Using Rapist Risk Factors to Set an Agenda for Rape Prevention

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Rape is costly to survivors and to society. It is essential that we develop optimal prevention and early intervention programs and policies to reduce its occurrence. The first step toward this goal is to identify the behaviors, traits, developmental experiences, and biological antecedents that have been found to be associated with an increased probability that a male will become sexually aggressive. This article briefly reviews this literature and attempts to identify the gaps in our knowledge that must be addressed to develop effective prevention programs. We speculate about the general parameters of interventions that the existing evidence suggests are likely to be successful in decreasing the probability that a male will become sexually aggressive. We also argue that current rape prevention programs might be suboptimal because they fail to encompass the complex of traits that cause sexual aggression, and primary prevention efforts must focus on the latter. A more extensive exposition of these issues can be found in Knight and Sims-Knight (in press).

In this article we will use the term *sexual aggression* to encompass all behaviors in which a male engages in sexual activity with a non-consenting female peer or adult. We define a risk factor broadly as any variable that consistently has been found to be correlated with an increased probability that a male will become sexually aggressive. By definition studies of risk factors are correlational, and the existing studies are cross-sectional and thus do not allow a clear delineation of temporal priorities. Although we will speculate about which risk factors show promise as causal determinants, other, more sophisticated research strategies are required to demonstrate which factors are truly causative and to help prioritize potential preventive intervention strategies (Moffitt, 2005).

For the convenience of this paper we will divide risk factors into three related descriptive clusters. Because all existing data are cross-sectional, this grouping of factors is highly speculative. The first cluster, concurrent correlates, comprises situational variables that immediately precede the assault, including the perceptual processing and cognitive attitudes that set up or facilitate coercive behavior and the distortions introduced by alcohol. Here we also include certain correlated behaviors such as pornography use, for which no known overriding trait has been identified. The second cluster includes stable attributes and dispositional characteristics of the perpetrator that operate in multiple situations, that persist across time, and that hypothetically influence how perpetrators perceive, think about, emotionally respond to, and act in particular situations, and that consequently increase or decrease the probability of sexually coercive behavior. The third cluster encompasses the developmental and biological antecedents that most likely contribute to the formation of the traits. Because this article focuses on rape risk factors in individuals, we will forego consideration of rape-supportive social contexts (White, 2009).

Risk Factors for Rape

Concurrent Risk Factors for Rape

Substantial research has been devoted to the concurrent correlates of rape. These studies have frequently used convenience samples, mostly college

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students, and until recently have been done predominantly in the United States (see Hines, 2007; Murnen, Wright, & Kaluzny, 2002). We will summarize the most consistent factors that have emerged from these studies and might be considered concurrent risk factors. They can be divided into four categories: rape supportive attitudes, cognitive-perceptual proclivities that distort communication in relationships, perpetrator use of pornography, and the effects of alcohol.

Rape-Supportive Attitudes

A number of scales that assess masculine ideological beliefs hypothesized to support sexually coercive behavior have been developed. These were generated from feminist sociocultural models of rape, and their early success in accounting for rape proclivity, their clear relevance to intervention, and the ease with which they could be administered to student samples contributed to their popularity. These tap a variety of beliefs such as the adversarial nature of men's relationships with women, stereotypical ideas about sexual roles, negative notions about masculinity, and rape myths that support sexually aggressive behavior. Although these attitudes certainly endure across time and situations, we consider them in this first cluster of factors because they focus on a circumscribed domain. We will argue later that these attitudes are related to more general traits that have been shown not only to be pervasive characteristics of the individual's personality, but that also have identifiable developmental and possibly genetic antecedents. Thus, relative to the purported traits described in the next section, these attitudes represent more proximal correlates of sexually aggressive behavior.

In a meta-analysis examining 11 different measures of masculine ideology across 39 studies, Murnen et al. (2002) found that although all but one measure of masculine ideology were significantly associated with sexual aggression, the strongest support emerged for hostile masculinity and hypermasculinity, both of which assess hostile beliefs about women, the desire to be in control, and an acceptance of violence against women. Measures of simple gender adherence that did not include the hostility and acceptance of aggression components were not strong predictors of sexually aggressive behavior. In a recent cross-cultural, 38-site study, Hines (2007) examined the roles of adversarial sexual beliefs, the status of women in society, and prior sexual victimization as risk factors for sexually coercive behavior against both women and men. She found support that both adversarial attitudes about relationships and having been the victim of sexual abuse were related to sexual aggression in both genders, across cultures, across samples (criminal and non-criminal), and across studies. Recent studies using the Multidimensional Inventory of Development, Sex, and Aggression (MIDSA) also found that negative masculinity and hostility to women scales differentiate rapists, even among criminal samples (MIDSA, 2008).

Distorted Perceptions

Acquaintance rape occurs within a social context that requires the active selection and processing of information. Several studies have suggested that men likely to rape may have perceptual biases that lead to specific misperceptions of women's communications. Drieschner and Lange (1999) grouped these into three hypothetical classes of perception: (a) the tendency to perceive friendly behavior as seductive and assertive behavior as hostile; (b) a positivity bias that in ambiguous situations transforms negative, dismissive communications into encouragement; and (c) a general cognitive set to mistrust women's communications and perceive them as hostile. Support has continued to accrue for these hypotheses, especially the perception of sexual intent in women's behavior, which is particularly prevalent in sexually coercive men and men who endorse sex-role stereotypes (Farris, Treat, Viken, & McFall, 2008). Moreover, the processes that may be problematic in misperceptions have been further specified. First, Farris, Viken, Treat, and McFall (2006) have demonstrated that men who believed that rape was justifiable and who blamed women for victimization had more difficulty distinguishing between sexual interest and other affect categories, particularly when women were dressed provocatively. Second, Yoon and Knight (2008) found evidence that sexually coercive males' early perceptual problems

might be related to difficulties withdrawing their attention from emotionally salient stimuli. In a study that required participants to shift their attention from sexual stimuli to complete a cognitive task, self-reported sexually coercive males were significantly slower than non-coercive males in disengaging their attention only from sexual stimuli. Response latencies on sexual stimuli disattention trials correlated with scales measuring misperceptions about sexual advances, impulsivity, and emotional dysregulation but not scales assessing callous manipulativeness and hypersexuality. These results suggest that this disattention deficit may be more related to problems with emotional dysregulation than difficulties with hypersexuality. More recent data also suggest, however, that sexual compulsivity may also contribute to disattention difficulties (Yoon, 2009). Not only do misperceptions appear to covary with particular traits, but they also interact with other concurrent risk factors (Jacques-Tiura, Abbey, Parkhill, & Zawacki, 2007). Unraveling the covarying traits and interacting concurrent risk factors and specifying the cognitive processes underlying such misperceptions is critical for developing effective interventions aimed at changing these perceptions (Farris et al., 2008).

Alcohol Use

Whether its role is facilitative or causative, whether it serves as an excuse, a precipitant, or a manipulative device, alcohol use and abuse plays a significant, multifaceted role in sexually aggressive behavior in both college and criminal samples (Abbey, 2008). In almost 50% of sexual assaults the perpetrator has consumed alcohol, and at the time of a sexual assault approximately one-half of victims have also been found to have consumed alcohol (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004). As one might predict, there is a high correlation between perpetrator and victim alcohol use (Ullman, Karabatsos, & Koss, 1999). Alcohol's impairment of inhibitory controls, its exacerbation of communication misinterpretations, its disruption of higher order cognitive processing (e.g., decision making abilities), and its interaction with existing personality characteristics (e.g., trait aggression) have all been invoked as reasons for the relation of alcohol to sexually aggressive behavior (Abbey, 2008). In a prospective study Abbey and McAuslan (2004) found that males who reported consuming larger quantities of alcohol when dating and prior to having consensual sex were more likely to be repeat sexual assaulters at a one-year follow-up.

Alcohol use not only correlates with increased frequency of sexual aggression, but also it impacts the outcome. Perpetrator alcohol use has been found to increase the amount of physical damage to victims for both convicted rapists and child molesters (Hamdi & Knight, 2008). Abbey, Clinton-Sherrod, McAuslan, Zawacki, and Buck (2003) found that in college students higher perpetrator alcohol consumption was positively related to higher violence, but whether penetration occurred had curvilinear relation to alcohol intoxication—increasing at lower levels of alcohol consumption, reaching a plateau at moderate levels, and decreasing at high levels. They also found a positive correlation between the amount of alcohol consumed by the victim and outcome severity, suggesting that more intoxicated victims faced a greater risk of completed rape. For victims of sexual assault, alcohol use may inhibit their ability to fully appreciate sexually aggressive signals from men and to respond in an effective fashion (see Norris, 2008 for a more detailed discussion of alcohol and victim issues).

Pornography Use

In a meta-analysis of 46 studies Oddone-Paolucci, Genius, and Violato (2000) determined that exposure to explicit sexual materials (pornography) was moderately correlated with a variety of negative outcomes, including increased sexual perpetration and endorsement of rape myths. Reviews of the literature (e.g., Malamuth, Addison, & Koss, 2000) confirm the consistency of the correlation between pornography use and sexually aggressive behavior.

Recent work by Malamuth and his colleagues (see Malamuth & Huppin, 2005, for a review) has attempted to integrate cross-sectional survey studies and laboratory experimental strategies and to provide a useful and convincing model of the likely effects of pornography on sexually aggressive attitudes and behavior. Correlational studies have suggested that men who score high on certain risk

factors such as hostility toward women, higher hypermasculinity, a high frequency of sexual and hostile fantasies, a high attraction to impersonal sex, and aggressive/dominance motivation are significantly more likely to acknowledge both greater exposure to and attraction to various kinds of pornography (Bogaert, 2001; Malamuth & McIlwraith, 1988). Consistent with these results, research using the MIDSA has found that across three independent samples (juvenile sexual offenders, adult sexual offenders, and community nonoffenders) higher scores on both Conventional Heterosexual Pornography and Violent Pornography scales (MIDSA, 2008) were consistently related to scales measuring various aspects of hypersexuality. In addition, across the three samples, high scores on these pornography scales consistently correlated with facets of psychopathy and with higher anger and aggression. In addition, Vega and Malamuth (2007) found in a correlational study that pornography added unique variance to the prediction of sexual aggression.

Experimental studies have suggested that not only are males with a higher proclivity to sexually aggressive behavior more likely to be drawn to excessive pornography use, but they are also more likely to be influenced by their exposure to such materials. After viewing a rape portrayal in which a woman showed signs of sexual arousal, males with a high self-reported proclivity to sexual aggression against women were more likely to rate women as deriving pleasure from such assaults. In contrast, males low in the likelihood of committing a rape showed no such effect (Malamuth & Cheek, 1981). Thus, exposure to pornography may exacerbate sexually aggressive proclivities only in those who are at high risk for such behavior (Kingston, Malamuth, Fedoroff, & Marshall, 2009).

Attributes and Dispositional Characteristics of the Perpetrator

Building on Malamuth's early attempts to fashion an etiological model for sexually aggressive behavior (see Malamuth, 2003, for a review), Knight and Sims-Knight (2003, 2004) generated and tested an expanded model that emphasized the traits that underlie the concurrent risk factors of rape. Malamuth had proposed a two-path model in which negative masculinity and impersonal sex were the major predictors of sexual aggression. Knight and Sims-Knight (2003) found that adding a third path—behavioral impulsivity, measured by antisociality, impulsivity, and aggressive behavior—increased the predictive power of his model. They also broadened his negative masculinity to callousness/ unemotionality (CU), the first factor of the Psychopathy Checklist-Revised (PCL-R) (Hare, 2003), a more general personality trait that correlates with negative masculinity.

The consistent predictive potency of this revised model across criminal and community samples supports the hypothesis that a unified theory of sexual aggression can be generated across these disparate populations. Although the optimum model for the components, their developmental trajectories, and the best way to measure the three traits requires substantial additional research, the general parameters of these traits can be identified. They include hypersexuality/impersonal sex, the arrogant-deceitful, callous interpersonal (CU) characteristics of psychopathy, and antisocial behavioral tendencies. The latter two traits are the subject of a large research literature on the genetic, cognitive, affective, and personality correlates of psychopathy (e.g., Knight & Guay, 2006; Knight & Sims-Knight, 2004). We will briefly describe the nature of each of these traits.

Hypersexuality/Sociosexuality

The notion that some aspect of sexual drive or sexual appetite is a critical component of sexual aggression (Ellis, 1993; Malamuth, 2003) and may be an underlying component of other volitional impairments of sexual behavior (Kafka & Hennen, 2003) has found considerable empirical support. A number of investigations have found that sexually aggressive men have consensual sex at an earlier age and have more consensual sex partners than do noncoercive males (e.g., Koss & Dinero, 1988). Knight, Ronis, Prentky, and Kafka (2009) found that sexual drive and preoccupation discriminated sexually aggressive from nonaggressive men in both community and general criminal samples. Regardless

of criminal status or age (juvenile or adult), males who sexually coerced age-appropriate females reported higher levels of sexual drive, frequency of sexual behavior, and sexual deviance on the MIDSA (2008) than noncoercive males. Hypersexuality covaries with a number of negative attributes, including components of negative affect like mood and anxiety disorders and increased substance abuse and impulse-related problems (e.g., Långström & Hansen, 2006).

There is, however, considerable debate about the precise core construct underlying this dimension. Whereas for Ellis (1993) the core seems to be simply the strength of the sexual drive, Malamuth (2003) has proposed that the proclivity to engage in promiscuous/impersonal sex is the critical construct. He described the dimension of impersonal sex as similar to the concept of "sociosexuality," a dimension assessing willingness to engage in sexual activity in the relative absence of attachment or emotional ties. Knight and Cerce's (1999) research measured sexual drive, preoccupation, and compulsivity. These variables, which were highly correlated with each other, in turn were correlated with pornography use, expressive aggression toward women, sadism, pervasive anger, and offense planning for both adult and juvenile sexual offenders. These components of sexual fantasies and behavior appear to be at least as important in juvenile samples as in adult samples (MIDSA, 2008).

Antisocial and Impulsivity Tendencies

Antisocial behavior in its manifold guises has consistently been shown to be a covariate of sexually aggressive behavior (Knight & Guay, 2006). Both juveniles and adults who sexually aggress have been characterized as high in impulsivity and antisocial behavior (MIDSA, 2008). The importance of antisocial behavior and impulsivity in predicting sexual aggression in noncriminal samples has been supported in a number of other studies (e.g., Calhoun, Bernat, Clum, & Frame, 1997; Casey, Beadnell, & Lindhorst, 2009). College males who are persistently coercive sexually have also been distinguished by their adolescent delinquency (Abbey & McAuslan, 2004). It is not surprising that Knight and Sims-Knight's adding of this path to Malamuth's two-path model substantially increased the proportion of variance of aggressive sexual behavior accounted for. The link between antisocial behavior and alcohol abuse (e.g., Krueger, Markon, Patrick, Benning, & Kramer, 2007) ties it directly to the concurrent risks for sexual aggression. Its congruence with emotional lability (Sitnikov, Goldberg, Daversa, & Knight, 2007) and its strong link to genetic etiology (Waldman & Rhee, 2006) enhance its potential as a primary prevention target.

Callousness-Unemotionality (CU)

Studies examining the differentiating characteristics of both juvenile and adult sexual offenders have found that rapists tend to be callous and unemotional and to lack guilt and empathy. Caputo, Frick, and Brodsky (1999) compared a group of juvenile sexual offenders to a group of violent juvenile nonsexual offenders and a group of juvenile offenders with only noncontact property and drug offenses on a youth version of the PCL-R. Compared to the nonsexual offenders, the juvenile sexual offenders had higher scores on the Callous-Unemotional factor of the PCL-R. Kim, Guay, and Knight (2007) found that rapists scored higher than child molesters both on this overall CU factor and on each of the two facets it comprises. On the MIDSA (2008) both juvenile and adult sexual offenders were found to score significantly higher on scales measuring the CU factor than noncriminal community males. Evidence that this component is consistent over time, even in juveniles (Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007), and that it shows some evidence of genetic transmission (see Genetic Antecedents section), supports its potential as an underlying trait.

Developmental and Biological Antecedents

As one moves back in the temporal sequence from more specific, concurrent risk factors to broader hypothetical traits and finally to the earliest developmental and biological antecedents for sexual aggression, the amount of supportive research diminishes. For those risk factors that are most distal, the research on early abuse antecedents is far more prevalent than research on biological risk

factors. Indeed, we will provide supportive studies with sexual offenders to bolster the former, but we must access research with other populations to support speculations about the latter.

Developmental Antecedents

It has long been established that the backgrounds of sexual offenders are characterized by disrupted family relationships, violence, and neglect (Bard et al., 1987). Such problematic family backgrounds are not limited to incarcerated offenders. Lisak and Roth (1990) found that unincarcerated self-identified sexually coercive males disclosed more negative relationships with both parents, but particularly fathers, than did men who were not sexually aggressive. The negative developmental antecedents of sexual abuse and physical abuse/antipathy play an important role in etiological models (Knight & Sims-Knight, 2003; 2004) and have received the most empirical support. We will discuss each in turn.

Sexual abuse. Sexual offenders appear to have been sexually victimized in childhood more often than the general population or other types of offenders (e.g., Craissati, McClurg, & Browne, 2002) and such abuse has been found to correlate with the characteristics of their future perpetration. Youth who have been abused repeat the sexually aggressive behaviors that were used in their own victimization (Burton, 2003). Histories of sexual abuse have been found to be more prevalent among juveniles who sexually offend than other delinquent groups (Zakireh, Ronis, & Knight, 2008). Moreover, the experience of being sexually abused has been found to predict both revictimization (Hines, 2007) and perpetration (Hines, 2007; White & Smith, 2004), even among noncriminal samples.

Isolating the specific effects of sexual abuse from other pathogenic properties of the family environment, such as physical abuse, neglect, and general family disruption, has been difficult because different types of abuse tend to occur together (e.g., Knight & Sims-Knight, 2003, 2004). In addition, many studies have not employed optimal control groups, and outcome measures have been neither standardized nor normed. Finally, sexual abuse is a complex phenomenon, fraught with multiple definitional and assessment problems. Consequently, the immediate and long-term covariates of childhood sexual abuse that have been identified must be interpreted cautiously. Nonetheless, cogent mechanisms to explain the relation of such abuse to subsequent sexual perpetration have been proposed (e.g., Grabell & Knight, 2009).

Physical/Verbal Abuse. In the literature on adult sexual offenders, a high incidence of childhood physical abuse has been reported among both rapists and child molesters (Bard et al., 1987). In a study of the relation of early maltreatment to offense characteristics, physical abuse was found to co-vary with the frequency and level of nonsexual unsocialized aggression among sexual offenders (Prentky et al., 1989). In Knight and Sims-Knight's (2003; 2004) model, physical abuse/antipathy has been found to be a significant antecedent of both the antisocial and CU paths in multiple samples that vary in age, criminality, and sexual offender status.

Physical abuse also plays a prominent role in the juvenile sexual offender literature. It has been hypothesized that being physically abused or observing family violence may contribute to the development of sexual violence in adolescence (Awad & Saunders, 1991). Consistent with these speculations, juvenile sex offenders have been found to have experienced more abuse than other delinquent groups. For example, Lewis, Shanok, and Pincus (1981) found that whereas 75% of their violent adolescent sex offenders had been physically abused, only 29% of other delinquents had experienced such abuse. Physical abuse was not, however, unique to sexual offenders. In this same study an equal percentage of violent nonsexual offenders had also been physically abused. Similarly, observing domestic violence appears to be associated with violence in general and not specifically with sexual violence (Spaccarelli, Bowden, Coatsworth, & Kim, 1997). Thus, it seems clear that children who experience physical abuse are likely to exhibit higher than average aggression in adolescence and adulthood and this aggression may be sexual or not sexual.

Physical abuse has been implicated in the sexually aggressive behavior of noncriminal samples (White & Smith, 2004). It appears to increase children's emotional detachment and it is correlated with personality disorders and with dissociation. In Malamuth's (1998) theoretical model of sexual aggression, harsh early environments, including experiencing physical abuse, play a prominent antecedent role in sexually aggressive behavior, both potentially locking a person into short-term mating strategies and impersonal sex and increasing the probability of both hostile masculinity and antisocial behavior.

Genetic Antecedents

Genetic influences on sexual aggression have not been studied directly. Nonetheless, genetic antecedents of many of the risk factors for aggression (antisocial personality or behaviors, psychopathy, criminality/ delinquency, aggressive behaviors, alcohol use and misuse) have been studied, and thus genetic factors are at least indirectly implicated in sexual aggression. In addition, aggression and sexual aggression often have common environmental correlates (e.g., physical abuse is a developmental risk factor for both), and thus they might also share genetic influences. It is important at the outset of the discussion of genetic influences to emphasize that the presence of such influences in no way implies any preset determinism. Indeed, the literature we will review argues strongly for the malleability of the effects of genes and the critical role that environmental experiences have in shaping and determining their outcome.

Traditionally, genetic influences have been studied in humans by the use of twin and adoption studies. Substantial heredity estimates have been found for antisocial personality, conduct disorder, and aggressive behavior, although methodological weaknesses may have inflated the results (see Pérusse & Gendreau, 2005). In addition, Attention Deficit Hyperactivity Disorder (ADHD), which is a correlate of the antisocial path described above (MIDSA, 2008) and a frequent trait in juvenile sex offenders (Robertson, Knight, & Conboy, 1999), has also been shown to be partially inherited (McLoughlin, Ronald, Kuntsi, Asherson, & Plomin, 2007).

The nature of genetic influence has been clarified by research that uses newly developed techniques for identifying polymorphisms in individual genes. This research has found that single genes interact with the environment so that only individuals who both possess the deleterious gene allele and suffer abusive early environments develop the negative traits. The most widely studied gene by environment interaction has focused on aggressive or antisocial behavior. The first convincing study (Caspi et al., 2002) was a prospective study of the interaction between harmful early environment and the MAOA gene in boys who were 26 years of age at the time of the outcome assessment. Although not all attempts to replicate this study have been successful, a recent meta-analysis (Kim-Cohen et al., 2006) suggests the interaction is real. Furthermore, comparable findings have emerged from studies of the serotonin transporter gene (5HHTLPR) in rhesus monkeys (see Suomi, 2005, for a review). The primate research confirms with an experimental manipulation the interaction found in nonexperimental human studies.

Most studies in this area use omnibus measures of child adversity, but Beaver (2008) explored the interaction with a single type of abuse of particular importance in sexual aggression, child sexual abuse. Using a summary index of three dopaminergic genes (DAT, DRD2, and DRD4) and violent adolescent delinquency as the outcome, he found the predicted interaction between child sexual abuse and genetic liability—the children who were both at genetic risk and suffered childhood sexual abuse were most likely to become violent delinquents.

Although the technique has not yet been applied to sexual aggression, interactions have been found and replicated with ADHD, conduct disorder, antisocial disorder, and alcohol dependency, all of which are risk factors for sexual aggression. Furthermore, research on serotonin has found that a low level of serotonin activity is related to increased sexual behavior as well as impulsivity and lability of

behavior (Spoont, 1992), and monoamines have been implicated in sexual appetitive disorders (Kafka, 2003).

All of the human genetic research we described here is correlational because the genetic manipulation of humans is unethical. Its causal validity is, however, boosted by animal studies, such as the primate research described above and experimental manipulation of genes by activating and inactivating them is possible. Evidence of the gene effects on sexual aggression can also be inferred indirectly from experimental studies of the effectiveness of medications. Medications such as antidepressants presumably counteract the effects of the deleterious monoamine genes. In a recent meta-analysis of experimental and repeated measures studies, such drugs have been found to reduce aggressiveness (Connor, Boone, Steingard, Lopez, & Melloni, 2003) and evidence supports their efficacy in treating disinhibited sexual motivation or sexual appetitive behavior disorders (Kafka, 2003).

Interrelatedness of Risk Factors Research

Despite the obvious gaps in our knowledge about the etiology and course of sexually aggressive behavior against women, definite consistencies have emerged in the risk factors data reviewed. Negative masculine attitudes, vulnerability to cognitive misperceptions, and concurrent alcohol and pornography use correlate with each other and interact with the dispositional variables that define the core paths in a successful etiological model of sexual aggression. The CU path predicts negative masculinity and adversarial relationship attitudes, which in turn facilitate sexual aggression. The effects of both the antisocial path and hypersexuality on sexually aggressive behavior are mediated by distorted perceptions. The antisocial path, which involves impulsivity and emotional liability, correlates with and is disinhibited by alcohol abuse. High hypersexuality and CU increase pornography use and such use disinhibits sexual aggression for men high in these traits. All of these dispositional paths are intertwined with developmental antecedents and interacting genetic influences, which if unraveled and understood will allow the identification of perpetration risk levels for the creation of maximally efficacious preventative interventions.

Prevention of Rape

Current Rape Prevention Strategies

The majority of the rape prevention programs that target males have been aimed at acquaintance rape among college students. They have typically focused on rape supportive attitudes, sexual role stereotypes, and social attitudes that are hypothesized to support sexual aggression. In large part the models implemented in these programs have been based on feminist and social construct theory. Although the attempt to reduce the high prevalence of sexual aggression on college campuses is laudable, the results have not been encouraging. While there is some evidence that such programs have a small, but positive effect on changing problematic rape attitudes, little or no evidence has emerged that they reduce sexually coercive behavior (Anderson & Whiston, 2005). Indeed, some evidence has indicated that attitudes changed in male oriented programs subsequently rebound to the level that the males had prior to the intervention, and the positive effects of interventions appear to diminish as the length of the follow-up increases (Anderson & Whiston, 2005).

Although better success might follow from a concerted effort to develop longer, more comprehensive, multi-level prevention strategies that include peer, community, and societal levels (e.g., Banyard, Moynihan, & Plante, 2007), and one program ("Safe Dates," Foshee et al., 2004) has shown some promise in reducing violence in dating contexts, it is also possible that such programs have yielded suboptimal results because rape-supportive attitudes are anchored by enduring traits that must be specifically addressed. Insofar as negative masculinity and hostility to women are reflections of an attitude complex, changing specific manifestations of the complex (such as attitudes regarding rape) will not be effective. Insofar as negative masculinity and hostility to women are manifestations of a callous-unemotional trait, successful intervention must be directed toward

the larger trait and the environmental conditions that cause and support it.

Implications of the Research for Prevention

What will it take to develop more effective prevention programs? Essential to any truly primary prevention intervention is a well-established, empirically-based model of etiology and course that discriminates causal factors from risk factors. Just as efforts to prevent antisocial activity in general have been curtailed by the limits of our understanding of its causes (Moffitt, 2005), likewise any endeavors to prevent sexual aggression will be limited by our ignorance of its etiology and course. As Moffitt (2005) has indicated, the history of attempts to prevent antisocial behavior is littered with failed programs (e.g., peer-group interventions, the DARE program) that have targeted risk factors that were correlative, but not causative. Only studies that attempt to disentangle genetic and environmental influences or studies that manipulate environmental conditions will allow us to develop more effective prevention programs. Consequently, both cross-sectional and longitudinal studies aimed at measuring both genetic proclivities and environmental stressors and mapping the interactive effects of these on the risk traits for sexual aggression are essential to the development of adequate etiological models of sexual aggression. The creation of effective sexual aggression primary prevention programs that efficiently target the most vulnerable individuals at the critical developmental stages rests on the foundation of such knowledge. Although we cannot alter the genetic makeup of vulnerable individuals, the single gene research suggests that we can prevent the negative expression of aberrant gene alleles by eliminating or reducing the stressful and punishing environments that trigger them.

The two prime candidates for prevention of the development of traits that lead to rape are physical and sexual abuse. If subsequent research indicates they are truly causal factors and we can develop interventions that at least reduce the incidence of such abuse, we then have the potential to lessen the deleterious effects of harmful genes, thereby preventing the development of traits that lead to sexual aggression. Promising programs like the Chicago Child-Parent Centers program that provide child and family support for disadvantaged families have demonstrated the long-term educational, criminal justice, and economic benefits of early-childhood intervention programs (Reynolds & Temple, 2006). Parent management training programs have had some success at reducing problematic aggressive child behavior, but more research is needed (Duncan & Magnuson, 2006). No early intervention programs have specifically targeted or measured sexually aggressive behavior. Although such primary prevention programs have the greatest potential to reduce the incidence of rape, effecting widespread reduction in child abuse unfortunately may require interventions that extend beyond programs that target changes in the family (for discussions, see Hay & Jones, 1994).

If we cannot effect a truly primary prevention that averts the onset of negative, maladaptive characteristics, we can and must focus our attention on secondary prevention efforts in which we identify genetic, developmental, and trait problems at the earliest ages possible and intervene to prevent these children from becoming sexually coercive. If we knew what genes to target, they could be measured. Impulsivity and antisocial tendencies and CU characteristics are measurable behavioral dispositions in childhood (Frick & White, 2008; Lynam et al., 2007; Moffitt, 2005).

Interventions into sexual proclivities should also begin early. McClintock and Herdt (1996) demonstrated that in both males and females, both homosexual and heterosexual, sexual attraction begins around 10 years of age. They posit that this sexual attraction is caused by the rise in sex hormones between the ages of 6 and 11 as a result of the maturation of the adrenal glands. Thus, prevention programs directed at hypersexuality as well as those for CU traits, impulsivity, and antisocial behavior should not wait until the individuals are of college age or even of pubertal age, but should attack these traits when they are truly in their formative stages.

Research must be directed at the identification of the early risk factors associated with subsequent sexual aggression and clarify their causative role. Such knowledge must then be translated into practical action. We must determine how we can reliably and validly measure these factors in an efficient way so that vulnerable children can be identified, possibly in the context of mental health checkups, and effective interventions initiated and studied. In addition to responding to obviously vulnerable children whose manifest behavior indicates the presence of risk factors or whose reported abuse history is known, we should also implement additional assessment strategies. Sequential assessments, such as computerized self-report screening questionnaires followed by more thorough evaluations for potential high risk youth, should be developed and evaluated using the strategies suggested for other problematic domains (Fox, Halpern, & Forsyth, 2008). Age-appropriate interventions that target children of highest risk, including genetic risks, must be fashioned and tested (see Durlak, Fuhrman, & Lampman's 1991 meta-analysis in which they found cognitive-behavioral therapy more effective for adolescents than younger children). Some intervention research targeting aggression in teenagers indicates the potential effectiveness of such programs (e.g., Lochman, Powell, Whidby, & Fitzgerald, 2006).

Finally, we have argued that programs that focus on college students may be suboptimal both because they are too late and because they have focused on rape-supportive attitudes without addressing the broader traits that may be causing or maintaining those attitudes. The data reviewed suggest that such programs may be improved if two things are done. First, measures of proximal and trait correlates of sexually aggressive behavior need to be developed that discriminate high risk individuals. Second, males with high trait vulnerability should be triaged into programs that specifically address their problematic proclivities (e.g., impulsivity, alcohol abuse, hypersexuality, emotional dysregulation), and the males with low externalizing characteristics, but high attitudinal risk, could be streamed into programs that focus on the attitudinal complex and the peer culture that maintains it.

Summary

In this article we reviewed the primary risk factors for sexual aggression in men. Because longitudinal studies of sexual aggression are lacking and we do not have the data to determine the causal precedence of risk factors, we divided the factors into three descriptive clusters that suggest, because of their differential specificity, cross-temporal endurance and temporal priority, a division into proximal versus distal causes. In reviewing the empirical evidence on these factors we concluded:

1. There is substantial evidence that identifies critical proximal (first cluster) correlates of sexual aggression, including particular attitudes, proneness to misperceive social/sexual cues, and alcohol and pornography use;
2. The factors in this first cluster covary and interact with each other in complex ways;
3. Core, cross-temporally stable traits, includ ing impulsivity/emotional dysregulation, callousness/unemotionality, and hypersexual ity, are also risk factors for sexual aggres sion and covary with the first cluster of risk factors;
4. The traits appear to have specific develop mental and genetic antecedents, which suggests a testable theoretical etiological model of sexual aggression; and
5. The ineffectiveness of current prevention programs might be due to their failure to target the more core, potentially causative traits and antecedents, and to intervene at a sufficiently early developmental stage.

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In Brief:

Using Rapist Risk Factors to Set an Agenda for Rape Prevention

Rape is a serious and prevalent crime. Effective programs aimed at preventing its occurrence are essential. Yet, research shows that current rape-prevention programs are suboptimal for reducing sexually coercive behavior. We argue that to create more effective programs it is important to identify the core traits that underlie rape and to intervene at sufficiently early ages. This article briefly reviews the empirical research on the behaviors, traits, developmental experiences, and biological antecedents that have been found to be associated with an increased probability that a male will become sexually aggressive. It attempts to differentiate correlative and causative factors and to identify gaps in our knowledge that must be addressed to develop models of etiology on which to base effective prevention programs. We propose a model that integrates the currently available data and we make suggestions for generating more effective prevention strategies. We also urge an increased effort to conduct the research that will guide future prevention and intervention efforts.

Recommended Readings and Resources

- Anderson, L.A., & Whiston, S.C. (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness. *Psychology of Women Quaterly, 29*, 374-388.
- Barbaree, H.E., & Marhsall, W.L. (Eds.) (2006). *The juvenile sex offender*. New York: The Guilford Press.
- Centers for Disease Control and Prevention data sources on violence prevention http://www.cdc.gov/ViolencePrevention/sexualviolence/datasources.html
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