



make the transition from elementary to high school [Pellegrini and Long, 2002]. In this study, we assessed whether adolescents who bully their peers are more likely to engage in other forms of power and aggression compared to adolescents who do not report bullying.

The bio-psycho-social model of development [Cairns, 1979; Ford and Lerner, 1992; Magnusson, 1988] forms the theoretical foundation for our research. According to this model, the dramatic biological and social changes that occur in adolescence impact psychosocial development [Brooks-Gunn et al., 1985]. We expected that pubertal changes in early adolescence are reflected in the emergence of sexual harassment as a form of aggression used to gain power and control. We expected some sex differences in the various forms of bullying. We also expected the changing social relationship contexts from same-sex to mixed-sex peer groups in pre- to early adolescence [Connolly et al., 1999] to be reflected in the emergence of bullying within romantic relationships during adolescence. In these relationships, power and control may be established through physical aggression, but also through psychological abuse and other forms of behavior that cause distress.

### **Diversification in Form and Social Relationship context with Age**

Consistent with Moffitt's [1993] notion of heterotypicity, we hypothesized that the propensity to use various *forms* of aggression changes with development as a function of increasing capacities and emerging issues. Bjorkqvist et al. [1992] indicate that physical, verbal, and indirect aggression are developmentally sequenced and linked to advances in language and perspective-taking abilities. We propose that the form of bullying also changes as a function of developmental transformations during puberty. During early adolescence, there is an increased awareness of emerging sexuality and sexual identity. Adolescents can readily acquire power over another by identifying vulnerabilities relating to sexuality and, in turn, use these as a means to bully, through sexual harassment. Our research has shown that the perpetration of cross-sex sexual harassment increases through the early adolescent years and is linked to pubertal development and sex composition of the peer network [Craig et al., 2001; McMaster et al., 2002]. Pellegrini [2001] found an association between bullying and sexual harassment, mediated by dating frequency. We hypothesized, therefore, that sexual harassment

emerges during the early adolescent years and continues through adolescence as a means of asserting power through aggression. We expected that adolescents who bully their peers are more likely to report also perpetrating sexual harassment than those who do not bully.

The relationship context of bullying may also change in concert with biological and social transformations during adolescence. A growing interest in romantic relationships accompanies pubertal development. We were interested in the generalization of power and aggression from bullying within peer relationships to bullying within the context of romantic relationships. We found that students in Grades 6–8 (aged 11–13) who reported bullying others were more likely to be involved in a romantic relationship and more likely to report being verbally and physically aggressive with their romantic partners than students who did not report bullying [Connolly et al., 2000]. The sexual dimension within romantic relationships provides a foundation from which either male or female partners can exert power and control [Capaldi and Gorman-Smith, 2003]. Adolescents who bully may recognize and target the vulnerabilities in a romantic partner to establish interpersonal power in the relationship to a greater extent than adolescents who do not bully. Thus, we hypothesized that adolescents who report bullying are more likely to report perpetrating aggression towards their romantic partner.

### **Sex Differences in Bullying**

Within the present developmental analysis, we were interested in sex differences in the various forms of power and aggression during adolescence. Girls' aggressive behavior problems are generally less prevalent than those of boys [Archer, 2004; Moffitt et al., 2001; Offord et al., 2001]. Although the vast majority of studies of bullying use self-report questionnaires, there are measurement concerns with form of assessment because girls may be less likely to acknowledge perpetrating this form of aggression than boys. In survey research, girls are less likely to report bullying others compared to boys [Charach et al., 1995; Olweus, 1993; Pepler et al., 2004]. In our observational research, the difference between the rate of boys' and girls' bullying was not as great as the survey reports indicated [Pepler et al., 2004]. Although a smaller proportion of girls than boys acknowledge exerting power through bullying, there appears to be a social cost for both girls and boys who bully—they report less closeness and more conflict in relationships

compared with children who do not report bullying others [Pepler et al., 2004]. Given the relationship dynamic in bullying, we are also concerned that girls and boys who use their power aggressively with peers will transfer this dynamic to interactions with romantic partners.

There is evidence from our observational research that girls who bully may be establishing patterns of power and aggression in the context of both same- and opposite-sex relationships. We observed elementary aged girls bullying boys and other girls at approximately equal rates: In our first study, 52% of the victims of girls' bullying were boys and 48% were girls [Craig and Pepler, 1997]. In our second study, we observed girls bullying boys in 45% and other girls in 55% of the episodes in which girls were the aggressors [Pepler et al., 1998]. In both studies, boys were much more likely to bully other boys than to bully girls, which may relate both to the nature of boys' interactions, as well as to a social norm against male to female aggression [Archer, 2000]. Research on aggression within adolescent romantic relationships reveals few sex differences: girls are as likely to perpetrate dating aggression with their partners as are boys [Connolly et al., 2000]. In a meta-analysis of sex differences in partner aggression, Archer [2000] found that among young, dating couples, females tended to report using more physical aggression than males; however, the effect size was modest. Within a romantic relationship, Archer notes that there is a strong norm of men not hitting women, which may enable the women to engage in physical aggression with little fear of retaliation. We hypothesized, therefore, that boys are more likely to report higher levels of bullying and sexual harassment than girls, but that boys and girls do not differ in reports of aggression within dating relationships.

## METHOD

Cross-sectional data for this study were drawn from a study of bullying in late elementary school and high school. There were two independent samples of students: one from elementary school (Grades 6–8) and the other from high school (Grades 9–12). The schools were located in a large Canadian city. These cross-sectional samples were part of a larger study with common measures of the various forms of aggression across the two studies.

### Participants

**Elementary school sample.** This sample comprised 504 boys and 457 girls enrolled in Grades 6–8

in seven elementary schools (Kindergarten through Grade 8), with an average age of 12.6 years ( $SD = .9$  years; range 9–14). There were 114 boys and 126 girls in Grade 6, 169 boys and 130 girls in Grade 7, and 223 boys and 201 girls in Grade 8. Approximately 75% of the students had parental consent to participate in the study. Five schools were coeducational and publicly funded and two schools were single-sex independent schools, one for boys only and one for girls only. The majority of students were from Euro-Canadian backgrounds; however, specific data on ethnicity are not available as this information was not collected for the elementary school sample. Most of the adolescents came from two-parent households (74.6%). Of the remaining adolescents, 4.0% lived with both parents separately in joint custody arrangements, 4.7% lived in blended families (with one biological parent and one step-parent), 14.2% came from single-parent homes, and 2.4% were living in other types of family configurations (e.g., with legal guardians). Students from the public schools were from lower- and middle-socioeconomic level families, whereas students from the independent schools were from middle- to upper-socioeconomic level families. Specific information about parental level of education was not collected from this sample.

**High-school sample.** The high-school sample comprised 456 boys and 479 girls enrolled in Grades 9–12 in four high schools, with an average age of 15.7 years ( $SD = 1.2$  years; range 13–19). There were 142 boys and 108 girls in Grade 9, 117 boys and 129 girls in Grade 10, 132 boys and 105 girls in Grade 11, and 66 boys and 137 girls in Grade 12. In each of the schools, approximately 65% of the students had parental consent to participate in the study. Two high schools were coeducational publicly funded schools and two schools were single-sex independent schools, one for boys only and one for girls only. The majority of students were from Euro-Canadian backgrounds (70.6%), with 5.0% African-Canadian adolescents, 13.3% Asian-Canadian adolescents, and 11.1% from other ethnic backgrounds. Most of the adolescents lived in households with both biological parents (72.6%). Of the remaining adolescents, 5.9% lived with both parents separately in joint custody arrangements, 5.5% lived in blended families (with one biological parent and one step-parent), 14.4% came from single-parent homes, and 2.9% were living in other types of family configurations. Eleven percent of the adolescents' fathers and 14% of their mothers had completed high school, while 73.8% of the fathers and 69.7%

of the mothers had gone on to complete at least some post-secondary education.

## Measures

**Bullying.** A shortened version of The Safe School Questionnaire, adapted from Olweus [1989], was administered to obtain self-report of bullying behavior in school. Two items were used to assess involvement in bullying: "How often have you taken part in bullying others in the past 2 months?" scored with a five-point scale (0 = not at all, 1 = once or twice, 2 = now and then, 3 = about once a week, 4 = several time a week); and "How often have you taken part in bullying others in the last 5 days?" scored with a five-point scale (0 = not at all, 1 = once, 2 = twice, 3 = three or four times, 4 = five or more times). A sum score of the two items was used as a measure of bullying behavior. Prior to administration, a class discussion was conducted to define bullying and a definition of bullying, adapted from Olweus [1989], was provided. This definition clarified that bullying was repeated aggression and that the victimized child had difficulty defending him/herself. The definition did not specify sexual forms of bullying, such as sexual harassment. The internal reliability for the bullying questions was .84.

The use of these two items to assess bullying has limitations. Without a listing of the behaviors that might be perpetrated in bullying, such as hitting (physical), name-calling (verbal), and excluding (social), there may be an under-reporting of involvement in bullying. Given that bullying is more consistent with the traditional male stereotype, boys may be more willing to report bullying than girls. Our observations of bullying on the school playground suggest that the discrepancy between girls' and boys' involvement in bullying may not be as great as self-reports imply [Pepler et al., 2004]. Although self-reports of bullying using this form of question have been used extensively, these measurement limitations should be kept in mind in the consideration of sex differences in bullying.

**Sexual harassment.** Sexual harassment was measured using a modified version of the AAUW Sexual Harassment Survey [AAUW, 1993], which asks students to report on how often they perpetrated a variety of sexual harassment behaviors. The questionnaire instructions make explicit that the students are to report on only *unwanted* sexual behaviors. The following modifications were made to the original survey: (1) students reported only on harassment involving peers, not staff; (2) students reported on harassment occurring in the last

2 months, not their entire school lives; and (3) the response rating scale was expanded to five points, with the anchors ranging from 0 = never through 4 = daily. [For more details, see McMaster et al., 2002]. Five items were included: making sexual comments, jokes, movements, or looks; brushing up against someone in a sexual way on purpose; spreading sexual rumors about someone; calling someone a "fag," "dyke," "lezzie," or "queer"; flashing or mooning someone. Because of our interest in the distinction between same-sex and opposite-sex harassment, the students were asked, for each item, how often the behavior was directed to a same-sex and to an opposite-sex peer. Because the item distributions were strongly positively skewed, items were dichotomized into 0 = "never" and 1 = "ever." Internal reliabilities for dichotomous coding were .78 and .86 for same- and opposite-sex perpetration, respectively.

**Dating aggression.** To assess dating aggression, adolescents responded to seven items with reference to behavior with either a current or recent (past 3 months) romantic partner. These items were the same as those for aggression with same- and opposite-sex peers. Three items from the Conflict Tactics Scale [Straus, 1979] assessed physical aggression ("slapped or kicked"; "choked, punched, or beaten"; "threatened with a knife"). Three items from the Relational Aggression Scale [Crick and Grotpeter, 1995] assessed indirect aggression ("spread rumors or lies about him/her", "when mad, kept him/her out of the group", "ignored him/her when mad"). Using a five-point scale, ranging from "never happened" to "happened more than nine times" adolescents reported on perpetrating these behaviors with a boy/girlfriend.  $\alpha$  coefficients were .94 and .83 for physical and indirect aggression, respectively.

**Pubertal development.** Pubertal status was measured in grades 6–8 using the Pubertal Development Scale [Petersen et al., 1988]. On sex-specific versions of the form, girls and boys rated the development of their secondary sex characteristics (ranging from not yet started to completed) including pubic hair, growth spurt, skin changes, facial hair, voice change, breast development, and menarchial status.  $\alpha$  coefficients were .79 for boys and .83 for girls.

## Procedure

Trained research staff administered the questionnaires during regularly scheduled class periods. All participating students had obtained signed parental consent and assented themselves to participate. Because of the sensitive nature of the research, we

included a question at the end of the package inviting students to indicate if they wanted to talk to a member of the research team about issues raised in the questionnaires. We developed a protocol to address the issues that adolescents raised in discussions with senior research staff [cf. Yuile et al., in press].

## RESULTS

### Grade and Sex Differences in the Form and Relationship context of Bullying and Related Behaviors

To examine the developmental patterns of bullying and aggression, we assessed grade and sex differences on summary scores on the bullying, sexual harassment, and dating aggression items. We used grade, rather than age, as an indicator of developmental stage to reflect the influence and importance of school groupings and peer group contexts in the social behaviors of adolescents.

To assess grade and sex differences in the patterns of aggression, we conducted two MANOVAs: one for the scale scores for bullying and same- and opposite-sex sexual harassment; the other for

indirect and physical aggression with dating partners. In the first analysis, there was a multivariate effect of grade,  $F(18, 4,614) = 7.01, P < .001$  and of sex,  $F(3, 1,631) = 45.71, P < .001$ , with no grade by sex interaction. The grade and sex means for all forms of aggression are presented in Table I. Reports of bullying were lower in the elementary grades (6–8) than in the high-school grades (9–12), with a peak at the school transition point (grade 9), followed by lower reports of bullying for students in grades 10 and 12,  $F(6, 1,633) = 4.57, P < .001$ . There were also grade differences in reports of sexual harassment towards same-sex peers,  $F(6, 1,633) = 13.99, P < .001$ , and opposite-sex peers,  $F(6, 1,633) = 11.30, P < .001$ . Consistent with a developmental hypothesis, reports of sexually harassing same-sex and opposite-sex peers were lower in the elementary grades (6–8) than in high-school grades (9–11). Reports of same-sex harassment were somewhat lower among grade 12 students compared to other high-school students and not different from those reported by students in grades 7 and 8. Reports of opposite-sex harassment were highest among grade 9 students and significantly higher than reports by students in grades 6–8. Reports of

**TABLE I. Mean Aggression Scores (Scale 1–5) (and Confidence Intervals) by Grade and Sex**

	Bullying	SS sexual harassment	OS sexual harassment	Social dating aggression	Physical dating aggression
Grade 6					
Boys	1.25 [1.13–1.43]	1.11 [1.03–1.18]	1.05 [.96–1.14]	1.02 [.91–1.13]	1.03 [.96–1.09]
Girls	1.16 [1.02–1.30]	1.16 [.94–1.09]	1.15 [.94–1.13]	1.10 [.92–1.14]	1.06 [.94–1.08]
Total	1.21 <sub>a</sub> [1.12–1.32]	1.06 <sub>a</sub> [1.01–1.12]	1.04 <sub>a</sub> [.98–1.11]	1.02 <sub>a</sub> [.95–1.10]	1.02 [.97–1.06]
Grade 7					
Boys	1.43 [1.33–1.58]	1.16 [1.10–1.23]	1.15 [1.07–1.23]	1.10 [1.02–1.18]	1.06 [1.02–1.11]
Girls	1.17 [1.03–1.32]	1.02 [.95–1.10]	1.06 [.97–1.16]	1.02 [.93–1.12]	1.01 [.95–1.06]
Total	1.31 [1.22–1.41]	1.11 <sub>a</sub> [1.04–1.15]	1.11 <sub>a</sub> [1.05–1.17]	1.07 <sub>a</sub> [1.00–1.13]	1.04 [1.00–1.07]
Grade 8					
Boys	1.57 [1.47–1.68]	1.21 [1.15–1.27]	1.25 [1.18–1.31]	1.09 [1.02–1.15]	1.07 [1.04–1.11]
Girls	1.26 [1.17–1.41]	1.04 [.97–1.10]	1.10 [1.02–1.17]	1.09 [1.01–1.17]	1.03 [.98–1.07]
Total	1.42 <sub>b</sub> [1.35–1.51]	1.14 <sub>a</sub> [1.08–1.17]	1.19 <sub>b</sub> [1.12–1.22]	1.09 <sub>a</sub> [1.04–1.14]	1.05 [1.02–1.08]
Grade 9					
Boys	1.63 [1.52–1.76]	1.41 [1.34–1.47]	1.40 [1.33–1.48]	1.21 [1.13–1.29]	1.02 [.97–1.07]
Girls	1.39 [1.22–1.50]	1.18 [1.10–1.25]	1.31 [1.18–1.36]	1.38 [1.27–1.50]	1.08 [1.02–1.15]
Total	1.53 <sub>b</sub> [1.41–1.59]	1.31 <sub>b</sub> [1.24–1.34]	1.36 <sub>c</sub> [1.30–1.42]	1.27 <sub>c</sub> [1.21–1.33]	1.04 [1.01–1.09]
Grade 10					
Boys	1.48 [1.35–1.62]	1.44 [1.37–1.51]	1.36 [1.28–1.45]	1.20 [1.08–1.26]	1.07 [1.01–1.13]
Girls	1.13 [1.00–1.25]	1.16 [1.09–1.22]	1.21 [1.12–1.29]	1.21 [1.11–1.31]	1.03 [.98–1.09]
Total	1.30 <sub>a</sub> [1.21–1.40]	1.29 <sub>b</sub> [1.25–1.35]	1.28 <sub>c</sub> [1.23–.34]	1.20 <sub>b</sub> [1.12–1.26]	1.05 [1.01–1.09]
Grade 11					
Boys	1.61 [1.49–1.74]	1.38 [1.31–1.45]	1.36 [1.28–1.44]	1.20 [1.12–1.29]	1.05 [1.0–1.10]
Girls	1.15 [1.00–1.29]	1.09 [1.02–1.17]	1.17 [1.08–1.26]	1.30 [1.20–1.39]	1.05 [.99–1.10]
Total	1.41 <sub>b</sub> [1.29–1.48]	1.25 <sub>b</sub> [1.19–1.29]	1.27 <sub>c</sub> [1.21–1.33]	1.24 <sub>c</sub> [1.18–1.30]	1.05 [1.01–1.09]
Grade 12					
Boys	1.33 [1.16–1.51]	1.35 [1.25–1.44]	1.32 [1.21–1.44]	1.36 [1.25–1.47]	1.06 [1.00–1.13]
Girls	1.11 [.99–1.23]	1.14 [1.07–1.21]	1.18 [1.11–1.27]	1.20 [1.12–1.28]	1.03 [.98–1.08]
Total	1.18 <sub>a</sub> [1.11–1.33]	1.21 <sub>c</sub> [1.19–1.30]	1.23 <sub>b</sub> [1.16–1.30]	1.26 <sub>c</sub> [1.20–1.32]	1.04 [1.00–1.09]

Frequencies for the total score for form of aggression with different letter subscripts are significantly different between grades ( $P < .05$ ).

opposite-sex harassment were somewhat lower during the latter high-school grades. Grade 10 and 11 students' reports were not different from those of grade 8 students and grade 12 students' reports were similar to those of students in grades 7 and 8.

The multivariate effect of sex revealed that boys were more likely to report perpetrating aggression than girls. As hypothesized, boys reported significantly higher levels of bullying,  $F(1, 1,633) = 61.13$ ,  $P < .001$ , sexual harassment toward same-sex peers,  $F(1, 1,633) = 103.75$ ,  $P < .001$ , as well as toward opposite-sex peers,  $F(1, 1,633) = 27.69$ ,  $P < .001$ .

The second MANOVA assessed indirect and physical aggression with dating partners. We examined dating aggression separately from bullying and sexual harassment because not all of the adolescents had a current or recent dating partner. Table I presents the mean scores of boys and girls in the elementary and high-school samples. A multivariate effect was found for grade,  $F(12, 1,964) = 6.71$ ,  $P < .001$ , but not for sex, with no grade by sex interaction. Overall, levels of indirect aggression towards dating partners were significantly lower in the elementary grades (6–8) than in the high-school grades (9–12),  $F(6, 983) = 10.64$ ,  $P < .001$ . Reports of indirect aggression in dating relationships were somewhat low in Grade 10; however, the overall level of aggression in Grade 10 did not differ from the level reported by students in Grades 7 and 8. The main effect for grade did not hold up in the univariate analysis of physical aggression within dating relationships. The prevalence of physical aggression toward a dating partner was generally low across grades, ranging from 2% to 24%. An examination of the confidence intervals in Table I indicates that for indirect and physical dating aggression, girls' scores were similar to those of boys. The exception to the pattern of no sex differences arose in Grade 9, when the girls' mean for indirect dating aggression was higher than that for boys, and in Grade 12 when the boys' mean for indirect dating aggression was higher than that for girls.

We have postulated that sexual harassment and dating aggression are forms of bullying that emerge in concert with puberty when early adolescents experience both physical and psychosocial sexual development. Pubertal development was assessed for students in grades 6–8. Although there were no significant correlations between pubertal development and same-sex sexual harassment, several correlations between puberty and opposite-sex sexual harassment were significant. For girls, the correlations for grades 6, 7, and 8 were significant

(.31, .24, and .24, respectively). For boys, only the grade 7 correlation was significant (.21). For dating aggression, the only significant correlations were again for boys in grade 7: pubertal development correlated significantly with grade 7 boys' reports of both physical aggression (.311) and indirect aggression (.316) toward a romantic partner.

### Risk of Engaging in Aggression Among Students who Bully

The second objective was to assess the likelihood of engaging in behaviors that represent a developmental diversification of the form and relationship context of bullying: sexual harassment and dating aggression. We first examined the correlations between students' reports of bullying and engaging in these other forms of power and aggression. Elementary and high-school boys' and girls' reports of bullying were significantly correlated with their reports of sexual harassment and dating aggression, ranging from .16 to .44. Therefore, there is consistency in students' reports of using power and aggression: high scores on bullying were associated with high scores on sexual harassment and dating aggression. To assess the risk of engaging in other forms of relationship aggression for adolescents who bully, we ran four  $\chi^2$  analyses, separately for boys and girls in elementary and high school, which are presented in Table II. The probability of involvement in sexual harassment and dating aggression was compared between youth who reported bullying others at least once in the past 2 months and those who did not report bullying their peers.

**Sexual harassment.** There were significant associations between the level of bullying and boys' and girls' reports of same- and opposite-sex sexual harassment in both elementary and high school. Sexual harassment was more prevalent among students who bullied than those who did not report bullying others. The patterns were consistent for both elementary and high school: both boys and girls who reported bullying others were more likely to report sexually harassing same-sex peers and opposite-sex peers compared to boys and girls who did not bully.

**Dating aggression.** There were also significant associations between bullying and indirect and physical dating aggression. In general, the elementary and high-school boys and girls who reported bullying their peers were more likely to report perpetrating both forms of dating aggression than those who did not bully. The exception to this

**TABLE II. The Association between Bullying and Other Forms of Aggression for Boys and Girls in Elementary and High School**

	Elementary school			High school		
	Non-bully	Bully	$\chi^2$	Non-bully	Bully	$\chi^2$
<b>Boys</b>						
SS sex harass	55/299 (18%)	90/197 (46%)	42.7***	24/119 (20%)	50/100 (50%)	21.6***
OS sex harass	27/301 (9%)	69/197 (35%)	51.9***	18/121 (15%)	43/100 (43%)	21.7***
Soc date agg	12/153 (8%)	29/121 (24%)	13.8***	3/62 (5%)	17/68 (25%)	10.1**
Phys date agg	6/156 (4%)	12/122 (10%)	4.1*	2/63 (3%)	9/68 (13%)	4.3*
<b>Girls</b>						
SS sex harass	7/252 (3%)	17/78 (22%)	31.9***	97/369 (26%)	51/95 (54%)	26.1***
OS sex harass	26/254 (10%)	33/78 (42%)	42.0***	137/374 (37%)	66/101 (66%)	26.8***
Soc date agg	11/150 (7%)	13/60 (22%)	8.7**	77/193 (40%)	24/56 (43%)	n.s.
Phys date agg	1/145 (1%)	5/57 (9%)	9.3**	23/195 (12%)	13/56 (23%)	4.6*

Note: \*\*\* $P < .001$ , \*\* $P < .01$ , \* $P < .05$ .

pattern was for high-school girls' indirect dating aggression: the proportion of non-bullying girls (40%) was similar to the proportion of bullying girls (43%) who reported being indirectly aggressive with their dating partners.

## DISCUSSION

In our research program on bullying, we have come to understand bullying as a relationship problem, because it unfolds in the context of relationships. For children who bully, we are concerned that the interactional style of using power and aggression will generalize to other forms of relationship aggression. In this paper, we have examined the age and sex differences in reports of bullying and the changing form and relationship context of the use of power and aggression in a cross-sectional study of adolescents. Consistent with developmental expectations, the data highlight the increase and decrease in reports of bullying across the adolescent years and the emergence of sexual harassment and dating aggression. The emergence of these forms of behavior coincides with pubertal development, when issues of sexuality are salient. Consistent with this developmental pattern, we found that those children who are more advanced in pubertal development are more likely to use some of these emerging forms of bullying. Opposite-sex sexual harassment was associated with pubertal development for girls in grades 6–8; for boys, opposite-sex sexual harassment was only significant for boys in grade 7. The association between dating aggression and pubertal development was also found only for boys in grade 7. The present data suggest an association between advanced pubertal timing and norm-breaking behaviors. For girls, aggression is inconsistent with social

norms, but the well-documented sex difference in aggression appears to hold only for aggression to a same-sex and not to an opposite-sex person [Archer, 2004]. Therefore, girls who are advanced in pubertal development may risk the general norm violations for aggression to engage, albeit negatively, with boys during early adolescence when interest in the opposite sex is increasing. We observed a similar form of negative engagement on the school playground by younger girls [Pepler et al., 2004]. For boys, advanced pubertal development relative to peers was also associated with norm violations: they were more likely to be aggressive toward a girl through sexual harassment or physical and social dating aggression. This pattern was only seen with boys in grade seven, however, suggesting that the boys who are most advanced in pubertal development in this early stage may be at particular risk for relationship aggression. There is a need for more research to explore these associations. The present data suggest that the timing of pubertal development may be important in association with relationship patterns that bode poorly for both boys' and girls' healthy opposite-sex relationships through adolescence and into adulthood.

The grade differences found in this cross-sectional analysis of bullying and sexual harassment are only somewhat consistent with those found for other forms of aggression. There was a higher level of bullying reported among the high school than among the elementary school students. This pattern is inconsistent with the findings of Nansel et al. [2001], who reported cross-sectional data indicating higher levels in bullying reported by children than by adolescents. An inspection of our data reveals that the prevalence of bullying was highest for boys in Grade 8 and girls in Grade 9, when almost half of the students reported bullying others at least

once in the past 2 months. In a longitudinal analysis, Pellegrini and Long [2002] found that bullying increased when children made the transition from elementary to high school. Although cross-sectional, the data in the present study indicate that the years on either side of a school transition may be a period of risk for bullying. For the boys in our sample, the peak in reports of bullying appeared at the time when they were the oldest in elementary school, whereas for the girls, the peak appeared as they were adjusting to the new social context of high school with new relationships to be established. Our data are consistent with those of Nansel et al. [2001] indicating that reports of bullying were low at the end of high school. The pattern of generally low levels of aggression for older adolescents is consistent with adolescents' increasing capacity for empathy and less tolerance of those who are mean and hurtful [Galambos et al., 2003].

Consistent with a bio-psycho-social perspective of development, sexual harassment emerged as a form of aggression used to gain power and control. The means for both same-sex and opposite-sex sexual harassment increased in a step-wise fashion across the elementary school years to a peak in reporting by both boys and girls in who were Grade 10, after which the means stayed relatively constant. For boys in Grade 10, the prevalence of same-sex sexual harassment (65%) was somewhat higher than that for opposite-sex harassment (56%), whereas for the Grade 10 girls, the prevalence of opposite-sex sexual harassment (43%) was somewhat higher than that for same-sex harassment (36%).

There was a developmental pattern in reports of dating aggression, particularly for indirect aggression, which was more frequently reported by high school than by elementary school students. Björkqvist et al. [1992] highlighted this general developmental progression in the forms of aggression. The present research indicates that the more subtle and sophisticated forms of indirect aggression toward a romantic partner, such as ignoring and exclusion, are more prevalent among older adolescents. The grade difference was not significant for physical aggression with a romantic partner. Fewer than 10% of boys and girls in elementary school reported physical aggression with a dating partner. Among high-school students, the rates were somewhat higher, but generally below 15%.

The sex differences in bullying and sexual harassment were consistent with those found with other forms of aggression, with more boys acknowledging using these forms of aggression than girls [Archer, 2004; Moffitt et al., 2001]. The exception to this

trend was in dating aggression: there were no sex differences in the prevalence of indirect and physical forms of dating aggression. The context of romantic relationships with high levels of intimacy and opportunity for conflict appears to engage a relatively equal number of boys and girls in aggressive interactions. Indirect aggression is reported more frequently than physical aggression in romantic relationships, with over a quarter of high-school boys and girls reporting indirect aggression. The equal rates of boys and girls reporting dating aggression raise concerns for the interactional patterns being established. Dating aggression in these young intimate relationships may foretell longer-term relationship problems and the potential for acceleration into violence.

The concern for bullying as a form of behavior in which children learn to use aggression to establish power in relationships is highlighted in the present study. The cross-sectional data, from an elementary and a high-school cohort, are however limited, in that they cannot be used to test whether there is a developmental progression from bullying to sexual harassment and dating aggression, which requires a prospective study. The present data reveal that the youth who report bullying their peers are also more likely to provide concurrent reports of engaging in developmentally salient forms of aggression—sexual harassment and dating violence. In elementary and high school, bullying is not an exceptional problem: many adolescents engage in bullying their peers occasionally; a small group of students bully at a more frequent rate. The latter group of adolescents, who frequently bully others, may be at high risk for transferring these interactional patterns to other forms of power and aggression, such as workplace harassment, domestic violence, and child abuse. The developmental pathway from bullying to other forms of relationship aggression in adulthood is a critical area for future research.

This study of bullying across the adolescent years draws attention to adolescents who are involved in using aggression to establish power and control over others. Although limited by the self-report and cross-sectional nature of the data, the present study highlights the importance of identifying and intervening with students involved in bullying: those adolescents who bully are more likely to sexually harass their same- and opposite-sex peers and are more likely to be physically aggressive with their dating partners. These boys and girls need to be identified as early as possible to stop the reinforcing dynamics that emerge in bullying and to prevent the further consolidation of their aggressive inter-

actional patterns. When bullying is understood as a relationship problem, a clear objective for intervention can be identified: to enhance relationship capacity and promote healthy relationships in the present in order to lay the foundation for healthy relationships throughout the lifespan.

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