by the findings of Malamuth et al. (1991). Percentage in small circles indicates amount of variance of latent variance that was accounted for. Broken arrow between delinquency and attitudes supporting violence indicates hypothesized path that received only weak support.

samples generally fit the proposed model well. They showed that coming from a home with parental violence and/or child abuse was associated with a higher rate of delinquency in adolescence, which in turn was strongly predictive of greater sexual promiscuity. This path (labeled the sexual promiscuity/impersonal sex path) contributed to coerciveness against women, as did the other major constellation, which consisted of attitudes supporting violence and hostile masculinity.<sup>6</sup> Together, these two paths accounted for 78% of the latent variance of coerciveness against women, which was indicated by scales measuring sexual and nonsexual aggression against women.

Additional analyses presented by these investigators were designed to show mean differences between nonaggressive men and those displaying sexual and/or nonsexual aggression on the hostile masculinity and promiscuity/impersonal sex dimensions. Their sample consisted of 1713 men for whom data were available for both aggression measures. Subjects were divided into two levels (low vs high)

<sup>6</sup>In their original model, Malamuth et al. (1991) predicted that the experiences of "harsh" home environments and delinquency (i.e., acting out during adolescence) would contribute to attitudes supporting violence against women and hence to characteristics of the hostile masculinity path. This link was not supported well, being significant and quite weak in only one of the sample halves. This finding, consistent with data collected later, suggests that hostile masculinity and sexual promiscuity represent largely independent sets of characteristics, although they are both typically in many sexual aggressors' profiles. This pattern seems counterintuitive as one might expect that early exposure to violence would affect attitudes toward violence. The absence of a stronger link is also surprising because it predicts that sexual promiscuity could likely lead to more frequent rejection and hence to heightened hostile masculinity. Perhaps more refined analyses focusing on curvilinear relationships among variables will be sensitive to identifying conditions where links between the promiscuous/impersonal sex and hostile masculinity do exist (e.g., distinctions between successful vs unsuccessful promiscuous men).



aggression showed moderately elevated levels of hostile masculinity and were close to the average on the sexual promiscuity dimension. In contrast, men high only on sexual aggression were also relatively high on sexual promiscuity and moderately high on hostile masculinity. Finally, those low on both types of aggression were also relatively low on both promiscuity and hostile masculinity dimensions. Taken together, these data are consistent with the hypothesis that sexual aggression is associated with elevated levels of both sexual promiscuity and hostile masculinity, whereas nonsexual aggression is associated only with elevated hostile masculinity scores.

#### **REPLICATING AND EXTENDING THE CONFLUENCE MODEL**

Efforts to refine and extend the confluence model were undertaken by Malamuth, Linz, Heavey, Barnes, and Acker (1995). In a longitudinal study, the model was used to predict difficulties in men's relationships with women. About 150 men were assessed twice, with an intervening period of about 10 years. The latter assessment focused on four behaviors that might have occurred during the 10 years since initial participation: (1) sexual aggression, (2) nonsexual physical aggression, (3) nonsexual verbal aggression, and (4) general relationship quality and distress. The researchers were able to secure, in many cases, collateral information from the men's partners as well as videotape some of the couples, thus lending further validity to the self-report measures.

Using cross-sectional data, Malamuth et al. (1995) replicated the findings that were obtained in the 1991 study. More importantly, in extending the model to make longitudinal predictions, it was argued that the two-path "causal structure" will be a useful predictor of sexual aggression assessed 10 years later as it is for current behavior. The results were indeed in accord with this prediction: Information about hostile masculinity and promiscuity/impersonal sex orientation enabled the prediction of later sexual aggression above and beyond that achieved based on knowing earlier sexual aggression only. Finally, Malamuth et al. used these data to successfully test a hierarchical model which suggests that some of the factors contributing to sexual aggression (e.g., proneness to general hostility) underlie various types of conflict and aggression in intimate relations, whereas other factors (e.g., hostility to women, sexual dominance) are more specific to sexual aggression itself.

#### **ATTENUATING FACTORS AND ACTING OUT OF AGGRESSION**

Theorizing and research (e.g., Feshbach, 1970; Miller & Eisenberg, 1988) pertaining to the topic of aggression generally suggest that certain factors may attenuate the link between risk factors and actual aggression behavior. The hypothesis is that the effects of the risk factors on behavior may be blocked or reduced by

counterinfluences. Empathy/sympathy levels, for example, were found in this literature to be inversely correlated with aggression and other antisocial behavior. Data in the area of sexual aggression also indicate inverse correlations between men's sexual aggression and empathic ability (Seto & Barbaree, 1993). However, studies testing the actual moderating function of such factors have not been conducted.

Dean and Malamuth (1997) sought to specifically examine the moderating role of a more general personality measure of which sensitivity to others' feelings is an important component. This personality measure is related to previous work showing correlations between Bem's (1974) scales designed to assess "masculinity" (M) and "femininity" (F) and various rape-related responses (e.g., attitudes, perceptions, proclivities, and behaviors) (Quakenbush, 1989; Ross & Allgeier, 1991; Tieger, 1981). Bem's (1974) scales were presented within the context of theory and research arguing that traditional gender roles prescribe a more dominant, self-centered orientation for males versus a more "connected to others" caring orientation for females. However, after Bem's original work, an extensive literature developed, indicating that femininity and masculinity labels are somewhat inappropriate. Wiggins and Holzmuller (1981), for example, concluded that Bem's scales are some of the best measures of the broad personality dimensions of dominance (agentic) and nurturance (communal). Others have similarly concluded that the scales measure personality dimensions that may be termed "self-directed" and "other-directed" (Ballard-Reisch & Elton, 1992).

Dean and Malamuth (1997) used the F and M scales to compute a score for each subject of the degree to which he was high on nurturance relative to dominance and tested whether this dimension moderated the relationship between proclivities to aggress sexually and actual behavior. The investigators proceeded as follows: First, the "two path" model developed by Malamuth et al. (1991) of the predictor "risk" characteristics of sexual aggressors was successfully replicated by Dean and Malamuth (1997). Second, analyses were conducted dividing this sample into two levels on the basis of the nurturance relative to dominance dimension. In both groups, the basic "two path" structure on the "predictor" side of the model remained essentially the same. However, in those men more oriented toward the "self" at the expense of "others" (e.g., little nurturance or compassion), linkages between risk characteristics and actual aggressive behavior were strong. In contrast, when the personality profile reflected higher levels of "other" orientation (e.g., greater compassion for others), relationships between "risk" characteristics and actual aggression were weak or not significant. These findings (and additional ANOVA analyses) supported the expected role of the nurturance relative to dominance orientation as a moderator of the relationship between "risk" predictor factors and actual aggression.

Additional support for the important role of nurturant characteristics such as empathy is provided by the findings of two studies focusing on sexual arousal and empathy. Malamuth, Linz, and Heavey (1996) evaluated the role of empathy as a



moderator between the risk factor of sexual arousal to aggression (assessed by penile tumescence) and aggressive behavior in a 10-year longitudinal design. They found that when men's dispositional empathy was low, sexual arousal to aggression (measured 10 years earlier) was a successful predictor of later aggressive behavior (assessed by the reports of the wives or girlfriends of the men). However, when empathy was relatively high, there was not a significant relationship between sexual arousal to aggression and behavior. In a related study, Rice, Chaplin, Harris, and Coutts (1994) tested the explanation that differences in empathy may partially explain why rapists are more sexually aroused to rape depictions than men who are not sexually aggressive. According to this explanation, nonrapists' arousal is inhibited by empathy with the victim, but rapists' arousal is not similarly inhibited because they do not similarly empathize with the victim. Consistent with this explanation, it was found that rapists were less empathic than nonrapists and sexual arousal to rape was inversely related to self-reported empathy.

The findings of Dean and Malamuth and those of other research showing links between dimensions such as empathy levels and aggressive behavior may be viewed as providing support for treatment programs with sexual offenders that place a strong emphasis on empathy training (e.g., Pithers, 1993). However, it has not yet been established whether characteristics such as nurturance, compassion, or empathy reflect a "fixed" personality dimension or a trainable skill. This issue needs to be systematically examined in future research.

#### IMAGINED SEXUAL AGGRESSION

Although the behavioral manifestation of aggression may be inhibited in a man with relatively high nurturance relative to dominance, Dean and Malamuth (1997) hypothesized that the risk factors may be manifested in some nonbehavioral ways. Specifically, they also assessed imagined sexual aggression. Two lines of research have studied the characteristics of men who report imagining themselves being sexually aggressive. One has concentrated on assessing coercive sexual fantasies (e.g., Greendlinger, 1985; Greendlinger & Byrne, 1987) whereas the other has concentrated on attraction to sexual aggression (e.g., Malamuth, 1989a, 1989b). Dean and Malamuth (1997) sought to situate these lines of research within the confluence model framework. They created a single scale assessing imagined sexual aggression based on the measures of coercive sexual fantasies and of attraction to sexual aggression.

As expected, the nurturance relative to dominance orientation did not reveal a moderating role for imagined aggression, with several of the risk factors for actual aggression also showing a strong relationship to imagined aggression regardless of the levels of this orientation. These data contradict the view that imagined sexual aggression is an isolated response in no way related to a proclivity to aggress. Instead, they support the contention that such imagined aggression may provide

important information pertaining to some of the underlying factors or mechanisms leading to actual aggression but which may not be displayed often in actual behavior. The importance of these findings may be considered within the context of studies reporting a low correlation between actual sexually aggressive behavior and either fantasies or attraction to sexual aggression (e.g., Malamuth, 1988). Such a correlation has been interpreted by some as questioning the value of assessing imagined sexual aggression as a basis for understanding the causes of actual sexually aggressive behavior, since in these researchers' view the strength of the relationship with the behavior is the critical criterion for evaluating its potential relevance to the causes of such behavior (e.g., Mould, 1988). As amplified next, this conclusion is challenged.

Both feminists (e.g., Brownmiller, 1975) and evolutionary psychologists (e.g., Symons, 1979) have suggested that there are psychological mechanisms (e.g., information processing rules or algorithms) in men in general and some men in particular that create considerable potential for sexual aggression. In this view, many men who have not committed any sexual aggression may have some motivation or desire to do so. As suggested by a number of investigators (e.g., Buss, 1990; Ellis & Symons, 1989), responses such as fantasies may actually provide more insight into the psychological mechanisms underpinning feelings, thoughts, and actions than do responses such as behaviors. This is because behaviors are often constrained by real life exigencies (e.g., potential punishment, reputation damage), whereas imagined acts are private and far less likely to be inhibited by fear of external consequences and, as suggested by the present findings, internalized inhibitors of actual aggression. In the area of sexual aggression, this may be particularly relevant as relatively few men in most societies admit to committing such acts, particularly if more severe behaviors are examined (e.g., physical coercion). However, in unusual circumstances such as war when certain external inhibitors are removed, it appears that a large percentage of the male population engages in such acts (e.g., Brownmiller, 1975). Studying men who imagine sexual aggression may help identify some of the mechanisms underlying sexual aggression, even if there is not observable aggression in current environments.

A similar argument has been made by Kenrick and Sheets (1993), who contend that many normal individuals have violent desires and inclinations that are not typically carried out in actual homicides but are reflected in homicidal fantasies. They conducted two studies which revealed that the majority of subjects reported having had at least one homicidal fantasy. In keeping with actual rates of murders, males recalled more homicidal fantasies than did females and reported longer and more detailed fantasies. However, these investigators did not examine whether the profile of men who fantasize more about homicide is similar in some respects to those who are more likely to commit such acts. The fact that Dean and Malamuth found that the profile of men who imagined sexual aggression was similar in certain key respects to that of those who actually commit such acts is critical to the argument that imagined sexual aggression can help identify some of the characteristics underlying actual behavior.

## PORNOGRAPHY CONSUMPTION

Does exposure to pornography contribute to coerciveness against women, particularly sexual aggression? This question has been widely debated for many years in many countries. There has not been much consensus among researchers or national commissions (Linz & Malamuth, 1993).

Laboratory and some field experiments indicate that exposure to certain types of sexually explicit media, particularly those that combine sexual and violent images, can cause increases in attitudes accepting of violence against women and laboratory aggression (for a review, see Malamuth, 1993). However, one of the most frequently raised issues concerns the generalizability of such data to responses in naturalistic settings. Various commentators (e.g., Fisher & Barak, 1991) have emphasized that research has not shown that such connections actually exist "in the real world." Although it is ethically impossible to conduct an experimental study that would actually demonstrate such a causal connection, it is feasible to determine whether pornography consumption under certain circumstances is associated with a greater risk for sexual aggression after controlling for other known risk factors.

Malamuth, Koss, and Sockloskie (1993) conducted such a study by following up the Malamuth et al. (1991) findings. As described earlier, in the 1991 study the investigators had developed the confluence model and identified the risk factors of hostile masculinity and sexual promiscuity. In more recent analyses, the investigators used the same data base to conduct a series of structural equation modeling and risk analyses using the factors identified in the earlier research but also adding the variable of pornography consumption. For the purposes of this research, pornography consumption was operationally defined as the degree of exposure to sexually explicit magazines, which is the most widely consumed medium of the sexually explicit industry.

Researchers found that pornography consumption was significantly correlated with sexually aggressive behavior. However, the structural equation modeling indicated that this relationship might be equally well explained by a model suggesting that exposure to pornography causes a small increase in aggressive behavior once other relevant factors have been controlled for, as by a model indicating that sexual aggression causes greater pornography consumption. (Of course, "third variable" causation by some factor that was not measured in this research cannot be completely ruled out either.) Other analyses conducted by these investigators examined a "risk" approach that did not concern cause and effect but sought to determine whether knowledge about subjects' pornography consumption enables some greater statistical prediction of sexual aggression, once other variables have been taken into consideration. These data did indicate some greater statistical prediction, particularly at a relatively high risk for aggression. For example, Table 9.1 presents an analysis in which the risk factors used for predicting sexual aggression were hostile masculinity, sexual promiscuity, and pornography consumption. Each factor was divided into upper, middle,

TABLE 9.1 Predicting Self-Reports of Sexual Aggression against Women Based on the Presence or Absence of High Scores on Hostile Masculinity, Sexual Promiscuity, and Pornography Consumption

| Group | Presence of risk factor <sup>a</sup> |            |            | N    | % aggression | Risk ratio | 95% confidence bounds | $\chi^2$ | Difference between groups |
|-------|--------------------------------------|------------|------------|------|--------------|------------|-----------------------|----------|---------------------------|
|       | High host.                           | High prom. | High porn. |      |              |            |                       |          |                           |
| 1.    | Yes                                  | Yes        | Yes        | 18   | 72           | 3.9        | 2.5–6.2               | 33.5***  | All                       |
| 2.    | Yes                                  | Yes        | No         | 139  | 44           | 2.5        | 2.0–3.1               | 59.5***  | 1,5,6,7,8                 |
| 3.    | Yes                                  | No         | Yes        | 22   | 32           | 1.7        | 0.9–3.3               | 2.4      | 1,8                       |
| 4.    | No                                   | Yes        | Yes        | 28   | 39           | 2.1        | 1.2–3.5               | 7.6**    | 1,8                       |
| 5.    | Yes                                  | No         | No         | 448  | 25           | 1.4        | 1.2–1.7               | 12.9***  | 1,2,8                     |
| 6.    | No                                   | Yes        | No         | 436  | 30           | 1.8        | 1.5–2.1               | 43.6***  | 1,2,8                     |
| 7.    | No                                   | No         | Yes        | 37   | 24           | 1.3        | 0.7–2.3               | 0.7      | 1,2,8                     |
| 8.    | No                                   | No         | No         | 1605 | 11           | 0.3        | 0.3–0.4               | 170.4*** | All                       |

*Note:* A subject was defined as sexually aggressive if scoring greater than 11 on the sexual aggression measure. Approximately 19% of subjects in the total sample were defined as sexual aggressors.  $N = 2733$ .

<sup>a</sup>Host., hostile masculinity; prom., sexual promiscuity; and porn., pornography consumption.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

and lower thirds of the distributions. The existence of a risk factor was defined as having a score in the top third of that variable's distribution.

Table 9.1 presents an analysis of the number of sexually aggressive subjects as a function of whether they had each of the three risk factors. The sample consists of 2733 men constituting a representative national sample of those in some form of post high school education. Sexual aggression was defined as having reported some degree of such behavior on the revised Koss and Oros sexual aggression measure (for more information, see Malamuth et al., 1991). For example, 1605 subjects were classified in the group that did not have any risk on all three variables. Of these individuals, 11% reported some level of sexual aggression.

Table 9.1 also presents the risk ratio statistic. It is a descriptive statistic that ranges from 0 to infinity and indicates the relative increase or decrease in risk of one group from any one other group using a dichotomous-dependent variable. A risk ratio of 1.00, for example, indicates that there is no difference in risk between two chosen groups. In the analyses reported in this table, the risk ratio compares subjects within each group (with its particular risk factor combination) to all other subjects.<sup>7</sup> For example, the 1605 subjects who did not score high on any of the risk factors have a risk ratio of 0.3. This indicates that these subjects are 0.3 times as likely to be sexually aggressive as all other subjects combined. At the other ex-

<sup>7</sup>Differences in group sizes may render some of the comparisons less reliable than others.

treme, there were 18 subjects (out of the total of 2733) who were high in all three risk factors. The risk ratio of this group indicates that they are 3.9 times as likely to be sexually aggressive as compared to all other individuals combined.

Confidence bounds, which reflect the range of the "true" risk ratio for this population, are based on the 95% confidence level (Table 9.1). For example, the 95% confidence level for those subjects scoring high on all three risk factors suggests that the "true" risk ratio for this population probably ranges somewhere between 2.5 and 6.2.

To make comparisons in the levels of risk of one group compared to all the other subjects, the  $\chi^2$  statistic was used. For example, Table 9.1 indicates that in comparison to all others, a significant increase exists in sexual aggression for those high on all three risk factors. In contrast, Table 9.1 shows that those high in pornography consumption, but not high in hostility or sexual promiscuity, are not significantly greater in sexual aggression in comparison to all other groups in the sample. However, those who did not have any of the risk factors were significantly lower than all others in their aggression levels.

Finally, Table 9.1 presents a comparison of two groups at a time (in contrast to the statistic reported earlier that compared each group to all others). The numbers listed refer to the specific groups that were found to statistically differ at the .05 level. For example, Table 9.1 indicates that the risk ratio of subjects high on all of the three risk factors (group 1) differs significantly from subjects in each of the other groups (as indicated by the term "all").

Table 9.1 suggests that within the context of the variables studied, pornography consumption may indicate some increased likelihood for sexual aggression, but only when (1) neither of the other two other risk factors are present or (2) both of the other risk factors are present. This conclusion is indicated by focusing on comparisons between individual groups that do versus do not have pornography consumption as risk while the other two risk factors are "kept constant." First, the comparison is significant between those with only the "pornography" risk factor (group 7) as contrasted with those without any risk factors (group 8). Similarly, the comparison is also significant between those with all of the risk factors (group 1) to those with both hostility and promiscuity risk factors but not high on pornography consumption (group 2). In contrast, no difference exists between those high on the two risk factors of hostility and pornography but low on promiscuity (Group 3) to the group only high on hostility (group 5). Further, those high on promiscuity and pornography (group 4) do not differ in sexual aggression from those high on promiscuity alone (group 6).

Although there is some indication of pornography as a risk factor for those not showing any other risk and those showing a high risk on the two other factors, data shown here and other analyses conducted by Malamuth et al. (1993) indicate that the important increase is at the high risk end of the distribution. For example, at the low risk end of the distribution, Table 9.1 shows that although those with only the pornography risk factor differ from those without any risk factors, their

sexual aggression is not significantly different in comparison to all others combined. Other comparisons using actual mean levels of sexual aggression (rather than classifying subjects as showing some aggression or none at all) indicated a very low level of aggression for this group.

However, 18 subjects who scored high on all risk factors showed a much higher level of aggression in comparison with all others combined and in comparison to all other individual groups. Although this group constitutes less than 1% of the sample, both the analyses illustrated here (e.g., 72% showing some aggression) and additional analyses focusing on the actual levels of aggression indicated that this group was much more aggressive than all other groups.

Additional results suggest that these findings are not consistent with a "general deviancy" explanation, which suggests that pornography consumption is simply an indicator of some general extremity or deviance. For example, Malamuth et al. (1993) also examined nonsexual aggression (e.g., yelling and hitting in a nonsexual context). Using the same risk factors, they found that pornography consumption did not increase the risk for this type of aggression. However, they did find that alcohol consumption was a contributor to the risk for nonsexual aggression. Correspondingly, levels of alcohol consumption were not found to contribute to the risk for sexual aggression in the context of the other two risk factors.

It is important to emphasize again that these data do not enable any causal conclusions but may only be useful as risk "markers" or indicators. However, they are consistent with some earlier experimental research showing that men who are relatively high in risk for sexual aggression are more likely to be attracted to and aroused by sexually violent media (e.g., Malamuth & Check, 1983) and may be more likely to be influenced by them (e.g., Malamuth & Check, 1985). This bidirectional relationship (i.e., higher proclivity to aggress resulting in more exposure to media violence, which in turn contributes to higher risk for aggression) is also consistent with research on media violence generally (Bushman, 1995).

#### SUMMARY

A model of the profile of sexual aggressors was presented, indicating that they may be characterized by certain developmental (early childhood and adolescent) and current personality and behavioral characteristics. These are well described by the confluence of impersonal sexuality and hostile masculinity constellations of characteristics. The first consists of a short-term, noncommittal orientation to sexual relations, the second of a dominant and hostile orientation to women. Evolutionary psychology theory was presented to help account for the particular set of characteristics associated with sexual aggression identified in this model. Both cross-sectional and longitudinal findings supporting the model were summarized. Within the framework provided by this model, findings were presented in three areas. First, a personality dimension labeled the nurturance relative to dominance orientation was shown to moderate the relationship between risk factors and ac-

tual aggression. Second, research focusing on imagined sexual aggression was integrated within the framework of the confluence model. It showed that while the actual acting out of aggression may not occur in some individuals, their aggressive tendencies may be expressed in imagined aggression. Third, research was described assessing whether information about a person's mass media usage adds to the ability to identify "risk" for committing sexual aggression. Using a nationwide representative sample, it was found that the added information of frequent use of sexually explicit media helped discriminate between "high risk" men (those scoring high on both hostile masculinity and impersonal sexual orientation) who actually aggressed against women and those "high risk" men who did not commit sexually aggressive acts. In contrast, knowledge of the degree of sexually explicit media consumption with "low risk" men was generally found to be of little predictive utility, although it was somewhat of an indicator for men not showing any other risk factors. It is suggested that the confluence model can serve as a useful framework for future research in examining the role of other factors potentially related to sexual aggression.

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