Aggressive and Violent Girls: Prevalence, Profiles and Contributing Factors

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The following is an excerpt (not including reference bibliography) from a chapter which has been published in R. Corrado, R. Roesch & S. Hart (eds.) Multi-Problem and Violent Youth: A Foundation for Comparative Research. *Amsterdam: IOS Press, 2002.*

One of the most consistent findings throughout youth violence research and literature is that males are more heavily involved in serious forms of violence than females. According to official charge statistics, males are far more likely to be involved in both serious (homicide, assault causing bodily harm, aggravated assault) and minor (Level 1 assaults, intimidation) forms of violence during adolescence (Dell & Boe, 1998; Duffy, 1996; Totten, 2000; US Department of Health and Human Services, 2001). This relationship has held true across time (Corrado, Cohen & Odgers, 2000; Rowe, Vazsonyi, & Flannery, 1995) and across cultures (Budnick & Shields-Fletcher, 1998; Department of Justice Canada, 1998; Tanner, 1996). In addition, self-report data has consistently shown higher rates of violence among adolescent males when traditional measures of physical aggression and violence are employed (US Department of Health and Human Services, 2001). Support for unequal rates of antisocial behavior between young males and females is also evident within psychiatric literature where an approximate 4:1 male to female prevalence rate of pre-adolescence conduct disorder diagnosis has been reported (Butts et al., 1995; Cohen et al., 1993; Shaffer et al., 1995).

Despite this widely acknowledged sex difference in serious forms of violence, the involvement of females in aggressive and violent behavior has recently captured the attention of a number of individuals working in mental health, youth justice, and educational settings (Artz, 1998a; Budnick & Shields-Fletcher, 1998; Reitsma-Street, 1999). The growing recognition that there are a significant number of young women who engage in behaviors that are highly aggressive, both overtly and relationally (Moretti, Holland, & McKay, 2001), has brought forth a myriad of important research and policy questions. However, despite the immediate demand for answers to these questions and the creation of gender specific programming (Budnick & Shields-Fletcher, 1998) we still know relatively little about prevalence rates, psychosocial profiles, risk factors, and developmental trajectories of violent girls.

The inclusion of young women as a footnote, subset, or minor variation of behavior among males (Artz, 1998a; Bergsmann, 1989; Calhoun, Jurgens, & Chen, 1993; Chesney-Lind & Sheldon, 1998; Figueria-McDonough, 1992) limits our capacity to develop comprehensive theories of female violence (Horowitz & Pottieger, 1991; Kruttschnitt, 1994; Levine & Rosich, 1996). A substantial degree of confusion surrounding how we should best understand and respond to violence among girls continues to exist. In this chapter we summarize the existing research on research on prevalence, profiles, and developmental trajectories. Limitations of research and challenges to the field are discussed.

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Rates of Aggression and Violence in Girls: Characteristics and Trends

Many argue that violence among girls is rising. This is not a new observation; in fact, Freda Alder voiced this concern over 25 years ago in her seminal publication *Sisters in Crime* (1975). At that time, Alder stated that "the phenomenon of female criminality is but one wave in the rising tide of female assertiveness—a wave which has not yet crested and may even be seeking its level uncomfortably close to the high-water mark set by male violence" (p.14). Although Alder was speaking more generally about criminality, the underlying concern was that the behavior of young women was becoming more serious in nature and warranted immediate attention. Since that time, violence among young women has continued to rise, and although it has not reached the 'high-water mark' set by males, recent media portrayals of girl gangs, swarmings, and brawls throughout the Western world (Burman, Tisdall & Brown, 1998; Chisholm, 1997; Hennington, Hughes, Cavell & Thompson, 1998) have contributed to the impression that female violence is increasing exponentially and may be transforming into a more vicious phenomenon (Schissel, 1997).

The question, then, is whether the impression that female violence is on the rise can be supported by what we currently know. This issue can be addressed by first examining what the long term trends in female violence are, and then examining how the rates of female and male violence compare over time. In North America, female violence has risen substantially over the last decade. Statistics Canada has reported a 127% increase in charges for violent crimes among females over this period (Savioe, 2000). Similarly, the Violent Crime Index[3] arrest rate in the United States more than doubled for females between 1987 and 1994; although it has decreased consistently since that time (between 1995 and 1999), the rate still remains 74% above the 1980 rate, while the rate for males has dropped to 7% below its 1980 rate (*OJJDP Statistical Briefing Book,* 2000). The female arrest rate for simple assault in the United States, however, has not followed a similar pattern of rapid escalation and moderate decrease. Instead, it has risen over 250% since 1981 and is continuing to rise sharply (Snyder & Sickmund, 1999).

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Comparing male and female charges for violence over time reveals that violent crime has increased at a greater rate among girls. In Canada, violent crime has been increasing at twice the rate for female as compared to male youth over the last decade (Statistics Canada, 1999). Similarly, between 1987 and 1994, the Violent Crime Index arrest rate in the United States more than doubled for females while increasing 64% for males (*OJJDP Statistical Briefing Book,* 2000). Measures of simple assault in the US are even more telling where arrest rates have risen 260% for females versus 148% for males between 1981 and 1987.

Admittedly, official statistics only capture a portion of the profile of violence and aggression among girls. While they are an essential source of standardized data in the analysis of prevalence and long term trends, self-report data aids in the approximation of the actual prevalence of aggression and violence. Overall, self-report measures of aggression are also supporting the notion that female youth may be 'closing the gap'. According to the [US] Surgeon General's recent report on youth violence, the ratios of self-report male to female violence have decreased from 7.5:1 to 3.5:1 between 1983 and 1999 (U.S. Department of Health and Human Services, 2001).

Although there are consistent indications that female violence is on the rise, and that the ratio of male to female violence has decreased over time, a couple of cautionary notes should be considered. First, the percentage increase of female violence is somewhat misleading due to low initial base rates. For instance, although there was a 125% increase in Violent Index Offence arrest rates between 1985 and 1994 in the United States (Snyder & Sickmund, 1999), the arrest rate for males remained 5.8 times the rate for females. Second, males still tend to be more heavily involved in the most serious types of violent crimes, such as robbery and major assault, whereas females are far more likely to be charged with common assaults. For example, Statistics Canada arrest data indicates that in 1999, two-thirds of female youths [arrested] were charged with common assault compared to just under half (46%) of male youths (Savioe, 2000).

Another important methodological issue concerns the forms of aggression and violence that are measured. For example, when overt aggression is measured, which includes acts of physical aggression, significantly more boys than girls report engaging in violence (Bjorkqvist, Osterman & Kaukiainen, 1992; Cotton et al., 1994; Ryan, Matthews

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[3] Violent Crime Index includes the offences of murder, manslaughter, forcible rape, robbery, and aggravated assault.

& Banner, 1993; Saner & Ellickson, 1996; US Department of Health and Human Services, 2001), although a handful of studies have reported comparable rates (Finkelstein, Von Eye & Preece, 1994; Snyder & Sickmund, 1999). However, when the traditional definition of violence is expanded, to include indirect or relational forms of aggression, the disparity between males and females decreases (Crick, 1995; Crick & Grotepeter, 1995; Everett & Price, 1995).

Overall, then, official and self-report data indicate that girls' aggression has consistently risen across the past two decades. It is important to keep in mind, however, that female violence is not skyrocketing and girls continue to be under-represented as perpetrators of serious forms of overt aggression.

Do Girls Express Aggression Differently than Boys?

A recent body of literature suggests that girls may be as aggressive as boys if gender-specific forms of aggression are considered. There is little question that in early childhood boys are more physically or overtly aggressive then are girls (Fabes & Eisenberg, 1992; Maccoby & Jacklin, 1980; Parke & Slaby, 1983). Crick and Grotpeter (1995) argue, however, that girls are just as aggressive as are boys if gender differences in the expression of aggressive behavior are recognized. Gender differences in aggression arise because of fundamental differences between males and females in social goals: males' social goals emphasize instrumentality and physical dominance while females' goals are more focused on interpersonal issues. The bilateral model of aggression captures gender differences in aggressive behavior, according to the specific focus or goal to which aggressive acts are directed. Two forms of aggressive behavior are differentiated. Overt aggression includes physical acts and verbal threats toward others, such as hitting or threatening to hit others. In contrast, relational aggression which is intended to harm others through damage to personal and social relationships, such as spreading rumors and excluding others from social groups. In studies of pre-school children (Crick, Casas & Ku, 1999; Crick, Casas & Mosher, 1997); middle-age children (Crick, 1996; Crick & Bigbee, 1998; Cunningham, et al., 1998; Rys & Bear, 1997) and young adults (Werner & Crick, 1999), relational aggression has been associated with greater loneliness and less social satisfaction, independently of level of overt aggression. While both relational and overt aggression are viewed as equally hostile, relationally aggressive acts have been shown to be particularly distressing for girls (Crick & Bigbee, 1998; Paquette & Underwood, 1999).

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How consistently are gender differences in the expression of aggression found?

The results of pre-school studies with children as young as three to five years of age indicate that teachers and peers readily distinguish relational from overt aggression. Even at this young age, girls display a significantly higher level of relationally aggressive behavior than do boys (Crick et al., 1997), and girls are more likely to experience relational victimization than are boys (Crick & Bigbee, 1998; Crick et al., 1999). By middle childhood, the distinction between the gender-specific forms of aggressive behavior appears relatively well-established; although the percentage of aggressive girls and boys is comparable (27% of boys vs. 21.7% of girls; Crick and Grotpeter, 1995), girls tend to display this aggressive behavior through covert, relational acts and boys through overt, physical acts.

Yet not all research supports the view that girls and boys express aggression differently. Some studies have found, for example, that girls and boys engage in relational aggression to the same extent (Crick & Grotpeter, 1995; Rys & Bear, 1997). Indeed in some studies (Craig, 1998; Henington, Huges, Cavell, & Thompson, 1998; Roecker, Caprini, Dickerson, Parks & Barton, 1999; Wolke, Woods, Bloomfield, and Karstadt, 2000) boys are found to engage in even higher levels of relational aggression than are girls. There are several factors that play a role in these diverse findings including diverse assessment procedures (self-report, teacher report, behavior observation) and the age of children across various studies. Nonetheless, it is simply not the case that relational aggression is exclusively a female form of aggressive behavior at any developmental level. Girls and boys both engage in relational aggression across development. Girls, however, generally engage in higher levels of relational than overt aggression and boys generally engage in higher levels of overt than relational aggression.

How Important is Relational Aggression?

An important question to ask, then, is whether relational aggression is of any particular significance in understanding severe aggression and violence in girls. There are two types of information that are relevant in this regard. First, clinically elevated or severe levels of relational aggression may be a 'marker' of other forms of aggressive behavior that are present at the current time. The evidence pertaining to the role of relational aggression as a 'marker' of other forms of aggressive behavior is limited but some trends can be data. A close look at published studies shows that the correlation between relational and overt aggression is typically very high. For example, in a study of 245 third to sixth grade children, Crick (1996) found a correlation of .77 between relational and overt aggression. Although studies show that relational aggression has unique consequences on social-emotional functioning in girls and boys, independent of overt aggression (Crick & Bigbee, 1998; Paquette & Underwood, 1999), the high correlation indicates that these two forms of aggression often co-occur. Similar results were found in our study of conduct disordered adolescents (Moretti, Holland & McKay, 2001). Girls engaged in significantly higher rates of relational aggression than did boys; however, they did not engage in lower levels of overt aggression and assaultive behavior. Furthermore, the correlation between these two forms of aggression was high for both girls and boys, r=.62 and r=.54 respectively. More importantly, a robust correlation emerged between relational aggression and engagement in assaultive behavior for girls, r=.47, p=.001, but not for boys, r= -.12, ns. These results suggest that very high levels of relational aggression in girls may be a marker for serious overt aggressive behavior. These girls are often highly controlling and manipulating of their social networks (i.e., relationally aggressive), and at the same time, physically aggressive toward others. This is consistent with observations of other researchers (Artz, 1998b; Campbell, 1984; Chesney-Lind & Sheldon, 1998) who have used diverse methods to understand the lives of aggressive and violent girls. For example, Artz (1998b) describes the social relationships of violent girls as focused on issues of power and dominance designed to secure their position within a tenuous social milieu.

Relational aggression may also be important as a predictor of future violent behavior even if such behavior is not present at the current time.

Unfortunately, longitudinal evidence of such a relationship is limited. In one study, however, Crick (1996) found that level of relational aggression is related to peer rejection in girls and that peer rejection increases over time (6 month follow-up) for relationally aggressive girls. Clearly, further research is required to assess the predictive significance of relational aggression to later violent behavior.

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In sum, although research shows that relational aggression is generally more pronounced in girls than is overt aggression, relational aggression is not restricted to girls. It is clear that relational aggression is linked with increased levels of psychological problems and social relations difficulty at least concurrently and in the short term. However, research findings are insufficient to conclude that relational aggression, independent of physical aggression, is predictive of the development of severe aggressive behavior or violence in girls or boys. Nonetheless, preliminary findings show that very high relational aggression typically co-occurs with overt aggression and assaultive behavior in high-risk girls but not high-risk boys. Thus, relational aggression may define the social context in which serious acts of overt aggression occur for girls.

Risk Factors, Mental Health Profiles and Developmental Trajectories

Based on our previous discussion it is clear that various forms of aggression are associated with a myriad of social-emotional difficulties in both girls and boys. However, there are very few studies that have made the distinction between minor and serious forms of aggression among girls. Instead, the majority of research has treated girls that engage in antisocial behavior or delinquency as a homogeneous group. For example, a meta-analysis of 60 studies conducted by Simourd and Andrews (1994) concluded that the risk factors that are important for male delinquency are also important for female delinquency. The majority of outcome measures employed in these studies, however, failed to distinguish between minor forms of antisocial behavior (ie. skipping school, drinking, lying, shoplifting) and more serious measures of aggression (physical fights, use of weapons, robbery, etc.).

The second limitation throughout this body of research relates to the tendency to rely heavily on normative or low-risk populations. For instance, in arriving at the conclusion that there are no significant differences in the correlates of delinquency for males and females, Rowe, Vazonyi & Flannery (1995), relied on a sample (n=836) of predominately middle class, Caucasian youth, from intact families (89%), who reported relatively minor involvement in delinquency. Similarly, the most recent review of the research on female adolescent aggression (Leschied, Cummings, Van Brunschot, Cunningham & Saunders, 2000) was based on studies where the majority— over 70%—of samples were drawn from normative or high school populations.

Arguably, there are two problems with relying on these types of summaries for the purposes of profiling girls who engage in serious forms of violence. First, we know from previous research that highly aggressive youth are not likely to be found in school populations due to high rates of expulsion and dropping out (Figueria-McDonough, 1986; Corrado, Odgers & Cohen, 2000). Second, although the preceding meta-analyses and literature reviews concluded that the factors associated with aggression for males and females were remarkably similar, it is not clear whether this relationship holds true at more extreme ends of the continuum of violence.

Although it is important that researchers understand the significance of even moderately elevated levels of aggression for psychological adjustment in girls, there are limitations in generalizing from research based largely on normative populations and relatively non-serious definitions of violence to highly aggressive and violent girls.

In other words, there is a need to examine separately the factors that contribute to very severe aggressive and violent behavior. Not surprisingly, the information on these very high-risk girls is extremely scant. There are, however, two sources of relevant information on severely aggressive and violent girls, namely, juvenile delinquency and conduct disorder (CD) research. Although not all female offenders and conduct disordered youth are violent, most are either overtly or covertly aggressive and thus findings from these studies are of relevance here.

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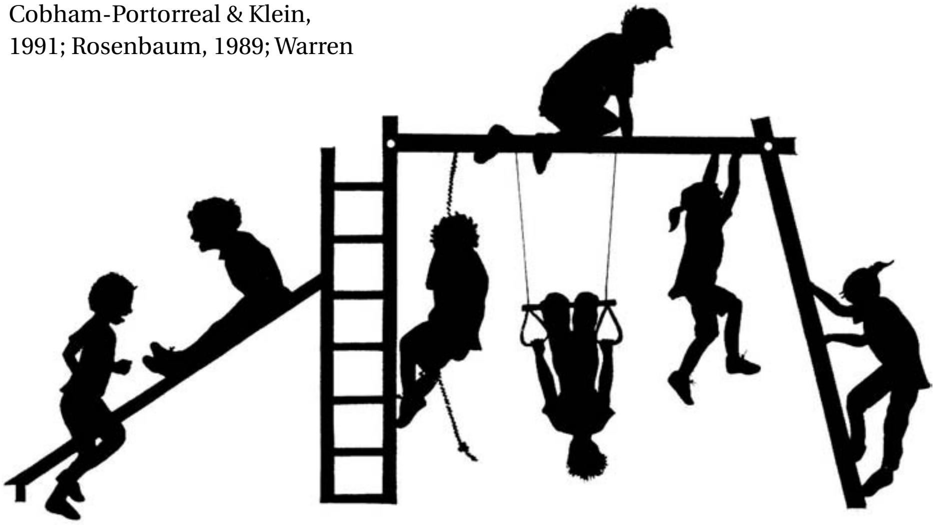
With respect to risk factors, there is a reasonably large body of juvenile delinquency research profiling female offenders. Overall, these studies (Bergsmann, 1989; Chesney-Lind & Sheldon, 1998; Corrado, Odgers & Cohen, 2000; Crawford, 1988; Lewis, Yeager, Cobham-Portorreal & Klein, 1991; Rosenbaum, 1989; Warren & Rosenbaum, 1986) report similar findings pointing to high levels of physical and sexual victimization, family dysfunction, substance use, and psychological distress. A review of these studies indicated that 45% to 75% of incarcerated girls have been sexually abused, as compared to approximately 2% to 11% of incarcerated males (Bergsmann, 1989; Corrado, Odgers & Cohen, 2000; U.S. Bureau of Justice Statistics, 1997; Viale-Val & Sylvester, 1993). Reported levels of physical abuse are also extremely high among girls in jail. For example, Corrado, Cohen & Odgers (2000), in a Canadian study of 460 incarcerated youth, reported that 70% of females (n=110) versus 38% of males (n= 360) reported exposure to physical abuse. Similarly, other studies (Bergsman, 1989; Calhoun et al., 1993; Viale-Val & Sylvester, 1993) show rates of physical abuse among girls as ranging between 40% and 62%.

Familial dysfunction (Calhoun, et al., 1993; Chesney-Lind & Sheldon, 1998; Corrado, Odgers & Cohen, 2000), psychopathology (Bergsmann, 1989; Rosenbaum, 1989), and family violence (Heimer & deCoster, 1999) are also extremely common among girls in jail. For instance, Rosenbaum (1989) reported that 97% of girls committed to the California Youth Authority came from non-intact families, and that 76% had family members with previous



previous records of arrest. Likewise, Corrado, Odgers & Cohen (2000) found significantly higher levels of familial dysfunction among girls in custody; 70% had a family member with a criminal record, 76% had a family member with a significant substance abuse problem, and 78% reported that a family member had been physically abused. Levels of family conflict among the females were also significantly higher, with 88% of girls leaving home, and 57% reporting that they had been kicked out of their homes. Moreover, in accordance with previous research (see Bergsmann, 1989; Shaw & Dubois, 1995; Smith & Thomas, 2000), the levels of family dysfunction and level of conflict experienced within the home was significantly higher among the female, as compared to the male offenders.

CD research has produced mixed findings with respect to the effects of exposure to maltreatment. In a study of early-onset CD, Webster-Stratton (1996) found no difference between girls and boys in a host of family variables including parental drug and alcohol abuse and depression, disconfirming the hypothesis that it takes a worse environment to produce conduct problems in girls than boys. In other studies, however, conduct disordered girls are found to be more likely to be placed outside the home in foster care or other such facilities, to be removed from the home earlier than boys, and to be exposed to sexual abuse (Moretti, Holland & McKay, 2001; Moretti, Wiebe, Brown & Kovacs, 2000).

With respect to mental health profiles, studies of youth in detention centres has confirmed the view that girls are more likely than boys to have a broad array of problems. In particular, high rates of suicide ideation and attempts (Bergsmann, 1989; Lewis et al., 1991) have been reported in these samples. In a self-report study conducted by the American Correctional Association Task Force on the Female Offender, over half of the girls reported attempting suicide (Crawford, 1988), while a seven-year follow up study of female offenders, conducted by Lewis et al. (1991), found that close to 90% of these girls had attempted suicide. Numerous studies have also highlighted the presence of depression and low levels of self-esteem among female young offenders (Chesney-Lind & Sheldon, 1998; Crawford, 1988). In addition, higher rates of substance use disorders (SUDs) (Ellickson, Saner & McGuigan, 1997; Jasper, Smith, & Bailey, 1998; Kingery, Mirzaee, Pruitt, Hurley & Heuberger (1991) and hard drug use have consistently been found among incarcerated girls (Corrado, Odgers & Cohen, 2000; Crawford, 1988; Horowitz & Pottieger, 1991).

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Studies examining the mental health profiles of conduct disordered girls is limited, but findings typically confirm a pattern of pervasive psychopathology which exceeds that found for conduct disordered boys. In one of the first papers to address this issue, Loeber and Keenan (1994) selectively reviewed studies on co-morbidity with CD and specifically examined the effects of age and gender. Where possible, general population studies were selected but studies using high-risk and clinical samples were noted as well. Odds ratios showed that girls with CD were more likely to suffer from co-morbid conditions of attention-deficit hyperactivity disorder (ADHD), anxiety disorder, depression and substance use disorder (SUD) than were their male counterparts. Similar results were found in our recent study of gender differences in rates of co-morbidity among 70 adolescents diagnosed with conduct disorder (Moretti, Lessard, Weibe & Reebye, 2001). Girls and boys in this sample were found to show highly similar patterns of conduct disordered behavior; for example, girls were as likely as boys to be involved in violent or aggressive behaviors such as mugging, cruelty to others, and use of weapons. Despite the comparability in CD symptoms, co-morbid psychiatric disorders were much more prevalent among girls than boys. For boys, 16.1% met criteria for CD alone and approximately 80% were diagnosed with between one to three additional disorders. In contrast, all girls in our sample were diagnosed with a co-morbid condition; in fact, 37% of conduct disordered girls met criteria for between one and three additional disorders and a further 63% were diagnosed with four or more additional disorders. Most commonly, girls met criteria for at least one internalizing, one externalizing, and a substance use disorder. Similar findings were found regardless of whether analyses focused on results from diagnostic interviews or from independent caregiver reports.

A few studies have specifically examined co-morbidity between conduct disorder and post-traumatic stress disorder (PTSD) as a test of the hypothesis that exposure to trauma is associated with both delinquent behavior and PTSD. Cauffman, Feldman, Waterman and Steiner (1998) found that approximately 60% of incarcerated female juvenile offenders met partial (12%) or full (49%) criteria for PTSD. These rates were significantly higher than those noted for male juvenile delinquents. Furthermore, compared to males, females were more likely to report being victims of violent acts (15% vs. 51% for males and females respectively) rather than witnesses to

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such acts (48% vs. 17% for males and females respectively). Similar findings were reported by Reebye and colleagues (Reebye, Moretti, Wiebe & Lessard, 2001). Girls diagnosed with conduct disorder met criteria for PTSD more frequently than did boys. Girls more frequently reported exposure to sexual assault while boys were more likely to report exposure to physical assaults, being involved in accidents and witnessing the death of a loved one.

In summary, the typical delinquent and conduct disordered girl has generally experienced more severe maltreatment and trauma than boys with comparable behavior problems. There is some evidence that the type of maltreatment and trauma experienced by delinquent and conduct disordered girls is different than that experienced by boys; girls are more likely to be victims of sexual abuse than are boys. Finally, there is consistent evidence that girls have a far greater scope of mental health problems, beyond their aggressive behavior, than do boys.

Although these findings are provocative in suggesting that aggressive and violent behavior in girls is linked to distinct risk profiles, there are several notable limitations. First, existing research is almost exclusively descriptive in nature. Most has focused on assessing the relative level of risk factors in girls and boys rather than the relationship between the risk factors and aggressive behavior. All or some of these risk factors may be more or less strongly related to aggressive behavior in girls than boys. Second, existing research is typically retrospective. The findings provide a good picture of the types of events that have transpired in the lives of these girls, and the scope of the mental health problems with which they contend. However, they do not provide a test of the causal relationships between risk factors and the development of later aggressive behavior. These are just some of the challenges for future research in this area.

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Marlene Moretti, Department of Psychology at Simon Fraser University, lectured in the Institute for the Humanities series on Violence and Its Alternatives, November 14, 2002.