

## **Self–Other Representations and Relational and Overt Aggression in Adolescent Girls and Boys**

Marlene M. Moretti, Ph.D.,\*  
Roy Holland, F.R.C.P., and Sue McKay, B.A.

---

**Aggressive behavior in girls has received far less attention than similar problems in boys. This study examined self-representation, and others' representation of self, as predictors of relational aggression, overt aggression, and assaultive behavior in 32 girls and 52 boys, 10 to 17 years of age, referred for assessment due to significant aggressive and delinquent behavior problems. As predicted, negativity of self-representation predicted relational aggression in girls but not boys. Negativity of self-representation also predicted overt aggression and assaultive behavior in both girls and boys. Parental representations of self were not predictive in this sample; however, negativity of peer representations of self, was associated with increased relational aggression in girls and decreased relational aggression in boys. Negativity of peer representations of self also predicted overt aggression and assaultive behavior in both girls and boys. Results suggest that the evaluation of self–other representations may be valuable in the assessment of risk for gender specific patterns of aggression. Copyright © 2001 John Wiley & Sons, Ltd.**

### **INTRODUCTION**

Until recently, girls have been perceived as less prone to aggression than boys and, consequently, research in developmental psychopathology and delinquency has focused almost exclusively on identifying the precursors and consequences of aggressive behavior in boys alone. During the past decade, there has been a growing recognition that aggression can be a significant issue for girls (Artz, 1998; Hoyt &

---

\*Correspondence to: Marlene M. Moretti, Department of Psychology, Simon Fraser University, 8888 University Drive, Burnaby, BC, USA 156, Canada. E-mail: moretti@arts.sfu.ca

Marlene M. Moretti, Professor, Department of Psychology, Simon Fraser University; Roy Holland, F.R.C.P., Clinical Director, Maples Adolescent Centre, Burnaby, British Columbia; Sue McKay, B.A., Department of Education, Simon Fraser University. This research was supported by a grant from the British Columbia Health Research Foundation. Portions of this research were presented at the Children Exposed to Family Violence, 5th International Conference, Vancouver, British Columbia, October, 1999 and Youth Violence: Approaches to Evaluating Needs and Risk Management, Vancouver, May, 2000. We extend our appreciation to the youth who participated in this study and to the Maples Adolescent Centre.

Scherer, 1998). Although boys continue to outnumber girls as perpetrators of seriously violent crimes including homicide, recent statistics point to disproportionate increases in other violent crimes committed by girls. Dobb and Sprott (1998) found that in Canada between 1991 to 1995 the rate of charges for assault with a weapon or assault causing bodily harm increased approximately 20% for girls compared to a slight decrease for boys. Recent statistics show a 12% gender difference in the rate of change for engagement in violent crimes between 1995 and 1999 (Statistics Canada, 1999). Specifically, rates of violent crimes dropped 9% for boys between 1995 and 1999 and increased 3% for girls during that period. The most notable increase for girls was between 1995 and 1998 when violent crime jumped 10%.

Similarly, in the United States, arrest rates for violent crimes in girls under 18 years of age increased by 125% between 1985 and 1994 compared to an increase of 67% for boys in this age group (Snyder, Sickmund, & Poe-Yamagata, 1996). This shift reflects substantial increases in rates of arrest for girls for aggravated assault (134% for girls versus 88% for boys) and simple assault (141% for girls versus 102% for boys), but not for murder (64% for girls versus 158% for boys). Recent statistics show a 33% drop for violent crimes in boys between 1994 and 1998, reducing their participation in violent crimes to 6% above the rate for 1981. However, the drop for violent crimes in girls during this period has been substantially lower, at 13%, where it remains a considerable 47% above the 1981 rate, warranting further investigation (OJJDP, 1998). Furthermore, there are concerns among educators that aggression in schools is increasing for girls at unprecedented rates (Boothe, Bradley, Flick, Keough, & Kirk, 1993; Cameron, Bruijne, Kennedy, & Morin, 1994).

It is clear that researchers must do more to understand the unique and shared factors that contribute to aggressive behavior in girls and boys. In this paper we examine gender differences in aggressive behavior and the role of the self as a predictor of aggression. This research builds on earlier studies of relational versus overt forms of aggression in girls and boys (Crick, 1997; Crick, Casas, & Mosher, 1997; Henington, Hughes, Cavell, & Thompson, 1998; Rys & Bear, 1997) and studies on the link between the self, affect, and behavior (Higgins, Bond, Klein, & Strauman, 1986; Stein & Markus, 1994).

### **Gender Differences in the Expression of Aggression**

Our society appears reluctant to recognize that aggressive behavior and violence is within the realm of girls' behavior. This predominant belief system, coupled with decades of research indicating consistently higher levels of aggression in boys (Maccoby & Jacklin, 1974, 1980; Parke & Slaby, 1983), is reflected in researchers' negligence in identifying girls' aggression as a significant social and mental health problem. Crick and Grotpeter (1995) propose that previous conclusions of limited aggressive behavior in girls are erroneous because they fail to recognize that aggressive behavior can be expressed in forms that differ from commonly recognized overt or physical acts of aggression. They argue that whereas boys' social goals emphasize instrumentality and physical dominance, girls' goals are more focused on interpersonal issues, with the emphasis being on popularity and security within their social groups. As a result, a bilateral model of aggression may be necessary to

comprehensively capture gender differences in aggressive behavior, according to the specific focus or goal to which these acts are directed.

Crick and her colleagues differentiated two forms of aggressive behavior: overt aggression, which includes physical acts and verbal threats toward others, such as hitting or threatening to hit others; and relational aggression, which is intended to harm others, or threatens to harm others, through damage to their peer relationships and their reputation. Adolescents who engage in relationally aggressive acts use covert measures that serve to exclude their rivals from their peer group and increase social rejection. These actions include spreading destructive rumors about others (e.g., rumors about being sexually promiscuous), threatening to end valuable friendships, and threatening to disclose personal information (Crick *et al.*, 1999b). While both overt and relational aggression is viewed as hostile, relationally aggressive acts are considered particularly distressing, and socially and psychologically detrimental, for girls (Crick & Bigbee, 1998).

In the last decade, research examining overt and relational aggression in boys and girls has proliferated. The results of preschool studies with children as young as three to five suggest that teachers and peers can readily distinguish relationally from overtly aggressive behavior. 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.*, 1999a). With development, gender-linked styles of aggressive behavior become increasingly apparent with girls becoming more relationally aggressive and boys becoming more overtly aggressive (Crick & Werner, 1998). By middle childhood, the distinction between the gender specific forms of aggressive behavior is well established, and although the percentage of aggressive girls and boys is comparable (27% of boys versus 21.7% of girls; Crick & Grotpeter, 1995), girls tend to display this aggressive behavior through covert, relational acts and boys through overt, physical acts.

Adjustment problems, including depression, loneliness, anxiety, and rejection by peers have been linked to aggressive behavior in children (Crick & Bigbee, 1998; Crick *et al.*, 1999b; Crick & Grotpeter, 1995), and relationally aggressive children exhibit significantly more internalized and externalized difficulties than do their non-aggressive peers (Crick, 1997). Studies of pre-school children (Crick *et al.*, 1999a; Crick *et al.*, 1997); middle-age children (Crick, 1996; Crick & Bigbee, 1998; Cunningham, Cunningham, Martorelli, Tran, Young, & Zacharias, 1998; Rys & Bear, 1997) and young adults (Werner & Crick, 1999) demonstrate that, in girls, peer rejection is positively related to relational aggression, and peer rejection increases over time for those girls who are relationally aggressive. In a recent study, Werner and Crick (1999) expanded upon previous research by examining the mental health problems of relationally aggressive girls in late adolescence. Although, in this study, relational aggression was not related to symptoms of depression in girls, it was predictive of borderline personality features and bulimia. In sum, research to date reliably confirms that girls and boys are equally aggressive in their behavior, but consistently different in the types of aggressive behavior they display. These gender differences can be detected early in development and persist at least until late adolescence. Like overt aggression, relational aggression is also linked to problems in emotional and social development.

## Self-Representation, Relational, and Overt Aggression

The role of the self in the organization and regulation of behavior has recently emerged as a central focus of developmental theory and research (Harter, 1998, 1999; Moretti & Higgins, 1999; Stern, 1985). What is the role of the self in aggressive behavior? Social information processing (SIP; Crick & Dodge, 1994) models implicate a variety of cognitive steps, such as the encoding of information and interpretation of social cues, in determining children's social behavior, including aggressive behavior. For example, Crick and her colleagues argue that underlying relational aggression is the tendency to form hostile attributions, whereby individuals take a defensive and revengeful stance toward others whom they perceive as provoking them. This tendency has been linked with relational aggression, particularly in girls (Crick, 1995; Crick & Dodge, 1994, 1996). How children and adolescents think about themselves – the beliefs they hold about what kind of person they are and what characteristics they possess – has been linked to how they encode and interpret social cues, and consequently to the likelihood of aggressive behavior in social relationships. For example, Dodge and his colleagues (Dodge & Tomlin, 1987; Lochman & Dodge, 1998) have demonstrated that aggressive children tend to utilize their prior expectations and self-schemas rather than relevant cues to interpret whether social interactions were benign or hostile. To the extent that adolescents hold negative views of themselves, or negative self-schema, they are more likely to perceive themselves as inadequate in social relationships, both in their capacity to manage interpersonal situations and in their ability to achieve and succeed in the world. Such beliefs would likely fuel negative affect, increase vigilance to cues of rejection, and contribute to a generalized defensive approach across a variety of situations, thus increasing hostile and aggressive behavior in social situations. In turn, aggressive behavior toward others is likely to elicit social rejection, confirming the negative view that adolescents hold of themselves. Over time, the reciprocal relationship between cognitive beliefs about the self, behavior, and social consequences can produce entrenched cognitive-behavioral patterns that exert an increasingly powerful role in directing responses to social situations.

Extensive research confirms the predictive role of the 'self-concept' or 'self-schema' in determining a wide range of behaviors and affective states (Higgins *et al.*, 1986; Stein & Markus, 1994; Strauman & Higgins, 1987). If the self is an important predictor of aggression, one would expect to find that adolescents who hold negative views of the self are more prone to aggressive behavior than those who view themselves positively. Given the well documented gender difference in aggressive behavior, negativity of self-representation should be a more robust predictor of relational aggression in girls than in boys.

Adolescence also marks a period in which individuals become increasingly interested in thinking about multiple perspectives on the self, for example, their own perspective versus their inferred perspectives of parents, peers, and other real or imagined audiences (Case, 1985; Harter, Bresnick, Bouchev, & Whitesell, 1997; Harter & Monsour, 1992; Steinberg, 2001). The cognitive capacity to simultaneously represent multiple perspectives on the self, coupled with social role changes that make these diverse perspectives psychologically relevant, leads to increased awareness of both positive and negative aspects of others perspectives on the self.

Although research has yet to examine whether the quality of internal representations of others' views of self are associated with aggressive behavior, there is good reason to believe that such beliefs play a central role in determining the likelihood of aggressive behavior. For example, if individuals believe that others perceive them negatively, they are more likely to feel threatened by others, more likely to believe that others are hostile and rejecting toward them, and more likely to view aggressive behavior as a reasonable and justified response to this situation.

The role of others' perceptions of the self may be particularly critical in determining relational aggression in girls. Crick and Grotpeter (1996) argue that relational aggression in girls reflects their tenuous social status and anxiety regarding social acceptance. Fundamentally, these girls likely believe that others do not accept them and this gives rise to the covertness of their aggressive actions and their attempts to "control" relationships in order to secure their social position. For example, Crick and Grotpeter (1996) found that relationally aggressive girls tended to "victimize" their friends by eliciting intimacy and encouraging disclosure in order to acquire control. Once this control had been established they were in a position to manipulate the relationship as they could then threaten to expose their friends' secrets to others.

Several theorists and researchers have argued that self-development in girls is more strongly influenced by the interpersonal context of close, intimate relationships than is self-development in boys (Cross & Madson, 1997; Gilligan, Lyons, & Hammer, 1990; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991; Moretti, Rein, & Wiebe, 1998; Surrey, 1991). If this is true, one should find that beliefs regarding how others perceive the self (i.e., internal representations of others' views of the self) are more strongly predictive of all forms of aggressive behavior in girls than in boys, but particularly predictive of relational aggression, rather than overt aggression, because of the focus on encoding, interpretation, and responsivity to interpersonal situations.

In the present study our first goal was to examine the role of self-representation as a predictor of relational and overt aggression, and assaultive behavior in pre- to late adolescents with a history of significant behavior problems. We predicted that negativity of self-representation would generally be linked to increases in all forms of aggressive behavior for both girls and boys, but specifically associated with increased relational aggression in girls as compared to boys. The second goal of the study was to investigate the importance of others' representations of self as a predictor of aggressive behavior. Here we reasoned that negativity of others' representations of self would be linked to increased aggressive behavior of all forms for girls as compared to boys because of the psychological significance of others' perspectives on self for girls. We also predicted that negativity of others' representations of self would specifically predict increased relational aggression in girls but not boys.

## METHOD

### Participants

Youth were recruited for participation from consecutive referrals to a provincial assessment and community consultation unit located in British Columbia, Canada.

This facility receives referrals for youth between the ages of 10 and 17 years with significant behavioral problems. Fifty-two boys and thirty-two girls between the ages of 11 and 17 years ( $M=14.44$  years;  $SD=1.51$ ; boys:  $M=14.19$ ,  $SD=1.57$ ; girls:  $M=14.83$ ;  $SD=1.33$ ) participated in the study. The majority of the youth were from lower–middle social economic status families and of Caucasian ethnicity (86% of boys; 58% of girls). A significantly higher number of girls than boys were of minority status,  $\chi(4,68)=12.19$ ,  $p=.02$  (see Table 1). A trend emerged indicating that girls were also more likely than boys to be living away from their natural parents, in foster placements (27% of boys; 50% of girls) or other care settings (4% of boys; 9% of girls;  $\chi(4,84)=9.01$ ,  $p=.06$  (see Table 1)<sup>1</sup>. A similar percentage of girls and boys met DSM-IV criteria for conduct disorder (63% of boys; 72% of girls) through structured diagnostic interview (Diagnostic Interview for Children and Adolescents – Revised; Reich, Shayka, & Taibleson, 1991),  $\chi(1,77)=.37$ , ns.

## Measures

### *Measures of Self-Representation*

*Selves Questionnaire* (adapted from Higgins, Klein, & Strauman, 1985). The Selves Questionnaire provides an idiographic assessment of self-representation and others' representation of self. Youth were instructed to spontaneously list at least five characteristics to describe their own perspective on the self and their perspectives of how others view them, specifically, their mother/female caregiver, father/male caregiver, and peers.

In this study we focused on the relative positivity versus negativity of participants' self-perceptions and inferred parental and peer representations of self. Participants' self-perceptions and their perceptions of self by others were assessed by coding the

Table 1. Age, ethnicity, and residential status for girls and boys

	Boys ( $n=52$ )	Girls ( $n=32$ )
Mean age	14.19	14.84
Ethnicity (percent):		
Caucasian	86%	58%
Native Canadian	2%	27%
Asian	5%	4%
Indo-Canadian	0%	4%
Other	7%	7%
Residential status (percent):		
Natural parent	69%	41%
Foster parent	27%	50%
Adoptive parent	2%	0%
Relative	0%	3%
Other	2%	6%

<sup>1</sup>Supplementary analyses indicated ethnicity and placement outside of the home (e.g. foster placement) did not account for or alter the relationship between negativity of self and other representations and aggressive behavior. Similarly, ethnicity and foster placement were not significantly correlated with relational or overt aggression, or assaultive behavior.

positivity and negativity of listed attributes based on Anderson's (1968) 7-point scale for rating the "likableness" of personality characteristics (0=least desirable and 6=most desirable). Attributes with likableness scores greater than 3 were classified as positive (e.g., friendly, caring, and hardworking); those with scores less than 3 were classified as negative (e.g. useless, fat, lazy, and shy); and characteristics that were ranked as 3 and/or were ambiguous in nature were classified as neutral (e.g. talkative or play hockey).

Inter-rater reliability of attribute positivity and negativity were established at 91% and 94% agreement, respectively. A difference score representing degree of negativity was obtained for each subject by subtracting the number of negative from positive attributes for each self-state representation. In this sample, negativity of self-representations was significantly correlated with both negativity of maternal representations of self and negativity of peer representations of self,  $r(84) = .30$ ,  $p = .01$  and  $r(65) = .39$ ,  $p = .01$  respectively. There was no significant relationship between negativity of self-representations and negativity of paternal representations of self,  $r(64) = .11$ , ns. A significant relationship between negativity of maternal representations of self and negativity of paternal representations of self was also revealed,  $r(64) = .45$ ,  $p = .01$ .

Previous research with the Selves has confirmed the reliability and validity of the measure (for a review, see Moretti & Higgins, 1999).

### *Measures of Aggression and Violence*

*Self-Report Delinquency Scale (SRD; adapted from Elliott, Ageton, Huizinga, Knowles & Canter, 1983).* This 36-item self-report instrument is a well validated and comprehensive measure of violent and nonviolent offending (Henggeler, 1989). Youth are instructed to give an estimate of the number of times they have committed particular delinquent acts during the last year. Responses can range from zero to any applicable amount. The items of the SRD are grouped into nine types of delinquent and criminal behavior, such as theft, property damage, illegal services, etc. This study utilized the two assault categories, specifically, felony and minor assault. Together these categories encompass six items: three covering minor assault (number of times in the last year the youth has) (1) hit or threatened to hit a parent or caregiver, (2) hit or threatened to hit a supervisor, employee or teacher, or (3) hit or threatened to hit anyone else (other than parents, supervisor, another employee or teacher) and three covering felony assault (number of times in the last year the youth has) (1) attacked someone with the idea of seriously hurting or killing that person, (2) been involved in gang fights, or (3) had or tried to have sexual relations with someone against their will. The average score across these six items was computed to assess relative involvement in assaultive behavior.

The self-report delinquency scale possesses adequate internal consistency and test-retest reliability and has been shown to possess good predictive and discriminate validity in samples of chronic offenders (Dunford & Elliott, 1984) and serious offenders (Elliott, Huizinga, & Ageton, 1985).

*Children's Peer Relations Scale (CPRS; adapted from Crick & Grotpeter, 1995).* This self-report measure includes scales that assess overt aggression,

relational aggression, prosocial behavior, and loneliness. For the purpose of this study, only the items pertaining to overt and relational aggression were utilized. The overt aggression scale includes three items (i.e., hitting, shoving, and yelling at others) and the relational aggression scales includes five items (i.e., ostracizing, excluding, lying, and spreading rumors about others). Youth were instructed to respond to questions, such as "Some kids tell their friends that they will stop liking them unless the friends do what they say. How often do you tell friends this?" on a 5-point scale (1 = never to 5 = all the time).

Previous research using this aggression measure has established acceptable validity and reliability ( $\alpha = .73-.94$ ; Crick, 1996; Crick & Grotpeter, 1995, 1996). Crick's (1996) longitudinal research demonstrated test-retest reliability of  $r = .93$  and  $.86$  (for boys' overt and relational aggression, respectively) and  $r = .81$  and  $.80$  (for girls' overt and relational aggression, respectively) over a 1 month period.

*The Diagnostic Interview for Children and Adolescents – Revised. Adolescent Version (DICA-R-A; Reich et al., 1991)* was administered to each youth by a trained research assistant. The DICA-R-A is a semistructured interview that assesses the presence or absence of symptoms indicative of the DSM-III-R or DSM-IV disorders of childhood and adolescence. Youth were systematically queried on the frequency, age of onset, clustering, and impact of various symptoms. Adequate reliability of the DICA-R-A, comparable to other semistructured interviews, has been demonstrated (Reich, 2000). In the current study, this instrument was used for descriptive purposes to determine the percentage of girls and boys who met criteria for conduct disorder.

## Procedures

Youth were provided with information regarding participation in the study within two weeks of their admission to the facility. Youth were advised of the limits of confidentiality which included disclosure of risk to self or other or exposure to abuse. Informed consent to participate was acquired from the youth and their legal guardians. Youth were tested in the presence of a trained research assistant.

In order to minimize biases in youths' responses to all questionnaires, and particularly to the SRD, youth were advised that identifying information would not be recorded. In addition, responses on the SRD were reviewed with youth to ensure accuracy. The Selves Questionnaire was completed first with the remaining measures placed in random order. This study is part of a larger study in which the participants received a \$30 honorarium for participating.

## RESULTS

### Sample Characteristics

As summarized in Table 2, boys and girls showed similar levels of self-representation negativity,  $F(1,83) = .03$ , ns. In contrast to boys, girls held significantly more

Table 2. Mean scores for girls and boys on negativity<sup>a,b</sup> of self-representation, parental and peer representations of self, and measures of aggression

Variable	Boys		Girls	
	Mean	SD	Mean	SD
Self-representation	1.37	2.36	1.47	3.53
Maternal representation of self	.27 <sup>a</sup>	2.82	-1.31 <sup>b</sup>	3.99
Paternal representation of self	-.01 <sup>a</sup>	2.41	-1.88 <sup>b</sup>	3.70
Peer representation of self	1.49	2.33	2.21	3.02
Relational aggression	8.85 <sup>a</sup>	3.40	10.71 <sup>b</sup>	4.09
Overt aggression	7.27	2.77	7.34	2.47
Assaultive behavior	8.10	15.72	15.06	24.78

Note: <sup>a,b</sup>Scores represent the number of positive attributes minus the number of negativity attributes. Lower scores represent higher levels of negativity. Means with different subscripts significantly differ for boys and girls.

negative maternal and paternal representations of self,  $F(1,83) = 4.52$ ,  $p = .04$  and  $F(1,63) = 6.05$ ,  $p = .02$ , respectively. Girls and boys did not differ significantly in the negativity of peer representations of self,  $F(1,64) = 1.20$ , ns.

Consistent with previous research, girls reported significantly higher levels of relational aggression than did boys,  $F(1,83) = 5.14$ ,  $p = .03$ . There were no significant gender differences in levels of overt aggression,  $F(1,83) = .07$ , ns, and assaultive behavior,  $F(1,78) = 2.34$ , ns.

### Self-Representation as a Predictor of Aggression

Heirarchical regression, entering gender and self-representation in the first step of the equation, and the interaction term in the second step of the equation, revealed a significant gender by self-representation interaction effect predicting relational aggression,  $R^2 = .17$ ,  $\Delta R = .07$ ,  $F(1,80) = 6.32$ ,  $p = .01$ . Consistent with predictions, relational aggression was more strongly linked to negativity of self-representation in girls,  $\beta = .50$ , than in boys,  $\beta = .07$  (see Figure 1). In contrast, heirarchical regressions predicting overt aggression and assaultive behavior from gender and self-representation were significant only in the first step of the analyses,  $R^2 = .07$ ,  $F(2,81) = 3.21$ ,  $p = .05$  and  $R^2 = .15$ ,  $F(2,76) = 6.48$ ,  $p = .003$  respectively, indicating that self-negativity predicted increased overt aggression,  $\beta = .27$ , and assaultive behavior,  $\beta = .34$ ,  $p = .002$ , for both girls and boys.

### Parental Representations of Self as Predictors of Aggression

In contrast to results for self-perceptions, maternal representations of self were not found to be robust predictors of aggression. Heirarchical regression analyses predicting relational and overt aggression failed to produce significant main effects for maternal representation or significant gender by maternal representation interactions. In contrast, regression analysis predicting assaultive behavior showed a marginally significant first step of the analysis,  $R^2 = .06$ ,  $F(2,76) = 2.60$ ,  $p = .08$ , reflecting a weak association between negativity of maternal representations of self and assaultive behavior for all participants,  $\beta = .18$ ,  $p = .11$ .

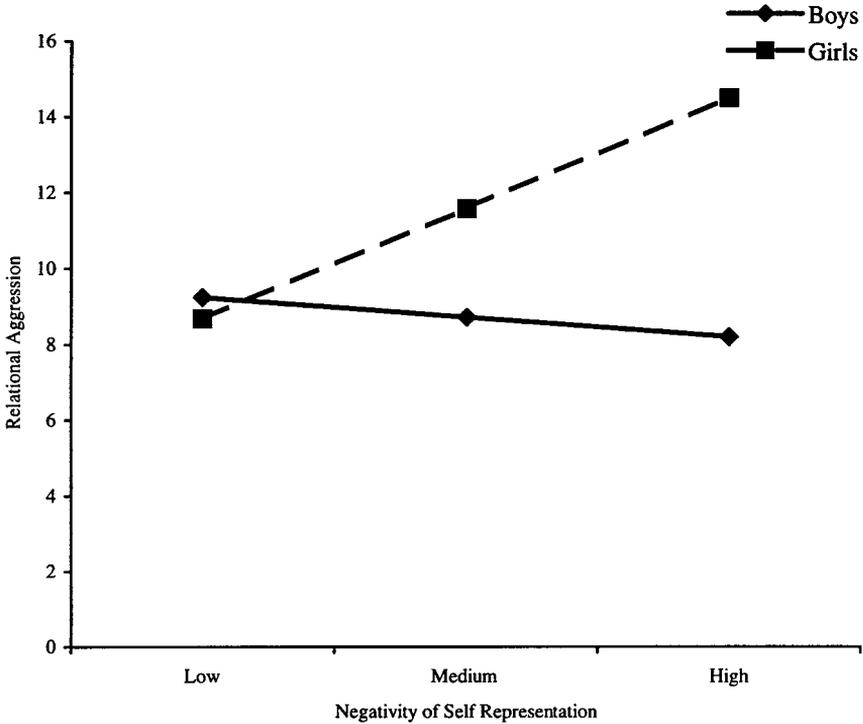


Figure 1. Mean scores for girls and boys on relational aggression as a function of negativity of self-representation.

Negativity of paternal representations of self was found to be significantly correlated with increased relational and overt aggression in girls,  $r(22) = .50$ ,  $p = .01$  and  $r(22) = .41$ ,  $p = .05$ , but not in boys,  $r(38) = -.02$ , ns and  $r(38) = -.02$ , ns. Despite this difference, hierarchical regression failed to produce significant main or interaction effects involving paternal representations of self. In contrast, hierarchical regression predicting assaultive behavior was significant in the second step of the analysis,  $R^2 = .18$ ,  $\Delta R = .08$ ,  $F(1,43) = 4.09$ ,  $p = .05$ , reflecting a significant gender by paternal interaction effect,  $\beta = .32$ ,  $p = .05$ . In this case, negativity of paternal representation of self was more strongly related to assaultive behavior in boys,  $\beta = .21$  than girls,  $\beta = .10$ .

### Peer Representations of Self

As predicted, the second step of the regression predicting relational aggression from gender and peer representations of self was significant,  $R^2 = .13$ ,  $\Delta R = .08$ ,  $F(1,61) = 5.79$ ,  $p = .02$ , reflecting a significant gender by peer representation interaction effect,  $\beta = 1.00$ ,  $p = .02$ . Consistent with predictions, negativity of peer representations of self was related with higher levels of relational aggression in girls,  $\beta = .26$ . Surprisingly, however, negativity of peer representations of self predicted *less* relational aggression in boys,  $\beta = -.33$  (see Figure 2).

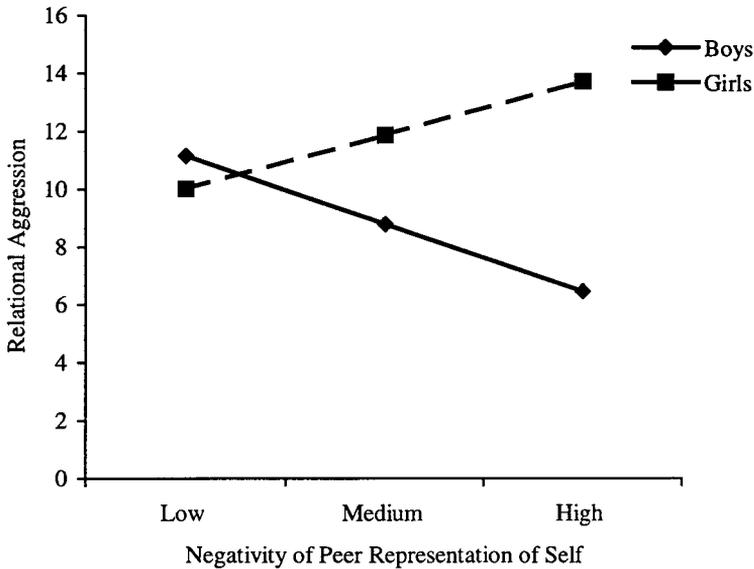


Figure 2. Mean scores for girls and boys on relational aggression as a function of negativity of peer representation of self.

Finally, the regression predicting overt aggression from gender and peer representation showed only a trend toward significance in the first step,  $R^2 = .07$ ,  $F(2,62) = 2.31$ ,  $p = .11$ , indicating that negativity of peer representations of self was associated with greater overt aggression for both girls and boys,  $\beta = .26$ ,  $p = .04$ . Similarly, the regression predicting assaultive behavior was not significant beyond the first step,  $R^2 = .11$ ,  $F(2,57) = 3.46$ ,  $p = .04$ , indicating that negativity of peer representations of self was marginally associated with greater assaultive behavior for both girls and boys,  $\beta = .22$ ,  $p = .10$ .

## DISCUSSION

### Gender Specific Forms of Aggression

This research set out to examine the role of self-representation, and others' representations of self, as predictors of gender-specific forms of aggressive behavior in pre- to late-adolescent girls and boys with a history of significant behavior problems. Consistent with previous research, our results confirmed that girls engaged in significantly higher rates of relational aggression than did boys. These findings extend upon existing research by demonstrating this gender difference within a pre-adolescent to late adolescent clinical sample. This gender difference emerged despite the fact that levels of overt aggression and assaultive behavior were comparable for girls and boys in the sample. Overall, this pattern of findings paints a complex picture of aggressive behavior in high-risk girls: these girls are heavily engaged in controlling and manipulating their social networks, and at the same time, are quite ready to lash out physically toward others.

Other researchers (Artz, 1998; Campbell, 1984; Chesney-Lind & Sheldon, 1992) using a variety of methods to understand the lives of aggressive and violent girls have provided similar descriptions. For example, Artz (1998) 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. She argues that the behavior of aggressive girls can be understood in terms of their experiences of oppression and sexual objectification that have dominated their family, peer, and romantic relationships. These experiences create a sense of self as powerless and unworthy of love or respect. The responses of the girls in our study echo those of Artz's in terms of negativity and self-deprecation (1997, 1998). Frequently, our adolescent girls described themselves as stupid, mean, bitchy, and "slutty," and they also emphasized perceived flaws in their physical appearance. The girls not only viewed themselves as fat and ugly, but they also believed that their parents and peers viewed them in this way.

### **Self-Other Representations as Predictors of Aggressive Behavior**

Consistent with this view, our results confirmed that negativity of self-representation is linked to relational aggression in girls but not boys. Girls who hold a negative view of themselves are more likely than girls who view themselves positively to manipulate and control their social environment with the goal of punishing others whom they feel have slighted them and ensuring loyalty from others whom they feel may reject them. Consistent with our predictions, negativity of self-representation was also associated with higher rates of overt aggression and assaultive behavior in both girls and boys. These results highlight the significance of self-representation as a determinant of aggressive behavior. The link between negativity of self-representation and aggressive behavior is likely complex, involving both affective and cognitive factors. As previously noted, based on other research (Crick & Dodge, 1996; Crick & Werner, 1998) it is reasonable to expect that negative self-representation give rise to negative affect, vigilance to cues of rejection, and attributions of hostility and threat. Further research is required to determine how the association between self-representation and aggressive behavior may be mediated or moderated by such affective and cognitive factors.

Contrary to predictions, maternal and paternal representations of self were not significant predictors of aggressive behavior in girls or boys. Negativity of maternal representations of self was only weakly related to assaultive behavior. Similarly, negativity of paternal representations of self predicted marginally higher levels of assaultive behavior in boys but not girls. Our failure to detect a relationship between negativity of parental views of self and aggressive behavior is likely due to the limited specificity of measurement in the study. Specifically, few items in the aggression measures used in this study focused on aggression toward parents. It is possible that measuring aggression toward specific targets, including parents, would reveal robust relationships between internal representations and specific acts of aggression.

Consistent with our predictions, we found that negativity of peer representations of self predicted significantly higher levels of relational aggression in girls. In other

words, girls in this sample were more likely to report engagement in relational aggression when they believed their peers viewed them in less positive and more negative terms. For these girls, relational acts of aggression may be a form of retribution toward peers for the beliefs they are inferred to hold. Relationally aggressive acts may also be implemented to control and contain the potential threat that such peers are believed to present in one's social group. For example, if a girl believes that her peer views her negatively, she may believe that encouraging exclusion of this peer from important social groups and spreading rumors about her are effective strategies to contain the threat this peer presents to her social status.

Our finding that negativity of peer representation of self predicted *lower* levels of relational aggression in boys is surprising and novel. This result suggests that boys who believe their peers' view them negatively tend not to engage in socially aggressive behavior. Yet, they are no less overtly aggressive or assaultive; indeed, we found that negativity of peer representations of self predicted marginally higher levels of overt aggression and assaultive acts for both girls and boys. Thus, the effect of peer representations of self on boys' relational aggression is quite specific to that domain of aggressive acts. Why might boys' who believe their peers view them negatively avoid the use of socially aggressive behavior? One possibility is that because relational aggression is viewed as gender atypical it is unlikely to lead to increased social status. Indeed, boys' displays of relational aggression may be perceived extremely negatively by their peers and lead to greater social rejection (Crick, 1997). Thus, boys who believe their peers see them negatively may avoid displaying gender atypical aggressive behavior and instead display increased overt aggression.

Although we found that others' representations of self predicted increased aggressive behavior, particularly for girls, overall our results suggest that self-representation is a stronger predictor than are others' representations of self. This finding likely reflects two factors. First, self-representations are more likely to reflect abstractions based on experiences across a variety of interpersonal relationships that have been internalized by individuals (Moretti & Higgins, 1999; Moretti & Wiebe, 1999). As such, self-representations are a more constant factor across relationships and thus a more consistent determinant of behavior, including aggressive and violent behavior. Second, it is important to recognize that aggressive youth are not usually aggressive in *all* social relationships. Instead, whether they aggress toward others depends on the extent to which they perceive others as a threat to the self and their social position, and this depends on how they believe others view them. Thus, in order to determine the true link between others' representations of the self and aggressive behavior researchers need to utilize measures with greater specificity; measures in which youth are asked to provide descriptions of specific others' views of them and to detail their acts of aggression specifically toward these same individuals.

This point is clearly illustrated by interview material collected by Artz (1998). She notes that, among aggressive girls, violence is not a random act but rather designed to put other girls who present a threat toward the aggressor in their place. How these youth believe others view them is critical in determining whether or not they will aggress toward specific individuals. An ambiguous comment may slip by if it comes from a peer or adult whom the youth believes holds a relatively positive or benign view of them. The same comment from another individual, whom the youth

believes holds, or may hold, a negative view of them, can provoke an aggressive response.

### **Implications for Assessment and Intervention**

What are the implications of these findings? First, girls who engage in high levels of relational aggression may be at significant risk for engaging in other forms of serious overt aggression and violence. In our sample, relational aggression was highly correlated with assaultive behavior in girls,  $r = .47$ ,  $p = .002$ , but not in boys,  $r = -.12$ , ns. When girls become involved in controlling and containing their social context through relationally aggressive acts, social situations may escalate to the point that girls are provoked or believe it is necessary to engage in overtly aggressive and assaultive acts. Thus, our findings suggest that relational aggression is a serious form of aggression in girls and it is important to assess in determining risk for other forms of aggressive behavior.

Our results also indicate that self–other representations offer an important source of information in predicting the likelihood that youth will act aggressively toward others. To the extent that youth hold a negative view of themselves they are at higher risk for engagement in aggressive behavior. Negativity of self-representation appears to increase the likelihood of aggression across all targets. Likewise, if youth believe that other individuals, particularly peers, hold a negative view of them they are likely to retaliate with aggressive behavior. Thus, assessing beliefs about the self and beliefs about how others view the self may be a helpful adjunct in assessments of risk.

Our findings also have implications regarding which interventions may be most helpful for youth at risk. Interventions may or may not be of benefit in reducing risk for aggression depending on whether they promote or impede the development of positive, well integrated self–other representations. For example, cognitive interventions that target negative beliefs about the self or others may be useful in promoting more positive self–other representations by challenging negative beliefs and increasing opportunities for positive social experiences (Guerra & Slaby, 1990; Lochman & Wells, 1996). Similarly, behavioral and social skills interventions may reduce risk for aggression by widening the scope of social experiences in such a way that youth begin to build more positive self–other representations (Kazdin, 1995; Webster-Stratton, 1991). In contrast, it is difficult to see how interventions which focus on containment, control, and punitive restriction, contribute to more positive self–other representations.

### **Limitations**

Our study is the first to our knowledge to investigate the relationship between self and aggression in an adolescent sample. There are several caveats to our findings. First, our sample consists of a select group of youth identified for problems of aggression and violence. It is not clear that these results generalize to the population at large, and thus caution should be exercised in extrapolating from our findings.

In this paper we have focused only on the valence of self–other representations as an initial step toward mapping the relation between self–other representations and aggressive behavior. Other facets of the self-system, including the complexity and congruence of self-evaluative guides and the internalization of significant other standards for self-regulation, likely play an important role in determining the nature and relative likelihood of aggressive behavior (Moretti & Higgins, 1999; Moretti & Wiebe, 1999). Further research will help to elucidate these aspects of self-representation as predictors of aggressive behavior.

In addition, we have discussed self-representations, and others' representation of self, as if these were two independent entities. This has been helpful in disentangling how these two aspects of the self-system contribute to aggression. It is important to understand, however, that the self is best understood as a self-regulatory *system*. Representations of self and representations of others' view of the self are mutually interdependent and their impact on behavior is a function of the overall pattern of these representations rather than the characteristics of each representation per se. Further research is required to assess how *patterns* of self–other representations influence risk for aggressive behavior.

In addition, consistent with previous research on self-schemas and self-representation (Dodge & Tomlin, 1987; Harter, 1999; Moretti & Higgins, 1999), we have framed our study in terms of how characteristics of self-representation increase risk for aggressive behavior. Clearly, however, engagement in aggressive behavior can also have an impact on how we view ourselves and how we believe others view us. If youth are rejected by their peers they may come to see themselves in a negative light and, as research has shown, this will likely increase their adjustment difficulties and their aggressive behavior (Crick & Bigbee, 1998). Thus, the transactional influences of social relationships and internal representations of self require further examination. Finally, our research examines the relationship between self–other representation and aggressive behavior in a clinical sample. Whether or not these same associations exist in the general population is unknown and requires validation.

## CONCLUSIONS

Aggression in girls and women is often disregarded as insignificant in relation to the magnitude of social problems associated with aggression in boys and men. Although it is true that boys and men continue to outnumber girls and women as perpetrators of serious violent acts, there is no question that a significant number of girls and women engage in behaviors that are highly aggressive and harmful toward others. Moreover, recent statistics suggest that aggression and violence is growing among girls. Our research points to the significance of relational aggression in girls. Generally, relationally aggressive behavior is viewed as relatively benign. However, our results show that relationally aggressive behavior is linked with higher rates of overt aggression and assault in girls. Researchers, educators, and clinicians need to begin to recognize that girls' aggression is a serious issue and that relational forms of aggression place girls at risk for engagement in other forms of aggression.

Our findings also highlight the importance of the self-system in aggressive behavior. There is substantial research in other areas of psychology with children,

adolescents, and adults demonstrating a link between the self and a wide range of behavioral patterns and emotional problems. The current findings suggest that expanding this research to examine the relationship between self-representation, self-regulation and aggression may prove fruitful in furthering our understanding of the developmental course of aggression and of interventions that alter these pathways.

## REFERENCES

- Anderson NH. 1968. Likableness ratings of 555 personality-trait words. *Journal of Personality and Social Psychology* **9**: 272–279.
- Artz S. 1997. On becoming an object. *Journal of Child and Youth Care* **11**: 17–37.
- Artz S. 1998. Where have all the school girls gone? Violent girls in the school yard. *Child and Youth Care Forum* **27**: 77–109.
- Boothe J, Bradley L, Flick M, Keough K, Kirk S. 1993. The violence at your door. *The Executive Educator*, February: 16–21.
- Cameron E, deBruijne L, Kennedy K, Morin J. 1994. *British Columbia Teachers' Federation Task Force on Violence in Schools Final Report*. British Columbia Teachers' Federation: Vancouver BC.
- Campbell A. 1984. *The Girls in the Gang*. Blackwell.
- Case R. 1985. *Intellectual Development: Birth to Adulthood*. Academic: New York.
- Chesney-Lind M, Sheldon R. 1992. *Girls Delinquency and Juvenile Justice*. Brooks/Cole: Pacific Grove, CA.
- Crick NR. 1995. Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology* **7**: 313–322.
- Crick NR. 1996. The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development* **67**: 2317–2327.
- Crick NR. 1997. Engagement in gender normative versus nonnormative forms of aggression: Links to social-psychological adjustment. *Developmental Psychology* **33**: 610–617.
- Crick NR, Bigbee MA. 1998. Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology* **66**: 337–347.
- Crick NR, Casas JF, Ku H. 1999a. *Relational and Physical Forms of Peer Victimization in Preschool*. *Developmental Psychology* **35**: 376–386.
- Crick NR, Werner NE, Casas JF, O'Brien KM, Nelson DA, Grotzger JK, Markson K. 1999b. Childhood aggression and gender: A new look at an old problem. In *Gender and Motivation: Volume 45 of the Nebraska Symposium on Motivation*, Bernstein D. (ed.) University of Nebraska Press: Lincoln; 75–141.
- Crick NR, Casas JR, Mosher M. 1997. Relational and overt aggression in preschool. *Developmental Psychology* **33**: 579–588.
- Crick NR, Dodge KA. 1994. A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin* **115**: 74–101.
- Crick NR, Dodge KA. 1996. Social information-processing mechanisms in reactive and proactive aggression. *Child Development* **67**: 993–1002.
- Crick NR, Grotzger JK. 1995. Relational aggression, gender, and social-psychological adjustment. *Child Development* **66**: 710–722.
- Crick NR, Grotzger JK. 1996. Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology* **8**: 367–380.
- Crick NR, Werner NE. 1998. Response decision processes in relational and overt aggression. *Child Development* **69**: 1630–1639.
- Cross SE, Madson L. 1997. Models of the self: Self-construals and gender. *Psychological Bulletin* **122**: 5–37.
- Cunningham CE, Cunningham LJ, Martorelli V, Tran A, Young J, Zacharias R. 1998. The effects of primary division, student-mediated conflict resolution programs on playground aggression. *Journal of Child Psychology and Psychiatry* **39**: 653–662.
- Dobb AN, Spratt JB. 1998. Is the "quality" of youth violence becoming more serious? *Canadian Journal of Criminology* **40**: 185–194.
- Dodge KA, Tomlin AM. 1987. Utilization of self-schemas as a mechanism of interpretational bias in aggressive children. *Social Cognition* **5**: 280–300.
- Dunford FW, Elliott DS. 1984. Identifying career offenders using self-reported data. *Journal of Research in Crime and Delinquency* **21**: 57–86.

- Elliott DS, Ageton SS, Huizinga D, Knowles BA, Canter RI. 1983. *The Prevalence and Incidence of Delinquent Behavior: 1976–1980 (The National Youth Survey Rep at No. 26)*. Behavioral Research Institute: Boulder, CO.
- Elliott DS, Huizinga D, Ageton SS. 1985. *Explaining Delinquency and Drug Use*. Sage: Beverly Hills, CA.
- Gilligan C, Lyons N, Hammer T. 1990. *Making Connections: The Relational World of Adolescent Girls at Emma Willard School*. Harvard University Press: Cambridge, MA.
- Guerra GG, Slaby RG. 1990. Cognitive mediators of aggression in adolescent offenders: 2. Intervention. *Developmental Psychology* 26: 269–277.
- Harter S. 1998. The development of self-representations. In *Handbook of Child Psychology: Social, Emotional, and Personality Development*, 5th edn. Damon W, Eisenberg N (eds). Wiley: New York; 553–617.
- Harter S. 1999. *The Construction of the Self: A Developmental Perspective*. Guilford: New York.
- Harter S, Bresnick S, Bouchev HA, Whitesell NR. 1997. The development of multiple role-related selves during adolescence. *Development and Psychopathology* 9: 835–853.
- Harter S, Monsour A. 1992. Development analysis of conflict caused by opposing attributes in the adolescent self-portrait. *Developmental Psychology* 28: 251–260.
- Henggeler SW. 1989. *Delinquency in Adolescence*. Sage: Newbury Park, CA.
- Henington C, Hughes JN, Cavell TA, Thompson B. 1998. The role of relational aggression in identifying aggressive boys and girls. *Journal of School Psychology* 36: 57–477.
- Higgins ET, Bond RN, Klein R, Strauman T. 1986. Self-discrepancies and emotional vulnerability: How magnitude, accessibility, and type of discrepancy influence affect. *Journal of Personality and Social Psychology* 51: 5–15.
- Higgins ET, Klein R, Strauman T. 1985. Self-concept discrepancy theory: A psychological model for distinguishing among different aspects of depression and anxiety. *Social Cognition* 3: 51–76.
- Hoyt S, Scherer G. 1998. Female juvenile delinquency: Misunderstood by the juvenile justice system, neglected by social science. *Law and Human Behavior* 22: 81–107.
- Jordan JV, Kaplan AG, Miller JB, Stiver IP, Surrey JL. (eds). 1991. *Women's Growth in Connection: Writings from Stone Center*. Guilford: New York.
- Kazdin AE. 1995. *Conduct Disorders in Childhood and Adolescence*, 2nd edn. Sage: Thousand Oaks.
- Lochman JE, Dodge KA. 1998. Distorted perceptions in dyadic interactions of aggressive and nonaggressive boys: Effects of prior expectations, context, and boys' age. *Development and Psychopathology* 10: 495–512.
- Lochman JE, Wells KC. 1996. A social-cognitive intervention with aggressive children: Prevention effects and contextual implementation issues. In *Preventing Childhood Disorders, Substance Abuse, and Delinquency*, Peters RD, McMahon RJ. (eds). Sage: Thousand Oaks; 111–143.
- Maccoby EE, Jacklin, CN. 1974. *The Psychology of Sex Differences*. Stanford University Press: Stanford, CA.
- Maccoby EE, Jacklin CN. 1980. Sex differences in aggression: A rejoinder and reprise. *Child Development* 51: 964–990.
- Moretti MM, Higgins ET. 1990. Relating self-discrepancy to self-esteem: The contribution of self-discrepancy beyond actual-self ratings. *Journal of Experimental Social Psychology* 26: 108–123.
- Moretti MM, Higgins ET. 1999. Own versus other standpoints in self-regulation: Developmental antecedents and functional consequences. *Review of General Psychology* 3: 188–223.
- Moretti MM, Rein AS, Wiebe VJ. 1998. Relational self-regulation: Gender differences in risk for dysphoria. *Canadian Journal of Behavioural Science* 30: 243–252.
- Moretti MM, Wiebe VJ. 1999. Self-discrepancy in adolescence: Own and parental standpoints on the self. *Merrill-Palmer Quarterly* 45: 624–648.
- OJJDP Statistical Briefing Book. 1998. <http://ojjdp.ncjrs.org/ojstatbb/qa253.html>.
- Parke RD, Slaby RG. 1983. The development of aggression. In *Handbook of Child Psychology: Vol. 4. Socialization, Personality, and Social Development*, Mussen PH. (ed.). Wiley: New York; 547–641.
- Reich W. 2000. Diagnostic interview for children and adolescents (DICA). *Journal of the American Academy of Child and Adolescent Psychiatry* 39: 59–66.
- Reich W, Shayka JJ, Taibleson C. 1991. *Manual to Accompany the Diagnostic Interview for Children and Adolescents – Revised*. Washington University Press: St. Louis, MO.
- Rys GS, Bear GG. 1997. Relational aggression and peer relations: Gender and developmental issues. *Merrill-Palmer Quarterly* 43: 87–106.
- Snyder HN, Sickmund M, Poe-Yamagata E. 1996. *Juvenile offenders and victims: 1996 update on violence*. Office of Juvenile Justice and Delinquency Prevention: Washington, DC.
- Statistics Canada. 1999. New York. <http://www.statcan.ca/english/Pdgd/State/Justice/legal14.htm>.
- Stein K, Markus HR. 1994. The organization of the self: An alternative focus for psychopathology and behaviour change. *Journal of Psychotherapy Integration* 4: 317–353.
- Steinberg L. 2001. We know some things: Adolescent-parent relationships in retrospect and prospect. *Journal of Research on Adolescence* 11: 1–20.

- Stern D. 1985. *The Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology*. Basic: New York.
- Strauman TJ, Higgins ET. 1987. Automatic activation of self-discrepancies and emotional syndromes: When cognitive structures influence affect. *Journal of Personality and Social Psychology* **53**: 1004–1014.
- Surrey J. 1991. The self-in-relation: A theory of women's development. In *Women's Growth in Connection: Writings for the Stone Center*, Jordan J, Kaplan V, Miller AG, Stiver JB, Surrey J. (eds). Guilford: New York; 51–66.
- Webster-Stratton C. 1991. Strategies for helping families with conduct disordered children. *Journal of Child Psychology and Psychiatry and Allied Disciplines* **32**: 1047–1062.
- Werner NE, Crick NR. 1999. Relational aggression and social-psychological adjustment in a college sample. *Journal of Abnormal Psychology* **108**: 615–623.

Copyright of Behavioral Sciences & the Law is the property of John Wiley & Sons Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Copyright of Behavioral Sciences & the Law is the property of John Wiley & Sons, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.