

Aggressive Girls' Health & Parent-Daughter Conflict

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Using a sample of 462 adolescent girls, this study addressed physical and emotional health problems that aggressive girls may experience relative to non-aggressive girls, and the role of the parent-daughter relationship in the association of aggression and health problems. Compared to non-aggressive girls, girls who were highly aggressive, experienced significant physical and emotional health problems and were at higher risk of having problems in their relationships with their parents. A developmental contextual approach to intervention is suggested as a strategy to both respond to the individual needs of aggressive girls and to influence the ability of the social environment to support their healthy development. Social policies that acknowledge relationships as a key determinant of health are suggested to support transdisciplinary partnerships with the capacity to develop, and systematically evaluate, intervention outcomes to ensure that programs are effective in evoking improved and sustained health outcomes for aggressive girls.

Over the past decade, there has been increased interest in girls who display aggressive behaviour problems. Research, programming, and policy initiatives to understand and meet the developmental needs of aggressive girls are essential because aggressive behaviour problems in childhood are strongly correlated with similar problems in adulthood (ages 8 to 42) for both girls and boys (Kokko & Pulkkinen, 2005). Although fewer girls than boys exhibit consistently high levels of aggressive behaviour problems, those girls who are highly aggressive tend to experience a range of psycho-social problems that are similar to or

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greater than their male counterparts (Moffitt et al., 2001). The historical lack of attention to the risks for aggressive girls may relate to the fact that girls do not accelerate to the high levels of delinquency and criminality that aggressive boys reach and, therefore, do not pose as salient a social concern. Some fundamental gender differences in the social goals of girls and boys may underlie these gender differences in the expression of aggressive behaviour problems in adolescence and adulthood. Whereas boys tend to strive for dominance in the peer group, girls strive for connectedness. Boys' aggression in childhood, adolescence, and adulthood is often publicly displayed, placing community members at risk. In contrast, girls' aggression is more likely to unfold in the context of close relationships. There is, nevertheless, significant reason to identify highly aggressive girls early in their development, not only to prevent the development of serious psychological problems for the girls themselves, but also to interrupt the inter-generational transfer of aggressive behaviour problems. These girls become young women with undeveloped social capacity and are, therefore, ill equipped to become the mothers of the next generation. In this paper, we assess a group of aggressive girls in early adolescence for indications of emerging health problems and examine whether these health problems are associated with concurrent difficulties in the girls' primary family relationships – with their parents. The present study addresses three questions: Are aggressive girls more likely to have physical and emotional health problems than non-aggressive girls? Do aggressive girls have more problems with their parents than non-aggressive girls? and Does the quality of the parent-daughter relationship play a role in the association of aggression and health problems?

There is a growing body of research to suggest that the nature of girls' aggression differs somewhat from that of boys. Both boys and girls exhibit aggressive behaviours in the early years of life, with a peak at around ages two and three (Hay, 2005; Tremblay et al., 1999). As children acquire language and social skills, their rates of aggression decrease through early childhood, with girls' aggression decreasing more rapidly than boys. In childhood, there are well marked gender differences in aggression: Physical aggression comprises a higher proportion of boys' aggressive acts and indirect, non-physical aggression comprises a higher proportion of girls' aggressive acts (Bjorkqvist et al., 1992). These gender differences may be based, in part, on the different socialization experiences of girls and boys: Aggression is tolerated more in boys and actively discouraged in girls for whom pro-social behaviours are highly encouraged (Eron, Huesmann & Zelli et al., 1991). For girls, in particular, the atypical persistence of physical aggression may signal a significant gap in their socialization, which may, in turn, put them at a disadvantage as they meet developmental challenges in childhood, adolescence, and adulthood.

There is considerable evidence for the link between girls' aggression and health problems from both concurrent and longitudinal research. Bardone et al., Moffitt, Dickson, Stanton & Silva (1998) assessed this link in the Dunedin study. Girls who were aggressive at age 15, when followed up at age 21, generally reported poorer health and had a lower Body Mass Index (BMI) than non-aggressive girls (Bardone et al., 1998). Not only do aggressive girls experience more general health problems, but there is also evidence that they experience more gender-specific health difficulties. They are more likely than non-aggressive girls to have: Experienced gynecological problems, more sexual partners, contracted a sexually transmitted disease, used birth control pills, and experienced pregnancy by late adolescence (Bardone et al., 1998; Serbin et al., 1991)

There is substantial empirical support for a developmental-contextual perspective on the development of aggressive behaviour problems (Cairns & Cairns, 1991; Magnusson, 1988). In other words, explanations for the development of aggression lie both within individual children's make-ups and within the contexts or relationships in which children grow up. As we considered the potential risks for health problems of aggressive girls, we were guided by a developmental-contextual perspective. What might it be about the make-up of aggressive girls themselves that would interfere with healthy physical and emotional development? The link between physical aggression and lack of self-regulation of thought, behaviours, and emotions (Seguin & Zelazo, 2005) may in part underlie the putative link between aggression and health, at least for physically aggressive girls. Those girls who are at risk for being physically aggressive because they cannot or do not regulate their thoughts, behaviours, and emotions, may be at risk for similar self regulation problems when it comes to health behaviours (e.g., hygiene, eating behaviours, risk-taking behaviours). The chronic difficulties that these girls experience in regulating their thoughts, behaviours, and emotions may contribute to their inability to become self-sufficient and capable of planningful in meeting their health needs through adolescence and into adulthood. Hence, individual characteristics of aggressive girls may comprise part of the process that contributes to the development of significantly higher health problems for aggressive girls as they move into adulthood (Bardone et al., 1998).

The complementary perspective on the development of adjustment difficulties focuses on the relationships or contexts in which girls grow up. There is strong evidence that difficulties within the family, a child's primary social context, contribute to the development of aggression (Loeber & Stouthamer-Loeber, 1986; Patterson, 1982). The family risks in childhood, such as ineffective parenting and troubled family contexts, appear to operate similarly for boys and girls in contributing to antisocial behavioural problems, (Moffitt et al., 2001). The

family context may be especially salient for girls' development, given that they tend to be more tied into the family and spend more time at home (Maccoby, 1998). Research on the association between a strained family context and children's aggression suggests that family risks may be more strongly associated with girls' than with boys' aggression. The relevant family risk processes include: Pparent-child conflict, poor problem-solving, weak attachment, and and rejection by caregivers (Brook, Whitmena & Finch et al., 1993; Pakaslahti et al., 1998; Pepler & Sedighdeilami, 1998; Sprott & Doob, 1998). In a clinical program for aggressive girls, the Earls court Girls Connection (Pepler, Walsh & Levene et al., 2004), there is a strong focus on the mother-daughter relationship, which has been found to be particularly salient in the ddevelopment of girls' aggression (Fagot & Kavanagh, 1990; Pakaslahti et al., 1998).

At this point, we can only speculate how these strained and ineffective relationships within the family might contribute not only to the development of girls' aggressive behaviour problems, but also to their health problems. There is a strong link between experiences of abuse and girls' development of aggression, particularly for sexual abuse. In a meta-analysis, Kendall-Tackett, Williams, & Finkelhor and her colleagues (1993) found that the highest effect sizes for sexual abuse were for externalizing behaviors, such as sexualized behaviors and aggression. Almost half the victims of child sexual abuse exhibited aggressive or antisocial symptoms. (Kendall-Tackett, Williams, & Finkelhor, 1993). Girls who are chronically exposed to abuse, either directly or indirectly by witnessing family violence, may not only develop aggressive interactional styles, but may also experience post traumatic stress symptoms, which would register as health problems on questionnaire reports. In addition to this specific link, girls who grow up in strained and disorganized families, with ineffective parenting, may lack the consistency in daily living and the scaffolding support from their parents which are essential to the development of health-promoting behaviours. We hypothesize, therefore, that aggressive girls who report difficulties in their family context will be at even greater risk for health problems than those with few family difficulties.

The present study highlights some of the health problems that aggressive girls may experience by addressing three questions: AAre aggressive girls more likely to have physical and emotional health problems than non-aggressive girls? Do aggressive girls have more problems with their parents than non-aggressive girls? and Does the quality of the pparent-daughter relationship play a role in the association of girls' aggression and health problems?

METHOD

Sample

Data for this paper were drawn from a subset of adolescents who participated in a larger longitudinal study of adolescents' antisocial behavior, psychosocial well-being, and their relationships with their parents and peers in Toronto, Canada. The sample for the current study comprised 1177 adolescents who participated in the study in the spring of 1999. The current analysis focuses on female adolescents. A total sample of 462 girls was available for the analyses. The girls' age ranged from 13 to 19, with mean age of 15.7 and standard deviation of 1.2.

Measures

Aggressive behavior. Aggressive behavior was assessed with eight items: Five items from an adapted version of the Conflict Tactics Scale (Straus, 1979) assessing physical aggression ("pushed, grabbed or shoved"; "slapped, kicked or bit"; "threw an object"; "hit or tried to hit"; "choked, punched, or beaten"); and three items from the Relational Aggression Scale (Crick & Grotpeter, 1995) assessing social aggression ("spread rumours or lies about him/her", "when mad, kept him/her out of the group", "ignored him/her when mad"). Students reported on how often they perpetrated these behaviours with same- and opposite-sex friends, as well as with a boy/girlfriend. The original response formats of these items were 5-point Likert scales, ranging from "never happened" to "happened more than 9 times". Because of the low incidence of aggression, each item was transformed to a binary indicator equal to 1 if the individual displayed any evidence of aggressive behaviours and 0 if there was no report of aggression.

Health problems. Health problems were assessed with six scales: Physical problem without known medical cause; eating problems, anxiety, self esteem, depression, and substance use. Physical problems were measured by students' reports on eight items (e.g., "nausea, feel sick"; "vomiting, throwing up") from a shortened Youth Self Report (YSR) (Achenbach & Edelbrock, 1991). Students rated each question on a three-point scale (0: not true, 1: somewhat or sometimes true, 2: very true or often true). A sum of these eight items comprised the measure of physical health problems ($\alpha = 0.78$). Eating Problems were measured by 13 items (e.g., "I stuff myself with food") from the Eating Attitudes Test (EAT-26), (Garner & Garfinkel, 1979). Students reported on how often these problems happened to them. The response formats of these items were 6-point Likert scales, ranging from "never happened" to "always happened". A sum of these 13 items comprised the measure of eating problems with a higher score indicating greater eating pathology ($\alpha = 0.91$). Anxiety was assessed with six YSR questions (e.g., being too fearful or anxious), which were summed for the anxiety score ($\alpha=0.79$). Self

esteem was assessed by four items (e.g., “overall, I have a lot to be proud of”) from the Self-Description Questionnaire (SDQ-II) (Marsh, Byrne & Shavelson, 1988). Students were asked to indicate how well these items described them. Each item was rated on a five-point scale (1=false, 2=mostly false, 3=some times false/true, 4=mostly true, 5=true). A sum of these four items comprised the measure of self esteem ($\alpha=0.89$). The Beck Depression Inventory (BDI) (Beck, Steer & Brown, 1996) was used to assess adolescents' depression. Participants responded on a four-point scale as to how frequently they experienced 19 depressive behaviors (e.g., sadness, crying, irritability) ($\alpha =0.92$). Substance use was measured by seven items from the Self-Reported Delinquency Questionnaire (SRED) (Moffitt & Silva, 1988). Sample items include: How many times in the last 6 months did you get drunk and /or use marijuana. Respondents rated each item on a three-point scale (0=never, 1=once or twice, 2=three or more times). The sum of these seven items comprised the measure of substance use ($\alpha=0.84$).

Conflict with parents was measured with three items from the Conflict Resolution Scale adapted from the Friendship Scale (Parker & Asher, 1993). These items assessed how often adolescents disagreed and fought with their parents, yelled at each other, and stayed angry a long time after arguing. Each item was rated on a five-point scale (1=not at all, 2=a little, 3=some times, 4=pretty often, 5=almost all the time). The sum of these three items formed a measure of adolescents' conflict with their parents for each wave, with higher scores indicating higher conflict between adolescents and their parents ($\alpha=0.81$).

RESULTS

Data analyses proceeded in two stages. In the first stage, Latent Class Analysis (LCA) was used to classify adolescents into different groups according to the severity and pattern of aggressive behaviours. In the second step, a series of logistic regressions was conducted to investigate whether the aggressive girls were more likely to have health problems and whether the quality of the parent-daughter relationship played a role in the association of aggression and health problems.

Latent Class Analysis (LCA) was used to define the classes of aggressive behaviors and determine the profile for each class. Classification through LCA has several advantages over conventional regression analyses that use total scores or cut-off scores (van Lier et al., 2003). In LCA, individuals are classified into (latent) classes directly by the statistical model and a profile for each identified class is provided by the model.

In LCA, five items on physical aggression and three items on social aggression were used as indicators for the aggression class membership. Posterior probabilities from the model were used to assign individuals to

aggression class membership. According to the BIC-based model selection strategy, we found that a three-group model best fit the aggression data. Symptom endorsement profiles for the three-group model are presented in Figure 1.

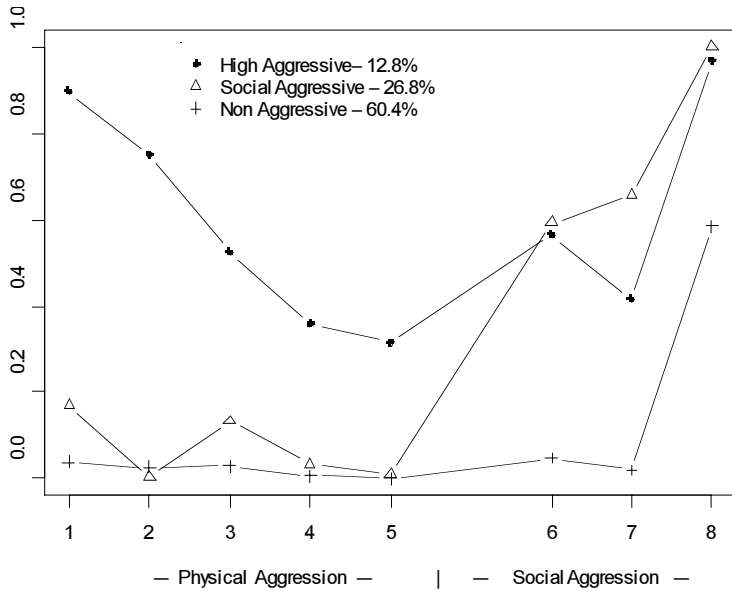


Figure 1. Probability of Being Physical & Social Aggressive

- Note.** Physical Aggression:
- 1: Pushed, grabbed or shoved
 - 2: Slapped, kicked or bit
 - 3: Threw an object at
 - 4: Hit or tried to hit
 - 5: Choked, punched or beaten
- Social Aggression:
- 6: Spread rumours or lies
 - 7: Keep him/her out of group
 - 8: Ignore

The endorsement profiles of girls were highly comparable across the three groups. Girls in group 1 were highly aggressive (12.8% of the sample) and had high probabilities for perpetrating both physical and social aggression. Group 2, representing 26.8% of the sample, was labeled as socially aggressive. Girls in Group 2 had small probabilities for physical aggression, but had elevated probabilities of perpetrating social aggression. The majority of girls (60.4%) fell into the non-aggressive

group, which had low or zero probabilities for both physical and social aggression.

For the following analyses, all health outcome variables and the parent-daughter relationship variable were dichotomized, as far as possible, into the most troubled quarter of girls versus the remainder. Each outcome variable was recoded so that the value 1 indicated high risk and was assigned to adolescents who had elevated scores (i.e., above the 75th – 80th percentile) on a given variable; the value 0 was assigned to all others (i.e., scores up to the 75th – 80th percentile). According to Loeber et al. , Farrington and Stouthamer-Loeber (1998), this approach makes it possible to focus on the girls with clearly elevated levels on risk factors and problem behaviors.

To examine the association between girls' aggression and health outcomes, we conducted a series of logistic regressions. Table I provides the odds ratios (ORs) of having health problems for aggressive girls compared to non-aggressive girls. Table I indicates that aggressive girls are at greater risk of having elevated health problems compared to non-aggressive girls. Girls who were generally high on aggression (both physical and social), were more likely to report physical problems, low self esteem and depression compared to girls who were non-aggressive. Girls who were high on social aggression only were more likely to report anxiety and eating problems compared to non-aggressive girls.

Table I. Odds Ratios of Having Elevated Health Problems

	Aggression Group	
	Social ^a	High ^a
<u>Physical Health</u>		
Physical problem	1.83 *	4.63 ***
Eating problem	2.56 ***	1.95 *
<u>Emotional Health</u>		
Anxious	3.31 ***	2.46 **
Low Self Esteem	2.08 **	3.55 ***
Depression	1.77 *	2.86 ***
<u>Substance Use</u>		
Drug, alcohol and smoke	1.28	2.74 **

a. Non aggression group was reference category.

***p < 0.001; ** p < 0.01; * p<0.05.

Table II provides the percentages of girls having high conflict with their parents within each aggression group. Table II indicates that both highly aggressive girls and only socially aggressive girls were more likely to have high conflict with their parents than non-aggressive girls. The association between girls' aggression and conflict in the parent-daughter relationship was significant, Chi-square (2) = 7.26, P=0.03.

Table II. Aggression and Parent-Daughter Conflict (in Percentages)

	Parent-Daughter Conflict	
	High	Low
Non Aggressive Girls	18.6	81.4
Socially Aggressive Girls	25.0	75.0
Highly Aggressive Girls	33.9	66.1

To examine the association between parent-daughter conflict and health outcomes, another series of logistic regressions was conducted. Table III depicts the odds ratios of having health problems for girls who reported high conflict with their parents compared to girls who reported low or no conflict with their parents. The girls reporting high conflict with their parents were more likely to report lower self-esteem and greater levels of depression and substance use.

Table III. Odds Ratios of Having Elevated Health Problems

	Conflict with Parents	
	Low	High
<u>Physical Health</u>		
Physical problem	1.00	1.89*
Eating problem	1.00	2.41***
<u>Emotional Health</u>		
Anxious	1.00	1.51
Self Esteem	1.00	4.61***
Depression	1.00	3.20***
<u>Substance Use</u>		
Drug, alcohol and smoke	1.00	3.17***

Note. ***p < 0.001; ** p < 0.01; * p<0.05.

To investigate whether the quality of the parent-daughter relationship plays a role in the association of aggression and health problems, we computed the odds ratios of having elevated health outcomes, comparing the girls with high versus low parent-daughter conflicts, within each aggressive group. As can be seen from the results in Table IV, we find that for socially aggressive girls, high conflict with their parents significantly increased their odds of having elevated health problem for all the health variables (except anxiety).

Table IV. Parent-Daughter Relationship Moderates the Association Between Aggression & Health Problems

	Aggression Group by Conflict Group		
	Non High vs. Low Conflict	Social High vs. Low Conflict	High High vs. Low Conflict
<u>Physical Health</u>			
Physical problem	1.90	3.01 *	0.51
Eating problem	2.71 **	3.13 **	0.75
<u>Emotional Health</u>			
Anxious	1.69	1.28	0.97
Self Esteem	2.85 **	12.3 ***	2.25
Depression	3.16 ***	2.51 *	3.37 *
<u>Substance Use</u>			
Drug, alcohol and smoke	2.77 **	2.69 *	4.07 *

Note. Cell entries are odds ratios of having health problems for those girls having high conflicts with parents versus those having low or no conflicts with parents.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Socially aggressive girls who reported high conflict with their parents were three times more likely to have elevated physical and eating problems, 12 times more likely to have low self esteem, and two to three times more likely to have elevated depression and substance use, than socially aggressive girls who reported low conflict with their parents. For highly aggressive girls (both physical and social), reports of high conflict with parents significantly increased their odds of having elevated levels of depression and substance use. Highly aggressive girls who reported high conflict with their parents were three times more likely to have elevated depression and 4 times more likely to have elevated substance use, compared to highly aggressive girls who reported low conflict with their parents.

DISCUSSION

In the present study, we addressed three questions concerning the health of aggressive girls. First, we were interested in determining whether aggressive girls are more likely than their non-aggressive counterparts to experience physical and emotional health problems. Results of the present study are consistent with previous studies (Bardone et al., 1998; Kaltiala-Heino et al., Marttunen, Rimpela & Rantanen, 1999; Pepler et al., Craig, Connelly, & Henderson, 2001; Piko, Keresztes & Pluhar, 2006; Rosen, 2003; Weir, 2001), suggesting that aggressive girls are at risk for a broad range of health problems. A number of studies examining the relationship between girls' aggression and health issues have focused predominantly on girls who demonstrate physical aggression. In this study, girls were grouped into two classes of aggressive behaviour allowing us to determine whether girls who are classified as socially aggressive experience similar health risks as those who demonstrate high levels of both physical and social aggression. Results clearly indicate that socially aggressive girls are also at high risk for a wide range of health problems. Social aggression is covert and, from a social and legal perspective, may be perceived as less costly than physical aggression. From a developmental perspective, socially aggressive behaviours are often described as normative for girls during pre-adolescence and adolescence. Acceptance of social aggression as developmentally appropriate for adolescent girls and as a relatively "safe" form of aggression minimizes the potential impact of this type of aggression on the healthy development of girls.

Findings from this study highlight that girls who are socially aggressive, similar to girls who demonstrate high levels of both physical and social aggression, experience significant physical and emotional health problems relative to non-aggressive girls. This, in turn, serves to underscore the importance of examining the nature of social affiliations and the dynamics of social networks on girls' development. In order to develop and maintain positive and meaningful relationships, individual girls need to have the capacity to engage in healthy interactions with others. Assessing individual capacity together with the context in which interactions are situated is necessary in order to develop appropriate interventions that target the needs of aggressive girls and the contexts in which they live.

The second and third study questions focused on aggressive girls' relationships with their parents and the impact of these relationships on the association between aggression and health problems. Relationships are central to girls' healthy development (Craig, 2005). Girls strive for connectedness and their relationships with their parents are thought to be of particular importance to their healthy development (Pepler & Craig,

2005). Results indicate that those girls classified as highly aggressive (high on both physical and social aggression) are at significantly higher risk of having problems in their relationships with their parents than girls classified as only socially aggressive or non-aggressive girls. In terms of the influence of the parent-child relationship on the association between aggression and health problems girls, across all groups those girls who report high levels of conflict with parents are more likely to have specific health problems than girls who report low conflict with their parents. The finding that socially aggressive girls with higher conflict with their parents experience a broader range of physical and emotional health problems than the highly aggressive girls was unexpected, and further emphasizes the need to view this group of aggressive girls as deserving of attention from both an individual and a contextual perspective. For highly aggressive girls who reported strained relationships with parents, health problems were related to depression and substance abuse. Also of note is that even among non-aggressive girls, those who reported high levels of conflict with their parents were at higher risk for eating problems, self-esteem issues, depression, and concerns related to substance use compared to non-aggressive girls who reported low conflict with their parents.

Findings from this study contribute to the growing body of literature related to the issues and needs of aggressive girls, with particular emphasis on the role that parental relationships have on the physical and emotional health of these young women. Aggressive high school age girls are at risk for a constellation of health problems. Our findings highlight the health risks associated with conflictual parent-daughter relationships for both aggressive and non-aggressive girls. A consistent prediction in research on aggressive girls is the potential for an intergenerational pathway wherein women with limited capacity to develop and nurture healthy relationships within their intimate and social network are the models for their children's development (Pepler & Craig, 2005; Robins, 1986; Stack et al., Serbin, Schwartzman, & Ledingham, 2005). The significance of warm, supportive and positive relationships, particularly with parents, is considered fundamental to the healthy development of all children and is, perhaps, most salient for girls. Identification of aggressive girls early in their development, together with appropriate interventions, may serve to prevent the development of individual psychological problems as well as to enhance the potential capacity of aggressive girls to be nurturing future mothers and thereby prevent an intergenerational cycle of relationship problems.

Aggressive behaviours arise in interactions with members with various social environments. It is important that interventions in support of healthy development of aggressive girls are approached with two lenses: One with a focus on the individual girl and her strengths and challenges and a second with a view to her relationships and social

context (Pepler, 2006). This developmental contextual approach (Pepler & Craig, 2005) acknowledges the importance of assessing aggressive girls' relationships with peers, parents, and other significant social relationships and using this information to design broad spectrum interventions that both respond to the individual needs of aggressive girls and influence the ability of the social environment to support their development. This approach requires a shift from a medical model that focuses on individual pathology to a public health model with a commitment to primary and secondary prevention, as well as to influencing policies that foster cohesive, comprehensive and ongoing programs that support social development and well-being (Jones et al., Bennett, Olmsted, Lawson, & Rodin, 2001; Rafiroiu et al., Sargent, Parra-Medina, Drane, & Valois, 2003; Willms, 2002a).

Certainly, early intervention is imperative to position girls for healthy development across the lifespan. However, Xie, Cairns, & Cairns (2005) suggest that, given the new relationships and behaviours that emerge in the course of development, prevention and intervention efforts should not be limited to the early years. Findings from this study indicate that, at the very least, intervention foci targeted to the health issues of high school age aggressive girls should include support for the individual girl, the parent-child relationship, and the school community. A broad spectrum approach to intervention acknowledges that children are members of a family and that families are situated within communities (Romano et al., Tremblay, Boulerice & Swisher, 2005). Parent-child assessment and interventions could include measure of age appropriate parenting skills, the cohesiveness of the family unit, and the extent to which parents are engaged with their children (Willms, 2002a). An extension of this nuclear family focus would be an examination of how these factors are affected by the peer groups, neighbourhoods, and communities in which aggressive girls and their families are embedded (Willms, 2002a). Data from the current study suggest that non-aggressive girls who experience high levels of conflict with their parents would also benefit from inclusion in interventions targeted at the parent-child relationship.

For adolescents' experiencing stress and/or conflict at an individual level, or within their families and communities, the availability of social support in one or more of these contexts may serve to buffer the negative effects of these experiences (Barrera, Chassin & Rogosch, 1993; Romano et al., 2005). High school age girls spend much of their day in the school community making it an accessible environment in which to nest comprehensive interventions. It is important to identify characteristics of the school environment and to delineate which of these may be influential in the experiences of vulnerable individuals (Willms, 2002a). Bonny et al., Britto, Klostermann, Hornung, and Slap, (2000) report that adolescents who feel connected to their schools and their

families demonstrate safer social behaviours and have better health outcomes. Higher academic achievement and extracurricular involvement were also positively related to school connectedness. Enhancing adolescents' sense of connectedness with their school environment is suggested as a strategy to support students at highest risk of emotional distress, depression, violence, substance abuse, and sexual issues (Bonny et al, 2000; Resnick, Harris, & Blum, 1993). School and community environments provide an opportunity for professionals from multiple disciplines to respond collaboratively and coherently to shared questions and concerns related to the health issues of aggressive girls.

There is substantial evidence that relationships are important to the health of girls. Willms (2002b) proposes that the provision of the best possible environment for children is the foundation of social policy in Canada. The delivery of programs and services for children falls within provincial control; within the provinces the school system serves as the focus for operationalizing the national commitment to equal opportunity for children— in both academic and social realms (Willms, 2002b). At another level, community resources targeted to children and families are supported by municipal governments. It is apparent that, within Canada, the well-being of children is a stated priority across all levels of government. As such, it is important that strategies aimed at establishing relationships as a key determinant of health are multi-faceted and targeted to appropriate levels of influence and support. Social policies that acknowledge relationships as a key determinant of health need to support the development of programs and infrastructures at federal, provincial and municipal levels to ensure that there is: a) screening and assessment related to the nature and quality of relationships that influence healthy development, b) secured funding for research aimed at understanding factors that contribute to the development and maintenance of girls' aggressiveness, and c) support for direct multi-level, multi-method interventions that focus on the individual and the social context, as well as transdisciplinary partnerships that have the capacity to systematically evaluate the outcomes of interventions to ensure that programs are effective in evoking improved and sustained health outcomes for aggressive girls.

Effectiveness of transdisciplinary initiatives targeted at enhancing aggressive girls' physical and emotional well-being will depend on the level of knowledge and skills brought by each profession to the transdisciplinary partnerships and the integration of the unique strengths to create a coherent and shared approach to planning, implementing, and evaluating broad spectrum interventions. Increasingly, professional education programs are incorporating concepts and competency development in the area of transdisciplinary practice and social and health care policy. Continued emphasis on these dimensions of professional practice, with a focus on public health initiatives, is essential

to multi-level programs in support of aggressive girls' health.

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