

EXPLORING THE MECHANISMS OF SEX AND GRADE DIFFERENCES IN
RELATIONAL/INDIRECT/SOCIAL AGGRESSION

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By

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differences

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ABSTRACT

The purpose of the project was to explore sex and grade differences observed in RISA (a term used to refer collectively to relational, indirect, and social aggression). Three theories used to explain sex and grade differences, namely, gender socialization theory (Bjorkqvist, 1994; Lagerspetz & Bjorkqvist, 1994; Lagerspetz, Bjorkqvist, & Peltonen, 1988), target-value theory (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Lagerspetz et al, 1988; Crick & Grotpeter, 1995), and symbolic capital theory (Campbell, 1993; Cashdan, 1997; Eckert, 1990; Horney 1934a, 1934b, 1934c) were reviewed, expanded upon, and tested. Theories were tested using questionnaires; however, a small subset of participants also completed individual interviews to add greater depth to information provided by the quantitative data. A second purpose of the project was to use a measure that represents the diversity of RISA items found in other measures currently used by researchers since research has suggested inconsistencies in findings may be related to item composition. Participants were 521 (301 girls and 220 boys) in grades six ($n = 224$), seven ($n = 224$) and eight ($n = 73$) from various Canadian schools (average age of 12.2 years) who completed the questionnaires. From this sample, 28 students completed individual interviews. Results indicated that boys and girls did not differ in regard to self-reported use of RISA; however, interviews and peer nominations indicated that girls have the reputation for engaging in RISA more frequently than boys. Post-hoc analyses indicated that the appearance of sex differences in RISA may be influenced by item choice as some items on the self-report measure were more highly reported by boys, while others were more likely to be reported by girls. There was not a great deal of support for any of the theories tested. Results indicated that the pattern of connections for predictors of RISA frequently did not differ by sex. Factors like perceived risk of or discomfort with using aggression, affective reactions to relationship threats,

and care about one's own or a peer's performance in a number of life domains were connected to
RISA for both sexes

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Dedication

For Jeremy

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Definition</u>
ANGR.....	Degree of anger endorsed in response to interloper
CCF.....	Care about having close friends
CGRD.....	Care about having good grades
CATTR.....	Care about being attractive
COS.....	Care about success in romantic relationships
CPOP.....	Care about being popular
CSPO.....	Care about doing well in sports
FATTR.....	Bothered about friend's greater attractiveness
FFRIEND.....	Bothered by friend's greater number of friends
FGRD.....	Bothered by friend achieving better grades
FOSEX.....	Bothered by friend's greater success in romantic relationships
FPOP.....	Bothered by friend's greater popularity
FSPO.....	Bothered by friend's better performance in sports
HURT.....	Degree of hurt endorsed in response to interloper
JEAL.....	Degree of jealousy endorsed in response to interloper
NOBAGSrev.....	Normative Beliefs about Aggression Questionnaire -- Revised
PAnor.....	Normative beliefs about physical aggression
RISA.....	Relational/Indirect/Social Aggression
RISAnor.....	Normative beliefs about relational/indirect/social aggression
RISApn.....	Relational/indirect/social aggression peer nominations
RISAint.....	Endorsement of relational/indirect/social aggression in response to the interloper
RISAsr.....	Relational/indirect/social aggression self-report

SuppImp.....Importance placed on emotional support, intimacy, and disclosure
SuppLev.....Level of emotional support, intimacy, and disclosure
SUPR.....Degree of surprise endorsed in response to interloper
VAnor.....Normative beliefs about verbal aggression

CHAPTER 1 LITERATURE REVIEW

Exploring the Mechanisms of Sex and Grade Differences in Relational/Indirect/Social Aggression

Aggression among adolescent girls has become a very popular topic among researchers in the last ten to fifteen years. In addition, the awareness of the apparent “meanness” of girls outside of academic circles has reached new heights judging by the vast number of books (e.g., Simmons, 2002; Wiseman, 2002), movies (e.g., *Mean Girls*; Fey & Waters, 2004), television shows (Feshbach, 2005), media clips, and internet sites dedicated to the subject. Many such publications often include descriptions of behaviours such as social exclusion (e.g., not being invited to a birthday party), body language (e.g., turning away while another is speaking) and other manipulations of the peer group. Commonly within such publications there is a great deal of energy dedicated to attempting to understand why these behaviours occur and what can be done to prevent what so many describe as a very painful experience.

Among researchers, there has been a shift from measuring aggression in only physical or verbal forms to incorporating behaviours that have been thought to be more representative of many girls’ and women’s experiences. Accordingly, the definitions of aggression have been expanded to include the more subtle behaviours (i.e., exclusion from activities, ignoring, avoidance of eye contact, spreading rumors; Crick & Grotpeter, 1995; Feshbach, 1969). These types of aggressive behaviours are commonly labeled as indirect (Feshbach, 1969), relational (Crick, 1996), or social aggression (Galen & Underwood, 1997; Xie, Swift, Cairns, & Cairns, 2002). Among some research groups, there is currently a debate as to whether the three

constructs of relational, indirect, and social aggression are similar or distinct and which label is best to use. Since this matter is far from being settled empirically, and is beyond the scope of the present pursuit, the term relational/indirect/social aggression (RISA) will be used for simplicity and in recognition of all researchers' work.

In many ways, research into RISA is still in its early stages. Until very recently, much of the work in this area has been largely descriptive, focusing on the work of mapping age and sex differences in the frequency of RISA (e.g., Crick & Grotpeter, 1995) as well as developing methods and measures for use with various age groups. More recently, researchers have been linking RISA to a variety of correlates ranging from group factors like sociometric status and centrality (Cillessen & Mayeux, 2004; Xie, Cairns, & Cairns, 2002) to individual factors like empathy and personality disorders (Fossati, Barratt, Carretta, Leonardi, Graxioli & Maffei, 2004; Loudin, Loukas, & Robinson, 2003).

Possibly one of the most common observations coming from many of the earlier descriptive works in RISA is that girls are often involved in or affected more highly by this form of aggression, relative to other forms of aggression (e.g., direct, physical, and verbal) that are more commonly attributed to boys (e.g., Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Crick & Grotpeter, 1995; Paquette & Underwood, 1999; Russell & Owens, 1999). Also, the frequency of RISA appears to increase at the onset of early adolescence (Archer, 2004; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Crick, Bigbee, & Howes, 1996; Galen & Underwood, 1997; Russell & Owens, 1999; Salmivalli, Kaukiainen, & Lagerspetz, 2000). It is intriguing to speculate about why these proposed sex and age differences exist. Researchers have just begun to build theories and discuss possible reasons for the sex and age differences that are observed in some studies (e.g., Benenson

& Schinazi, 2004; Chesney-Lind, Morash, & Irwin, 2007; Crick, Bigbee, & Howes, 1996; Lagerspetz, Bjorkqvist, & Peltonen, 1988; Lagerspetz & Bjorkqvist, 1994; Richardson & Hammock, 2007; Sippola, Paget, & Buchanan, 2007; Underwood, 2003). To date, however, there has been little systematic testing of many of the suggested theories. The purpose of the present study is to begin to explore some of the possible mechanisms underlying sex and age differences in RISA in terms of three of these given theories.

Current Research on Age and Sex Differences in Relational/Social/Indirect Aggression

Age Differences in RISA

A great deal of research on RISA has focused on children between middle childhood and early adolescence; that is, children ranging from about eight to twelve years of age (e.g., Archer & Parker, 1994; Coie, Cillessen, Dodge, Schwartz, Hubbard, Lemerise, & Bateman, 1999; Crick, 1996, 1997; Crick, Bigbee, & Howes, 1996; Crick & Grotpeter, 1995, 1996; Crick & Werner, 1998; Delveaux & Daniels, 2000; Ellis & Zarabatany, 2007; Kaukiainen, Bjorkqvist, Lagerspetz, Osterman, Salmivali, Rothberg, & Ahlbom, 1999; Murray-Close & Crick, Galotti, 2006; Paquette & Underwood, 1999). Research conducted on other age groups is also quickly increasing in frequency, including preschool (e.g., Crick, Casas, & Ku, 1999; Crick, Casas, & Mosher, 1997; Sebanc, 2003; Vaillancourt, Miller, Fagbemi, Cote, & Tremblay, 2007), mid to late adolescent (e.g., Cillessen, Jiang, West, & Laskowski, 2005; Coyne, Archer, & Eslea, 2006; Owens, Shute, & Slee, 2000b), and adult samples (e.g., Archer, Ireland, & Power, 2007; Bjorkqvist, Osterman, & Lagerspetz, 1994; Hines & Fry, 1994; Lento-Zwolinski, 2007; Walker, Richardson, & Green, 2000; Werner & Crick, 1999). A few studies have been located that are longitudinal in nature or track RISA across two or more of these age groups (e.g., Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Cillessen & Mayeux, 2004; Galen, & Underwood, 1997;

Russell, & Owens, 1999; Salmivalli, Kaukiainen, & Lagerspetz, 2000), however these are not the focus of most research.

Some fairly consistent trends are apparent from reviewing the literature listed above. The first is that RISA appears to be used across the age span. For example Crick, Casas, and Mosher (1997) asked children ranging from three to five years of age to fill out peer nomination instruments (where students list peers who engage in various behaviours, like RISA) measuring RISA and overt aggression. Even at this age boys and girls appear to distinguish RISA from other forms of aggression and prosocial behaviour. Other studies have noted that relational aggression continues to be used by adolescents, young adults, and older adults (Green, Richardson, & Lago, 1996; Lento-Zwolinski, 2007; Linder, Crick, & Collins, 2007; Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001; Walker, Richardson, & Green, 2000; Werner & Crick, 1999).

Interestingly, researchers have noted that RISA appears to increase or peak in frequency during early adolescence. Four studies were located which include multiple age comparison groups within their design (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Galen & Underwood, 1997; Russell & Owens, 1999). These studies indicate that RISA appears to increase in frequency among girls from middle childhood to early adolescence. For example, Cairns, Cairns, Neckerman, Garipey, and Ferguson (1989) compared grades four and seven girls' use of subtle and physical aggression via peer nomination techniques. From grades four to seven, girls' use of RISA increased whilst their use of other forms of aggression declined. Specifically, in fourth grade use of subtle aggression occurred in about 10% of girls' same-sex conflicts but by seventh grade, this proportion increased to over 30%. For boys in this study there was no parallel increase from grade four to

seven. Bjorkqvist, Lagerspetz, and Kaukiainen (1992) examined use of aggression in cohorts of eight, eleven (see Lagerspetz, Bjorkqvist, & Peltonen, 1988 for data specific to the latter age group), and fifteen-year old boys and girls using peer nominations. Results of these two studies indicated that age eight girls used some forms of RISA (e.g., becoming friendly with someone else as revenge) but not others (e.g., gossiping). At age eleven the differences between girls' and boys' use of aggression became more obvious. Specifically, eleven-year old girls used a wider variety of types of RISA, and used them more frequently than boys and eight-year old girls (e.g., telling untruths behind back, getting others to exclude someone, sulking, getting others on one's side, and pretending to not know someone). These sex differences remained significant at age 15, but the overall frequency of the use of this form of aggression appeared to decrease somewhat.

Sex Differences in RISA

Two aspects of sex differences can be identified in the literature. The first describes differences in the prevalence of RISA and the second describes differences in the correlates or outcomes associated with RISA.

In regard to prevalence, there is some research indicating that girls engage in RISA more frequently than boys (e.g., Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Feshbach, 1969). Specifically, Crick and Grotpeter (1995) noted that in a sample of children from grades three to six, girls were more likely to be nominated by their peers as using RISA, and were more likely to be represented in a group of individuals that frequently use RISA. That is, girls were more likely than boys to score at least one standard deviation above the mean on peer measures of RISA.

Interestingly, this sex difference in the prevalence of RISA does not appear until late childhood or early adolescence (French, Jansen, & Pidada, 2002). For example, Crick, Casas, and Mosher (1997) asked preschool children to indicate their peers' level of aggression (e.g., subtle, physical, verbal). Results indicated that girls and boys did not differ on any type of

aggression. Similar results were found in other studies using samples of children in preschool and early elementary (grades two and three) school (e.g., Henington, Hughes, Cavell, & Thompson, 1998; McEvoy, Estrem, Rodriguez, & Olson, 2003).

Results from a longitudinal study support the idea that sex differences emerge more clearly in early adolescence. Cairns et al. (1989) conducted a longitudinal analysis of boys' and girls' aggressive behaviours (e.g., verbal, physical, and social ostracism) over a period of six years beginning when participants were in fourth grade. Although a formal measure of RISA was not included in the study, interviews were conducted to explore participants' conceptions of peer conflict. Through the course of these interviews, the authors identified themes of physical aggression, RISA, and conflict denial. Most interestingly, in grade four, themes related to RISA were not prominent in either boys' or girls' interview responses, however, among the grade seven students, topics that are consistent with RISA (i.e., social manipulation through alienation, rumor-spreading, etc.) became the major form of aggression among girls (totaling over one-third of all conflicts discussed) but not among boys.

Similar results were obtained in a quantitative investigation that made cross-sectional comparisons of subtle, physical, and verbal aggression in 8-, 11-, and 15-year-olds using peer nominations (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Lagerspetz, Bjorkqvist, & Peltonen, 1988). Sex differences in RISA were found in the latter two age groups (Lagerspetz et al., 1988 and Bjorkqvist et al., 1992, respectively), but not the first (Bjorkqvist et al., 1992). In addition, RISA appeared to peak for girls at age eleven (Bjorkqvist et al., 1992). These results are replicated by Bosacki (2003) who found no sex differences in use of RISA among eight- to ten-year olds, but found a sex difference among the oldest children she sampled - eleven year olds (grade six students). There is some preliminary evidence that this sex difference persists across

the life span after this early adolescent period, occurring in older adolescents (e.g., ages 18-23; Werner & Crick, 1999) and adults (Hines & Fry, 1994). However, newer evidence suggests that these sex differences dissipate at some point in adolescence (Hess & Hagen, 2006).

It should be noted that several other studies (David & Kistner, 2000; Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Henington, Hughes, Cavell, & Thompson, 1998; McEvoy, Estrem, Rodriguez, & Olson, 2003; Tomada & Schneider, 1997) are frequently cited in reviews (see Archer & Coyne's 2005 review, for example) as providing evidence for the lack of sex differences in RISA. Most of these studies, however, were conducted with pre-school or early elementary school students, with no student being older than ten years of age. Again, a lack of sex differences prior to early adolescence is consistent with findings in the previous review and should therefore not be seen as strong evidence against the observed pattern of sex differences

In a thorough review of the literature for this project, there were three studies located (Delveaux & Daniels, 2000; Rys & Bear, 1997; Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001) that *did not* find the expected sex difference in RISA in late childhood/early adolescence. Specifically, the first study (Tiet et al., 2001) was conducted on a sample of boys and girls ranging from 6 years to 18 years of age with conduct problems. The characteristics of this sample quite likely differ from a regular sample in terms of base rates for aggressive behaviour. Despite the large age range of participants age comparisons were not made. The second study (Delveaux & Daniels, 2000) included children ranging between eight and eleven years of age, but the majority of the sample contained children who had not reached early adolescence. Also Delveaux and Daniels (2000) used a measure of RISA, containing only two self-report items, which may have limited the measurement in terms of construct validity. It is

argued that self-report items are prone to bias when used to measure RISA because of participants' tendencies to rationalize, deny, or otherwise be unaware that they themselves engage in these undesirable behaviours (Lagerspetz & Bjorkqvist, 1994; Lightdale & Prentice, 1994; Owens, Shute, & Slee, 2000a; 2000b). Previous research also suggests that as behaviours become less clearly perceptible to others, the agreement between measurements also becomes less clear. Research supports the idea that self-reports are influenced by social desirability showing that self-reports and peer nominations of RISA tend to correlate less well together than teacher and peer ratings measures. Furthermore there is some evidence that these effects sometimes appear to be more exaggerated in measures of RISA than in direct forms of aggression (Lagerspetz, Bjorkqvist, & Peltonen, 1988; Pakaslahti & Keltikangas-Jarvinen, 2000). As a result self-reports tend to be used in combination with other measures by researchers in the area.

The third study (Rys & Bear, 1997) used an appropriately aged, non-clinical population and reasonable assessment methods but still did not observe sex differences in use of RISA. Participants were students in third and sixth grade. When the data were divided by grade, sex differences were not observed for either grade; given that other studies tend to find sex differences in students from grade six and upwards, this finding is inconsistent with past research. However, when the students were classified into groups based on scores on aggression measures, sex differences emerged. Specifically, 95% of all students who scored one standard deviation above the mean on RISA nominations were girls, whereas 83% of students who scored one standard deviation above the mean in regard to overt aggression were boys. In sum, RISA still seemed to be under the influence of participant sex, even when sex differences were not present for all participants.

Other researchers using younger age groups where overall sex differences are not found have replicated the findings of Rys and Bear (1997) showing that girls tend to be over-represented in groups scoring at the high ends of the continuum on measures of RISA (e.g., Henington et al., 1998). Another related finding is that the proportion of RISA to direct aggression strategies used by boys and girls appears to differ based on sex. For example, in a large sample ($n = 2094$) of eight-, eleven-, and fifteen-year-old boys and girls from various European countries, Osterman et al. (1998) found that in all age groups, girls were rated by peers as using proportionally more RISA (e.g., 41-51%, depending on the age group) than verbal (e.g., 31- 40%) and physical (e.g., 8-14%) forms of aggression, whereas boys were rated by peers as using proportionally more physical (33-38%, depending on age group) and verbal forms (37-47%) of aggression than RISA (19-26%).

In sum it appears that there are some conclusions that can be made regarding use of RISA, sex, and age. First, sex differences in use of RISA appear strongest in early adolescence. However, even though sex differences frequently appear, we must not assume that RISA is completely irrelevant to boys' experiences; boys still use this form of aggression, albeit perhaps less often than girls. Conversely, in those cases where sex differences do not appear the assumption should not be made that sex does not play a role in RISA. This is because girls still tend to choose to use RISA over other forms of aggression, while boys seem to choose more direct forms over RISA. It seems that it would be wise to investigate why sex differences in usage of RISA tend to occur, while also understanding that these factors may still also pertain to boys.

Unlike the sex differences in RISA observed in early adolescence, girls do not necessarily report being targets of RISA more often than boys as one might expect. For example, Crick and

Grottpeter (1996), using self-report measures, asked boys and girls in grades three through six to indicate how often they are the targets of prosocial behaviour, and subtle and overt aggressive behaviours from other peers (sex of peer not specified). Boys and girls reported being victims of RISA to the same extent (on average, a fairly low amount). Paquette and Underwood (1999), using the questionnaire developed by Crick and Grottpeter (1996), found that grade seven and eight boys (mean age of 13 years) reported being victims of RISA as often as their female counterparts (again, not a high amount). However, qualitative and ethnographic studies (Eder, 1985; Merton, 1997) where the activities of girls' interactions are observed or recorded on a daily basis suggest that victimization by RISA occurs much more frequently than is indicated by the quantitative research. Possibly, part of the problem may be that aggressive behaviours are often so subtle that the victims may be unaware of what is happening until the behaviours reach a relatively high level, or there is a strong tendency to deny that even one's closest friends may be the aggressors (Merten, 1997). Or perhaps, ethnographers' gendered expectations or choice of study settings are somehow biasing results (Underwood, 2003). In any case there does not appear to be much research that uses both interviews and quantitative measures within the same study in order to make more direct comparisons of these reporting methods.

As reviewed, sex differences have been observed in the reported frequency of RISA alongside other studies that report a proportionally greater usage of RISA relative to other forms of aggression by girls. Preliminary data also highlight that RISA relates in different ways to outcomes for boys and girls. The most obvious and perhaps important is in regard to the manner in which RISA impacts boys and girls. Although there do not appear to be sex differences in self-reports of victimization experiences, some evidence suggests that girls are more negatively affected by RISA victimization when compared to boys. These results suggest that RISA may be

a more effective strategy among girls in the sense that these strategies appear to be more hurtful or, at least, more meaningful for many girls. For example, Paquette and Underwood (1999) interviewed boys and girls from grade seven and eight after measuring the frequency of victimization. Although boys agreed that they had been the victims of RISA in the past, many were often unable to remember a single incident (56%), while the majority of girls were able to describe at least one incident in great detail (89%). Interestingly other girls were the perpetrators of the majority of the incidents that the girls described. In addition, girls reported responding differently to the victimization than did boys. Girls would report thinking about the incident more often, trying to comprehend the reasons for the victimization, analyzing whether they had deserved the treatment, and contemplating how to become friends with the aggressor compared to boys. In general, girls experienced more negative thoughts and feelings. Finally, the frequency of victimization using RISA was more strongly and negatively related to girls' self-perceptions of athletic competence, physical attractiveness, romantic appeal, closeness of friendships, and self-worth than it was for boys. The research conducted by Paquette and Underwood (1999) also suggests that girls' experiences of overt aggression are not as strongly related to negative outcomes when compared to experiences of victimization by RISA. In contrast, overt aggression and RISA contributed similar amounts in predicting outcomes for boys.

Galen and Underwood (1997) reported similar results to those of Paquette and Underwood (1999) using scenarios of aggressive behaviour. In this study, boys and girls in grades four, seven, and ten were asked to read written vignettes that described behaviours consistent with RISA (i.e., glaring, overhearing peers saying negative things about oneself, and exclusion from an activity) and physically aggressive interactions between same-sex peers (i.e., being hit, shoved, punched, tripped, or beaten by a peer or a group of peers). After reading the

vignettes, participants were asked to indicate the degree of hurtfulness of the situation for the target. Results indicated that all participants (regardless of sex) rated the physical aggression scenarios as more hurtful than the RISA scenarios, which was not surprising since the scenarios depicting physical aggression were quite extreme in nature. Girls, however, found the RISA scenarios to be more hurtful than boys, and boys rated the physical aggression scenarios as more hurtful than the RISA scenarios. In addition, older girls (in grades seven and ten) rated RISA as more hurtful than younger girls (in grade four), while older boys rated RISA as *less* hurtful than younger boys. In sum, although there is evidence that suggests that boys are both perpetrators and victims of RISA, the significance of RISA appears to be greater for girls.

Summary and Limitations of Existing Research

Currently, research has largely focused on describing sex differences in RISA. Explanatory research to identify girls' motivations for engaging in these behaviours is very limited. Similarly, a strong theoretical foundation for understanding these sex differences has not been identified. There are some ideas among researchers in the field that attempt to account for age and sex differences. Three of these explanations will be reviewed along with any related research (which is often quite limited). It should be noted that the theories presented were typically not labeled by the researchers who proposed them, so in the present proposal, names have been assigned for ease of communication.

Why might RISA be used more frequently by early adolescent girls compared to boys as the research seems to suggest? RISA researchers and others from a variety of related disciplines (i.e., evolutionary biology, cultural psychology) have posited three reasons why. The purpose of this section, then, will be to review the theories put forth by various researchers/theorists to explain these differences and to outline any research supporting these theories. Within the

review, the next steps in the research process are outlined along with an articulation of how each theory was tested in the present project.

Explanations for Sex Differences in RISA

Theory 1: Gender-role Socialization Perspective

According to the gender-role socialization perspective (Lagerspetz, Bjorkqvist, & Peltonen, 1988; Lagerspetz & Bjorkqvist, 1994), norms for aggressive behaviour differ by sex. Girls are thought to have internalized messages from the social environment disapproving of direct aggression in most situations, whereas boys are thought to have internalized messages that it is acceptable to demonstrate directly aggressive behaviour (Lagerspetz et al, 1988; Lagerspetz & Bjorkqvist, 1994).

Lagerspetz et al.'s (1988) thoughts about social norms impacting the expression of RISA are very similar to those developed and tested by social learning theorists (e.g., Bandura, 1986; Dodge, 1980) in regard to direct forms of aggression. Cognitive learning theorists state that throughout life, individuals gather information about acceptable and unacceptable behaviours (Bandura, 1973; 1986; Dodge, 1980) and this information is believed to accumulate in a database-like manner within individuals (Crick & Dodge, 1994; Huesmann & Guerra, 1997). The information or norms are then activated in contexts similar to those in which they were originally learned (Huesmann & Guerra, 1997). The norms are said to guide behaviours such as aggression, both in terms of the type (e.g., shouting versus hitting) and frequency of behaviour emitted within that particular context. Researchers have further subdivided normative beliefs into general and situation-specific types (Huesmann & Guerra, 1997). A general belief is "it is okay to call someone names" whereas a situation-specific belief might be "it is okay to call someone a name when she/he has said something mean to you first".

A number of studies (e.g., Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000; Huesmann, Guerra, Miller, & Zelli, 1992) have investigated the role of normative beliefs in the prediction of direct (i.e., verbal and physical) forms of aggression in children and adolescents. Two studies were located that also included an outcome measure of RISA in addition to direct forms of aggression (Crick, Bigbee, & Howes, 1996; Huesmann & Guerra, 1997).

When only direct aggression was used as an outcome, modest positive correlations between normative beliefs and number of peer nominations for direct aggression were observed for boys, while normative beliefs about direct aggression and peer nominations for directly aggressive behaviour failed to show any relation for girls (e.g., Huesmann et al., 1992). These findings were consistent across general and context-specific beliefs. On self-report measures of aggression, results seemed more dependent on the contextual factors of the aggressive interaction for girls. Boys' normative beliefs across a variety of situations (e.g., age of target/aggressor, degree of provocation, sex of target/aggressor, sex of aggressor) were all positively correlated with self-reported use of aggression, with the exception of the context of directing aggression toward a girl. That is, boys who believed aggression was okay in a certain situation would also be more likely to report using aggressive behaviour. Girls' endorsement of use of direct aggression when the target was a boy, or when strongly provoked (e.g., when the provoker wielded a knife) evidenced positive correlations with self-reported use of direct aggression. Girls' beliefs about use of direct aggression when directed toward other girls were not related to self-reported behaviour. These findings indicate that other unmeasured factors may be more central in girls' same-sex interactions and use of aggression, or that girls select certain aggressive strategies dependent on the sex of the target.

When a measure of RISA is added to outcome measures of aggression, a positive correlation between girls' normative beliefs about aggression and aggressive behaviour appears (Huesmann & Guerra, 1997). Huesmann and Guerra (1997) investigated the relation between normative belief systems about verbal and physical aggression (but not RISA) and peer nominations of aggressive behaviour (verbal, physical and RISA) in a large sample of inner-city elementary school children in grades one to five. Responses on normative belief scales about direct aggression positively correlated with peer nominations of aggression for both boys and girls, meaning that the more "ok" children thought it was to engage in aggressive behaviours, the more likely they were to be nominated as engaging in aggressive behaviours. It should be noted that when examining correlational patterns specific to various contexts, girls' normative beliefs about direct aggression toward girls again did not relate to peer nominations even though the outcome measure (but not the measure of normative beliefs) included some RISA items.

In those instances where correlations between normative beliefs and aggression were observed, it is difficult to know whether these beliefs were contributing to RISA, or to direct aggression since the outcome variables were not separated based on type of aggressive behaviour. More importantly normative beliefs about RISA were not examined in either study, so it is unknown whether these beliefs might relate to aggressive behaviour. Also of interest here is that the correlations between girls' beliefs and their aggressive behaviours (on the combined aggression scale) were lower (in the .06 to .10 range) than those observed in boys in most contexts measured (in the .19 to .23 range). Huesmann and Guerra suggested that these lower correlations might have occurred because the normative belief scale did not actually measure normative beliefs about RISA, only verbal and physical aggression.

One study actually investigated the perceived acceptability of RISA in addition to verbal and physical aggression (Crick, Bigbee, & Howes, 1996). Behavioural norms were conceptualized in a slightly different manner than by Guerra et al's research group. Specifically, Crick et al. defined norms as what most individuals would actually do in a situation, rather than asking what behaviours are okay or acceptable to engage in. Participants aged 9 through 12 years were asked the open-ended question, "What do most boys (girls) do when they are mad at someone?" They were then given time to write down their responses without further prompting. Results indicated that participants thought that in same-sex interactions, girls were more likely to engage in behaviours consistent with RISA (43% of responses), such as rolling one's eyes, saying mean things, lying about, or excluding others than were boys in same-sex interactions (5% of responses). Older girls were more likely to indicate that other girls would typically use RISA when angry as compared to younger girls (46% and 18% of responses, respectively). Finally, boys were significantly more likely than girls to view physical aggression as typical or normative angry behaviour for girls (36% versus 10%, respectively). The authors interpreted this last finding as indicative of boys being unaware of the intricacies of girls' conflicts, because they are not typically directly involved.

The age differences observed in Crick et al's study indicating that RISA is increasingly viewed as more normative for girls are worth noting. It is often suggested by a variety of theorists that normative belief systems are influenced by age. Specifically, social cognitive theorists suggest younger children have less well-developed belief systems that become stronger as they move into and through middle childhood. The gender intensification hypothesis (Hill & Lynch, 1983) posits that the onset of early adolescence is the period in which boys and girls begin to assume culturally appropriate characteristics and behaviours or norms for their own sex.

For example, Berndt and Heller (1986) compared third grade, sixth grade, and university-age students on various sex stereotypes and found that grade six children held the most inflexible beliefs about the traits and behaviours of boys and girls. Other similar works (e.g., Alfieri, Ruble, & Higgins, 1996; Berndt & Heller, 1986; Galambos, Almeida, & Peterson, 1990; Reynolds, Oakes, Haslam, Nolan, & Dolnik, 2000; Werrbach, Grotevant, & Cooper, 1990) indicate that it is increasingly important for both sexes to demonstrate conformity to appropriate sex stereotypes as they move from childhood into adolescence. There is, at this time, very little research investigating the developmental changes in normative beliefs for RISA.

In sum there is some preliminary research indicating that normative belief systems may be instrumental in determining behaviours classified as RISA. Specifically, research indicates that believing that it is “okay” to engage in aggressive behaviours is related to children’s actual aggressive behaviour. Also the type of aggression that children choose to engage in (RISA, physical, or verbal aggression) is related to beliefs about what most other children of the same sex would do when angry. Research seems to suggest that normative beliefs about sex-appropriate expression of aggression are more strongly held at older ages. However, the research reviewed herein is limited to a consideration of children under 12 years of age and does not consistently include normative belief items measuring RISA. Most importantly, there has been no research found which has examined whether normative beliefs about RISA are related to individuals engaging in behaviours that are classified as RISA.

To address the age limitations and to gain understanding into how normative beliefs may or may not be connected to RISA, I adapted the existing measures of normative beliefs (i.e., developed by Huesmann & Guerra, 1997 and Huesmann et al., 1992) to include RISA behaviours for participants in grades six through eight. The sex of the actors in the questionnaire

items was varied to include same-sex pairs engaging in various types of aggression (e.g., two girls using RISA, two boys using RISA, two girls involved in verbally aggressive behaviour, and two boys involved in verbally aggressive behaviour). Since the purpose of this research was to understand characteristics of the aggressor that predict use of RISA, and some research suggests that RISA occurring in same-sex contexts may be particularly central, other-sex interactions were not investigated in this study. The following hypotheses were suggested. Hypotheses 1, 2, and 4 were replications of previous research done on younger age groups, while hypotheses 3, 5, and 6 served to extend this area of research.

H1: Girls as a group will rate RISA as more acceptable or normative than boys.

H2: Boys as a group will rate direct aggression as more acceptable or normative than girls.

H3: Girls as a group will rate RISA as more likely to occur when the sex of the responder and provoker are portrayed as female, than when the sex of the responder and provoker are portrayed as male, than will boys as a group.

H4: When responder and provoker are portrayed as male, participants will rate verbal and physical aggression as more likely to occur as compared to when responder and provoker are portrayed as female.

H5: The perceived acceptability of RISA will be positively correlated with peer nominations and self reports of RISA.

H6: RISA will be rated as more acceptable or normative when sex of provoker and responder are female, than when the sex of the provoker and responder are portrayed as male.

Based on the gender intensification theory (Hill & Lynch, 1983) and findings by Crick et al. (1996), it is also expected that any relationships found in hypotheses 1-6 would be stronger for older adolescents than for younger adolescents.

Theory 2: Target Value Theory

Target Value Theory (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Crick, Bigbee, & Howes, 1996; Crick & Grotpeter, 1995; Lagerspetz et al, 1988) is also used to explain the tendency for girls to use RISA to a greater extent than boys. This theory purports that when individuals are aggressing against others, they use the method that will be most effective in causing harm to the other person. According to this theory, RISA is thought to be used by girls for two reasons. First, it has been proposed by Lagerspetz et al. (1988) that the mere presence of certain qualities common to girls' interactions (i.e., self-disclosure, intimacy, frequent interactions et cetera) facilitates use of strategies like RISA. Specifically, rumor spreading is probably more likely to occur in settings where individuals frequently self-disclose personal information. Being subtly unacknowledged in conversations is more likely to be noticed in groups where displays of emotional support tend to occur frequently among individuals, and manipulation of friendship patterns may only be noticed when friendships tend to be exclusive (Lagerspetz et al., 1988). It is suggested that RISA occurs more often among girls, because the relationship qualities are thought to be more common within girls' friendship networks than within boys'.

Second, it has been suggested that the greater value or importance (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992, p. 118) girls place on relationship qualities like intimacy, emotional support, and disclosure leave them vulnerable to strategies which serve to disconnect girls from valued relationships (Crick & Grotpeter, 1995). According to this theory, girls generally use RISA instead of more direct forms of aggression because they believe that other

girls place high value on maintaining relationships (Block, 1983). By definition, RISA typically disrupts and manipulates relationships and so would, in theory, be very effective in upsetting someone who likes to maintain connections to other peers. Boys (in general) are thought to value expressions of physical superiority or dominance and so are more likely to use direct forms of aggression (i.e., physical fighting, verbal insults) to demonstrate the physical weakness of another when angry (Crick & Grotpeter, 1995; Block, 1983). The relationship qualities that are typically thought to be more highly valued by girls than boys are intimacy, self-disclosure, and emotional support. Valuing these qualities is thought to leave girls more vulnerable to RISA, but the exact mechanisms underlying this connection between positive relationship qualities and RISA have yet to be outlined by RISA researchers.

Others (Benenson & Benarroch, 1998; Benenson, Roy, Waite, Goldbaum, Linders, & Simpson, 2002; Benenson & Schinazi, 2004; Parker, Walker, & Gamm, 2002; Roth & Parker, 2001) have found that girls' relationships also appear more subject to jealousy and discomfort regarding their friend's successes within other domains (i.e., academics) and with other people (i.e., same-sex peers and dating). So although girls may be more highly invested in their relationships as suggested by Crick and Grotpeter (1995), they may also be much more insecure about losing these relationships than are boys. Some have suggested that this large degree of both investment and insecurity serves to encourage RISA, thus explaining the sex differences sometimes observed in frequency of RISA. For example Parker, Walker, and Gamm (2002) suggest that because girls are more highly invested in friendships they will tend to be more vigilant of potential threats to the relationship. RISA serves to protect the large investment that girls make in their relationships. Specifically, RISA allows girls to prevent others from showing too much interest in their well-established friends by subtly pushing interested others out of a

friendship circle or limiting their interaction. The benefit of RISA over other forms of aggression is that it often allows the aggressor to remain hidden because the negative intent can be more easily rationalized away by aggressors as non-purposeful (e.g., “I meant to tell you about the party, but I forgot to”) or occurs behind the individual’s back. In this way, targets may not know the specific individual who initiated the attack, or if they do, are often unable to effectively confront the aggressor. Thus, the aggressor is able to retain a positive image among her pre-existing circle of friends, while ensuring that her friends do not get the opportunity to make connections with “other” girls who might be perceived as more interesting or friendship-worthy, thus preventing the loss of the large investment she has made in the friendship.

In sum, target value theory suggests that both the presence and value placed on certain relationship qualities (Crick & Grotpeter, 1995) of peer networks are more common among girls and account for the sex differences in frequency of RISA observed in prior research. However, it has been proposed that the greater investment placed in girls’ friendships works in concert with insecurity to perceived threats to the friendship. As such, from here on, the first part of target value theory will be referred to “Target-Value Theory – Part A Investment in Friendships” while the second aspect involving insecurity will be referred to as “Target Value Theory -- Part B Insecurity about Friendships”. Essentially it is being suggested that target-value theory Part A requires amendment in recognition of research about girls’ sensitivity to relationship threats relative to boys’ reactions.

Research on relationship qualities (Target-Value Theory – Part A).

As mentioned above, target value proponents agree that girls use RISA because girls’ same-sex peer groups place value on connection and maintenance of relationships and not competition for physical status within their peer group as is thought true of boys (Crick & Grotpeter, 1995; Galen & Underwood, 1997). This statement is based on work that has attempted

to outline the characteristics and functions of children's same-sex peer interactions and has concluded that boys and girls' same-sex groups tend to differ in many ways in terms of activities, network structures, and friendship qualities (e.g., Feiring & Lewis, 1987; Furman & Burmester, 1985; Maccoby, 1988, 1998; Parker & Asher, 1993; Reisman, 1990).

For example, Eleanor Maccoby (1988) has noted that most girls and boys seem to operate in sex-segregated groups from an early age, a trend that appears to continue until early adolescence. She also states that boys and girls occupy separate cultures in which different belief systems and modes of interaction are present. Of late, Maccoby's work has been referred to as the "Two Cultures" theory (Underwood, 2003). Similarly, Carol Gilligan (1982) in a series of qualitative studies concluded that girls are generally socialized to value intimacy, emotional supportiveness, and typically focus on maintenance and care for relationships. Girls form a sense of self through these connections which is why relationships bear such importance to their well being (Gilligan, 1982).

Empirical research indicates that emotional support, intimacy, and self-disclosure become important in girls' relationships in early adolescence. Definitions of emotional support, intimacy, and self-disclosure overlap to a very large extent across studies. Most definitions of emotional support include a sense of caring or trust. For example, House (1981) defines emotional support as "providing empathy, caring, love, and trust" (p. 24). Harter includes the provision of affection, enhancement of another's sense of self-worth, care for another's feelings, and listening to a friend when upset as indicators of an emotionally supportive relationship (Harter, 1990). Intimacy is often defined very similarly, including a sense of genuineness, trust and other features of emotional supportiveness (Bigelow & La Gaipa, 1980; Sharabany, Gershoni, & Hofman, 1981; Sullivan, 1953). Intimacy has also been defined less globally as the degree of

comfort or frequency with which one self-discloses personal information to another (Buhrmester & Furman, 1987; Buhrmester & Prager, 1995). One of the functions of self-disclosure is the establishment and maintenance of close relationships between those who share the personal information.

Emotional support and intimacy from same-sex peers (as opposed to parents) takes on greater importance from mid- to late childhood (Furman & Buhrmester, 1992). Girls from a very early age tend to report their relationships as being higher on emotional support and intimacy than boys. For example, Furman and Buhrmester (1985) assessed grade five and six boys' and girls' perceptions of relationship quality with their best friends. Girls reported placing greater importance on friendships than boys generally. Girls also reported greater self-disclosure of secrets, affection, and enhancement of worth than boys in their relationships with best friends. Similarly, in Parker and Asher's (1993) research on reciprocally nominated friends (in grades three through five), girls, as compared to boys, rated their relationships higher in terms of intimate exchange (i.e., tell each other secrets), problems, validation and caring (i.e., makes partner feel good about herself, sticks up for one another if someone talks behind one's back), help and guidance (i.e., do special favors for each other). This trend appears to continue into mid- and late adolescence, where girls generally report their same-sex friendships as more supportive emotionally than do their male counterparts (e.g., Cauce, Felner, & Primavera, 1982; Robinson, 1995; Slavin & Rainer, 1990).

Degree of emotional support has been found to be important for both boys' and girls' sense of well-being and health (Piko, 1998) and some preliminary evidence exists that emotional support may be especially crucial for the psychological well-being and health of girls (Piko, 1998; Slavin & Rainer, 1990). Piko (1998) examined the relation between various types of

support (emotional, material, informational, etc.), psychological health indicators (e.g., irritability, sleep troubles, pessimism) and psychosomatic symptoms (e.g., back pain, tension headaches, chronic fatigue, heart palpitations, and GI tract problems) in a sample of adolescents ranging from 14 to 19 years. Results indicated that emotional support was negatively correlated with psychological symptoms for individuals regardless of sex. However, lower levels of emotional support were related to higher levels of psychosomatic symptoms and number of physician visits over a year period for girls, but not for boys.

Using a prospective design, Slavin and Rainer (1990) investigated the impact of emotional support from a friend on mental health outcomes among students aged 14 to 19 years of age. Low levels of emotional support from a friend were related to concurrently higher self-reported symptoms of depression for girls at both points of measurement (eight months apart), while these correlations did not reach significance for boys at either time point. In terms of prediction of depression at Time 2 from initial levels of friend support, results also indicated that emotional support from a friend predicted reports of depressive symptoms one year later for girls (controlling for initial symptoms). For boys, this relationship was non-significant (Slavin & Rainer, 1990). Hence emotional support in same-sex relationships may be especially important for girls.

Similar to findings on emotional supportiveness between girls, research indicates that there are age and sex differences in the expression and expectation of self-disclosure from childhood to adolescence. Self-disclosure is more common in girls' same-sex interactions than in boys' from a very early age. For example, girls have been found to have greater knowledge of their same-sex friends' personal information from the age of seven through late adolescence (Markovits et al., 2001) and talk more about personal issues regarding family, friends, and

physical development from early childhood through late adolescence than do boys (Schulman, Laursen, Kalman, & Karpovsky, 1997). Again the importance of self-disclosure with a same-sex friend increases in importance for both boys and girls from childhood to adolescence (Buhrmester & Furman, 1987), while that with other individuals (i.e., parents) becomes less important over time. However, self-disclosure with peers takes on even greater significance for girls. For example, Buhrmester and Furman (1987) assessed frequency of self-disclosure in children in grade two, five, and eight (ages 7, 10, and 13 years respectively) to various sources (i.e., friends, parents, siblings, grandparents, teachers). In fifth grade, girls reported disclosures with same-sex peers to be as important as self-disclosure to parents, whereas parents were more important to boys. By grade eight, girls rated their same-sex relationships as more self-disclosing than relationships with any other source, including parents. However, boys in grade eight self-disclose as much to same-sex peers as they do to parents and girlfriends. In sum by early adolescence girls' same-sex peer relationships become an important and, perhaps in some cases, singular domain for self-disclosure.

Interestingly, although girls do report greater emotional support, intimacy and/or self-disclosure than boys from an early age, it appears to fall short of their expectations at least in early adolescence (Clark & Ayers, 1993). Clark and Ayers (1993) investigated early adolescents' expectations and experiences within reciprocated same-sex friendships and found that girls expected and received higher levels of empathic understanding (a combination of self-disclosure and emotional support) within their friendships than did boys. However, girls were not satisfied with the level of this empathic understanding within their friendships, whereas boys were quite content with their even lower levels. Generally, girls felt that their relationships fell short of providing the amount of empathic understanding that should exist within these relationships.

It should be mentioned that there have been some studies that have not found sex differences in friendship qualities. For example, Zarbatany, McDougall, and Hymel (2000) did not find sex differences in friendship intimacy among grade five students, but did among grade six students. Similarly, Garcia and Geisler (1988) did not find sex differences in self-disclosure among grade eight to twelve students. Others have commented that the reason for some of these discrepancies between studies are unknown and could be due to a number of factors (Underwood, 2003). It was suggested that it is important for future research to formulate conclusions using objective methods, such as questionnaires administered to larger numbers of students (as opposed to basing conclusions on observations of a small number of individuals) and that students need to be asked to think about specific friendships rather than to give opinions about friendships in general (Underwood, 2003).

Taken together, it appears that girls are often more highly emotionally invested in their same-sex friendships than boys and that although friendship quality is likely important for well-being in both boys and girls, it appears that girls may be more sensitive to lower levels of friendship quality than boys. In this sense, it is possible that the impact of RISA (that disrupts these friendships) may be more troublesome to girls as suggested by target value theory.

Research examining connection between RISA and relationship qualities.

There appears to be very little research examining the connection between the qualities of girls' (or boys') same-sex relationships and RISA. One study does provide some clues that relationship qualities and RISA are linked. Specifically, Grotmeter and Crick (1996) examined friendship pairs who frequently use RISA or directly aggressive and non-aggressive girls and boys in grades three through six. Friendship pairs were described as using RISA frequently if individuals scored one standard deviation about the sample mean on a peer nomination measure of RISA. Results of the study indicated that participants who were rated as frequent users of

RISA reported the highest levels of intimacy and exclusivity within their friendship pairs in comparison to non-aggressive and directly aggressive pairs. These findings are in line with Bjorkqvist's (1992) theory suggesting that the presence of certain qualities in a relationship is linked to RISA. However, the amount of research on this topic is sparse and conducted on children under the age of twelve. Since past research has found that both RISA and friendship qualities change in early adolescence it is important to determine whether this pattern is similar in older individuals.

For the purposes of this study, participants were asked to think about their relationship with their closest same-sex friend and were then asked to indicate the degree of emotional support and disclosure that exists within this friendship. They were also asked to indicate how important or how much value they place on having emotional support and disclosure within this relationship since the study by Clark and Ayers (1993) indicated that the distinction between perceived level of support and expected amount of support is important. The following hypotheses were suggested; hypotheses 7 and 9 are replications of prior work in the area, while hypotheses 8 and 10 represent novel tests of existing theory.

H7: Girls will rate their relationships as higher in emotional support and disclosure than will boys as a group.

H8: Girls will place greater value on having emotional support and disclosure within their relationships than boys.

H9: Degree of perceived emotional support and disclosure within a friendship will be positively correlated with peer nominations and self-reports of RISA.

H10: The value or importance of emotional support and self-disclosure for participants will be positively correlated with peer nominations and self-reports of RISA.

Consistent with research indicating that emotional support and disclosure become more important with age, it is predicted that H7 and H8 will become stronger across grade level.

Fear of loss of same-sex friendships (Target-Value Theory Part B).

Despite the research that suggests girls rate their friendships higher in emotional support and disclosure relative to boys, girls also appear more wary of losing their very closest relationships. Girls appear to be especially sensitive to their friends' successes, when they perceive that they may be losing their friend's attention or time. Roth and Parker (2001) devised a creative method of assessing adolescents' responses to their friend's successes. Participants are given a short "letter" from another adolescent their age who is asking for advice on how to deal with a same-sex friend who seems to be spending less time with them as a result of beginning a new other-sex relationship. After reading this information participants are asked to imagine themselves in the same situation and are asked to report how they would feel (e.g., angry, sad, guilty, jealous, or hurt) while in this situation. Finally, they are asked to respond to the letter writer stating how they think the situation should be handled. In the Roth and Parker study, girls reported feeling more jealous, angry, surprised, and hurt than boys in response to the scenario. Specifically, responses to the letter writer often included adaptive suggestions to cope with the difficulties, such as talking about one's feelings with the friend, or making an effort to adapt to the changing friendship. Responses that included destructive responses (i.e., those that included RISA-like behaviour) were less commonly suggested than more active adaptive problem solving type suggestions (e.g., talking about the situation with the friend). At the same time, destructive responses were more common than responses indicating passive acceptance of friendship (e.g., wait and things will get better), difficulty, or pessimistic acceptance that the relationship would never improve (e.g., it is best to forget about it and move on). Finally, the authors noted that these responses may have been biased by adolescents' wishes to give socially

desirable/acceptable solutions and recommended using a more structured method to gain adolescents' responses.

What this study seems to suggest is that girls may be very invested in their same-sex relationships, but at the same time, as a result of this greater investment, also seem to be wary of signs that they may be losing these relationships to others. Of interest in the present study is whether girls' investment in their same-sex relationships and insecurity about interlopers spending time with their friends is associated with engaging in RISA against the perceived interloper or friend. Evidence of this connection would support the target value theory.

There appears to be only one (unpublished) study that addresses this question in part. Specifically, Parker, Walker, and Gamm (2002) asked a sample of boys and girls in grades five through eight to indicate their degree of jealousy in response to fifteen statements that involved a friend and a same-sex interloper. Other affective responses to the scenario (e.g, anger, sadness, guilt, surprise) were not measured. Three structural aspects of participants' friendship networks (size, density, number of outside contacts) were also measured. Girls' networks were found to be larger, more dense, and exclusive than boys' networks. Girls responded with more jealousy than boys to the hypothetical interloper. Also, girls who responded with more jealousy were also those who received the greatest number of peer nominations for RISA. In regard to network variables, exclusivity was the only measure that positively correlated with jealousy and RISA; however, Parker et al (2002) concluded that structural aspects of networks might not have been sensitive enough indicators of individuals' qualitative experiences within their relationships to have an impact on RISA.

Hence a question of interest is whether the degree of investment as measured by individuals' quality of experiences in one's own friendships influences reactions to interloper

scenarios. If girls tend to have greater investment in their closest relationships, it may be that this investment encourages the subsequent stronger negative reactions to the interlopers than is observed for boys. A second question that remains unanswered is whether girls and boys might endorse using RISA in reaction to the perceived interloper. Accordingly, one purpose of the present study was to investigate the contribution of both girls' tendency to invest in same-sex relationships and their discomfort with an interloper in their endorsement of RISA in response to an interloper. An extension of Roth and Parker's (2001) method was used where adolescents were asked to read a short letter asking for advice from a similar aged peer of the same sex. To suit the focus of this study, a same-sex interloper was used, followed by a measure of various affective responses to the scenario, along with a structured measure of endorsement of RISA to either the interloper or friend. The following hypotheses were proposed. Hypothesis 11 is a replication of previous research, while hypotheses 12, 13, and 14 are extensions of prior research.

H11: Girls will have more feelings of anger, hurt, surprise, guilt and jealousy to the interloper than boys.

H12: Greater feelings of anger, hurt, surprise, guilt, and jealousy in response to the interloper will predict higher endorsement of RISA in response to the interloper, higher RISA peer nominations, and higher self-reports of RISA.

H13: Feelings of anger, hurt, surprise, guilt and jealousy in response to the interloper will be more strongly predictive of RISA nominations, self-reports, and responses of RISA to the interloper for girls than boys. That is, participant sex will moderate the connection between feelings and RISA peer nominations, self-reports, and RISA in response to the interloper.

H14: Degree of emotional investment in current friendships (measured by degree and value of emotional support and disclosure) will be positively correlated with stronger negative reactions in response to the interloper.

Theory 3: Symbolic Capital Theory – An Evolutionary and Cultural Explanation

Research on children suggests that boys and girls engage in competition with same-sex peers in different ways (Campbell, 1993; Hughes, 1988; Merton, 1997). Through observation of children's play, it has been noted that girls tend to favor less direct forms of competition when interacting with other girls and will prefer to play games where there is not necessarily a winner or a loser (Adler & Adler, 1998). Boys tend to choose to play more directly competitive games (i.e., soccer, basketball) with each other, where winners and losers are easily identified, but also where individuals work together in teams (Adler & Adler, 1998).

Interestingly, both cultural theorists and evolutionary psychologists suggest that there may be a connection between same-sex competition and RISA (Artz, 2005; Buss, 1988; Buss & Dedden, 1990; Campbell, 1993; Horney, 1934a, 1934b, 1934c). Although cultural and evolutionary perspectives have at times been at odds, here the theories converge in an area of interest to many early adolescent girls -- boys. Specifically evolutionary theorists (i.e., Campbell, 1993; Campbell, Sapochnik, & Muncer, 1997; Cashdan, 1997) state that in adolescence boys become a (scarce) resource that girls will compete over during early adolescence using techniques such as RISA. Similarly, cultural researchers (i.e., Horney 1934a, 1934b, 1934c; Eckert, 1990; Eder, 1985; Merton, 1997) suggest that boys (and other highly valued life domains) become a form of symbolic capital over which girls compete for access using RISA. The work of Karen Horney, Penelope Eckert, and that of evolutionary psychologists will be reviewed here.

Both Eckert (1990) and Horney (1934a, 1934b, 1934c) suggested that aggressive or competitive behaviour among adolescent girls is a way to protect a sense of self that does not meet societal expectations. Ultimately girls' fragile sense of self worth results from the occupation of a position of powerlessness within society. Girls learn throughout childhood that boys and men are well rewarded for a high number of the activities (i.e., careers, sports). Boys and men are provided opportunity to gain power, money, and a strong sense of personal worth by becoming proficient and successfully competing against other males in the area they choose. In contrast, the activities that girls are socialized to engage in typically involve nurturing others and an absence of open competition (i.e., caregiver, elementary school teacher, et cetera), are viewed as second rate, and are not rewarded in the same way as boys' activities (Eckert, 1990). In sum, girls are denied a method through which to develop a strong sense of self, even if they become proficient at these tasks. This creates a problem for girls as it is more difficult for them to form a sense of self-efficacy when they receive repeated messages that the roles they are being prepared for as adults are not worth rewarding. If gaining rewards or power through one's abilities are scarce, Horney argued that girls tend to become extremely sensitive to the motives and characteristics of other females and begin to view them as competitors or threats to self-worth. As such, a heightened sense of competition and use of RISA (although Horney did not use any of the currently accepted terms for RISA) prevails from an early age between girls.

What is it that adolescent girls are subtly aggressive over? According to Horney (1934a, 1934b) and other cultural theorists (i.e., Artz, 2005; Eckert, 1990), girls learn (as a function of cultural devaluation of the feminine) that they must satisfy their need for a sense of self worth by appropriating some of the power awarded to males. Girls achieve this by using socially manipulative strategies (i.e., RISA) that either gain the attention of high-status boys or give

others the impression that they are connected to these males. Essentially, girls simply cannot afford to maintain positive relationships with other girls who are competing for the same object of affection. Thus, being associated with a girl who is able to capture more attention through attractiveness or other characteristics, means that one's own worth or sense of self is diminished. As a result, a girl may attempt to damage her competitor's chances of winning the male gaze by manipulating the social network and rendering her competitor unworthy of such reward or to make herself appear more worthy.

Eckert made further statements regarding the nature of activities traditionally deemed appropriate for girls and women. Specifically, since girls and women are socialized to put the care of others first, they are not permitted to openly compete or aggress against others, or otherwise give the impression that they might be willing to put their own interests ahead of others in order to get what they desire. Instead, they must simply win the position or reward by being morally "the better woman" (p. 93). Eckert stated that girls and women spend extraordinary amounts of time analyzing their relationships and what other females say or do because it is perceived that only the better woman will gain access to men and hence power (Eckert, 1990). In situations where they must compete against others, girls are faced with a difficult set of options. If they are openly competitive, they risk being labelled as immoral and losing the status they have tried to gain (Eckert, 1990). If they do not compete, they may lose the chance to gain rewards or a sense of self worth. As a result competitive strivings and aggressive urges are often acted on in a more indirect manner, to allow girls to compete for wanted status while still maintaining an image of being a good, caring, nurturing person (Eckert, 1990).

Others (Eder, 1985; Merton, 1997) have noted that as students reach the upper grade levels schools begin to more closely resemble a competitive marketplace, where there exist fewer

opportunities for high status or desirable roles than there are individuals who would like to occupy them. For example, entrance on to sports teams, cheerleading, drama productions, or student government positions begin to require individuals to “try-out” for the position or garner the favorable opinions of other students who will then vote for those students they believe best for the position. Individuals who are successful in gaining positions in the sought after teams or activities are rewarded with increased popularity or notoriety among their peers. Those individuals who succeed in having high status positions also become sought after commodities themselves, with others vying to become associated with or “hang out” with the high-status person (Eckert, 1990; Eder, 1985).

Hence as girls move through the school system they are learning that in order to be worthy they must gain access or be associated with high status boys and/or activities. However, they must not show that they are in need of, or openly competing for, this access as is more often allowable for boys. Instead, covert manipulation of others becomes necessary to achieve their goals and build a sense of self. Although Eckert’s own research was applied to forms of “girl talk”, it is easy to see how this theory applies to a topic such as RISA. Eckert stated that although women’s position within many Western societies has improved in recent years, the old belief systems are still strong enough to influence everyday interactions between individuals today (Eckert, 1990).

Evolutionary theorists also state that human females will aggress against one another in competitive contexts over access to males. RISA among same-sex individuals is considered by evolutionary psychologists as a form of “intrasexual competition” (Campbell 1995, 1999; Cashdan, 1997; Darwin, 1871). Intrasexual competition is a form of sexual selection whereby two members of the same sex compete for mating access to a member of the other sex. RISA as a

strategy is thought to work by eliminating another female from her community or even by making her psychologically unwell and decreasing her value to males (Campbell, 1995). By eliminating another female from the community or social network, the aggressor ensures that the competitor will not block her access to high-status males.

Although RISA, per se, has not been addressed by many evolutionary theorists, there has been some research on “derogation of competitors” that often encompasses strategies like RISA. One of the ways that males and females increase the chances of accessing the other sex is to decrease the value or number of other same-sex competitors within their social network. Evolutionary writers have labelled this behaviour as a type of “derogation strategy” (Buss & Dedden, 1990). Interestingly, men and women tend to use different types of strategies to derogate their same-sex competitors. Many of the derogation strategies that women performed more often bear striking resemblance to those developmental psychologists refer to as RISA. For example, adult men tend to insult a competitor’s job status or physical strength, whereas adult women tend to spread rumors, ignore the target in social situations, and to tell others that the target is promiscuous or boring (Buss & Dedden, 1990).

According to the evolutionary perspective, females prefer RISA over more direct forms of aggression because they, evolutionarily speaking, have more to lose by engaging in physical or direct forms of aggression than do males. For example, women who are injured in a physical conflict may not be able to reproduce and raise children (Campbell, 1995; 1999). In contrast, men, who tend to have a less physically demanding role in reproduction, may be able to recover their reproductive abilities/lost time more quickly even with a severe injury or shortened life span (Campbell, 1995; 1999; Trivers, 1972). In this sense, females have more to lose by

becoming physically or directly aggressive with same-sex members. The benefit of RISA is that the aggressor can remain invisible and safe while still achieving the goal of harming the target.

In sum, we can see that both evolutionary and cultural theories suggest that girls may be engaging in RISA to compete for access or at least association with high-status boys. Girls begin to see other girls, particularly more attractive ones, as potential rivals for the association with other males. RISA is preferred over more direct strategies because it essentially allows girls' motivations to remain invisible or safe from the retribution of other girls. Research supporting these aspects of cultural and evolutionary theory will be reviewed next.

Research supporting competition over boys.

Generally, research directly investigating the contribution of competition over boys in girls' use of RISA is sparse. Qualitative research shows support for various aspects of the competition and RISA links made by cultural and evolutionary theorists. Although there are certainly many factors leading to use of RISA, such as cementing group boundaries or creating excitement (see Owens, Shute, and Slee, 2000), often during interviews when asked why girls aggress against one another, a conflict over receiving the attention of a boy will be noted (e.g., see Campbell, 1986; Merton, 1997; Owens, Shute, & Slee, 2000a, 2000b). Also, when asked why a particular girl was being aggressed against, girls often implied that certain characteristics place girls at risk for victimization by members of her own peer group and friends. These characteristics typically were related directly or indirectly to her ability to gain boys' attention or status within the group. Specifically, girls would imply that they would compare themselves to the potential target and when the target was gaining too much symbolic capital, they would aggress against her. For example they would state that if a girl was beginning to act too "hot" or superior, dressing too well, becoming more physically attractive or popular than her friends, she could expect to be aggressed against by her peer group (Merton, 1997; Owens, Shute, & Slee,

2000a, 2000b). These statements imply that girls use RISA against a peer who appears to be outdoing them in some way. This is consistent with evolutionary theory that purports that females will aggress against competitors who display signs of sexual availability or fertility (Campbell, 1995; Vaillancourt, 2005), and is also consistent with Eckert's (1990) thoughts on the value of symbolic capital among women and girls.

Others have indicated support for the idea that boys become a scarce resource for girls to compete over. Don Merton (1997) conducted an ethnographic study on girls' construction of "meanness" (which turns out to be very similar to RISA) from late childhood to early adolescence. He followed a group of girls with a reputation for meanness from grade six through to eighth grade. He observed that as the girls entered junior high, being physically attractive to boys became increasingly important for girls to obtain status within their peer groups. Unfortunately, the number of high-status boys was perceived to be few in number, so girls became extremely competitive in their efforts to make themselves more attractive and others less so. This means that a girl who may have been a treasured friend the previous year may be aggressed against if she becomes a threat or a detriment to her friend by obtaining the male gaze, as both Horney and evolutionary theorists seem to predict.

Research examining girls in competitive situations also notes that girls are more comfortable competing with one another when their identity is hidden from the competitor compared to boys. For example, in a series of studies on girls' emotional discomfort during competitive tasks, Benenson, Roy, Waite, Goldbaum, Linders, and Simpson (2002) coded same-sex groups of children in grades one and four for facial and bodily expressions of discomfort while the groups were asked to engage in three different types of tasks. The three tasks were selecting a group leader, playing a competitive game without being able to see one's opponent,

and playing a competitive game after meeting and spending a short amount of time with one's competitor. Even at this early age, girls exhibited more discomfort than boys when selecting a leader. In regard to the game playing task, although both boys and girls showed more comfort when an opponent was out of view, girls evidenced significantly more discomfort while playing the competitive game after meeting and spending a short time with an opponent. The results of this study seem to elucidate the conflict between sustaining relationships versus individual achievements for girls.

Others have found that when girls are required to engage in competitive behaviour openly, they will often try to verbally backtrack later and deny that this was their intention or state that there was a mitigating factor that forced them to engage in the competitive behaviour. For example, when early adolescent girls were forced to play a game that requires someone to lose, they have been observed to attempt to be "nice-mean" (Hughes, 1988) by explaining that they did not mean to get the other player out of the game, or offer reasons why it was necessary to get the other out. Adult women have also been found to view engaging in any type of aggression (including RISA) as an indication of a loss of control where one places one's own needs ahead of those of her relationship with the other, rather than as a means to an end as men tend to view it, which may explain why women do not like admitting to the use of aggression (Campbell, Sapochnik, & Muncer, 1997).

Finally, in regard to girls' reactions to other females' achievements, Benenson and Benarroch (1998) asked seventh and eighth graders to indicate how much they cared about being successful in various areas of life, including: academics, romantic relationships, athletics, attractiveness, and in their same-sex friendships. After answering these questions, participants were asked to name their two closest same-sex friends and then asked how much they would care

if these friends became more competent than themselves in any of these same domains. In regard to friends' successes in various domains, girls cared more than boys about their same-sex friends being noticed by a member of the other sex if they were not, about their friends being more popular, attractive, or having more close same-sex friends than they do. Although it was not the main goal of the study, participants were also asked to indicate what they would do in response to their friends' hypothetical success. Although none of the boys reported that they would feel negatively about their friends' successes, some of the girls expressed that they would be afraid of being abandoned, would feel down or depressed, or would otherwise have difficulty coping with their friends' successes in a healthy manner.

In sum, previous quantitative research provides some methods for investigating competition among girls (i.e., Benenson & Benarroch, 1998; Benenson & Schinazi, 2004) and qualitative research findings indicate that girls may engage in RISA-like strategies due to competition over boys. One goal of the present study was to directly examine the relationship between girls' same-sex competition and RISA. Such evidence would support the symbolic capital theory.

For the purposes of this study, Benenson and Benarroch's (1998) method of hypothetical comparison was employed to investigate whether comparison to ones' same-sex friends on various domains (that make the self feel or look bad) contributed to use of RISA. However, in addition to using open-ended questions about participants' possible responses to peers' hypothetical success, a questionnaire was added asking what the respondent thought others would do in response to this perceived success, which included RISA items from our previously developed questionnaire. According to existing research in this area, the following hypotheses

were suggested. Whereas hypotheses 15, 16, and 17 spell out potential replications of previous research findings, hypotheses 18, 19, and 20 outline new predictions not yet tested to date.

H15: Girls will care more about being successful with same-sex friends than boys will care about being successful with same-sex friends.

H16: Boys will care more about being successful in athletics than girls.

H17: Girls will care more about a same-sex friend's hypothetical greater success in the areas of romantic relationships, popularity, attractiveness, and close friendships than will boys.

H18: Caring about a friend's hypothetical success with the other-sex or any other domain, will be positively correlated with RISA peer nominations and self-reports. That is, individuals who are generally known to engage in RISA by peers and those who admit to engaging in RISA will tend to care more about other same-sex friends' hypothetical successes than individuals who are not known to engage in RISA or self-report using RISA.

H19: Caring about a friend's hypothetical success with the other-sex will be positively correlated with grade level. Individuals in higher grades will care more about friend's success with the other-sex than will individuals in lower grades.

H20: The relationship between RISA and caring about the hypothetical success in any domain will become stronger with increasing grade levels.

Measurement Issues

As mentioned at the outset of the proposal, a debate currently exists regarding the measurement of RISA. Since different groups of researchers from different parts of the world have independently developed their own definitions, theories, and measures of RISA, current measures of RISA sometimes vary in terms of item content and method of measurement. As a result, some research groups are arguing that relational, indirect, and social aggression represent distinct constructs (Archer, 2001; Xie, Farmer, & Cairns, 2003). For example, Archer (2001;

who uses the term indirect aggression) states that the distinction between relational, indirect, and social aggression is that indirect aggression involves actions occurring behind the target's back, while the latter two can occur either behind one's back or more directly. Xie, Swift, Cairns, and Cairns (who use the term social aggression; 2002), appear to disagree with Archer, stating that social aggression is as indirect or "non-confrontational" as indirect aggression, whereas relational aggression is the construct that tends to be more direct or confrontational (p. 206). Xie et al (2002) also add that social aggression "uses the social community as a vehicle to attack" (p. 206), whereas, they believe, indirect aggression does not. Xie et al. state that relational aggression may or may not involve the social community.

In contrast, others believe that there is too much similarity between the constructs to continue labelling them as though they are different (Bjorkqvist, 2001; Underwood, 2003). Finally, others argue that the different methods (peer nominations, interviews, scenarios, self-report) used to measure the various forms of subtle aggression might be a factor contributing to the sometimes inconsistent correlational patterns between measures of RISA and outcomes (Archer, 2004).

To date, there has been very little empirical research (e.g., a factor analysis comparing items from one or more measures, or a study that compares the various types of RISA to various outcomes) that can help lend clarity to the differing opinions on this issue. However, in a very thorough literature review Archer and Coyne (2005) observed that the appearance of sex differences seems to be less consistent in some studies using a peer nomination measure of "relational aggression" than those using a measure of "indirect aggression". It was noted in this review and recent meta-analysis (Archer, 2004) that methods used to measure RISA (i.e., peer nominations, self-reports, teacher reports) also influence the appearance of sex differences in

various studies on RISA. My own analysis of the theoretical underpinnings and measures indicates that this is a very complex issue, likely too large to be fully dealt with in this project. However, looking at the variety of items developed by different groups (there were over 100 items located, spanning 48 different publications), it becomes obvious that the arguments put forth in the debate of the similarity/difference issue likely all have merit. Specifically, sometimes measures of relational, indirect, and social aggression do differ in content, but there are definite commonalities among many measures. Therefore, to fully represent the construct of RISA, it was thought prudent to select items that were held in common as well as those that were more unique to certain research groups' individual conceptions of RISA. In regard to similarities between measures, there were six items that appeared to be represented in all three subtypes of RISA (namely relational, indirect, and social aggression). These six items included the following: (1) ignoring others when they are speaking (found in 40% of studies sampled), (2) spreading rumors or gossiping (found in 42% of studies overall), (3) lying behind someone's back to get peers not to like that person (found in 29% of studies), (4) keeping a person out of a group (40% of studies), (5) keeping a person out of a group's activities (16% of studies), and (6) saying mean things to others about another person (13% of studies). A seventh item that seemed very common to many measures of relational and social (but not indirect) measures, "threatens to stop liking someone or being their friend," was also retained due to its widespread appearance throughout the literature (30% of studies overall).

In terms of differences, various research groups state (but this does not always mean that the actual measures differ) that their concepts place differing emphasis on the extent to which their construct includes body language, directness/indirectness, and involvement of the social community. For example, Crick (1996) stated that relational aggression can include both direct

and indirect items, but does not involve use of body language. Galen and Underwood (1997) stated that social aggression is similar to relational aggression in content, but must also include body language or use of negative facial expressions. Indirect aggression researchers stated that their form of aggression should be hidden and requires the social community and therefore cannot include more direct expressions of aggression like negative facial expressions or ignoring someone as is measured in relational and social aggression. An examination of the actual content of various measures reveals that these stated theoretical differences do not always appear. For example, some measures of “indirect” aggression often contain at least a few “direct” items. Therefore, in selecting items for the present research I decided to pay attention to the differences between the constructs on an item level as well as on the stated theoretical position of researchers.

Measures of relational aggression are relatively invariable in comparison to either social or indirect aggression. Outside of the six common “core” items listed previously, there were only a handful of other items that seemed to be unique to the relational aggression construct. These included, “won’t invite others to a birthday party,” “won’t listen to another person”, “teases others away from adults”, and “quarrels for slight reasons.” Since there were so few of these items, all were retained for use here, with exception of the last item which was removed for reasons outlined in the Method section.

In regard to social aggression, Galen and Underwood (1997) stated that social aggression differs from relational and indirect aggression in that it should include using facial expressions (e.g., glaring at others, smiling insincerely) to aggress against others. An analysis of items found across various measures does seem to indicate that social aggression measures tend to have a proportionally greater number of items measuring negative facial expressions than other

measures of indirect or relational aggression. Four items commonly used to measure facial expressions (specifically, “looks at others with disgust”, “smiles insincerely”, “speaks in a snide tone of voice”, and “rolls eyes and makes a face when asked to interact with someone she or he doesn’t like”) were kept. However, “speaks in snide tone of voice” was later removed and “smiles insincerely” was changed to “smile in a fake way” after a pilot group of adolescent readers had some difficulty understanding these items.

Indirect aggression measures seem to contain the most variation in terms of content and number of items. However, the one thing that researchers seem to agree on is that indirect aggression differs from other “forms” of aggression because it is generally more indirect, anonymous or circuitous. For example, approximately 24 articles on indirect aggression were reviewed for this project. Out of these 24, 17 mentioned the hidden aspect or anonymity of the aggressor within the introduction or article review (i.e., Archer & Parker, 1994; Bjorkqvist, 1994; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Bjorkqvist, Osterman, & Lagerspetz, 1994; Green, Richardson, & Lago, 1996; Hines & Fry, 1994; Kaukiainen, Bjorkqvist, Lagerspetz, Lagerspetz, Bjorkqvist, & Peltonen, 1988; Kaukiainen et al., 1999; Lagerspetz & Bjorkqvist, 1994; Osterman, Bjorkqvist, Lagerspetz, Kaukiainen, Landau, Fraczek, & Caprara, 1998; Owens, Shute & Slee, 2000a; Owens, Slee, & Shute, 2000; Richardson & Green, 1999; Salmivalli, Kaukiainen, & Lagerspetz, 2000; Walker, Richardson, & Green, 2000). Therefore, items that were indirect in nature were chosen for inclusion in the measure of RISA for this project, including “writes about others on desks or in washrooms,” “becomes friends with others as revenge,” “tells secrets to others,” and “backstabs others.”

With regard to format, RISA research groups tend to use different methods to measure the constructs. For example, relational aggression is often measured using limited peer

nominations and teacher reports (e.g., Crick & Grotpeter, 1995), while indirect aggression uses unlimited peer nominations and self-reports. Social aggression has been measured using self-reports, interviews, and vignettes (e.g., Paquette et al., 1999; Paquette & Underwood, 1999; Galen & Underwood, 1997). Although all methods have advantages and disadvantages, the limited choice peer nomination methods, self-report, and interview formats were used since these methods best suit the purpose of this study. Two aspects of sex differences can be identified in the literature. The first describes differences in the prevalence of RISA and the second describes differences in the correlates or outcomes associated with RISA.

The Present Study

At least three theories currently exist to explain the underlying mechanism of sex differences in RISA in early adolescents, including gender socialization theory (Lagerspetz, Bjorkqvist, & Peltonen, 1988), target value theory (Bjorkqvist, 1988) and symbolic capital theory (Campbell, 1993; Campbell, Sapochik, & Muncer, 1997; Eckert, 1990; Horney, 1934a, 1934b, 1934c). The goal of the present study was to further investigate the applicability and tenability of these theories within a sample of early adolescents (grades 6 to 8).

All three theories suggested mechanisms for age or sex differences observed in RISA. Specifically, gender role socialization theory (Huesmann & Guerra, 1997) suggested that individuals' normative belief systems may contribute to RISA and that these norms for aggression differed depending on the sex of the individuals involved. In addition, it is suggested that sex norms governing aggressive behaviour become more strongly held in early adolescence (Hill & Lynch, 1983) as compared to younger age groups. Target value theory posited that girls were more likely to use RISA than boys because of the qualities of girls' relationships. Additional research indicates that girls also engaged in RISA when their same-sex relationships appeared threatened. Since there are certain transitions occurring in early adolescence (transition

to high school, focus on boys), which impact the stability of friendship patterns, target value theory also predicted age differences in RISA. Work from cultural theorists (i.e., Artz, 2005; Eckert, 1990; Horney 1934a, 1934b, 1934c) and evolutionary theorists (Campbell, 1993; 1999; Cashdan, 1997) leads to the suggestion that girls were competing over access to the other sex or symbolic capital.

Given that research investigating these theories is scarce, the purpose of the present study was to derive testable hypotheses from each theory. Consistent with previous research, questionnaires were utilized as the primary method of data collection. The use of questionnaires allowed for quantitative examination of the tenability of each theory. In addition, semi-structured interviews with a small subset of participants were also used in order to complement and add depth to quantitative findings. This decision was made for two reasons. First, it has been rare in this field to directly ask what early adolescents think about why sex differences in RISA occur. Rather, researchers/adults have more commonly built theories and designed research around issues that they believe are important to young people. Therefore asking some open-ended questions has the advantage of tapping into adolescents' perspectives and as such decrease adult bias. It was thought quite possible that none of the theories articulated in the present review are actually deemed important or relevant by adolescents. It has been argued elsewhere that gaining participants' perspective is particularly important when a field of research is new (Owens et al., 2000). This is certainly the case in RISA research, where constructs and theories are still in early stages of development.

CHAPTER 2 METHOD

Participants

Participants were 521 students (301 girls and 220 boys) in grades six ($n = 224$), seven ($n = 224$) and eight ($n = 73$) recruited from three elementary and three middle schools in a large Canadian city (see Table 2.1 for more information on the grade and sex of participants). Participants' ages ranged from 10 to 14 years, with an average age of 12.2 years ($SD = .89$). Classroom participation rates ranged from 17 to 85 percent. However, only 6 classrooms (out of a total of 47; $n = 115$) had peer nomination participation rates that were 70% or higher; thus, all analyses that involved peer nominations as an outcome were conducted on this smaller subsample of students. This subsample of 115 students included 75 girls and 40 boys in grades 6 ($n = 49$) and grade 7 ($n = 66$). There were no grade eight classrooms with peer nomination participation rates reaching 70%.

The sample appeared to be ethnically diverse reflecting the make-up of the general population from which the sample was selected (Statistics Canada, 2006). A total of 97% of the sample responded to the question regarding ethnicity. Of those respondents, two-thirds (65%) reported being Euro-Canadian, with the second largest group (23%) being Asian, and much smaller proportions reporting Indo Canadian (4%), Latin (3%), Aboriginal (1%), African Canadian (1%), and Middle Eastern (1%). In regard to social economic status, 65% of students reported knowing their mother's level of education and 68% of students knew their father's level of education. For mother's level of education, responses indicated that although mothers had diverse levels of education, 36% had a university degree.

Table 2.1. Grade and Sex of Participants in Overall Quantitative Sample, Peer Nomination Subsample, and Interview Sample

Grade	Overall Quantitative		Peer Nomination Subsample		Interview Sample	
	<u>Boys</u>	<u>Girls</u>	<u>Boys</u>	<u>Girls</u>	<u>Boys</u>	<u>Girls</u>
1. Six	113	111	21	28	7	5
2. Seven	85	139	19	47	3	5
3. Eight	22	51	0	0	4	4

Specifically, 4% of students reported having a mother with a doctorate, 10% of mothers had a degree in medicine, dentistry, law or optometry, 9% reported their mother to have some university education, 2% had a mother who completed trade, technical or vocational school, 25% had a mother who completed high school, 5% had a mother who did not complete high school, and about 8% stated that their mother had some other level of education not described in the questionnaire. For fathers, 38% reported having a father with a completed university degree, 7% reported having a father with a doctorate, 5% had a father with a degree in medicine, dentistry, law, or optometry, 8% had a father with some university education, 9% reported their father to have attended trade, technical, or vocational school, 18% had fathers who completed high school, 7% had fathers who completed some high school, and 8% described their father as having some other level of education not described in the questionnaire options provided.

After each school completed the questionnaire phase of the study, the permission sheets of those individuals that agreed to be contacted for an interview (across all schools, $n = 218$ or 42% of the sample) were separated from the questionnaires. Next the sheets were sorted by sex and grade within each school, from which 28 students were randomly selected to participate in a short interview. Each potential participant was contacted by phone or email. Of those students who were contacted to participate, three individuals decided that they no longer wished to be interviewed. One student who agreed to participate was ill on the day of the interview. Two students who believed that they did not need to call the researcher back (but wished to participate and had consent) were also interviewed when it was determined that it would not be disruptive to the school schedule. In some cases, if a particular school did not have equal representation of a certain grade or sex, an attempt was made to select more of that grade or sex from the next

school. This selection process resulted in a sample consisting of 12 grade six students (7 girls, 5 boys), 8 grade seven students (3 girls, 5 boys), and 8 grade eight students (4 girls, 4 boys).

Measures

Demographic Information

Participants were asked to indicate their full name, grade level, and age on the front page of the questionnaire booklet (see Appendix A) followed by questions measuring socioeconomic background (see Appendix B). After questionnaires were completed, each participant was assigned a numerical code, and the front page of each questionnaire was removed to ensure confidentiality of participants' responses during data entry and analysis.

Assessment of Relational/Indirect/Social Aggression

Both peer nominations and self-reports of RISA were used (see Appendix C and D). As mentioned elsewhere, the measure was compiled from pre-existing RISA measures to capture the diversity of items that is currently available to researchers. This compilation involved several steps. First pre-existing measures of indirect, relational and social aggression were located from research articles dating from 1969 to 2004 (totaling over 50 different publications). From these publications, items were compiled to form a list of the various items currently used to measure subtle aggression (numbering over 100). After the more obvious duplicates between measures were deleted, the items were read for clarity by the author and re-formatted to fit both self-report and peer nomination formats. Next the items were given to four adolescents (ranging in age from 13 to 15 years) to gain their feedback on their comprehension of the items. Any items deemed too difficult to understand by the adolescents were omitted. This group of items (72 in total) was organized according to whether they originated from a "relational", "social" or "indirect" measure of aggression, or some combination of all three. The items that were common to all three categories were retained (six in total). Specifically, these common core items

included, When angry this person will, "...spread rumors or gossip," "...ignore others when they are speaking," "...lie behind someone's back to get peers to not like that person," "...keep others out of the group," "...keep others from participating in certain activities," and "...say mean things to others about another person". One item, "...threaten to stop liking someone or being their friend," was found in both social and relational aggression measures, but not indirect aggression. It was selected because it was so commonly found in a large number of studies and therefore seemed important to include. Finally, based on the current debate about the differences regarding relational, indirect, and social aggression, four or five items were chosen that were considered to be unique to only one "type" of aggression and were compiled (12 in total). For example, if an item was found on a measure of "relational aggression" and on a measure of "indirect aggression", it was not considered to be unique to one "type" of aggression, whereas if an item was only ever found on measures labelled as "relational", but never appeared on a single "indirect" or "social" measure, the item was considered to be unique to relational aggression. Specifically, four items were chosen from social aggression scales that were not represented on relational or indirect aggression scales (e.g., "look at others with disgust," "smile in a fake way," "speak in a snide tone of voice," "roll eyes and make a face when asked to interact with someone he or she doesn't like"). Five items that were unique to relational aggression scales were, "won't invite others to a birthday party," "won't listen to another person," "quarrel for slight reasons," and "teases others away from adults". Four items that were unique to indirect aggression scales and included in the composite measure are "writes about others on desks or in the washrooms," "becomes friends with others," "tells secrets to others," and "backstabs others". Due to the schools' requests for a shorter questionnaire one item was removed from the unique measures of relational, indirect and social aggression. Specifically, "speak in a snide tone of voice" from the

uniquely social aggression items was removed, “quarrels for slight reasons” from the relational aggression items, and “becomes friends with others” from the indirect aggression items. These items were deemed less clearly worded than the other items by both researchers and adolescent readers and so were cut from the measure. This left a total of 9 items that were unique to one of relational, indirect or social aggression scales, 6 items that were common to all three constructs and 1 item that was ubiquitous to many measures, for a final total scale composition of 16 items. As a final check, an independent reader (trained undergraduate) reviewed the items selected for the final measure to ensure that they appeared to appropriately represent the relational, indirect, and social aggression constructs, as well as the aspects common to these three constructs.

The self-report form of the RISA questionnaire consisted of the 16 items selected above. Participants were asked to indicate on a Likert-style scale (ranging from 1 = “Never” to 5 “All the Time”) how often they engage in each type of RISA behaviour described. Scale scores were averaged across all items to yield a mean score ranging from 1 to 5 for each participant. Higher scores are indicative of higher endorsement of RISA behaviour. Internal consistency was determined to be very strong ($\alpha = .86$)

The peer nomination measure was composed of the same items used for the self-report. Participants were asked to list the names of three individuals in their class who best fit each item and were instructed that they could nominate themselves and/or nominate an individual on more than one item. After questionnaires were completed, individual numerical codes were assigned to each nominated student who had parental consent to participate in the study (those who were nominated who did not participate in the study were not coded) and entered into a spreadsheet. The number of nominations each student received was summed and standardized to control for the different number of students participating in each classroom. Higher scores on this scale

represent a greater frequency of nominations made by peers. Internal consistency for this scale was adequate for research purposes ($\alpha = .68$).

Assessment of Normative Beliefs

A revised version of the Normative Beliefs About Aggression Scale (NOBAGS; Huesmann & Guerra, 1997) was used to assess participants' beliefs about the normativeness of direct, verbal, and RISA behaviours for girls and boys (see Appendix E). The original NOBAGS consists of two types of subscales. The first subscale type contains items to assess general beliefs about various types of verbal and physical aggression (e.g., "How okay is it generally to hit someone?"). The second subscale type typically consists of context-specific beliefs regarding verbal and physical aggression (e.g., Suppose a boy Rick, says something bad to another boy, John). In this study, the questionnaires were altered in two ways. First, the general belief subscale items were not used because they were considered superfluous for the purposes of this study, particularly in light of requests from schools and school districts to shorten the amount of classroom time required to complete the questionnaires. Second, items that measured normative beliefs regarding RISA were added to gain participants' perspective on this kind of behaviour in addition to direct forms of aggression. The total questionnaire consisted of 4 short statements describing an act of aggression; two statements describing an incident of verbal aggression (one depicting two male actors, one depicting two females) and two statements describing an incident of physical aggression (one depicting two males, the other depicting two females). Participants were then asked "how OK" it is to engage in various behaviours (verbal, physical, or RISA behaviour) as a response to the scenario (e.g., Do you think it's ok for John to not invite Rick out to do things anymore?), indicating their response on a 4 point Likert style scale ranging from 1 = "Never OK" to 4 = "Always OK", as consistent with the original version. For every statement/scenario, there was one verbally aggressive response statement (e.g., "Do you think

it's OK for John to scream at Rick?"), one physically aggressive response statement (e.g., "Do you think it's OK for John to hit Rick?"), and five RISA response statements (e.g., "Do you think it's OK for John to lie behind Rick's back?"). RISA response option items were constructed based on those items that were held in common among most currently existing measures of RISA. A greater number of RISA responses relative to verbal and physical aggression responses were used, since RISA is the major construct of interest in this study.

Several mean subscale scores (8 subscales in total) were calculated from averaging various combinations of NOBAGS items. To calculate the degree of normativeness of a particular type of aggression (RISA, verbal, or physical) across both scenario type and sex of scenario characters portrayed, all items measuring that form of aggression were selected from each of the four scenarios and averaged to obtain a mean score. For example, to calculate how OK participants believed RISA to be across scenario type and sex of character, the last four items measuring RISA responses to each of the four scenarios (items 1c, 1d, 1e, 1f, 1g, 2c, 2d, 2e, 2f, 2g, 3c, 3d, 3e, 3f, 3g, 4c, 4d, 4e, 4f, and 4g, for a total of 20 items) were summed and averaged. Higher average scores indicate a greater degree of agreement that RISA is okay to engage in response to all scenarios generally. Similarly, to calculate participants' beliefs regarding the normativeness of verbally aggressive responses to scenarios, all items that measured verbally aggressive behaviours across the four scenarios were averaged (items 1a, 2a, 3a, and 4a for total of four items) to obtain a second mean score. The same procedure was used to calculate normativeness of physical aggression across scenarios (using items 1b, 2b, 3b, and 4b, for a total of four items). Reliability for normativeness of RISA across all scenario types was excellent ($\alpha = .94$). Reliabilities for the verbal and physical aggression subscales across all scenario types were also very strong (alphas equal to .89 and .88, respectively).

The final six subscale scores were created to obtain an indication of the normativeness of each type of aggressive response (RISA, verbal, and physical aggression) taking into account the sex of the scenario characters portrayed (male to male; female to female). To create a subscale measuring the normativeness of RISA for female scenario characters items measuring RISA in the two scenarios depicting female scenario characters were summed and averaged (items 2c through 2g and items 4c through 4g, for a total of ten items altogether). For the normativeness of verbal aggression for female scenario characters items 2a and 4a were summed and averaged; similarly for the normativeness of physical aggression for female scenario characters, items 2b and 4b were summed and averaged. Normativeness of RISA, verbal and physical aggression scales for female scenario characters were judged to be adequate to strong (alphas equal to .88, .78, and .69, respectively).

Likewise, for male scenario characters, items 1c to 1g and 3c to 3g were summed and averaged to indicate normativeness for RISA behaviour (total of ten items). For normativeness of verbal aggression for male scenario characters, items 1a and 3a were summed and averaged. Finally for normativeness of physical aggression for male scenario characters, items 1b and 3b were summed and averaged. Normativeness of RISA, verbal and physical aggression scales for male scenario characters were judged to be adequate (alphas equal to .87, .75, and .76, respectively).

Prior research investigating the properties of NOBAGS indicates very good reliability of the scale measuring beliefs about verbal and physical aggression (alpha = .86; Huesmann & Guerra, 1997). This internal reliability held up across sex and various ethnic groups (Huesmann & Guerra, 1997). Previous versions of NOBAGS have been used primarily on elementary school children from inner-city schools and were found to demonstrate acceptable stability over a three-

month period (r 's from .36 to .48; Huesmann, Guerra, Miller, & Zelli, 1992). Previous studies in this age group found normative beliefs about direct aggression conducted by, or directed toward, girls evidence strong internal consistency (alphas ranging from .83 to .85). Similarly subscales measuring normative beliefs about direct aggression conducted by or directed toward boys had internal reliabilities in the .82 to .83 range.

Assessment of Perceived Friend Emotional Support, Disclosure, and Intimacy

A revised version of the Network of Relationship Inventory (NRI; Furman & Buhrmester, 1985; Furman, 2004; see Appendixes F and G) was used to assess how much participants value emotional support and disclosure/intimacy with a close friend. Selection of relevant items to measure emotional support, intimacy, and disclosure was based on previous work by Furman (1985) who developed the NRI. The most recent version of the NRI (Furman, 2004) consists of up to 14 subscales that are divided into two factors, the "Support Factor" and the "Negative Interchanges Factor" (Furman, personal communication, August 2004): The Support Factor measures the presence of positive relationship qualities and consists of up to 27 items, if all items are used. The second factor termed "Negative Interchanges Factor" measures the presence of more negative relationship qualities and consists of up to 15 items. Since only positive relationship qualities were deemed important for the purpose of the study, the Negative Interchanges Factor will not be reviewed here (instead the reader is referred to Furman, 1996 for further reading). The Support Factor contains nine subscales (each containing three items) including instrumental aid (e.g., "How much does this person teach you how to do things that you don't know?"), companionship (e.g., "How much free time do you spend with this person?"), nurturance (e.g., "How much do you protect and look out for this person?"), affection (e.g., "How much does this person like or love you?"), admiration (e.g., "How much does this person treat you like you're admired and respected?"), reliable alliance (e.g., "How sure are you

that this relationship will last no matter what?”), satisfaction (e.g., “How good is your relationship...?”), intimacy (e.g., “How much do you talk about everything with this person?”), and support (e.g., “...how often do you depend on this person to cheer things up?”). The nurturance and instrumental aid subscales from the support factor were deemed unnecessary or inappropriate for the purposes of the project and were omitted leaving all items from the remaining seven subscales. In addition, to shorten the overall questionnaire administration time, two additional items from the admiration subscale (“How much does this person like or love you?”) and the Reliable Alliance subscale (“How sure are you that the relationship will last in the years to come?”) were also omitted prior to data collection. These particular items were chosen because they seemed to be most similar to other scale items and hence the least necessary to retain. After the above omissions, the questionnaire consisted of 19 items in total. Although the factor scale can be divided into several subscales as indicated above, for the purposes of this study all items were kept together as a total score.

First, participants were asked to write down the first name or initials of one same-sex best friend who is not a sibling or relative, followed by some questions about the current status of the relationship (i.e., how long they have been friends and if they are still close). Second, participants were asked to indicate the degree to which they placed importance on certain qualities within the friendship identified. This part of the scale was revised by rephrasing all items of the NRI to reflect the importance of the qualities to participants, rather than asking for participants’ estimations of the amount of the various qualities present. For example, participants were asked to indicate on a 5-point Likert-style scale (1 = “Not Important” to 5 = “Extremely Important”) how important it was to them that “they have a good relationship” with a friend.

Mean scores were calculated such that higher scores indicate greater importance placed on positive emotional support, intimacy, and disclosure within a close relationship.

Third, participants indicated the degree to which the relationship qualities were present within their specified relationship (as consistent with the original NRI). For example, participants were asked to indicate on a 5-point Likert-style scale (1 = “Very Little or Not at All” to 5 = “The Most”) to what degree each quality was present in their relationship with the best friend. Items were summed and averaged to obtain a mean score. Higher scores indicate higher levels of emotional support, disclosure and intimacy.

Prior research investigating the psychometric properties of the NRI indicate very good reliability of the component subscales (alphas are typically about .80; Furman & Buhrmester, 1990; Furman & Buhrmester, 1992). The NRI factor scores (i.e., Support) have also demonstrated good stability over a one month period (r 's from .66 to .70; Connolly & Konarski, 1994). The NRI has been used in a variety of age groups ranging from children in second grade to college students (Buhrmester & Furman, 1987; Furman & Buhrmester, 1992). In this study, both forms of the NRI demonstrated strong internal consistency (alpha = .95 for the degree of support form and .96 for the perceived importance of support form).

Fear of Loss of Same-Sex Relationship: Assessment of Reaction to Same-Sex Interlopers

Participants were asked to read a short scenario presented as a printed out “e-mail” that the researcher had received from an adolescent who is about their age (see Appendixes H and I). This scenario is similar in content to that constructed by Roth and Parker (2001), with the exception that the email presented a same-sex rather than an other-sex interloper and asked slightly different questions afterwards. In the “e-mail”, the student talks about how he or she (participants were presented with scenarios containing an actor of the same-sex) has been feeling left out after his/her best friend started hanging around with another friend. Participants then

answered a series of questions related to the content of the e-mail. Specifically, participants were asked to indicate whether they had ever been in a similar situation, either as a person who has been feeling left out or as the person who left out a best friend. Since the correlations between all affective reactions were not deemed high enough to group affective reactions into one or two composite variables, all five emotions were evaluated separately. Higher scores on any affective reaction item are indicative of greater intensity of the emotion.

Next, participants were asked to imagine themselves in the e-mail writer's position and to indicate on a 5 point Likert-type scale (1 = "Not At All" to 5 = "Extremely") how jealous, angry, surprised, guilty, and hurt they would have felt in this situation. Next they were asked to imagine how they imagine the e-mail writer might respond to this situation and indicate on a 5 point Likert-type scale (1= "Strongly Disagree" to 5 = "Strongly Agree") how likely the e-mail writer is to engage in various RISA behaviours. There were eighteen items measuring RISA behaviours based on various measures available in the RISA literature rephrased to incorporate names of the e-mail writer, best friend, and interloper (e.g., "I can imagine Susan acting as if she doesn't care, when Kylie tells her about her problems"). Although many of these items were based on the core items used in the peer nomination measure (e.g., ignoring someone, saying mean things behind someone's back, spreading rumors, keeping others out of activities, not making eye contact, et cetera), the phrasing of the items were often made more specific in order to help make the scenario more realistic for participants. For example, instead of listing an item as "I could imagine Susan spreading rumors", the item was written as "I could imagine Susan spreading rumors about Amy that she steals peoples' friends". All items were summed and divided by the total number of items to obtain an average for each participant. The internal reliability of endorsement of RISA behaviours was demonstrated to be very strong ($\alpha = .95$).

Symbolic Capital Theory

To assess symbolic capital theory, Benenson and Benarroch's (1998) questionnaire based on Harter's Self-Perception Profile for Adolescents (1990) was used. The items on the questionnaire assessed participants' feelings about the following domains: athletic competence, close same-sex friendships, attractiveness, popularity, scholastic competence, and romantic relationships with the other sex (see Appendixes J and K). The questionnaire consisted of two main parts.

First, participants were asked how much they care about their own success in each of the six life domains. An opening paragraph was provided for participants to read before answering questions. The opening paragraph emphasized that a person's feeling of competence in each domain changes from time to time, sometimes a person feels more competent than usual, sometimes less competent. Consistent with Benenson and Benarroch's (1998) approach, change in self-perception was emphasized as normal, to help reduce any negative feelings that may result from the participants' self-evaluations. Next, participants read through a series of questions, with one question asking about each of the six life domains. For example, the question regarding self-competence in the academic domain read, "Everyone goes through a time when they don't get good grades in school. How do you feel when you don't get good grades in school? Indicate on the scale how much you care about getting good grades." Students were asked to respond on a five point Likert-style scale (1 = "don't care at all", 5 = "care more than anything") to indicate how much they cared about performing well in that domain. There were two parallel forms of this questionnaire (one for boys, one for girls), to accommodate the fact that one of the domains asks about being noticed by a member of the other sex. For these scales, items were not averaged or summed together, but kept as raw scores ranging from 1 to 5. As

such there were a single score for each of the six domains assessed. Higher scores indicate greater degree of care about one's own performance in the domain specified.

In the second part of the questionnaire, participants were asked to write the names of one best or closest same-sex friend. After doing this, they were asked to indicate how much they would be bothered by this friend outdoing them in each of the six domains assessed in the first part of the questionnaire. For example, the question in regard to athletic performance read, "If your closest friend became very good at sports or athletics and you did not, how much would you care?". Participants then indicated on a five point Likert-style scale (1 = "don't care at all", 5 = "care more than anything") how much they cared about their friend outperforming them. As with degree of care, a separate score was obtained for each of the six domain measures. Higher scores indicate a greater degree of discomfort with a hypothetical peer outperforming oneself in the domain measured.

Interviews

The purpose of the interviews was to further explore participants' thoughts about the validity of current theories explaining sex differences in RISA investigated in the quantitative part of the study (see Appendix L and M for interview request form and script of open-ended discussion questions). Consistent with an embedded design – correlational model (Creswell & Plano-Clark, 2007), the descriptive aspect of the study was given slightly less weight than the quantitative study and framed within findings from the quantitative part of the study. That is, the interview findings were contrasted and compared to the findings of the quantitative results, but the quantitative findings generally served as the structure around which descriptive components were analyzed.

Interviewees were informed about the approximate length of the interview and that the purpose was to gain adolescents' feedback on topics that adults had been studying up to this

point. To this end, the interviewer made a concerted attempt to indicate the value that she placed on students' knowledge on the subject, so that the interviewee could feel like "the expert" and feel confident enough to provide his or her insights as candidly as possible. For example, the interviewer would make statements like, "Adults are no longer in school, so we need students to let us know if we are totally off the mark in our ideas about things." The interviewer emphasized that there were no right or wrong answers to any question; that the interviewee's honest opinion was all that was wanted. Participating students were reminded that no other person except the interviewer would be allowed access to tapes or transcripts and could choose not to talk about anything that made them uncomfortable without penalty.

In regard to the content of the interviews, students were first asked about whether they had heard of the terms relational, indirect, or social aggression. If they had, they were asked to provide a definition. If a student was not familiar with the term or provided an incorrect answer, the interviewer provided a definition of the term. Next students were asked to provide an example of this type of behaviour that they had witnessed among others, heard about, or experienced within the last year. This question was asked to help students become more connected to the topic at hand. Next, students were asked if they thought that boys and girls engage in RISA to the same extent or differ in regard to the frequency that they choose to use RISA. If students believed that sex differences in RISA exist, they were asked to expand on why this might be occurring. Once a student provided his or her hypotheses for why the sex differences might occur, the researcher then introduced each of the three theories tested in the quantitative section, asking the student for his or her opinion on whether they thought the theory made sense given what they had experienced or witnessed among peers. If something did not make sense, students were asked to clarify what had not made sense or provide an alternative

explanation. Finally, after the interviewer finished reviewing all theories, students were asked whether they had any more ideas about why sex differences in RISA occurred (if it was believed by the interviewee that sex differences occur at all). At this point the interviewee was thanked for his/her participation, debriefed, and given the opportunity to ask any questions that he or she may have about the interviews or the study more generally.

After all interviews were completed, each was transcribed verbatim from the audiotapes, with the exception of names of individuals, schools, or any other information that could potentially violate confidentiality. Grade, sex, and school of the interviewee were written at the top of each transcript. All transcripts were checked against audiotapes to ensure that transcription was of high quality. Interview transcripts were then read over twice without taking notes or highlighting text. Next several spreadsheets were created with the following headings (a) “Sex Differences” where participants’ opinion about the existence in sex differences was recorded, (b) “Participants Own First Thoughts about Reasons for Sex Differences” referred to the reasons why participants thought sex differences may occur in RISA, (c) “Other Ideas that Participants Came Up With Throughout the Interview” referred to other theories, amendments, or interesting expansions that the participant generated after hearing theories provided by the researcher and (d) “Most Important Theory” was a heading created where participants gave their opinion about which of the three theories put forth by the researcher seemed most likely or important in regard to explaining sex differences in RISA. Pieces of electronic text from the transcripts were simply cut and pasted into the appropriate spreadsheets from each interview. This process was repeated several times over to attempt to ensure that nothing was missed or misinterpreted. Themes from the spreadsheets that seemed to either add depth or differed from quantitative findings were then incorporated into the quantitative results section.

Procedure

Group testing sessions were conducted in which participants filled out paper and pencil questionnaires. Students participating in the testing were informed that there were no right or wrong answers and that all responses were considered confidential. Due to the potentially sensitive nature of some of the topics covered in the questionnaire, students were debriefed after completing the questionnaire. During this debriefing they were thanked for their participation and given the opportunity to ask questions about the study. However, they were not explicitly informed about the purpose of the study since some would be participating in the second (interview) phase and classrooms did not always participate at the same time in each school. Participants were also told that if they had further concerns, questions, or comments that they could also talk to their school counselor, teacher, or school principal. The number for the Kids' Help Phone was also provided (1-800-668-6868; see Appendix N). Finally, participants were asked to indicate whether they were willing to participate in an interview with the researcher to talk further about the topics discussed (see Appendix L, as previously noted). After the interviews, participants were again given the researcher's contact information as well as a phone number for the Kids' Help Phone and encouraged to ask questions, if they had any, about the purpose of the interviews or the overall study generally (see Appendix N, as previously noted).

CHAPTER 3 RESULTS

In this section, results from both the quantitative and descriptive components of the study will be presented together. Since the purpose of the descriptive component was to complement those results from the quantitative, this section is organized according to the layout of the quantitative work, with descriptive components interspersed wherever appropriate.

Preliminary Analyses

Preliminary analyses were conducted in order to gain a sense of the basic characteristics of the sample. In regard to self-report RISA, on average both male and female participants reported that they “rarely” engaged in RISA-type behaviours (i.e., including ignoring others, leaving others out of an activity, or spreading rumors, not making eye contact; for total scale, $M = 1.83$, $SD = .54$). In regard to the frequency distribution of scores, about 26% of participants stated that they “never” used RISA, 61% “rarely” used RISA, 12% admitted to using RISA “some of the time”, while less than 1% of the sample reported using RISA “pretty often”. Results of a 2 (sex of participant: girl, boy) X 3 (grade: 5, 6, 7) factorial ANOVA did not indicate any main effects for sex or grade, nor was the grade by sex interactions for self-reported RISA observed, all p 's = ns.

In regard to peer-reports, the mean for total RISA-type behaviours (i.e., including ignoring others, leaving others out of an activity, or spreading rumors, not making eye contact) was found to be .006, $SD = .84$). A 2 (sex of participant: girl, boy) x 2 (grade 6, 7) factorial ANOVA was also conducted on RISA peer nominations. Results indicated a main effect for

grade; grade seven students ($M = -.18, SD = .82$) were more frequently nominated as engaging in RISA than grade six students ($M = -.22, SD = .81$), $F(1, 111) = 7.15, p = .009$. The main effect for sex did not reach significance, but the trend in the data suggested that girls ($M = .12, SD = .88$) were more frequently nominated as engaging in RISA than their male counterparts ($M = -.20, SD = .72$), $F(1, 111) = 3.14, p = .07$. No grade by sex interaction was observed. It was noted that 95% of participants scoring one standard deviation above the mean on the peer nomination measure were female, indicating that most of the participants considered to use RISA most frequently by peers were female.

When asked in another part of the questionnaire whether they had been “left out because a best friend started hanging out with another person”, 49% of participants indicated that they had been left out at least once over the school year. In addition, 30% of participants acknowledged that they had left a close friend out of an activity at least once over the school year. A majority of students (85%) stated that they would feel concerned if they knew of someone being left out when a best friend became friends with someone new. When asked to imagine themselves in the position of being left out by a best friend, students reported that they would expect to feel, on average, “somewhat” jealous ($M = 3.04, SD = 1.21$), angry ($M = 3.29, SD = 1.21$), and surprised ($M = 3.18, SD = 1.21$), “very much” hurt ($M = 3.72, SD = 1.30$), and “a little” guilty ($M = 1.87, SD = 1.09$). On average, participants did not highly endorse ($M = 2.43, SD = .86$; where 2 = “Strongly Disagree” and 3 = “Somewhat Agree”) engaging in RISA when a scenario character was portrayed as being left out by a friend.

Results from the interviews suggest a different pattern in regard to sex differences in RISA. When asked whether boys and girls engage in RISA-type behaviours to the same degree, the majority of interviewees responded that they believed that girls engaged in the behaviour

much more frequently than boys. There were also a few interviewees who thought girls and boys both use RISA about the same amount, but that they use different forms. For example, it was thought that boys were more likely to use ignoring, whereas girls were more likely to use rumor spreading or gossiping. Another theme was that even if boys and girls both use RISA: (a) girls nevertheless react more strongly when targeted by RISA and (b) conflicts involving RISA among girls seem to last longer than those among boys. Only one interviewee independently endorsed that he believed that boys used RISA (regardless of type) more than girls. Similarly, only one interviewee stated that he thought the impact of RISA was more intense for boys than girls.

In order to further explore possible reasons for the lack of sex differences observed on self-report RISA, some unplanned analyses were conducted. First, specific items were selected from the current RISA self-report measure to form two new composite measures. Selection of items was based on interview findings and also previous research (Bjorkqvist, Osterman, & Lagerspetz, 1994) that suggests adult men and women preferred different forms of covert aggression (a form of work harassment that is very similar to RISA in terms of measure content). Specifically, Bjorkqvist et al noted that women were reported to be more likely to use a “social manipulation” subscale consisting of items like spreading rumors, talking negatively about another behind one’s back, and use of negative body language (i.e., insinuating negative glances). Men were judged to use “rational” forms of aggression (that seemed less expressive) such as interruption, criticism, and reducing others’ opportunities to express themselves. Therefore, the first composite measure consisted of four items hypothesized to be used less frequently by boys and more by girls including “gossip or spread rumors about others”, “smile in a fake way”, “roll eyes and make a face when I’m asked to do something with someone I don’t

like” and “tell your secrets to others” ($\alpha = .57$ for the 4 items). The second composite was composed of two items that appeared to be preferred by boys “won’t listen to another person” and ignore others when they are speaking” ($\alpha = .67$). The latter composite was based mostly on interview findings, since the measure in the current study did not have items that directly corresponded to Bjorkqvist et al’s rational appearing aggression subscale. In line with predictions, the 2 (sex of participant: boy, girl) by 3 (grade: 6, 7, 8) factorial ANOVA for each composite measure revealed a main effect for sex. That is, girls reported higher scores on the “female RISA” composite ($M = 2.10, SD = .65$) than boys ($M = 1.84, SD = .72$), $F(1, 501) = 9.93, p = .001$. Boys scored higher ($M = 2.27, SD = .85$) on the “male RISA” composite measure than girls ($M = 2.11, SD = .79$), $F(1, 503) = 8.42, p = .003$. No main effects for grade or sex by grade interactions were observed for either composite.

In regard to normative beliefs about aggression, on average, participants stated that relational/indirect/social forms of aggression (e.g., not inviting someone out to activities, spreading rumors, ignoring someone, keeping someone out of the group et cetera) were “sometimes okay” ($M = 1.88, SD = .59$) when scenario characters were portrayed as saying something bad or hitting another person. Participant responses also indicated that it was “sometimes okay” ($M = 1.87, SD = .76$) to use verbal aggression but closer to “never okay” ($M = 1.40, SD = .66$) to use physical aggression when scenario characters were portrayed as saying something bad or hitting someone. Analyses that further explore age and sex differences are reported in a later section.

Both boys and girls reported placing importance on having same-sex friendships high in emotional support, disclosure and intimacy ($M = 4.11, SD = .76$). The majority of boys and girls

in this group also reported having high levels of emotional support, disclosure and intimacy within their closest friendship ($M = 3.97, SD = .81$).

Examination of zero order correlations (see Table 3.1) indicated that RISA peer nominations, self-reports, and endorsement of RISA in response to an interloper were all positively correlated. Normative beliefs about the various types of aggression (verbal, physical, RISA) were also all positively correlated. RISA self-reports and RISA peer nominations were also positively correlated with normative beliefs about various types of aggression (verbal, physical, RISA). Affective reactions in response to the interloper were all positively correlated. Care about one's own success in various life domains (e.g., with the other sex, attractiveness, popularity, number of same sex friends, academic achievement and sports achievement) were all positively correlated as were various items measuring care about friends' hypothetically greater successes among the various domains.

Table 3.1 Inter-correlations among all continuous variables

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. JEAL	--											
2. ANGR	.52**	--										
3. SURPR	.29**	.42**	--									
4. GUILT	.24**	.22**	.27**	--								
5. HURT	.41**	.53**	.32**	.19**	--							
6. CGRD	.15**	.16**	.09*	.02	.24**	--						
7. COS	.21**	.22**	.17*	.04	.24**	.19**	--					
8. CCF	.25**	.22**	.16**	.10*	.31**	.30**	.35**	--				
9. CPOP	.25**	.18**	-.12*	.07	.19**	.18**	.38**	.35**	--			
10. CATTR	.26**	.22**	.13**	.07	.26	.26**	.50**	.32**	.55**	--		
11. CSPO	.10*	.10*	.13**	.06	.14*	.33**	.17**	.21**	.23**	.25**	--	
12. FGRD	.17*	.25**	.09	.06	.21	.38**	.17**	.19**	.26**	.26**	.23**	--
13. FOSEX	.28**	.27**	.19**	.02	.26**	.09*	.58**	.27**	.37**	.44**	.19**	.37**
14. FFRIEND	.33**	.32**	.11*	.02	.34**	.24**	.32**	.34**	.41**	.40**	.16**	.43**
15. FPOP	.36	.33**	.13**	-.02	.36**	.21**	.31**	.30**	.54**	.48**	.22**	.41**
16. FATTR	.27	.30**	.15**	.04	.28**	.14**	.40**	.26**	.56**	.61**	.20**	.41**
17. FSPO	.18	.19**	.20**	.10*	.22**	.16**	.19**	.18*	.29**	.24**	.48**	.38**
18. RISAsr	.16**	.20**	.02	.06	.02	-.08	.16**	-.01	.12*	.20**	.00	-.01
19. RISAint	.28**	.26**	.07	.02	.11*	.04	.07	.04	.13*	.13**	-.04	.07
20. SuppImp	.22**	.14**	.16**	.09*	.27**	.15**	.17**	.32**	.19*	.20**	.09*	.14**
21. SuppLev	.20**	.14**	.15**	.08	.28**	.08	.15**	.31**	.18**	.18**	.09	.07
22. RISAnor	.16**	.14**	.01	-.05	-.01	-.01	.18*	.02	.09	.13**	-.03	-.01
23. VANOR	.10*	.11*	.05	.04	-.03	.01	.07	-.03	.10*	.05	-.02	-.05
24. PANOR	.02	.05	-.02	-.07	-.14**	-.06	.03	-.03	.07	.07	-.01	-.03
25. RISApn	.08	.02	-.03	-.01	.02	.08	-.02	-.11	.13	.11	.12	-.11

Note. For analyses not involving peer nominations, *df* range from 410 to 507. For analyses involving peer nominations, *df* range from 105-110. JEAL = degree of jealousy endorsed in response to interloper; ANGR = degree of anger endorsed in response to interloper; SURPR = degree of surprise endorsed in response to interloper; GUILT = degree of guilt endorsed in response to interloper; HURT = degree of hurt endorsed in response to interloper; CGRD = Care about getting good grades; COS = care about success in romantic relationships; CCF = care about having close friends; CPOP = care about being popular; CATTR = care about appearing attractive; CSPO = Care about doing well at sports; FGRD care about friend(s) obtaining better grades; FOSEX = care about friend's greater success with romantic relationships; Ffriends = care about friend's greater success with same-sex friends; FPOP = care about friend's greater popularity; FATTRA = care about friend's greater attractiveness; FSPO = care about friend's greater success in sports; RISAsr = self report of relational/indirect/social aggression; SuppImp = degree of importance or value placed on support and disclosure within same-sex friendships; SuppLev = perceived degree of support and disclosure in same-sex friendship; RISAnorm = normative beliefs about relational/indirect/social aggression; VANORM = normative beliefs about verbal aggression; PANORM = normative beliefs about physical aggression; RISApn = peer nomination of relational/indirect/social aggression. * $p < .05$ ** $p < .01$ (2-tailed).

Measure	13	14	15	16	17	18	19	20	21	22	23	24
1. JEAL												
2. ANGR												
3. SUPR												
4. GUILT												
5. HURT												
6. CGRD												
7. COS												
8. CCF												
9. CPOP												
10. CATTR												
11. CSPO												
12.FGRD												
13. FOSEX	--											
14. Ffriends	.46**	--										
15.FPOP	.48**	.60**	--									
16. FATTRA	.59**	.56**	.67**	--								
17. FSPO	.35**	.39**	.41**	.42**	--							
18. RISAsr	.16**	.09	.16**	.18**	.05	--						
19. RISAint	.21**	.21**	.24**	.18**	.08	.32**	--					
20. SuppImp	.13**	.15**	.17**	.11*	.04	-.11*	.07	--				
21. SuppLev	.15**	.14**	.20**	.10**	.07	-.04	.01	.76**	--			
22. RISAnorm	.16**	.09*	.11*	.14**	.00	.48**	.31**	-.06	-.02	--		
23. VANORM	.08	.05	.07	.04	-.03	.32**	.21**	-.11*	-.06	.59**	--	
24. PANORM	.05	.02	.01	.04	.01	.38**	.21**	-.10*	-.07	.59**	.51**	--
25. RISApn	-.03	.10	.07	.12	-.01	.36*	.32*	-.02	-.02	.19*	.11	.02

Note. For analyses not involving peer nominations, *df* range from 410 to 507. For analyses involving peer nominations, *df* range from 105-110. JEAL = degree of jealousy endorsed in response to interloper; ANGR = degree of anger endorsed in response to interloper; SURPR = degree of surprise endorsed in response to interloper; GUILT = degree of guilt endorsed in response to interloper; HURT = degree of hurt endorsed in response to interloper; CGRD = Care about getting good grades; COS = care about success in romantic relationships; CCF = care about having close friends; CPOP = care about being popular; CATTR = care about appearing attractive; CSPO = Care about doing well at sports; FGRD care about friend(s) obtaining better grades; FOSEX = care about friend's greater success with romantic relationships; Ffriends = care about friend's greater success with same-sex friends; FPOP = care about friend's greater popularity; FATTRA = care about friend's greater attractiveness; FSPO = care about friend's greater success in sports; RISAsr = self report of relational/indirect/social aggression; RISAint: endorsement of RISA to the interloper; SuppImp = degree of importance or value placed on support and disclosure within same-sex friendships; SuppLev = perceived degree of support and disclosure in same-sex friendship; RISAnorm = normative beliefs about relational/indirect/social aggression; VANORM = normative beliefs about verbal aggression; PANORM = normative beliefs about physical aggression; RISApn = peer nomination of relational/indirect/social aggression.

**p* < .05 ** *p* < .01, (2-tailed).

Theory 1: Gender-role Socialization Perspective (Pertains to Hypotheses 1-6)

A series of 2 (sex of participant: girl, boy) X 3 (grade: 5, 6, 7) X 2 (sex of scenario character: boy, girl) repeated measures ANOVAs were conducted with sex of participant and grade as between-subjects factors, sex of scenario character as a within-subjects factor and normative beliefs about RISA, verbal, and physical aggression as separate dependent variables. To explore other hypotheses under Theory 1, correlation coefficients were also examined. The reader is also referred to an organizational chart (see Table 3.2) listing of all hypotheses with the degree of support indicated for each.

RISA Normative Beliefs

Counter to Hypothesis 1 that girls would rate RISA as more “okay” or normative than boys, results indicated that in fact boys ($M = 1.96, SD = .62$) were significantly more likely than girls ($M = 1.81, SD = .56$) to rate RISA as normative across scenarios, $F(1, 472) = 5.33, p = .02$. Consistent with Hypothesis 6, a main effect for sex of scenario character, Pillai's $\lambda = .009, F(1, 472) = 4.22, p = .036$, suggested that scenarios involving girl characters were judged as more likely to include strategies like RISA ($M = 1.89, SD = .62$) than were scenarios involving boy characters ($M = 1.86, SD = .58$). There was, however, a significant sex of participant by sex of scenario character by grade interaction for normative beliefs regarding RISA, Pillai's $\lambda = .02, F(2, 472) = 3.81, p = .023$. To explore this interaction, a series of 2 (sex of participant: boy, girl) by 2 (sex of scenario character: boy, girl) repeated measure ANOVAs with RISA as the dependent variable were performed at each level of grade. Results indicate that a sex by sex of scenario character interaction was observed for grade 6, $F(1, 197) = 4.12, p = .04$ (See Figure 3.1), but was not significant in grades 7 and 8, indicating only partial support for Hypothesis 3 that girls would rate RISA as more acceptable for a girl scenario character than boys. Paired samples t-tests indicate that grade six girls reported that RISA was deemed more normative or okay for girl

scenario characters than for boy scenario characters, $t(95) = -2.33, p = .02$. Grade 6 boys did not make such a distinction. No other significant effects for normative beliefs about RISA were observed.

To determine the relation between normative beliefs about RISA and peer nominations of RISA, two-tailed correlations were conducted. As mentioned previously, only a subsample of grade 6 and 7 students were available for these analyses. Consistent with Hypothesis 5 that beliefs about aggression are related to aggressive behaviours, normative beliefs about RISA were positively correlated with RISA peer nominations, $r(111) = .21, p = .03$. The more students believed that RISA is normative and “okay”, the more likely they were to be nominated by peers as engaging in RISA.

To examine whether the relation between normative beliefs about RISA and RISA peer nominations was moderated by grade level as predicted by the gender intensification hypothesis, a hierarchical regression analysis was conducted using RISA peer nominations as the criterion variable. Step 1 of the regression included grade and normative beliefs about RISA with the interaction of these two variables entered on the second step. Results indicated that in the first step of the analysis grade and normative beliefs about RISA predicted 6.9% of the variance in RISA peer nominations, $F(2, 110) = 4.01, p = .02$. Examination of standardized coefficients indicated that grade was the only variable adding a unique contribution to the equation, $\beta = .19, t(2, 110) = 1.98, p < .05$. Addition of the interaction term at Step 2 was not significant; indicating that the relationship between normative beliefs about RISA and peer reported RISA did not look different at grades 6 and 7.

Table 3.2 Hypothesis summary chart

<u>Hypotheses</u>	<u>Degree of Support</u>	
	<i>Not Supported</i>	<i>Supported</i>
<i>Theory 1: Gender Role Socialization Theory</i>		
1. Girls will rate RISA as more “OK” than boys	X	
2. Boys will rate VA and PA as more OK than girls		X
3. Girls will rate RISA as more likely to occur when the sex of responder and provoker are females than than will boys as a group.	X	X (gr. 6girls)
4. When responder and provoker are male, participants will rate verbal and physical aggression as more likely to occur....	X (for VA)	X (for PA)
5. Normativeness of RISA will be positively correlated with peer nominations and self-reports of RISA.		X
6. RISA will be rated as more normative when the sex of provoker and responder are female...		X
6.5 All relationships will become stronger with increasing grade levels.	X (for RISA)	X (for VA, PA)
<i>Theory 2: Target Value Theory Part A</i>		
7. Girls will rate their relationships as higher in emotional support and disclosure...		X
8. Girls will place greater value on having emotional support and disclosure...		X
9. Degree of perceived emotional support and disclosure within a friendship will be positively correlated with RISA.	X	
10. The value or importance of emotional support and disclosure within a friendship will be positively correlated with RISA.	X	

Table 3.2 (Continued)

	<i>Not Supported</i>	<i>Supported</i>
<i>Theory 2b: Target Value Theory Part B</i>		
11. Girls will have greater feelings of anger, hurt, surprise, and jealousy to the interloper...		X (j, a, h)
12. Greater feelings of anger, hurt, surprise, guilt, and jealousy in response to the interloper will predict higher endorsement of RISA...	X (h, s, g)	X (j, a for sr)
13. Participant sex will moderate the connection between feelings and RISA.	X (a, h, s, g, j)	X (j)
14. Degree of emotional investment in current friendships (measured by degree and value of emotional support and disclosure) will be positively correlated with stronger negative reactions in response to the interloper.		X
<i>Theory 3: Symbolic Capital Theory</i>		
15. Girls will care more about being successful with same-sex friends than boys...		X
16. Boys will care more about being successful in athletics than girls.	X	
17. Girls will care more about friend's hypothetical greater success in the areas of romantic relationships, popularity, attractiveness, and close friendships...	X (r)	X (pop, attr, frnd, acads)
18. Caring about a friend's greater success with the other-sex or any other domain will be positively correlated with RISA...	X (athl, acads, frnd)	X (rom, pop, attr)
19. Caring about a friend's hypothetical success with the other-sex will be positively correlated with grade level.	X	
20. The relationship between RISA and caring about the hypothetical success of a peer in any domain will become stronger with increasing grade levels.	X	

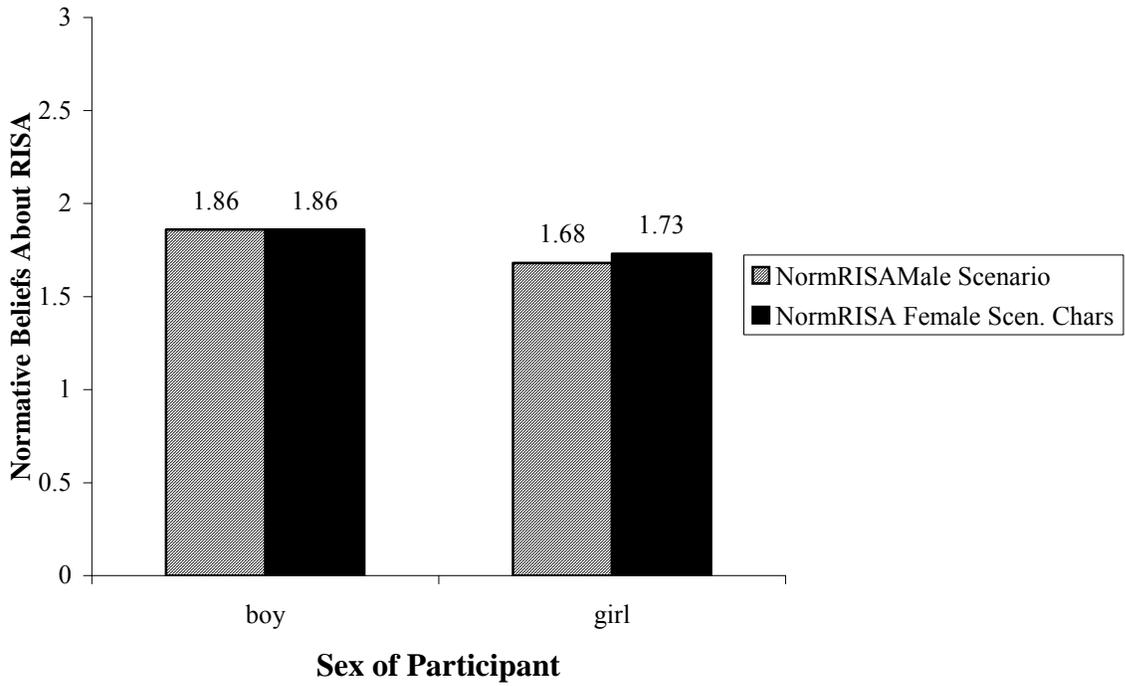


Figure 3.1 Normative beliefs about RISA for grade 6 participants.

Verbal Aggression

In support of Hypothesis 2, that boys would generally find direct forms of aggression by a scenario character as more acceptable than girls, a 2 (sex) X 3 (grade) X 2 (sex of scenario character) repeated measures ANOVA revealed that boys rated verbal aggression ($M = 2.01$, $SD = .79$) as more normative or “okay” than girls ($M = 1.77$, $SD = .72$), $F(1, 503) = 12.44$, $p < .0005$. A main effect for grade was also observed, $F(2, 503) = 10.82$, $p < .0005$. Post hoc comparisons using the Tukey HSD test indicated that grade seven students viewed verbal aggression ($M = 1.95$, $SD = .80$) as significantly more normative or “okay” than grade six students ($M = 1.73$, $SD = .66$). Grade eight students also reported verbal aggression ($M = 2.09$, $SD = .82$) as more normative or “okay” than grade six students, indicating support for the gender intensification hypothesis that predicted that the relations between normative beliefs and various aggression outcomes would become stronger across grade levels. The absence of a significant main effect for sex of scenario character ran counter to Hypothesis 4 that verbal aggression would be deemed more “okay” or normative when the scenario characters were boys as compared to girls. No interactions were observed to be significant for verbal aggression.

Physical Aggression

As predicted by Hypothesis 2, that predicted boys would rate direct forms of aggression as more acceptable than girls, a 2 (sex) X 3 (grade) X 2 (sex of scenario character) repeated measures ANOVA showed that boys rated physical aggression ($M = 1.61$, $SD = .79$) as more normative or “okay” than girls ($M = 1.25$, $SD = .50$), $F(1, 498) = 36.78$, $p < .0005$. There was also a statistically significant main effect for grade $F(2, 498) = 11.11$, $p < .0005$. Post hoc comparisons using the Tukey HSD test indicated that grade eight students viewed physical aggression ($M = 1.63$, $SD = .79$) as more normative or okay than grade seven ($M = 1.42$, $SD = .69$) and grade six students ($M = 1.31$, $SD = .57$), in partial support of the gender intensification

hypothesis that predicted normative beliefs about aggression would become stronger across grade. Grade six and seven students did not significantly differ from one another on normative beliefs regarding physical aggression. In support of Hypothesis 4, that predicted direct forms of aggression would be seen as more appropriate for boy scenario characters than girl characters, a main effect for sex of scenario character on normative beliefs regarding physical aggression was found $F(1, 498) = 36.98, p < .0005$. Specifically, physical aggression was deemed more normative or okay for boy scenario characters ($M = 1.42, SD = .72$) than for girl scenario characters ($M = 1.38, SD = .66$). There were no significant interactions observed for normative beliefs regarding physical aggression.

Results from the descriptive component of the project both complemented and varied from the quantitative findings, suggesting that RISA is perceived as a more appropriate form of aggression for girls than it is for boys, but not because it is “okay” per se. Specifically, interviewees typically mentioned that they believed girls engaged in RISA more than boys. When asked why, responses indicated support for the idea that certain forms of aggression are deemed more appropriate for one sex than another, in support of Hypothesis 6. For girls this was expressed as wariness about possible negative outcomes (e.g., decreased positive regard or popularity) if a girl was observed by peers to show aggression toward others. It did not seem that girls thought that RISA was more acceptable than boys, so no support was generated for Hypothesis 1, that girls would believe that RISA was more okay (as in the morally correct sense) than boys, it was just that it was that it was socially a less risky option. Specifically, interviewees stated that maintaining the façade of having a large number of friends was often more important than resolving conflicts among these friends. Resolving conflict openly was perceived as a risky undertaking, since one might be perceived as having fewer friends as a result. For example,

“[If girls expressed their anger directly like a boy] Maybe people wouldn’t like you as much. They would think you were mean or...or that if they talked to you then you wouldn’t like them or be nice to them.” (grade 8 girl)

“If a girl goes out and hits another girl, then they’re thought of as more dangerous and stuff like that, more risky or something [Would that change anything with her group of peers...that she hangs out with?] People might think she hangs out with a tough group of people or something like that...maybe not good people. [So, its not a good thing?] Yeah it might not be.” (grade 6 girl)

“[girls]...instead of getting in other peoples’ faces they just like sorta getting away from who ever you are mad at...by um...not talking to them. [why do you think girls choose that instead of saying something directly?] Maybe not to get in a big fight? [so would that be uncomfortable...?] For me it would...everyone knows about it...and everyone will say things about me. [So it could make things worse?] Yeah.” (grade 7 girl)

“Maybe they’d just make the other person [the person who expressed anger] feel like a horrible person. They might tell one person and convince them to not like them and then there would be more and more and more people who didn’t like them.” (grade 8 girl)

In support of Hypotheses 2 and 4 that boys would view verbal and direct forms of aggression as more acceptable than girls and that this behaviour is more typical for boys than girls, interviewees noted that using direct forms of aggression is sometimes viewed as a positive manifestation of one’s masculinity or toughness. Being able to show others up or getting others to admit to their weaknesses *publicly* was sometimes perceived as *the point* of addressing conflicts directly. If someone was shown to be wrong in view of others, the aggressor might be seen as the “winner” and shown greater respect by peers. More interestingly, some forms of RISA are viewed as feminine and so are avoided.

“It is really unlikely that boys would spread rumors about each other because people would think that they are weak, both physically and mentally or emotionally.” (grade eight boy)

“When girls are looking at the guys, guys are like, ‘Oh I should go in front of that guy and say it to his face and don’t (sic) be a wuss cause girls might think like, Oh that guy’s not cool anymore.’” (grade six girl).

“If a boy was to punch someone and like get into a fight, people think it’s cool a lot of the time, but if a girl was to – I don’t think it would be as cool or whatever, like they’d keep it more hidden probably if they punched someone. A guy would go telling everyone and all of his friends.” (grade eight girl)

There did not appear to be any grade differences in interview responses, so there was no support generated for the idea that normative beliefs become more strongly held with increasing grade level as predicted by the gender intensification hypothesis. Hypotheses 3 and 5 were not examinable using interview data.

Additional Themes

Within the interviews, students generated a number of other theories explaining sex differences in use of RISA. One overriding theme was that girls were not confident enough in their abilities to physically aggress against one another and so had to learn to express aggression in other ways, such as RISA. The point was made that boys spent more time engaged in physical activities (i.e., team sports) while growing up and so were more comfortable with expressing feelings in a direct and/or physical manner. Since boys were more likely as a group to be engaged in some type of physical activity and more comfortable expressing their feelings physically, conflicts were more likely to surface and be resolved while engaged in the activity. However, for girls, they were less likely to be interested in sports and physical activity and so did not seem to have the opportunity to resolve conflicts in this manner. Instead, it was perceived that they spent more time physically inactive; a situation that was more conducive to discussion and a focus on what others were doing, rather than a focus on an activity or developing their own strengths and skills. The discussion of others seemed to be a pastime akin to boys’ involvement in physical activity. To this end, it was sometimes remarked that girls “enjoyed” the art of engaging in RISA just as much as boys enjoyed displaying their physical strengths. Boys worked

to maintain an aura of “toughness”, but girls were described as being engaged in an all-encompassing battle to maintain an aura of physical and social perfection.

A general theme was that RISA was used as a means of self-protection for girls in peer groups that were rapidly shifting and highly competitive. Specifically, if one was able to draw attention to another’s perceived area of weakness (i.e., a physical feature like the straightness of teeth or body shape), others may be less inclined to look at the aggressor’s own flaws (i.e., her weight). This allowed the aggressor to define the standards of beauty or normality within her peer group so that her status within the group would remain secure. Boys were thought to care about their standing within one’s group, but did not seem to have the same degree of competition or concern about standards within the group.

Other reasons for sex differences in RISA included the perception that RISA is biologically based. Girls were described as being different from boys from birth in regard to personality. They were described as being subject to hormonal influence, particularly in early adolescence, that lead them to be more reactive to interpersonal slights or conflicts than boys. It was noted that girls started proceeding through puberty earlier than boys. This earlier maturation was thought to be a period of strain for girls and that this strain increased their likelihood of being “mean” or using RISA.

Theory 2: Target Value Theory (H7 to H14)

Variability in perceived emotional support/disclosure, the importance of emotional support/disclosure were examined using two separate 2 (sex of participant: boy, girl) X 3 (grade level: 6, 7, 8) univariate ANOVAs. Variability in emotional responses to an interloper (i.e., anger, hurt, surprise, guilt, and jealousy) was explored with one 2 (sex of participant: boy, girl) X 3 (grade level: 6, 7, 8) MANOVA. In addition, correlation coefficients were computed to

examine hypothesized relationships. Finally, hierarchical multiple regression analyses (as described below) were conducted to examine hypothesized moderation effects.

Perceived Level of Emotional Support/Disclosure in Friendships

Results of the first ANOVA supported Hypothesis 7 by showing that girls rated their same-sex friendships as higher in emotional support ($M = 4.17, SD = .73$) as compared to the same-sex friendships of boys ($M = 3.68, SD = .83$), $F(1, 448) = 31.80, p < .0005$. There was no main effect for grade and no grade by sex interaction observed.

Correlational analyses revealed that counter to what was expected under Hypothesis 9 (that emotional support and disclosure would positively relate to RISA), perceived level of emotional support and disclosure did not significantly correlate with either self-reported, $r(417) = -.035, p = ns$, or peer-reported RISA, $r(97) = -.021, p = ns$.

Importance/Value of Emotional Support/Disclosure

Consistent with Hypothesis 8, findings indicated a main effect for sex of participant, $F(1, 460) = 36.10, p < .0005$, such that girls placed higher value on support and disclosure in their same-sex relationships ($M = 4.30, SD = .62$) as compared to boys ($M = 3.83, SD = .86$). There was no main effect for grade, nor was a grade by sex interaction observed.

Contrary to what was predicted in Hypothesis 10 (that importance placed on emotional support and intimacy would increase along with use of RISA), the importance placed on emotional support and disclosure in same-sex friendships correlated negatively with self-report RISA, $r(425) = -.11, p = .02$. That is, those who place high value on emotional support and disclosure within their friendships reported lower levels of RISA. Similarly, counter to predictions, the value or importance placed on emotional support and disclosure was not significantly related to peer nominations of RISA, $r(99) = .02, p = ns$.

Affective Responses to an Interloper

Results of the MANOVA for the five affective responses (anger, jealousy, guilt, surprise, and hurt) revealed a main effect for sex, Pillai's $\lambda = .11$, $F(5, 491) = 11.61$, $p < .0005$, a main effect for grade, Pillai's $\lambda = .05$, $F(10, 984) = 10.09$, $p = .004$ and a sex by grade interaction Pillai's $\lambda = .04$, $F(10, 984) = 2.23$, $p = .015$. In regard to the main effect for sex, univariate analyses indicated that in partial support of Hypothesis 11 (that girls would have a stronger emotional reaction to the interloper than boys), girls consistently reported more jealousy $F(1, 495) = 18.72$, $p < .0005$, anger $F(1, 495) = 19.32$, $p < .0005$, and hurt $F(1, 495) = 44.00$, $p < .0005$ in response to the interloper as compared to boys (see Table 3.3). The affective responses of guilt and surprise did not vary for girls and boys as predicted by Hypothesis 11. Although, an examination of group means indicated that guilt, hurt, and jealousy appeared to increase across grade and there was an overall (unpredicted) multivariate effect for grade, none of the univariate tests for each affective response reached significance.

The sex by grade interaction was observed to be significant for hurt in response to the interloper, $F(2, 495) = 3.94$, $p = .02$. A one-way ANOVA (sex of participant: boy, girl) at each level of grade revealed that girls more commonly endorsed feelings of hurt in response to the interloper than did boys in grades six, $F(1, 216) = 32.76$, $p < .0005$ and seven, $F(1, 216) = 62.79$, $p < .0005$, but not in grade eight (See Figure 3.2).

Correlational analyses (see Table 3.4) supported Hypothesis 14 (that degree of investment in a friendship should be related to negative emotional reactions to the threat of an interloper) by showing that each of the five affective responses to an interloper was significantly correlated with perceived level of support and disclosure in a same-sex friendship. Specifically greater perceived emotional support was tied to stronger feelings of jealousy, anger, hurt, surprise and guilt. Thus, the more invested individuals were in their best friendships, the more strongly they

reacted to threats of losing these friends to others. Contrary to the prediction that greater affective response to any interloper in all five domains would be connected to more RISA (higher endorsement of RISA as a response, higher self- and peer-reports of RISA behaviour; Hypothesis 12), few significant correlations were observed (see Table 3.4). In particular, feelings of jealousy and anger in reaction to an interloper were positively correlated with self-reports of RISA, whereas hurt, guilt, and surprise were not significantly related. None of the affective responses were observed to be significantly related to peer-reports of RISA.

Anger, jealousy and hurt all positively correlated with level of RISA endorsement to the interloper scenario. That is, the more participants believed that they would feel angry, hurt or jealous in reaction to an interloper, the more likely they would believe that they should respond to the interloper or their friend with RISA behaviours.

Does sex moderate the relation between affective response and RISA?

Two hierarchical multiple regressions were conducted to see whether relations between affective responses and the criterion variables of interest (self-reported RISA and extent of RISA responses to the interloper) varied for girls and boys as was predicted by Hypothesis 13. Given that there were no zero-order correlations between affective responses and peer nominations of RISA (regardless of whether the correlations were run on both sexes together or separately), peer nominations were excluded from these analyses.

The same format was followed for each analysis. Specifically, affective responses sharing a significant zero-order correlation with the criterion variable of interest were entered onto the first step of the regression along with sex of participant. Interaction terms between sex of participant and relevant affective responses (those entered on Step 1) were entered on the second step of the regression.

Table 3.3 Means and (standard deviations) for affective responses to interloper by participant sex

Affective Response	Participant Sex	
	Boys	Girls
	<i>M (SD)</i>	<i>M (SD)</i>
1. Jealousy	2.73 (1.22)	3.26 (1.15)***
2. Anger	3.00 (1.27)	3.49 (1.12)***
3. Hurt	3.14 (1.4)	4.14 (1.06)***
4. Guilt	2.26 (1.10)	1.94 (1.11)
5. Surprise	3.18 (1.28)	3.19 (1.16)

*** $p < .005$.

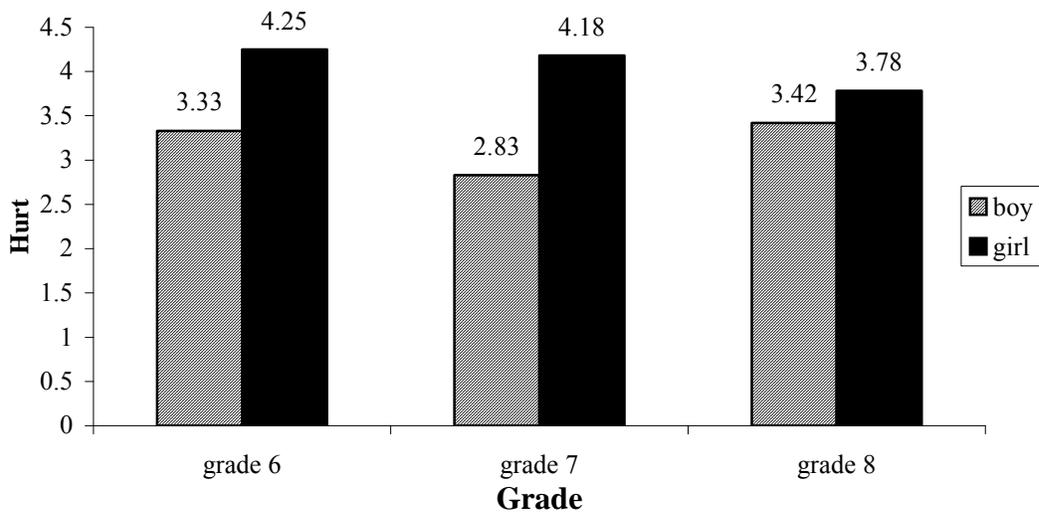


Figure 3.2 Sex differences across grade on hurt in response to the interloper.

Table 3.4 Inter-correlations among affective responses to the interloper, perceived level and importance of support and various measures of relational/indirect/social aggression

Measure	1	2	3	4	5	6	7	8	9	10
1. Anger	--									
2. Surprise	.22**	--								
3. Guilt	.22**	.27**	--							
4. Jealousy	.52**	.29**	.24**	--						
5. Hurt	.53**	.32**	.19**	.41**	--					
6. SuppLev	.14**	.15**	.08*	.20**	.28**	--				
7. SuppImp	.14**	.16**	.09*	.22**	.27**	.76**	--			
8. RISAsr	.20**	.02	.06	.16**	.02	-.04	-.11*	--		
9. RISApn	.02	-.03	-.01	.08	.02	-.02	.02	.36**	--	
10. RISaint	.26**	.07	.02	.28**	.11*	.01	-.07	.32**	.19*	--

Note. For analyses not involving peer nominations, *df* ranged from 417 to 458; For analyses involving peer nominations, *N* = 115. Anger = degree of anger endorsed in response to interloper; Surprise = degree of surprise endorsed in response to interloper; Guilt = degree of guilt endorsed in response to interloper; Guilt = degree of guilt endorsed in response to interloper; Jealousy = degree of jealousy endorsed in response to interloper; Hurt = degree of hurt endorsed in response to interloper; SuppLevel = perceived degree of support and disclosure in same-sex friendship; SuppImp = degree of importance or value placed on support and disclosure within same-sex friendships; RISAsr = self report of relational/indirect/social aggression; RISApn = peer nomination of relational/indirect/social aggression.

**p* < .05 ** *p* < .01 (2-tailed).

For endorsement of RISA to the interloper, results indicate that in the first step sex, hurt, anger, and jealousy predicted 10% of the variance, $F(4, 451) = 12.74, p < .0005$. In this case, anger $\beta = .19, t(4, 451) = 3.37, p < .001$ and jealousy $\beta = .21, t(4, 451) = 3.91, p < .0005$ were uniquely predictive of endorsing RISA. The addition of Step 2 (where the three sex by affect interaction terms were entered) added 1.5% of the predicted variance, $F(7, 451) = 2.60, p = .052$ to the model. Only the sex by jealousy interaction term made a unique contribution to endorsement of RISA to the interloper $\beta = .14, t(4, 451) = 2.75, p = .006$ indicating that the moderating effect of sex on the relationship between affect and RISA responses to the interloper existed only for jealousy. Subsequent correlational analyses revealed that the link between jealousy and endorsement of RISA to the interloper was stronger for girls, $r(265) = .35, p = .01$, than it was for boys, $r(184) = .17, p < .0005$; Fisher's $z = 2.00, p < .05$. In sum, there is partial support for Hypothesis 13 in that jealousy is more strongly predictive of endorsement of RISA responses to the interloper for girls than it is for boys.

For *self-reported RISA*, results indicated that in the first step of the analysis sex, anger and jealousy predicted 4.4% of the variance, $F(3, 459) = 7.06, p < .0005$. Only anger made a unique contribution to self-reported RISA, $\beta = .15, t(5, 459) = 2.90, p = .006$, indicating that higher levels of anger in response to an interloper contributed to higher self-reports of RISA. The addition of interaction terms at Step 2 was not significant, indicating that sex did not exert a moderating effect on the relationship between affect and self-reported RISA. Hence in this case, there was no support of Hypothesis 13 that predicts a moderating effect of sex on the relationship between affect and self-reported RISA.

Within the interview component of this study, the dyadic and more exclusive nature of girls' same-sex relationships was noted as a possible contributor to sex differences in RISA,

indicating some support that there is something about the nature of girls' friendships that leads to RISA. However whether this connection represented a positive correlation between support, intimacy and disclosure (as predicted by Hypotheses 9 and 10) or just a fear of what it meant if one lost the conflict is debatable. For example, it was sometimes noted that shifts in social networks were difficult for girls, leading to comparisons with new individuals in the group that primed jealousy and RISA. For example;

“Guys, ever since they were really little they always let everyone into their group, like guys are friends with all other guys, but girls they all have their little cliques and they're friends with different people.” (grade eight girl)

“Girls aren't used to seeing others moving around from group to group...they're just like used to staying with the same thing. So then, they just like compare them...they say, 'Oh, I'm prettier than her!'” (grade eight girl)

“The girls need someone to depend on...they depend on them being like nice otherwise if they're mean they could just turn their back on you and spread a rumor. [and then you'd be alone?] Yeah.” (grade eight girl)

“[If you think that girls engage more in RISA, why might this be?] ...I think girls they just talk a lot, they do a lot of talking so its [RISA] more effective.” (grade seven boy)

A very common theme throughout the interviews was the assertion that girls were more strongly impacted by RISA than boys. Some students even noted that engaging in physical aggression would not be an efficient way to hurt a girl. Furthermore, using RISA sometimes benefited the aggressor while also maximizing the hurt of the target. Specifically, some expressed that the aggressor may benefit by having increased attention from others while talking about interesting rumors or less attention drawn to her own flaws in the process of indirectly pointing out another girl's weaknesses. Although these effects were not formally hypothesized, they do seem consistent with the premises of Target Value Theory.

“Girls...if they are not part of the group, they think oh no, it's the end of the world.” (grade seven boy)

“If my brother is left out...he’ll just go talk to someone else...if my sister is left out...she’ll come home crying and be all sad.” (grade eight girl)

“If you hit a girl, I don’t know if they would really be affected. Like it would be a funny story and like no girl would hit another girl really, it would be like an anecdote you could tell people.” (grade eight girl)

There was one interviewee who offered the argument that the structure of boys’ groups could make the experience of RISA more severe for boys than girls. Specifically, it was noted that girls’ social interactions are often limited to smaller subgroups of individuals or cliques to which they belong. Each clique or subgroup will often have its own belief system or norm for social behaviour. However, boys tend to occupy one larger, more homogenous group. Therefore, if a certain number of individuals in this larger group decide use RISA against a boy, the boy has no other social group to turn to, whereas girls may be able to find refuge in another clique.

Another common theme was the difference in boys’ and girls’ responses to RISA when targeted. For example, students stated that boys were more likely to first evaluate whether a circulating rumor was true and if not might defend himself directly and/or confront another person who was thought to have started the conflict, leading often to a quick resolution of the conflict. So if boys were targeted by aggression, the impact was less emotionally painful because they were able to resolve it.

“The guys...they’re more calm. And they talk things out. But the girls like...they keep it in for a long time and don’t talk about it. The guys just say, ‘You’re doing this to me. I don’t like it. Stop.’ But the girls just start gossiping and spreading rumours. They don’t tell a person what is wrong. The guys say it and then they solve it.” (grade six girl)

“...the guy’s reaction...they’re like, ‘Doesn’t matter they’re not true anyways.’ But the girls are like [expressively], ‘But that’s not true!!!’ and they get all emotional.” (grade six girl)

It seems that girls in the same position may first wonder if it is true or assume that it must be true if peers have stated it, particularly if the girl(s) who targeted her were viewed as higher in social status. For example,

“Like if someone calls them [girls] a name, they’re like, ‘Oh, I hope I’m not that and...’ Like I said they’re emotional.” (grade eight girl)

“My friends...come up to me and they’re like ‘ew, what kind of shorts are you wearing?’ I’ll get all in a fuss and be like, ‘Oh god, I have to change my shorts now.’ If somebody says that your shorts are ugly, you’re obviously going to assume...that the other person has really nice shorts.” (grade eight girl)

However, it was noted that girls tended to keep their negative feelings in about a peer’s actions. Keeping one’s negative feelings in without doing anything to cope with or regulate one’s emotions led to increased intensity of emotions about the incident but benefited the girls in the short term because they did not give the outward impression of being hurt. The build up of negative emotions in turn appeared to help victims justify or convince themselves about the wrongfulness of the other’s comments or actions (and how deserving the other was of retribution). Eventually the emotions expressed themselves in other less direct ways, often leading to more RISA and confusion amongst the girls.

“Like some people...have like websites like Nexopia or something and on their thing they say like “shout to all my girls!”...and then they list a bunch of people and like if you’re not on their list you feel really kind of...like I thought we were friends?! So then you take them off your list or something like that and you never actually talk about it with the person. You never ask or if you say ‘Hey, why am I not on your list?’ you say it jokingly even if you don’t mean it jokingly to protect yourself.” (grade seven girl)

“If you don’t tell anybody then you can just keep it inside you and you can just hate them more and more and nobody would ever know...it will just get bigger and bigger. [why would you keep it in?] ‘Cause you don’t like them so much, you just want to like them less and make more people not like them.” (grade eight girl)

Others stated that sometimes both the aggressor and target purposely avoid talking about their ill feelings with each other directly, even though both are aware of the other’s dislike.

Instead, talking about another behind her back allows one to maintain the illusion of having a larger number of friends; the conflict is never truly made public so that peers can come to their own conclusions about what happened (and perhaps pick allegiances). However, because the issue remains behind the scenes, it does not resolve as quickly as it does with boys. In fact, those who were targeted by RISA observed that it might in fact be more beneficial to “save” the negative experience to use against the aggressor in the future, if a similar situation happened again, so that one may use this as “evidence” to convince others why a female peer should be rejected for her poor behaviour.

“Usually you can hold it...and you won’t look like you’re holding a grudge...’cause you don’t want to start a fight. But if suddenly something does happen then you can stir it up...like the person said something really bad to your face or something...then you can...throw all those things in....so it sounds really, really bad... ‘Oh, ooh one time she did this to me...she’s so mean!’ [...you can say to somebody else this is what she did?] Yeah. Or like ‘Don’t be friends with her, one time she did this to me and she’ll do that to you...’” (grade seven girl)

It was also noted that even when girls attempted to defend themselves in the ways that boys did, they were not always able to dispel rumors as easily as boys. It seemed that direct confrontations or a logical response might even backfire or make the situation even more intolerable (as girls often fear), again leading to increased RISA.

“Usually the person [who is aggressed against] will kind of laugh it off but then they are the only person who remembers it for awhile. Like the person who said it doesn’t even remember saying it. The rest of the group will laugh it off because it wasn’t said to them...And then after something else comes up [and the victim mentions what had been said to her previously]...no one else remembers. Then they look at you like you’re a spaz and stuff...You look like you’re weird. Like a freak who cares about every little thing.” (grade seven girl)

What the point seems to be is that, for the victim, there is often an inherent power differential between herself and those that target her. Even when the target directly confronts the aggressors, what she (the target) remembers is less important than what the group remembers. Additionally, the incident recalled may seem incredibly minute when put into words (e.g., “Why

did you look at me that way last Tuesday?”) and is trivialized by others for that reason. The victim is then targeted for focusing on such minor issues and further invalidated, isolated, or victimized.

Theory 3: Symbolic Capital Theory (H15-20)

Two multivariate ANOVAs were conducted to explore whether caring about one's own success (academics, romantic relationships, popularity, attractiveness, close friendships, athletics) or caring about the success of others (academics, romantic relationships, popularity, attractiveness, close friendships, athletics) varied as a function of sex of participant (2: girls, boys) or grade level (3: 6, 7, 8). Correlational analyses were also employed to explore hypotheses involving the relation between measures of RISA and caring about the success of others. Hierarchical regression analyses (described below) were also used to test moderator hypotheses.

Caring About One's Own Success

Results of the MANOVA for the six domains of caring about one's own success revealed a main effect for sex, Pillai's $\lambda = .11$, $F(6, 472) = 10.09$, $p < .0005$. An examination of sex differences at a univariate level indicated that in support of Hypothesis 15, girls cared more about success with same-sex friends than boys $F(1, 477) = 20.93$, $p < .0005$. However, boys did not care more than girls about doing well in sports, $p = ns$ contrary to Hypothesis 16. Girls also cared more than boys about being attractive, $F(1, 477) = 10.31$, $p = .001$ and having good grades, $F(1, 477) = 8.02$, $p = .005$, these relations were not hypothesized. See Table 3.5 for means and standard deviations. Neither the main effect of grade nor the interaction of sex by grade for caring about one's own success was found to be significant at the multivariate level.

Caring About the Success of Friends

Results of the MANOVA for the six domains of caring about the hypothetical success of friends revealed a main effect for sex, Pillai's = .064, $F(6, 474) = 5.42, p < .0005$ with no main effect of grade and no significant interaction of grade by sex. In regard to the hypothetical success of same-sex friends, girls were not more likely than boys to care when best friends had greater success in areas of romantic relationships $F(1, 9.03) = 5.50, p = ns$, contrary to Hypothesis 17. However, girls cared more than boys if best friends superseded them in popularity $F(1, 479) = 15.29, p < .0005$, a findings that was consistent with Hypothesis 17. Also consistent with Hypothesis 17, girls also cared more than boys if best friends became more attractive, $F(1, 479) = 14.59, p < .0005$ and more successful in close same-sex friendships, $F(1, 479) = 28.93, p < .0005$. Finally, girls cared more than boys when friends superseded them academically (this was not predicted), $F(1, 479) = 9.54, p = .002$ (see Table 3.5 for means and standard deviations). In sum, there is partial support for Hypothesis 17, which predicted that girls would care more than boys about the hypothetical success of same-sex peers in regard to romantic relationships, popularity, attractiveness, and close friendships. The absence of a significant multivariate effect of grade ran counter to predictions made in Hypothesis 19. Specifically, participants were not observed to care more about the greater success of friends as grade level increased.

Correlations were conducted to examine whether caring about the success of friends in various domains was associated with RISA as predicted. In partial support of Hypothesis 18, findings (displayed in Table 3.6) showed that greater self-reported use of RISA was related to caring about friends' hypothetical greater success in every domain except for athletics, academic achievement, and close friendships. Specifically, more RISA was self-reported when students cared more about the success of friends in the domains of romantic relationships, popularity, and

attractiveness. In contrast, counter to what was predicted (Hypothesis 18) no such connection was observed between caring about the success of friends and *peer-reported* RISA for any of the domains.

To examine whether the relationship between RISA and caring about the success of friends was moderated by grade level, a hierarchical regression analysis was conducted using self-reported RISA as the criterion variable. Step 1 of the regression included grade along with self-reports of caring about friends' success in the domains of romantic relationships, popularity, and attractiveness (where all three domains shared a significant zero-order correlation with self-reported RISA). Interaction terms between grade level and each of the four success domains were included on the second step.

For self-reported RISA, results indicated that in the first step of the analysis grade, care about friends' success in domains of romantic relationships, popularity, attractiveness and grade predicted 3.9% of the variance $F(4, 446) = 4.45, p = .002$. Examination of individual beta weights did not indicate any factors showing a unique contribution to self-reported RISA. Addition of interaction terms at Step 2 was not significant, indicating that grade did not exert a moderating effect on the relation between care about friends' success and self-reported RISA. Hence in this case, there was no support of Hypothesis 20 that predicted a moderating effect of grade on the relationship between care about friends' success and RISA.

Given that none of the success domains correlated with peer-nominations of RISA, no subsequent regression analysis was conducted to explore whether grade served as a moderator.

Table 3.5 Means and (standard deviations) for care about own success and friends' hypothetical greater successes

Care About <i>Own</i> Success	Participant Sex	
	Boys <i>M (SD)</i>	Girls <i>M (SD)</i>
1. With Friends	3.39 (1.22)	3.89 (1.15)***
2. In Sports	3.67 (1.27)	3.49 (1.12)
3. Attractiveness	2.77 (1.4)	3.30 (1.06)***
4. Grades	3.69 (1.10)	3.99 (1.11)***
5. Popularity	2.58 (1.28)	2.74 (1.16)
6. Romantic Relationships	3.38 (1.25)	3.22 (1.21)
Care About <i>Friends'</i> Greater Success		
1. With Friends	2.59 (1.10)	3.21 (1.15)***
2. In Sports	2.67 (1.37)	2.80 (1.23)
3. Attractiveness	2.37 (1.01)	3.00 (1.16)***
4. Grades	2.32 (1.18)	2.80 (1.15)***
5. Popularity	2.69 (1.24)	3.24 (1.15)***
6. Romantic Relationships	3.19 (1.21)	3.19 (1.37)

*** $p < .0005$.

To examine whether the relation between RISA and caring about the success of friends was moderated by participant sex (this was not predicted by any hypothesis), a second hierarchical regression analysis was conducted using self-reported RISA as the criterion variable. Step 1 of the regression included sex along with self-reports of caring about friends' success in the domains of romantic relationships, popularity, and attractiveness. Interaction terms between sex and each of the four success domains were included on the second step.

Results indicated that in the first step of the analysis sex, care about friends' success in domains of romantic relationships, popularity, and attractiveness predicted 3.9% of the variance $F(4, 446) = 4.45, p = .002$. Examination of individual beta weights did not indicate any factors showing a unique contribution to self-reported RISA. Addition of interaction terms at Step 2 was not significant, indicating that sex did not exert a moderating effect on the relationship between care about friends' success and self-reported RISA.

Results from the interviews were consistent with many of the results found through quantitative analyses. That is, many participants (boys and girls) were quick to state that girls cared more about their personal appearance (e.g., clothes, make-up, and hairstyle) than did boys. However, unlike the quantitative findings, when it came to the importance of attractiveness to the other-sex, some individuals stated that being attractive to the other- sex was very important for girls and was in fact linked to one's status in the peer group,

“Looks are really important to girls...being nice. If you've got a boyfriend it's kind of like being well liked. If you don't it doesn't really reflect on you much...but if you do it gets you like another point or something.” (grade six girl)

Table 3.6 Inter-correlations among caring about a friend or friends' greater success in various domains and RISA measures

Measure	1	2	3	4	5	6	7
1. Fgrade	--						
2. FOsex	.37**	--					
3. Ffriends	.43**	.46**	--				
4. Fpop	.41**	.48**	.60**	--			
5. FATtract	.41**	.59**	.56**	.67**	--		
6. FSports	.38**	.35**	.39**	.41**	.42**	--	
7. RISAsr	.01	.16**	.09	.16**	.18**	.05	--
8. RISApn	-.11	.03	.10	.07	.18	-.01	.36**

Note. For analyses not involving peer nominations, *df* range from 445 to 447; for analyses involving peer nominations, *N* = 115. FGrade = care about friend getting better grades; FOsex = care about friend being noticed by the other sex; Ffriends = Care about friend making a lot of other close friends; FPop = Care about friend becoming very popular; FATtract = care about friend becoming more attractive; FSports = Care about friends becoming very good at sports; RISAsr = self report of relational/indirect/social aggression; RISApn = peer nomination of relational/indirect/social aggression.

**p* < .05 ** *p* < .01 (2-tailed).

Occasionally, some indicated that having a girlfriend might also be important to boys as well as paying some attention to personal style (i.e., general choice of clothing), but generally these things were much more important issues for girls. When asked why these things were important to girls, interviewees gave a response like the example above stating that their performance in various domains was often linked to popularity or standing within one's peer group. Those who were perceived to be performing the best in these areas were often the most popular.

Another observation made by a number of interviewees was that not only was performance in various domains often more important for girls than boys (consistent with Hypothesis 15), but that the number of areas in which one gained success was critical for girls as well. Many observed that areas of weakness were more acceptable for boys than for girls. It was unclear from the responses whether this was a matter of individuals accepting imperfections in themselves or a matter of acceptance of imperfections by peers. However, it seemed that this lack of tolerance for imperfection was *why* girls found RISA (where one is criticized for her low performance in one of these areas) so hurtful. For example:

It's just because of the popularity in the school. They [girls] want to be popular, they want to be liked and they think they have to do things to be liked, like being thin. They [boys] could still be good at certain things and not care about other things. They don't need to be good at everything. They don't need to be perfect in this, perfect in that. [But girls think they need to be perfect?] Yeah. Like they [boys] could be not very smart but they could have good athletic ability or not very good athletics but they're very smart and social. [..and would that be good enough...?] Yeah, they still got one area where they are good and can make friends. (grade eight boy)

"Guys...they either do good in some things and not others, but people don't care about that." (grade seven boy)

“Girls want to keep their reputation...rumors and stuff like that is a kind of way of ruining that...so that’s how it hurts girls more. They want to be liked, have lots of friends, be popular and maybe have boys interested in them.” (grade six girl)

Unlike the quantitative results, athletic performance was typically considered more central for boys than for girls (as predicted by Hypothesis 16). Sports performance was often perceived as important in demonstrating boys’ toughness (important for popularity) and was one of the ways in which boys might become popular. Interestingly, lack of interest in sports was one of the reasons thought to contribute to greater use of RISA among girls. It was thought that group sports were domains where boys often worked out interpersonal conflicts and frustrations with some success. Some expressed the idea that because girls spent less time in physical activity that they had more time to talk among themselves, which led to, increased use of RISA. Others believed that the structure of physical activities was often reflective of how boys and girls dealt with competition and aggression in other parts of life. For example, it was noted that boys played group sports in which teams worked together to win or lose, whereas girls’ competitive physical activities often concluded with a single individual winner or loser; hence girls were not as accustomed to working together to achieve a goal in the way that boys do. Some examples of text portraying these ideas are listed below.

“[If you think that girls engage more in RISA, why might this be?] Because girls don’t engage in, like not as much as boys, sports...I think girls they just talk a lot, they do a lot of talking so its [RISA] more effective. When they [boys] do sports there’s lots of disagreements and that’s where it [conflict] comes from but then the next day we get it all fixed up.” (grade seven boy)

“Boys play sports like hockey, that’s a team effort so they are not trying to be better than anyone. Ballet is more of a girls’ sport, it is like a single sport where there’s one best.” (grade eight girl)

“Girls just want to be a part of the group more than boys...boys don’t really care, boys have other things to worry about, like they want to be the best at sports.” (grade eight girl)

CHAPTER 4 DISCUSSION

The purpose of this study was to determine the tenability of three different theories in predicting RISA outcomes. Specifically, I sought to determine whether the three theories could help explicate the reasons for age and sex differences observed in use of RISA among early adolescents.

Reported Use of RISA and Sex Differences

Boys and girls self-reported engaging very infrequently in RISA themselves. These findings contrasted strongly with the interview findings, where the majority of students were generally quite quick to state that they believed girls engaged in RISA more often than boys and they perceived that it happened quite frequently (but usually in peer groups other than their own). The low overall reported levels of RISA (regardless of sex) also seemed inconsistent with the large proportion of students who reported in another part of the questionnaire that a close friend had left them out over the school year. Finally, in the limited number of grade six and seven classrooms for which valid peer nominations were available, girls were more likely to be nominated as engaging in RISA than their male counterparts (although this difference did not reach statistical significance). In sum, it appears when talking about themselves, girls and boys tend not to admit to using RISA; however, when talking about others, many report that girls are more likely to engage in this form of aggression than boys. Since there appear to be two issues involved, namely, (a) low levels of self-reported RISA and (b) seemingly inconsistent reporting

of sex differences, the following sections are separated to discuss the meaning of these observations.

Low Self-Reported RISA

Although the findings from the current study regarding low levels of self-reported RISA seem puzzling due to the inconsistency with what is reported during interviews, the pattern of findings displayed is similar to results of other studies. For example, Solis (1999) asked adolescents to indicate how often they use RISA relative to the “average” similarly aged adolescent. Results indicated that most participants rated themselves as using RISA “a lot less” or “somewhat less” than most other adolescents their age. Other studies using the self-report method with both children and adult samples have also found that participants also tend to report using low levels of RISA (e.g., Delveaux & Daniels, 2000; Green, Richardson, & Lago, 1996). Researchers in the area of self-perception bias have referred to the tendency of individuals to view themselves as possessing fewer negative qualities and a greater number of positive qualities than the “typical” person as the “better-than-average effect” (Pronin, 2002). With regard to the contrast between the quantitative and qualitative aspects of reports of RISA, it has been observed by others that researchers using qualitative methods tend to conclude that RISA occurs more frequently than what is reported in quantitative reports.

There are several possible explanations regarding the inconsistent pattern observed between methods used to assess RISA. Certainly the general pattern of low self-reports and higher reports from peers is suggestive of socially desirable responding in regard to admitting to using RISA. Information from the descriptive component of the study certainly highlights this possibility. Specifically, when asked to describe incidents of RISA within the interviews, students very rarely described a scenario where they were acting as the aggressor. Generally, they would describe themselves as a victim or would report on an aggressor’s action from

another peer group. It was often reported that RISA occurred in “other” peer groups; that one’s own group of friends did not engage in this behaviour to the same degree. Occasionally participants described engaging in RISA in retaliation without appearing to recognize their own aggressive response as a form of RISA. The focus was often on what had been done to oneself by someone else. The tendency for others to talk about the “meanness” of others while having less insight into their own aggressive or competitive actions, particularly among women has been remarked on informally elsewhere (e.g., Dellasega, 2005; Tracey, 1991). A study that examined aggression narratives of boys and girls has found that the majority of students (94% of the sample) place blame on others when discussing aggression with researchers (Xie, Swift, Cairns, & Cairns, 2002). The term fundamental attribution error used by social psychologists also applies here (Jones & Harris, 1967). Regardless of the term used, this tendency may be especially strong in this study since perspective-taking abilities are likely still developing in many in the age group examined (Selman, 1980). Further research is necessary to determine the role of social desirability and developmental stage in the measurement of RISA. Although it is difficult to determine or control for the impact of social desirability, there are some measures of social desirability (e.g, measures by Paulhus, 1999 or Strahan, 2007) that could be incorporated into future research for the purpose of looking at the connection to the reports of RISA behaviour. For example, individuals nominated as RISA by peers could also complete self report RISA items and a measure of social desirability. A negative relation between self-reports and social desirability in those who are reported by peers to use RISA frequently may be an indicator supporting the effect of social desirability.

Information from the interviews also highlighted a second possibility regarding the pattern of RISA reporting. Specifically, it was noted that conflicts using RISA were often

circuitous or complex making it difficult to tell exactly who instigated the conflict since the actions with RISA are often difficult to attribute to one person and are meant to be hard to interpret (e.g., was someone left off of a list of “friends” intentionally or was it an oversight?). As a result it was quite possible that a “victim” responding with RISA to the “aggressor” might be perceived as the instigator of the conflict by the other person involved. These sorts of conflicts also occur in a historical context of interactions over what can be an extended period of time. Given all of these factors it may be very difficult for individuals to remember or determine who in fact “started” the conflict and so may not be accurate in reporting their own use of RISA, particularly if it is already viewed as an inappropriate behaviour. To this end, it may be good to begin to purposely elicit from interviewees how the other person involved in the conflict may have thought of their own actions, giving examples perhaps of how such misunderstandings may occur. In reference to peer nominations or self-report measures, perhaps it may be useful to differentiate between those peers who are perceived to tend to react using RISA in self-defense or when emotional, versus those individuals who are perceived to use RISA for fun or personal gain, such as has been done with direct measures of aggression (e.g., Poulin & Boivin, 2000).

In addition to being circuitous, it is possible that being targeted by RISA is simply more emotionally evocative than is being an aggressor, regardless of the social desirability component of self-reports. Research indicates that emotionally evocative incidents are more likely to be recalled than less evocative memories (Nelson & Gilbert, 2005; Sharot, Martorella, Delgado, & Phelps, 2007) and so participants may just be more likely to remember incidents where they were victimized rather than remember incidents where they quickly gave someone else a nasty look. As a result, reports of RISA may appear much higher when students recall victimization experiences and lower when they are asked to report on their own aggressor experiences. In sum

there are a number of directions for future research that would further identify the degree to which all of these factors play out in the self-report of RISA. For example, one may ask students to report on a variety of social experiences, including RISA victimization and aggression on a more frequent basis (e.g., online or daily diary reporting methods). In this way, individuals may be more accurate in their recollections. Alternatively, researchers may wish to interview students who are most frequently nominated as RISA by peers, so that some degree of certainty may be obtained that the individuals actually use RISA and study the ways that individuals deny, suppress, or rationalize aggressive behaviour. Perhaps individuals who tend to use RISA speak about their behaviours in a different manner than those who do not.

Finally, it is also possible that the students that participated in the interviews differed from those who just completed questionnaires. Specifically, given that less than half of those individuals who completed the questionnaires expressed interest in being interviewed, it is conceded that those individuals participating in the interviews may therefore have had more interest or experiences with RISA. This interest/experience may have influenced their perceptions on its frequency of occurrence, relative to self-reports from the quantitative portion of the study. Interviewees' levels of peer-nominated RISA were not obtainable due to ethical considerations, so the RISA status of the individuals interviewed in this study could not be examined to determine whether the interviewees were over-representative of aggressive or non-aggressive individuals.

Inconsistent Reporting of Sex Differences

The absence of sex differences observed in the RISA self-reports in this study, although somewhat unexpected, fits with a number of previous studies that have also not found sex differences in self-reported RISA (e.g., Delveaux & Daniels, 2000; Rys & Bear, 1997; Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001; Tomada & Schneider, 1997). In regard to

comparisons of self- and peer- reports of sex differences, Archer (2004) concluded based on meta-analysis that the method used to measure RISA (self-reports, peer nominations, or teacher reports) is partially responsible for inconsistencies in the reports of sex differences. It was noted that self-reports were especially prone to variability in terms of sex differences, when compared to studies using other methods to measure RISA; that is, a number of studies have found large sex differences, some small differences, and others none at all. In the current study, since self-reported RISA scores were generally attenuated toward the lower end of the scale, it is possible that sex differences (in the overall scale) were not large enough to reach significance. In regard to limited peer nominations (the same method used in the present study), effect sizes of sex differences are generally small (Archer, 2004). Perhaps in the current study, with a more representative or larger sample, sex differences would have been obtained on the peer nomination measure, since there was already a trend demonstrated with the limited sample. A limitation of this study was that verbal and physical forms of aggression were not measured; therefore it is difficult to know whether boys engaged in proportionally more direct aggression than RISA or whether girls engaged in proportionally more RISA than direct aggression, as is the case with other research (e.g., Osterman et al., 1998) that has not found overall sex differences when comparing boys' and girls' mean levels of RISA. However, interestingly, post-hoc analyses indicated that consistent with past research (e.g., Crick & Grotpeter, 1995), 95% of participants scoring one standard deviation above the mean on the RISA peer nominations were girls, indicating that there may be some effect of sex, at least in terms of more extreme ends of the spectrum.

With regard to the issue of sex differences, beyond the possible influence of general method of assessment, it seems that choice of items in composing a RISA composite may also

partially account for some of the apparent inconsistent reporting of sex differences between self-reports, peer nominations, and the interviews. First, a few interviewees in this study stated that certain types of RISA seemed to be more likely to be used by girls (e.g., gossiping, spreading rumors), while others might be more likely to be used by boys (e.g., ignoring others while they are talking). That is, these participants disagreed with the idea that girls used all forms of RISA more than boys. Since these interviewees' responses were somewhat consistent with previous research on adults that determined that men preferred "rational-appearing" while women preferred "socially manipulative" types of RISA (Bjorkqvist, Osterman, & Lagerspetz, 1994), some additional post hoc quantitative analyses were conducted to follow up on the interview responses. Interestingly results suggested that sex differences in self-reported RISA may depend on the items selected, specifically girls reported higher scores on a composite measure that consisted of "gossip or spread rumors about others", "smile in a fake way", "roll eyes and make a face when I'm asked to do something with someone I don't like", and "tell your secrets to others" while boys scored higher on a composite measure consisting of the two items "won't listen to another person" and "ignore others when they are speaking". Bjorkqvist et al did not offer an explanation for the pattern of results other than to say that they may be representative of the gender socialization processes; that style of aggression is influenced more by socialization and other contextual effects rather than sex. Such findings as those in this study and those by Bjorkqvist et al, suggest that types of aggression relate in a complex way to gender. That is, research has to move beyond sex as a dichotic category (or "stand-in" for gender role) and RISA as a singular category of behaviour to understand more fully how each relates to the other.

That sex differences depend on items selected in a measure is important for a number of reasons. First, this pattern of findings is interesting in light of the generally restricted range of

self-reports of RISA overall for both girls and boys. If these sex differences are significant despite the lower range of scores, it seems reasonable to conclude that the differences must be quite robust. However, the question must also be asked whether the restricted range may have masked other less strong sex differences on the other self-report items.

Second, these findings suggest a possible contributing reason for the inconsistent reports of sex differences in the existing literature. Recently, in a thorough literature review, Archer and Coyne (2005) noted that sex differences were less likely to be found in studies that used self-report measures of “indirect aggression” than those that used measures of “relational aggression.” The question of whether items from social, relational or indirect measures were differentially reported by sex was beyond the scope of the current study, but since the measure used in this study represented items unique to “social”, “indirect”, and “relational” aggression the results of this study currently add merit to the hypothesis that these concepts, although seemingly similar, are also different in potentially important ways due to items included in the different scales. There has been one very recent empirical study that has incorporated items from relational, indirect, and social aggression measures (Coyne, Archer, & Eslea, 2006). Results from this study indicated that sex differences were observed only on a single item – girls more frequently reported gossip than boys. However, the method used to measure RISA by Coyne et al differed from what is typical; participants were asked to report how often they had heard about or witnessed RISA by peers in a one-week period. Since the participants were not asked to specify the sex of the peers who were using RISA, it is difficult to know whether participants’ observations were based on same-sex or other-sex peers. In addition, although Coyne et al’s measure was a great improvement on previous research that uses only one “type” of RISA, only one measure of each “type” of RISA was used, so it is likely not completely representative of the

diversity of RISA items currently in circulation. In sum, although there is some evidence indicating the importance of using item-level analyses of various measures, further investigation is clearly required in this area.

Third, the findings from the post hoc analyses are important because they seem to illustrate that perhaps there are “boy-like”, “girl-like”, and perhaps “gender neutral” subcomponents of RISA. This pattern of self-reported differences may serve as an indication that not only do girls and boys seem to have different reputations for differential use of RISA (as indicated by the interview findings and peer nominations) but that girls and boys also perceive themselves as using certain types of RISA behaviour to a different degree than the other-sex. This pattern of findings seems to indicate that although there are global stereotypes about RISA, these stereotypes may be correct in some ways (i.e., girls as a group do tend to admit to using gossip and other behaviours more frequently), but also may washout certain other sex differences (i.e., boys may ignore others more frequently than girls). In sum, instead of viewing RISA globally as something that girls do, the focus may need to become more fine-grained when thinking about and conducting research on RISA. Perhaps the most interesting question generated from these findings is why certain RISA items seem more prevalent among girls and others among boys. Certainly a clue offered from the interviews was that boys believed that certain forms of RISA were too feminine to use. Currently there is little published research that examines the connection between RISA and gender role, however, one study conducted on adolescent girls (Crothers, Field, & Kolbert, 2005) indicates that femininity and RISA are positively related, indicating support for the idea that gender and RISA are connected in some manner. How the “girl-like” and “boy-like” RISA composites used in this study relate to gender role remains to be determined.

Finally, findings of boy-like and girl-like RISA may help to explain the differences between interviews and self-reports. Specifically, prior to asking participants about their opinion on sex differences in RISA, the interviewer provided a definition and several examples of RISA that incorporated both “girl-like” (i.e., gossiping or spreading rumors), “boy-like” (i.e., ignoring someone) and neutral examples. It is possible, then, that interviewees may have been holding in mind any one of these examples when asked to comment on sex differences and that the item he or she was thinking about may have produced or coloured responses about sex differences, thus possibly producing a greater number of responses that girls use RISA more than boys.

That there was a trend toward sex differences in the peer nomination measure overall also brings into question whether RISA has become generally viewed as something girls do, since both the self-report and peer nomination measures consisted of the same items, yet seemed to produce different results with regard to sex differences on the total measure. Specifically, in recent years, there has been a proliferation of film productions, books, and internet-based media that have introduced the concept of RISA to the general public as a type of behaviour that is more commonly used among girls than boys (the reader is referred to an intriguing media analysis on this subject by Feshbach, 2005). Although we did not assess media exposure within this study, given the topic’s proliferation generally, it is very possible that interview responses and the peer nominations were influenced by exposure to media portraying girls as the sex who are more likely to engage in RISA.

With regard to indirect evidence from the current study it should be noted that despite the hypothetically wide availability of information regarding the gendered nature of RISA, most participants were not familiar with or were unable to define the terms, relational, indirect, or social aggression at the beginning of the interview. A number also showed confusion

distinguishing between direct forms of aggression and RISA at various points within the interviews and had to be reminded of the differences between these types of aggressive behaviours. These difficulties suggest that participants were not familiar enough with the concept of RISA to know that it is seen as “something girls do”. However, it is possible that participants had still been sensitized to the general idea that girls are “mean” in different ways than are boys prior to participating in the current study without knowing the labels for these behaviours. As such, it is possible that some students may have been sensitized to the gendered nature of RISA perhaps without knowing the exact terminology used by researchers.

Whether or not RISA has been introduced as a gendered behaviour for girls via the media or other sources there were some indications that school administrators and teachers involved in the study were sensitized to the issue of aggression and bullying generally and believed it was something that needed to be better monitored and controlled within their schools. The question that must be asked, then, is whether school administrators and teachers may be giving the message that RISA is not tolerated in the classroom and that this message is partially responsible for students’ hesitation in self-reporting RISA, particularly girls concern about being “caught” using any form of aggression including RISA.

At least two of the participating schools had some informal and/or formal classroom interventions or discussions with students about the topic of “relational bullying” prior to data collection. A third school had informed the investigator that the school had concerns about RISA among its students after a change in programming and that the teachers had met a number of times to discuss the issue and what to do about it. At the school district level, schools were being required to demonstrate what about the curriculum addressed social responsibility and were often interested in the current project as a way to begin to address this area.

In sum, this project has extended the work of previous research and theoretical reviews by beginning to systematically examine the contribution of measure composition and method of measurement within a single adolescent sample. Given the findings of this study and Archer and Coyne's review, it has become very clear that method type and measure composition are very central components in the study of RISA. Continued attention to these factors will allow more authoritative statements about the existence or nonexistence of sex and age differences in RISA in addition to increasing the understanding of the sometimes subtle nuances of individuals' beliefs in regard to its usage. Future research should: (a) choose items that represent the broad spectrum of RISA items currently used in various measures, (b) take care in interviews to break down RISA into individual behavioural components, and (c) measure the familiarity children have to RISA (e.g., by asking about the amount of media exposure they have had in the past, or by asking for definitions of the concepts prior to beginning tasks associated with one's study). A strength of the current project was that it used multiple methods (i.e., self reports, peer nominations, and interviews) of assessment for RISA within a single study. Second, a major part of the background work in the development of the current research project was to select systematically items from the wide variety of existing measures in order to obtain a measure that equally represented RISA conceptualizations of the three primary research groups in the area. This work was done in an attempt to increase the coherence in the study and measurement of RISA and to possibly help learn more about the source of some of the inconsistent findings that appeared between different groups studying RISA (e.g., inconsistent findings in terms of sex differences). To this end, this research has extended previous works by attempting to control for the inconsistencies between methods and measures that have been used by separate research groups in different parts of the world over the past 10 to 15 years. Although the choice to use

multiple methods of assessment and inclusion of a wide range of RISA items within a single study clearly is a step forward for the field, the results born of these choices have also certainly highlighted one of the major challenges for researchers, namely, how to assess behaviour that is often unobservable, ambiguous, and socially undesirable in a reliable manner and how to interpret inconsistencies in results when they occur.

Gender Socialization Theory

Gender socialization theory posits that normative beliefs about the appropriateness of aggression predict frequency of aggressive behaviour. Specifically, gender socialization theory predicted that boys and girls would have different beliefs about the appropriateness of various forms of aggression. Furthermore these effects were expected to become stronger across grade level. Results indicated that beliefs about RISA were indeed related to aggressive behaviours. That is, the more students believed RISA to be “okay”, the more likely they were to be reported by peers as engaging in RISA and to self-report using RISA. This finding has recently been replicated by Werner and Nixon (2005) who also found that normative beliefs about RISA were positively correlated with RISA behaviours among grade five and six boys and girls. This study has extended previous work by determining that normative beliefs about RISA are linked to RISA behaviour for both boys and girls in an adolescent sample.

Normative Beliefs and Sex

Results further indicated that girls generally reported every form of aggression including RISA as less okay than did boys. The observed sex difference for beliefs about RISA is contrary to predictions made in this study and by others (Crick, Bigbee, & Howe, 1996; Huesmann & Guerra, 1997) who theorized that because girls tend to *use* RISA more than boys that they would also rate this behaviour as more okay than boys, relative to other forms of aggression. Despite the fact that girls were less likely to rate RISA as okay in any scenario, both boys and girls were

more likely to rate female scenario characters as engaging in RISA than male scenario characters in similar situations. Together, these findings seem to suggest that although girls find RISA wrong, they still view girls as more likely to use this form of aggression than boys. These findings also parallel those related to the pattern of sex differences in RISA. In interviews and peer nominations, girls are often thought to be the ones who use RISA within interviews and peer nominations, yet do not seem comfortable admitting to using RISA themselves. If it is true that girls generally use RISA more than boys, these findings speak to the strength of the social sanctions girls experience about admitting to engaging in this behaviour.

Interview results help to further clarify the unexpected relation between normative beliefs and sex. Specifically, girls expressed the strong belief that they would face negative social consequences (i.e., decreased status) if they were known to use any form of aggression, whether it is verbal, physical or RISA. Girls were fairly clear in their articulation of the idea that all aggression is viewed as wrong by peers and therefore risky to engage in. Early research has demonstrated that RISA is indeed viewed as a form of aggressive behaviour (i.e., as opposed to something less serious) and is often viewed by girls as more hurtful than more direct strategies (Galen & Underwood, 1997). In this light, perhaps it should not be surprising that girls would generally view RISA as “less okay” for a scenario character to use than boys. Furthermore, girls communicated that perceived risk of social sanction for being caught using aggression encouraged girls to use RISA rather than other forms of aggression. In sum, it seems as though the premise is that the more girls believed direct aggression would be viewed as unacceptable by others, the more they would use a strategy like RISA that increased their likelihood of remaining anonymous.

For boys, a similar, but converse, process appeared to be operating in regard to use of RISA. Boys generally viewed direct aggression as having favorable social outcomes, while RISA was not associated with any sort of social benefit and could also result in social sanctions. Specifically, boys thought that they would not be seen as masculine or tough if others knew that they decided to use a form of RISA rather than direct confrontation. It seemed, then, like girls, boys were also discouraged from using RISA, but felt freer to use other more direct forms of aggression when they believed it was required.

Information from the interviews also suggested that girls might choose to use RISA because they are less confident or comfortable using more direct forms of aggression due to lack of experience using these behaviours. Students attributed this discomfort to girls having less experience growing up playing team sports where physical contact and verbal aggression are sometimes tolerated or even encouraged. This finding is interesting since it indicates the impact that various contexts may have on individuals' behavioural repertoires. In regard to sports there are three areas that seem to be especially relevant to the topic of aggressive behaviours. First, sports usually have clear rules about what types or extent of physical or verbal confrontation is allowable (e.g., tackle below the waist in football, loud verbal confrontation in baseball) and often incorporate how to cope with and regulate emotional reactions during conflict (e.g., use of breath control and eye contact in martial arts training). Finally, in sporting activities there are usually specific, pre-defined sanctions for broken rules regarding conflict that are limited to a certain amount of time after which point the transgression is usually forgotten and the player is permitted to join back in the activity. One has to wonder about whether exposure to these types of sports has traditionally allowed boys to gain some skills in how to both manage and resolve conflicts. Since team sports that were traditionally reserved for boys (e.g., hockey, soccer, rugby)

are becoming increasingly open to female participants and providing more opportunities for females to proceed to professional levels, it may now be possible to assess more directly the relation between these types of factors in team sport participation and individuals' beliefs about RISA for both boys and girls.

It seems, then, that the crucial question in predicting RISA behaviour becomes not only whether girls or boys believe RISA is okay but under what conditions are they more likely to engage in this behaviour despite typically believing it is generally "not okay". For example, it may be the case that after reading a very brief ambiguous statement about another's actions (such as those given in testing gender socialization theory), individuals will continue to state that RISA should not be used. However, perhaps if a longer, less contrived scenario were provided where participants were reminded of life situations, the responses may be different. In fact, it has been remarked elsewhere that emotions cue cognitive scripts and that different emotions will elicit different scripts (Werner & Nixon, 2005).

Implications of Findings

The idea that RISA is viewed as equivalent to other forms of direct aggression by girls, and that fear of social sanctions for using aggression may actually increase use of RISA may have direct implications for shaping how interventions are structured within schools, particularly for girls who do not seem to have the option of confronting others more directly when angry. For example, investigating the impact of school policies and procedures around aggression, such as "zero tolerance" policies regarding physical and verbal forms of bullying becomes important since findings of this study suggest that girls' beliefs about the wrongfulness of any type of aggression and discomfort with being "caught" using aggression may actually perpetuate the use of RISA. Although girls who use RISA may have more power than their targets, others have recently argued (citing historical examples like the behaviour of servants and victims of spousal

abuse prior to the existence of legal divorce) that RISA type behaviour may also be more common in oppressed groups who are not free to express discontent openly (Chesney-Lind, Morash, & Irwin, 2007). It is important, then, that individuals are not simply taught that verbal, physical, and RISA is wrong without giving consideration to whether students have other behavioural strategies to directly confront and resolve conflicts that are allowable within the norms of the peer group. Results of this study also suggest that norms of the peer group become important because it is possible that, although seemingly painful and dysfunctional to adults, there may be few routes other than RISA for some adolescents to resolve conflict without being punished by the group. If this is the case, interventions may need to consider ways to address adolescents' peer culture rather than the behaviour of individuals per se. Others have emphasized the importance of developing intervention programs specific to RISA (Underwood, 2003), rather than applying pre-existing programs for direct forms of aggression to RISA. Results of the current study appear to lend some preliminary support to this suggestion.

Students also suggested that individuals might become more comfortable with and perhaps adjust norms for aggression through activities like team sports. Although it is too early to suggest that girls should be enrolled in more sporting activities to help them incorporate new beliefs about aggression and how to manage it, results do suggest a new area to investigate which could potentially become a fruitful path for intervention.

Normative Beliefs and Grade

In partial support of original predictions, students in grade eight reported verbal and physical aggression as more normative than students in grade six or seven. Interestingly, this result was not specific for boys but also held true for girls. This finding seems to indicate a lack of support for the gender intensification hypothesis that suggests individuals should increasingly endorse behaviours that are consistent with one's own sex in early adolescence (Hill & Lynch,

1983). Specifically, it was not expected that girls would increasingly endorse physical and verbal forms of aggression as normative with increasing grade levels, since these behaviours have been considered as essentially masculine. Perhaps some other factor was responsible for this finding rather than adherence to gender roles. For example, others have noted that conformity to adult proscriptions against the use of aggression becomes viewed as a form of childlike immaturity from an adolescent's perspective (Bukowski, Sippola, & Newcomb, 2000). As a result, students will begin to endorse aggressive behaviours as a means to indicate autonomy or separation from what are perceived to be parental expectations for the behaviour of young children.

Finally, these conclusions are based on cross-sectional data, not longitudinal comparisons. Hence grade differences observed may be more reflective of the characteristics of the particular schools/classrooms in the year students were assessed, rather than to grade per se. Also, the participation rate of grade eight students was lower than the other grades, resulting in a much smaller sized group of grade eights representing only two schools. Therefore, it is possible that the sample of grade eights may not be representative of grade eights in general. For this reason, it is wise to continue examining the tenability of the gender intensification hypothesis using a longitudinal design prior to reaching any firm conclusions about whether it applies to RISA.

The pattern of grade differences regarding the normativeness of RISA differed both from what was predicted on the basis of the gender socialization theory and from the pattern exhibited for normative beliefs about verbal and physical aggression. Grade six girls viewed RISA as more normative for female scenario characters than male scenario characters -- to a greater degree than participants in any other grade and sex combination. The reason for this particular pattern of findings is unclear, but again suggests that the gender intensification hypothesis does not seem to

be operating in regard to normative beliefs about RISA. Indeed, under the gender intensification hypothesis it should have been the grade eight girls emphasizing this sex difference and not this younger group. Others have noted that the gender intensification process may be moderated by variables not examined in this study such as pubertal or school transition timing (Alfieri, Ruble, & Higgins, 1996; Galambos, Almeida, & Peterson, 1990). Therefore it may be that the expectation that grade would be the primary variable involved was just too simple.

Evaluation of Gender Socialization Theory

If we are to look at the gender socialization theory as it was originally conceived and tested in the current project, a number of conclusions can be reached. First believing that certain forms of aggressive behaviour are okay is related to the degree to which individuals engage in aggression. Also, boys and girls tend to agree that RISA is more okay for girl scenario characters than boy scenario characters. In these ways, there was support for gender role socialization theory. However, the finding that girls found all forms of aggression, including RISA, as less okay than boys does not indicate support for gender socialization theory. Due to the latter finding, gender socialization theory as it was tested in this project fails to be useful in predicting why sex differences in use of RISA might exist.

It seems, rather, that examining gender socialization theory in a quantitative way, and expecting a linear correlation between beliefs and behaviours has left out a great deal of information in regard to understanding sex differences in the use of RISA. The interview data made this point particularly clear, when girls repeatedly expressed that not only was any form of aggression not okay, but that the reason why they used RISA was because they believed aggression was not acceptable to use. Essentially RISA was just the least risky strategy to use, amongst all aggressive strategies that were generally “not okay”. As mentioned previously, girls did not even admit to using it themselves or amongst their own peers. It was always “other”

girls who were mean, once again underlining the degree of stigma surrounding the use of any form of aggression for girls.

Hence when evaluating the usefulness of normative theory, it seems that ultimately there is very little that this theory, as it was constructed and tested in this project, tells us about the differential use of RISA among boys and girls. The more important avenue for future research seems to be to understand how normative beliefs about aggression are related to perceived outcomes related to use of aggressive strategies. Is it possible, for example, that perceived risk of using aggression might mediate a connection between normative beliefs about aggression and use of RISA? That is, if girls believe generally that aggression is not appropriate to use, a situation of perceived low risk may increase the likelihood of choosing to engage in RISA.

Although support for gender socialization theory as it was conceptualized and tested in this project was minimal, it should not be concluded that gender socialization does not have an impact on RISA. To gain perspective on the degree of evidence provided for gender socialization processes supplied by this study, it may be useful to review some ways one might determine whether gender socialization has contributed to various phenomena.

First, one might expect that individuals would agree that RISA is more appropriate or typical for one sex than the other. The current study has found that both sexes viewed RISA as more appropriate for girls than boys. Similarly, both boys and girls reported that other girls are more likely to use the behaviour in various contexts than are other boys. Interview data and peer nominations indicate that, generally, girls are thought to engage in RISA more frequently than boys. Others have suggested that gender socialization should surface in the meaning that individuals make of the behaviour under consideration (Campbell, 1999) and consequences associated with engaging in a particular behaviour should differ based on one's sex, if gender

socialization processes are at work. The interview portion of this study found that boys tended to view aggression as a way to make one's needs known. Furthermore, boys felt that achieving goals using direct forms of aggression let others know the extent of their feelings and may also help them to maintain or achieve status. Boys viewed using RISA as a sign of weakness and so they tended to avoid it. Girls seemed to believe that physical aggression in girls is laughable and RISA is a behaviour that aggressors should find shameful. In terms of consequences for engaging in the behaviour, from both the quantitative and descriptive results, it became clear that girls felt that any form of aggression was less okay to engage in than did boys. Through the interviews, girls repeatedly expressed that they felt that the consequences for being "found out" in terms of using any form of aggression were going to be harsher for themselves than they might be for boys. It was thought that they may lose friends, status, or be punished in some way if they were caught engaging in any kind of aggression. In this sense girls seemed to be saying that all forms of aggression are bad and risky to use, but that RISA was just the least risky option, which was why it was chosen or used more frequently than direct forms. These results are similar to previous research in an adult sample in which women were observed to associate aggression with a loss of control and losing, while men associate aggression with taking control and winning or dominance (Campbell, 1999). This focus on perceived risk also seem to fit nicely with the social sanction model (Richardson & Green, 1999) or the effect/danger ratio theory (Bjorkqvist, 1994; Bjorkqvist et al. 1994) that both propose individuals weigh the degree of risk relative to the benefits accrued prior to engaging in aggressive behaviour. To review, there seemed to be strong evidence that girls and boys viewed various forms of aggression in a different manner and similarly viewed that the consequences of using aggression varied based on sex of the actor and type of aggression used. Along these lines, the next step in the research

process might be to test empirically the differential impact of “being caught” using RISA versus direct forms of aggression in boys and girls. Previous research has already indirectly partially begun this process by linking various outcomes to peer nominations of RISA and direct aggression in boys and girls and has found that generally girls who use any form of aggression are less liked by peers than are boys who use these behaviours and that boys who use RISA are less liked than boys who do not (Cillessen & Mayeux, 2004; Vaillancourt & Hymel, 2006).

Others have commented that when socialization is truly successful, behaviours are perceived biological imperatives or become so automatic as to be invisible to the individuals even as they are engaging in the behaviours themselves (Owens, Stryker, & Goodman, 2001). Consistent with this view, both girls and boys mentioned the possible influences of biological changes in regard to use of RISA or at times seemed to have difficulty explaining why the differences may exist. Cross-cultural research such as that conducted by Osterman, Lagerspetz, and Kaukiainen (1994) may be helpful in determining whether sex differences in use of RISA are universal (suggesting biological influences) or vary by culture (suggesting socialization) and are inaccurately perceived as biological in origin. Clearly, research investigating other aspects related to biology (i.e., studies investigating the role of brain maturation or influence of hormones) would be useful.

Finally, those who eschew sex differences as the basis for evidence of gender socialization might expect to see some sort of connection between measures of femininity/masculinity and various outcome measures like RISA or normative beliefs about RISA. To this end a recent study has linked femininity as assessed by the Bem Sex Role Inventory to RISA in a sample of adolescent girls (Crothers, Field, & Kolbert, 2005). However, more research is required, especially using samples that consist of both sexes.

Conclusions on Gender Socialization Theory

In conclusion, there seems to be some evidence suggesting that boys and girls think about RISA differently, but not exactly in the way originally predicted by the gender socialization theory. Specifically, it appears that girls are not more likely to condone using RISA than boys. Rather it appears that girls very strongly believe that RISA, just like any other form of aggression, is not permissible to engage in. They choose to use RISA because it is less of a social risk than using direct aggression and perhaps because they have less practice or comfort with direct strategies. Boys also face sanctions for engaging in RISA, but appear to feel less restricted in using direct forms of aggression and may even feel that there are social benefits for communicating needs or aggression directly.

Target Value Theory

Part A: Investment in Friendships

The second theory, target value theory, predicts that when individuals are choosing to aggress against another, they will use a form of aggression that is most effective in causing harm to the target. Since girls are supposed to have closer relationships, it was proposed that RISA, a form of aggression that both damages and uses relationships to harm, is an especially useful strategy among girls. In this sense, levels of RISA were (paradoxically) reasoned to increase as importance and or level of support and disclosure increases. Results indicate that girls placed higher importance on, and report greater levels of social support, disclosure, and intimacy within their closest friendships than did boys as is consistent with some previous work (Cauce, Felner, & Primavera, 1982; Furman and Buhrmester, 1985; Parker and Asher, 1993; Slavin & Rainer, 1990).

Unexpectedly, degree of support or perceived level of support did not demonstrate a positive relation to RISA as initially hypothesized. That is, level of support, disclosure, and

intimacy were not related to either self-reports or peer nominations of RISA. This finding is in contrast with an earlier study by Grotper and Crick (1996) that found higher levels of intimacy in relationally aggressive girls' friendships than non-relationally aggressive girls' friendships. However, an inspection of Grotper and Crick's measure reveals that their subscale of intimacy referenced self-disclosure rather than items measuring a sense of closeness or emotional supportiveness more generally. Interestingly, the Grotper and Crick subscale that bears most resemblance to the present measure similarly did not show a relation to peer nominations of RISA in that study. Hence, although the results are consistent with previous research they do not support the theory that closeness or supportiveness of a relationship leads to more RISA.

In regard to self-disclosure, others have commented on the possible importance of knowing personal information (i.e., disclosure) in maintaining social power over others (Underwood, 2003). It is understandable in this sense how sharing secrets may thus be a double-edged sword. That is, although feeling free to tell others one's personal information may be perceived as a positive aspect of close friendships, it may also facilitate use of RISA-like gossip.

A more recent study of young women in university (Makela & McDougall, 2009) reported similar results in terms of social support; no relation was exhibited between social support and a measure of RISA. However, a measure of negative relationship quality was positively related to RISA. Those individuals who reported having more "negative interchanges" (i.e., nagging, getting on each other's nerves, arguing) with a friend were also more likely to report using RISA. Similarly, in a sample of older adolescents RISA has been found to be negatively related to positive relationship qualities and positively connected to negative interchanges (Cillessen, Jiang, West, & Lakowski, 2005).

Although not measuring negative friendship qualities directly, the current study did examine how girls and boys immediately respond to conflict within friendship through use of the interloper scenario. Here again, those individuals (more likely to be girls) who perceived the interloper as problematic (by virtue of indicating a negative affective response) were also those who were most likely to use RISA. In fact, positive qualities of one's friendships related positively to negative responses to conflict, and negative responses to conflict related in turn to use of RISA. In this way, positive qualities in friendships may indirectly lead to RISA through increased problematic response to conflict. Taken together, these results suggest that although girls, on average, do have more emotionally supportive, disclosing and intimate relationships than boys and that the ideals of emotional supportiveness in relationships lead to less RISA, a potential conflict can jeopardize whatever benefits a close relationship might have created.

Given these findings, future research may do well both to measure and separately analyze various components of relationship quality when examining the connection of this construct to RISA to determine whether some aspects more commonly associated with girls' relationships might relate differently than others. For example, clearly negative qualities (e.g., arguing, nagging, etc.) of friendship should be measured and distinguished from neutral (e.g., talking frequently), and positive (e.g., acting in a caring manner) qualities. In this way, a more complete range of friendship qualities will be considered.

In contrast to level of perceived support, those who reported placing higher importance on having emotionally supportive, disclosing, and intimate best friendships were also more likely to report themselves as using less RISA. Therefore, in the prediction of RISA, the weight an individual places on having an emotionally supportive and intimate relationship appears more

important than how much support one actually reports receiving in the relationship in the prediction of RISA.

This pattern of findings is intriguing. Since self-reported and peer-reported measures of RISA were both attenuated with regard to range, it is possible that the lack of connection between RISA and level of emotional supportiveness, intimacy, and disclosure was simply due to these measurement issues. However, if measurement issues were not responsible for the pattern of outcomes, the results suggest that participants who have high standards for their friendships are also more restrictive in the amount of unsupportive behaviour they direct to others (e.g., how often they use RISA against others). Taking this pattern of findings on its own (without considering the inconsistency with actual level of support) would indeed suggest that girls tend to have more emotionally supportive relationships than boys and that valuing these positive qualities seems to mitigate against use of RISA, as is suggested by previous researchers who tend to conceptualize girls' friendships in a positive light (Maccoby, 1998). The point must be made, though, that although girls are more likely to report having more emotionally supportive, intimate, and self-disclosing friendships than boys, it does not mean that the connection between friendship quality and RISA differs for boys. That is, boys who place high importance on friendship quality may also experience lower levels of RISA. It is, then, important to remember that although sex may figure into the equation for value placed on friendship quality, it does not indicate a different type of connection to RISA based on sex. In this way, the present project has extended previous theorizing by Maccoby and others by indicating that positive qualities of friendships may also be of importance to the understanding of boys' use of RISA, in addition to that of girls.

The relation between friendship values and self-reported RISA becomes more complex in light of the lack of connection between peer reports of RISA and importance/value of emotional support, disclosure, and intimacy. That is, individuals' professed values for supportive friendships do not seem to have any connection to whether one has a reputation for meanness amongst one's peers. Previous research indicates that individuals who use RISA do not necessarily save RISA for non-friends, but also tend to use it in their closest relationships (Grotzinger & Crick, 1996). Therefore, the possible disconnect between individuals' self-proclaimed kindness within friendships and actual behaviours (specifically behaviours invoked when in conflict situations) must also be considered. Girls' particularly high expectations for supportiveness in their relationships also begs the question of how girls cope when conflicts eventually occur, particularly since results of this research also suggest that girls see all forms of aggression as something destructive and to be avoided at all times. Finally, it is possible that the lack of connection between value placed on emotional support, intimacy and disclosure and peer nominations of RISA is simply a result of the restricted range of scores in peer nominations and so should be examined again in future research.

In sum, girls rate their relationships as higher in emotional support and disclosure than do boys, but the degree and value placed on this support relates to RISA in ways other than originally predicted. In addition, the connection to RISA is not sex specific. Thus, there is no support for the first part of target value theory – that investment in friendships is positively related to RISA.

Part B: Insecurity About Close Friendships

The second part of target value theory considers insecurity about close friendships. The theory suggests that it is not only the closeness or greater investment in friendships that leads girls to engage in RISA, but also the tendency to be threatened by the potential loss of these

relationships. According to this theory, boys are less likely to be as emotionally invested in their friendships and so therefore are less likely to be threatened by a potential loss of or damage to the friendship.

Results testing this reactivity to threat indicate that girls were more likely to react with some of the negatively valenced emotions (anger, hurt, and jealousy, but not surprise or guilt) in response to a friendship interloper than were boys. This pattern of sex differences in affective reaction is consistent with work that investigated the impact of an other-sex interloper in an older sample of adolescents (Roth & Parker, 2001). Although not examined in the present study, Roth and Parker noted that affective reactions to interlopers were impacted by past personal experiences with interlopers. That is, those individuals who indicated that they had actually experienced a similar situation in the past were less likely to endorse reacting with surprise and more likely to react with hurt, anger, and jealousy in response to the scenario presented in the study. A question that remains is whether girls in this study were more likely to have experienced a situation like the one presented to them and whether this may be a contributing factor to the pattern of observed findings. In regard to the low levels of, and lack of sex differences in, guilt, it seems understandable that neither girls nor boys may feel guilt in response to being left out by a friend because they were not the ones engaging in the hurtful behaviour and so may not have perceived a reason to blame themselves for a friend's actions.

Affective reactions to the interloper were positively correlated with degree of emotional investment in one's best friendships; individuals who were more invested in their relationship were more likely to react negatively to an interloper. This finding adds support to the idea that part of the reason why girls are reacting more strongly to an interloper (i.e., with anger, jealousy and hurt) is because they tend to have a larger investment in their same-sex relationships than

boys. It is also possible that girls' stronger response to interlopers represents a threat to the exclusivity of the relationship, or something else, like difficulties coping with conflict when one holds idealistic, overly high expectations for what a friendship should be. Efforts to parse out such distinctions would be a useful avenue for future study.

It is important to note that the relation between emotional investment and affective reaction held true for both boys and girls, even if girls as a group were more highly invested and more likely to react with negative affect to interlopers. For example, boys who were as highly invested in their relationship as girls were as likely to react as negatively to an interloper as girls. Finally, since this research is correlational the direction of the relationship between affective reactions and investment in a friendship cannot be assumed. For instance, it may be that degree of investment in one's friendship leads to more intense negative emotions when the relationship is threatened but it is also possible that individuals who are more emotionally reactive invest more deeply in their friendships than individuals who are not so emotionally reactive.

In regard to connections to RISA outcomes, affective reactions of anger, hurt, and jealousy were positively related to endorsement of RISA directed toward the interloper and toward the friend. Only jealousy and anger were related to self-reports of actually using RISA. Neither guilt nor surprise related to any of the RISA measures. Nor did any of the affective reactions relate to peer nominations. Finally, there was some indication that sex moderated the relation between affective reactions to an interloper and RISA outcomes. Specifically the relation between a jealous response and RISA was stronger for girls than it was for boys.

Prior to discussing this group of findings, it seems necessary to discuss some of the recent theoretical dialogue amongst researchers in regard to sex differences in emotion regulation and RISA. Specifically a number of past studies have found that from an early age girls learn to mask

some negative emotions like disappointment or anger based on subtle cues from parents or other individuals in their environment (Acker, 1990; Malatesta, Culver, Tesman, & Shepard, 1989; Valian, 1998). Other emotions like sadness or guilt are not masked because these feelings are deemed more acceptable forms of emotions for females to display (Keenan & Shaw, 1997). Based on such research findings, Conway (2005) has suggested that girls then deny or suppress unacceptable negative emotions instead of learning the skills to properly manage or regulate them. Due to lack of skill in regulation or coping with these unacceptable emotions, girls are thought to resort to using RISA in an attempt to cope with the unacceptable emotions without appearing to look angry or as though they are otherwise upset. Such theories suggest at least a couple of assumptions that (a) the experience of socially unacceptable affect like anger or perhaps jealousy should be more closely related to use of RISA for girls than boys and (b) certain emotions that are more acceptable to express (e.g., disappointment, sadness, hurt) should be less directly related to use of RISA than other less acceptable emotions.

The findings from the current project become particularly interesting in light of current theory and assumptions about emotions and RISA. First, consistent with Conway's theory, results from this study suggest that some affective reactions that might be viewed as less socially acceptable to express (e.g., anger, jealousy) are indeed more closely related to use of RISA than are other more possibly acceptable emotions (e.g., guilt, surprise, and sometimes hurt). However, with the exception of jealousy, the current study failed to find any evidence that any affective reactions are more closely linked to RISA outcomes for girls than boys. Perhaps such a result suggests that certain emotions are deemed less acceptable by both boys and girls to express directly in the scenario that was given in this study. This seems particularly important to consider

in regard to anger, since many researchers seem to agree that this is the emotion most likely to be masked by girls.

This unexpected lack of support for sex serving as a moderator between most affective reactions (particularly anger) and RISA in this study may indicate lack of support for theories such as Conway's or simply measurement limitations. In regard to the latter, it is quite possible that moderator effects of sex were not detectable due to the restricted range of RISA in both self-reported and peer-nomination measures. However, measurement issues notwithstanding, it may be possible that the relation between affective reactions and RISA operates differently than what is expected based on current theory. For example, although it may be true that girls are more likely than boys to mask certain emotions generally, it is possible that in certain contexts boys may also choose to mask emotions like anger and jealousy (and thus use RISA). Specifically, the scenario depicted conflict in the domain of a relationship rather in a domain like athletics or some other competition for physical dominance that boys are typically expected to openly express anger over. Although there is no known research that has examined this type of question specific to RISA, there is some research (e.g., Saarni, 1979) that suggests both boys and girls are more likely to endorse masking disappointment or annoyance in interpersonal situations where they are imagining interacting with a familiar peer than in situations with an unfamiliar peer. Since this study incorporated a scenario where characters had a close relationship to one another it is possible that this contextual factor was a more important influence than sex on participants' choice to use RISA.

Outside of possible measurement or methodological issues, the reason why jealousy was the only affect moderated by sex in relation to RISA is difficult to explain. Since girls' same-sex relationships have also been found to be more exclusive in nature than are boys' (Roth & Parker,

2001), this particular finding may be a reflection of exclusivity. Or it is possible that girls are just more likely to report jealousy than boys. At any rate, future research is required to determine whether this particular pattern of findings is replicable.

Responses from the interviews mirror quantitative results within the context of examining target value theory but also suggest that method of coping or conflict resolution skills may in fact be a crucial factor in determining the overall hurtfulness of RISA. Both boys and girls acknowledge that girls tend to react with more intensity of emotion when targeted by RISA behaviour. In addition to noting the higher investment as a contributing factor to this reaction for many girls, interviewees also indicated that the way in which boys coped with RISA victimization helped them recover more quickly from the incident and feel less impacted emotionally. In fact, some interviewees noted that boys may be equally hurt by RISA as girls initially, but because they are able to engage in adaptive coping strategies (e.g., not believing what is said, confronting the aggressor if known) they are able to resolve the incident more quickly and avoid the lasting emotional devastation and resentment that builds when the incident is without resolution. In sum, it seems from the interviews that girls' methods of coping were a factor that contributed to the greater hurtfulness of RISA, not just that they tend to be more invested in relationships as posited by target value theory.

However, it was also noted by female interviewees, that a healthy resolution is not always perceived as a realistic possibility for girls even if they were to attempt to use other coping methods that should be considered adaptive. This seemed to be particularly true in regard to assertively confronting the aggressor. Girls repeatedly stated that because RISA conflicts often sound petty when vocalized, one risks being further ostracized or invalidated by her peers just for bringing the issues forward. Basically, among girls it was thought that the reality of victims'

experiences would be denied; no one would admit that they had engaged in the behaviour, so consequently there was no neat resolution to be had. Recalling the findings of the gender socialization theory, girls' beliefs that being found out for being aggressive is something to be avoided at all times, it does not seem surprising that directly confronting an aggressive girl works less well than confronting an aggressive boy. Since girls were not able to work out the conflict, the negative emotions often festered and led to further resentment and RISA retaliations. In sum, one has to wonder whether the reason girls are more hurt by RISA than boys is not because they tend to have greater investment in relationships that are being threatened but rather because normative beliefs surrounding use of aggression and the (in)appropriateness of expressing negative emotions do not allow or delineate a way for female RISA targets and aggressors to resolve conflict once it has been initiated.

Other methods of coping that do not involve direct confrontation that were used by boys bear a great deal of similarity to adaptive coping strategies used and taught in cognitive behavioural and mindfulness therapeutic approaches (Leahy, 2003; Segal, Williams, & Teasdale, 2002). For example, in line with challenging "automatic thoughts" in cognitive behavioural therapy, boys would state that they would question the veracity of gossip they had heard about themselves and would often find reasons to discount the comments and thus avoid the cycle of negative self-talk and rumination that girls seemed to describe. Other boys, when feeling excluded by peers stated that they might evaluate the importance of the others' approval and whether they may be treated better by another group of peers. Also, boys communicated that when challenging an aggressor to admit his or her wrongdoing, it was not necessary for the aggressor to take responsibility, but rather he felt better about the situation by asserting his disapproval of the circulating gossip. Finally, in regard to acceptance, if no resolution was

available, boys might state that they would find someone else with whom to spend their time. Some participants stated that they normalized their own experience, by working to accept that, on occasion, friends exclude people and attempted to see the non-permanence of the current situation. Although clinical research has shown that the components of cognitive behavioural therapy such as self-talk, acceptance, and assertiveness are all linked to indices of mental health (Butler, Chapman, & Forman, 2006; Segal, Williams, & Teasdale, 2002), there does not appear to be a great deal of research that examines whether individual methods of coping may help ameliorate the pain of being targeted by RISA specifically. Nor does there appear to be much work to date that focuses on sex differences in use and effectiveness of coping strategies with regard to RISA specifically. One of the few studies (Kochenderfer-Ladd & Skinner, 2002) located examined coping responses to peer victimization indicates that coping strategies appear to work differently for boys and girls, much as some interviewees in this study expressed. Specifically victimized boys that used approach-style coping (i.e., working out a conflict with a peer directly) have more adaptive psychological outcomes than those who do not. Interestingly, girls who were highly victimized did not benefit from approach style coping, whereas girls with lower levels of victimization did show some benefit. Seeking social support however showed a converse trend. Female victims who sought support from friends fared better than those who did not. Boys faced greater victimization when they sought social support as compared to those who did not. These types of findings are consistent with reports in this study and once again seem to point to the existence of yet another layer of gendered norms for behaviour. If it is true that what works for some boys will not work for some girls and vice versa, future interventions may require some degree of specialization depending the sex of the person that is targeted and how seriously he or she has been victimized.

Grade Differences

As with the socialization theory, very few of the predictions regarding effect of grade held true for hypotheses testing target value theory. Specifically, level or importance of support did not change across grade level, nor were there any sex by grade interaction effects on these two constructs. In regard to the second part of target value theory that focused on reactions to loss of friendships, only one grade by sex interaction was observed but in a direction not predicted in the hypotheses. Specifically, girls in grades six and seven endorsed greater feelings of hurt compared with their male counterparts, while there was no such difference between grade eight boys and girls. There are number of possible explanations. As mentioned earlier, the grade eight participants were largely from one school and may differ in some way from the rest of the younger participants. For this reason or other measurement issues, it is possible that this pattern of findings will not be replicable. It is possible that by eighth grade more adolescents have reached a stage where they understand that a single relationship cannot be expected to meet all of another's needs (Blakemore & Choudhury, 2006; Gurucharri & Selman, 1982) and so these scenarios about same-sex interlopers are no longer capable of evoking the same kind of reaction that they may have at an earlier point in development. Future research on various grade levels will be required to determine if the findings are consistent with those of the current study.

Conclusions Regarding Target Value Theory Part A and B

In summary, girls placed greater importance on and reported higher levels of emotional support, intimacy, and disclosure within their closest same-sex friendships than did boys. However, emotional support, intimacy, and disclosure did not relate to RISA in the manner initially hypothesized and so did not show support for this part of target value theory. It seems, rather, that other theories (i.e., those proposed by Gilligan and Maccoby) depicting girls' friendships as having positive qualities that mitigate use of unpleasant interactions are more

correct than others – with the addition that these positive qualities are actually not only relevant for girls, but also boys’ same-sex friendships. However, given indications that girls’ relationships may be more readily upset by conflicts than boys, more research investigating the full range of friendship qualities is required to determine how negative, neutral, and positive qualities relate to RISA.

There was more support generated for the second part of target value theory. Girls were more likely to react negatively to an interloper than boys. Affective responses to the interloper were related to greater use of RISA for both boys and girls, with the exception of jealousy that showed a stronger connection to RISA for girls. Furthermore, the more one was invested in a best friendship, the more likely one was to endorse using RISA in response to an interloper scenario, giving support to the idea that investment in a relationship is one of the reasons why individuals tend to react more strongly to threats. However, it is also possible that girls and boys are reacting to something else in addition to the loss of friendship, such as loss of status in the peer group. To this end, it may be useful to determine more directly what close friendships mean to girls and boys in terms of identity. Also jealousy may be linked to the high level of exclusivity in girls’ friendships, rather than the depth of the relationship per se.

Finally, interview findings suggested that girls may be much more upset by RISA than boys, not because of their level of investment in friendships but because gender norms for aggression do not allow girls (either targets or aggressors) a way to discuss and resolve conflicts without considerable risk to either party. In this way, two questions that remain unanswered are (a) to what extent method of coping or interpretation of the event are the factors that make RISA more hurtful for girls than boys, rather than disconnection from the peer group or supportive relationships per se as predicted by target value theory and (b) whether these gendered

expectancies about the range of options and effectiveness of conflict resolution strategies reflect distorted belief systems or are rooted in the realities of boys' and girls' experiences.

Furthermore, although negative affective responses to the interloper scenario were positively related to the degree to which an individual endorsed using RISA against the character and interloper, it is difficult to know whether individuals were choosing to use RISA because it was the best way to hurt the target or whether it was just the least risky way for the aggressor to deal with her (or his) own hurt feelings. Future research may wish to provide more options outside of RISA (i.e., verbal or physical aggression, assertive communication, etc.) that participants may endorse to directly measure differences in perceived risk of various strategies. Another possibility is to provide both same and other-sex scenario characters to determine, for example, whether girls are more likely to use RISA against a female or male friend. If, for example, girls endorse using RISA against male friends to the same extent as females, there may be more evidence supporting the idea that girls are not necessarily considering the sex of the target when deciding to use RISA. To this end it may be useful to ask individuals why they chose one course of action over another in response to such scenarios.

Symbolic Capital Theory

Symbolic capital theory suggests that RISA occurs due to competition over access to the other-sex or other forms of symbolic capital that give individuals status (academic performance, number of friends, attractiveness). In the current study, it was assumed that symbolic capital theory would evidence itself in three ways. The first was that boys and girls would place different amounts of importance on their achievement in various life domains (e.g., girls would be more interested in attractiveness to the other sex; boys more interested in athletics). The second was that it was assumed that girls and boys would generally have different responses to friends hypothetically outperforming them in these domains. Finally, it was thought that those

who had difficulties with friends outperforming them in certain domains would be more likely to use RISA.

Results suggest that being attractive to the other-sex is not more important to girls than boys. In addition, being good in sports is not more important to boys than it is for girls. The absence of both correlations was unexpected and does not lend support to Horney's (1934) and Eckert's theories (1990) that girls are more sensitive to this index of symbolic capital (boys) because they are unable to gain access to other forms of capital that are valued in society. Likewise, the results do not suggest that sports or athletic activities is a domain of competitiveness deemed more important for boys as it was in traditional western society. Grade level did not seem to have an impact on these relationships indicating that the findings persisted from grades six through eight. These findings, although unexpected, are interesting as perhaps a broad indicator of society becoming less extreme with regard to its proscriptive roles for boys and girls, in that at the very least, girls' identity did not seem isolated to caring about the other-sex and boys did not seem to care only about athletic ability.

At the same time, girls still cared more about number of friends, academic achievement and general level of attractiveness than boys, consistent with symbolic capital's theory of the "better woman" (Eckert, 1990), whereby it is expected that girls would be more likely than boys to attempt to collect and display qualities indicating that they are deserving of status. Similarly, girls were bothered more than boys about having friends outperform them in the areas of number of friends, popularity, and general attractiveness. Third, being affected by friends' greater success in romantic relationships, popularity and attractiveness was connected to a greater use of RISA -- but these relationships held true for boys and girls.

Findings from the interviews were mostly consistent with what was reported in the quantitative aspect of the study; both boys and girls agreed that, generally, girls seemed to care more about their appearance and popularity than did boys. In contrast to the quantitative results, interviewees seemed to be of the opinion that sports generally mattered more to boys than it did for girls and girls may care about being attractive to boys more than boys care about being attractive to girls. Part of the reason for this discrepancy may have been because participants commented only on what mattered to members of their own sex, whereas in the interviews individuals commented on their beliefs regarding both sexes. Specifically, the girls who participated in the interviews may have perceived the importance of sports for boys differently than did the boys themselves. For that matter, it is possible that the boys who participated in the interviews could have differed from the larger group of boys who completed the questionnaire.

Also, sometimes it appeared difficult (e.g., participants seem to take more time to think about responses) for students to think of anything that boys seemed to care about as a group, whereas, with girls, there was a lot less difficulty identifying what they cared about. Therefore it is possible that boys care about sports, but it is not perceived to be as central to their identity as other qualities may be for girls.

So it seems that although girls will react more to a friend's greater performance, these strong reactions do not necessarily occur in the domains predicted by the symbolic capital theory. Second, caring about friends' greater performance is related to RISA, regardless of one's sex; the pattern is not sex specific. The question of why girls seem more threatened by friends' greater performance than boys in most domains still seems significant even if individuals are not focused on the other-sex or sports specifically. Some have posited that girls are less tolerant of others' higher performance or perceived displays of superiority because these behaviours violate

girls' preference for egalitarian, non-hierarchical relationships (Benenson & Schinazi, 2004; Maltz &orker, 1983). The negative reaction to a friend's achievements seems strange in light of the finding in this study that girls frequently place high value on having more emotionally supportive relationships and report that their friendships are more emotionally supportive than boys. It would seem that individuals who are part of an emotionally supportive relationship would expect to receive support rather than jealousy and anger when successful.

Others (e.g., Beneson & Schinazi, 2004) have framed girls' stronger reactions to outperforming peers in the context of the self-evaluation model. The self-evaluation model (Tesser, Millar, & Moore, 1988) suggests that there are two processes that occur whenever an individual compares herself with someone else. The first process is referred to as the "reflection process" whereby affiliation with someone who achieves great things serves to elevate one's own status and self-esteem. The closer one's relationship is to the person who does well, the more intensely one will receive the benefits of this association.

Social comparison is the second process that is said to occur (Festinger, 1954). Social comparison states that when an individual we know achieves something great, individuals also inherently assess where they stand in comparison. According to this part of the self-evaluation model, the closer we are to someone, the more likely we are to compare ourselves. Second, if an individual cares deeply about the domain or area in which another person with one whom is very close succeeds, that individual will tend to focus on his or her own shortcomings, instead of welcoming the other's spectacular performance. In sum, closeness of the relationship and importance placed on the area of comparison are key features of the latter process.

The possible relevance of this model to the findings of the present study is intriguing. First, girls rated their friendships as more emotionally supportive and intimate than did boys in

this study. Girls also tended to care more about their own performance in a variety of domains. By virtue of these two facts, girls may be more susceptible to falling into the negative social comparison process. Boys who claimed to care less about their performance in various domains and had less intimate friendships may be more likely to experience the more positive reflection process. In this way the current research project has (albeit unintentionally) extended previous research in the area of social comparison and evaluation theory (e.g., Benenson & Schinazi, 2004) by demonstrating empirical support for the connection between closeness of relationships, reactions to others' successes, and sex within an adolescent sample.

Despite the fit of the current findings to the self-evaluation model, the question must be posed about why there are sex differences in degree of care regarding one's own performance in so many of the other assessed domains (academic achievement, attractiveness, and number of friends) regardless of how boys and girls react to peers' greater performance. Results of the interviews repeatedly reflected the findings of the quantitative aspect; participants regularly commented on how girls feel that they must perform well in not just one life domain but every life domain. Furthermore, the domains that girls claimed to be concerned about frequently incorporated a large number of traditionally feminine concerns (i.e., wearing the right clothing, make-up, shoes, having others like you, having a perfect figure, in addition to being a high academic achiever). It was noted that boys were less harshly judged by peers than girls when they were known to be weak in any given area. Theorists have often stated that having one's identity based on performance in more than one domain is healthy. Specifically, individuals who place all their personal resources in sports would be more likely to be shattered if they no longer performed as well as they thought they should. However, in this study, it seems that girls feel

more fragile because of the multiple ways in which they could potentially fail to keep themselves up to par. Essentially it seems that a failure in one domain was as difficult as a failure in all.

What interviewees seemed to be communicating was that girls' greater concerns with social and physical perfection were closely linked to status amongst peers. It seemed that presenting oneself as having as many desirable qualities as possible served to elevate status or popularity. Perhaps even more interestingly, it seemed that being "perfect" in all ways at all times protected girls from becoming RISA victims and thus losing status amongst group members. It was thought that girls were so hurt by RISA because often their imperfections were being pointed out and imperfections lead to decreased status. So in a sense, caring about one's performance in various life domains and being uncomfortable about others looking better or achieving more than oneself are directly associated with girls' quest for power. Being attractive, intelligent, and having many friends were essentially like armor for girls in an environment where everyone is looking for a way to rise to the top – without looking like they are purposely attempting to do so. Similarly, getting caught up in a conflict with another girl using RISA was often symbolized as a devastating injury, in that there was often no easy way to save oneself once the conflict was initiated by another; open forms of aggression and competition could make both individuals lose status due to the taboo on direct aggression among girls.

Although boys also involved themselves to some extent in quests for status in schools, it seems that the competition was less intense or all-consuming because they were able to be direct and aggressive without being punished for fighting for status. Rather, telling or showing others that you disagreed with them was viewed as standing up for oneself and a legitimate way to be powerful and achieve status. Furthermore, directly expressing disagreement allowed boys to come to some sort of end in terms of a conflict, whereas girls' conflicts seemed to spiral on

indefinitely. In a sense, then, the least risky route for girls to achieve status was to display qualities of perfection and avoid getting caught being aggressive while boys were able to use display of talent and open aggression, assertion or competition in order to gain status while effectively resolving conflict with others.

Viewed through a feminist lens, these results suggest that the development and maintenance of a positive self-identity are somehow still influenced by sexist ideals. For example, both Horney (1934) and Eckert (1990) mentioned that pre-occupation with perfection in multiple domains was indicative of a fragile sense of self that males are not subject to in a sexist society. Other researchers (Morris-Shaffer & Perlman-Gordon, 2005) offer a slightly altered theory that seems to fit the findings of the current study better than symbolic capital theory. Specifically, the pressure for girls to do well in a variety of areas is thought to have increased due to the impact of the women's movement, rather than to the lack of valuable opportunities as suggested by symbolic capital theory. That is, the definition of a woman's identity rests not only on traditional values (e.g., dressing attractively, caring for others) but has expanded to include a range of other areas such as intellect, career success, and financial independence. It is suggested that, although girls are provided with more opportunities, they are given conflicting messages. Specifically girls are told that in order to be acceptable they must not only achieve competence in a variety of areas that require competition and willingness to set oneself apart from the group, but must also be physically attractive and maintain caring relationships absent of visible conflict while achieving greatness.

The theory presented by Morris-Shaffer and Perlman-Gordon (2005) also differs from symbolic capital theory in that girls are thought not to be after association with males per se, but rather, to occupy new roles that conflict with the importance placed on being a "nice girl" who

bases her identity on the quality of her relationships with others. Boys are thought to face fewer pressures in terms of identity development because they are not required to be physically attractive nurturers who also have to compete to achieve remarkable career success. For boys, competencies in one area (e.g., athletics) can still make up for lower performance in other areas (e.g, physical attractiveness). Certainly this theory fits very well with the findings from both the quantitative and descriptive aspects of the current project.

Findings from another very recent study are both consistent with Morris and Shaffer's theory and the results of this present study. Vaillancourt and Hymel (2006) examined qualities labeled "peer-valued characteristics" (PVCs) that bear similarity to the domains measured in symbolic capital theory (i.e., general attractiveness, stylishness, athleticism, sense of humor, toughness, special talents, and so on). The researchers predicted that individuals would have two ways to gain status among peers. The first was by using "implicit power" (LaFreniere & Charlesworth, 1983) whereby one simply worked to display as many peer-valued characteristics as possible. The second method was to use "explicit power" (LaFreniere & Charlesworth, 1983) or more unpleasant strategies (i.e., RISA, verbal, or physical aggression) to lower the status of other peers and highlight one's own social dominance.

Results suggested that PVCs were linked to peer liking for both sexes, but more strongly related to popularity and power for boys than for girls. Using physical aggression had different outcomes based on sex. Boys could use physical aggression to achieve greater power and popularity AND still be liked as long at they possessed a high enough number of PVCs. Girls could not use physical aggression and expect to maintain their group status (popularity or liking) regardless of the amount of the PVCs possessed. Use of RISA also was impacted by sex. Girls could use RISA and be perceived as powerful and popular, as long as they had PVCs, but they

could not use RISA and still expect to be liked. Boys would not benefit from using RISA, but they were still more popular and liked than their female counterparts who used this strategy. Other research has found similar results indicating that RISA is linked to high perceived popularity but low social preference, particularly for girls (Andreou, 2006; Cillessen & Mayeux, 2004).

Conclusions about Symbolic Capital Theory

In sum, although girls are not as well rewarded for possessing valued characteristics as boys, achieving “a perfect image” is the least risky way for them to achieve status and keep friends at the same time. That is, implicit power may be the best way for girls to achieve status. For girls, if one were to use explicit power, RISA is (marginally) preferable over physical aggression (consistent with gender socialization theory), but it comes with social sanctions and the cost of breaking girls away from relationships (which they are more heavily invested in according to Target Value Theory). Put another way, seeking perfection in as many life domains as possible seems like the best way to achieve power and liking, and these qualities also provide girls with the benefit of using RISA to maintain their standing if they ever require it. In short, maximizing one’s display of desirable qualities backed up by RISA are the crucial tools for girls to use to maintain status and power. To summarize, results from the interview portion of this study and recent research on PVCs highlight how status, RISA, and sanctions for aggressive behaviour operate along gendered lines. As such, future research should continue to study these interconnections closely.

Although not tested in the current project, symbolic capital theory also makes some statements about the cause of girls’ more fragile identity. Specifically, the fragility is supposed to be caused by a lack of worth placed on females’ activities relative to males in western society. It is certainly difficult to ascertain whether it is possible to ever determine support for this part of

symbolic capital theory. However, if one notes the findings from the interviews where some participants stated that boys are able to feel good about themselves if they even display moderate talent or ability in one area, the argument can be made that girls' achievements in the same areas as boys do seem to count for less. In regard to the source of the devaluation it is really difficult to tell to what degree sexist beliefs of the larger society are influencing girls to monitor other girls' achievements -- and by extension -- girls' identities or whether individual peer groups are interpreting these larger belief systems in ways that are particularly unforgiving. This problem may be best examined by determining whether certain peer groups are less prone to this type of monitoring and carefully identifying those qualities that lead to less competitive interactions among girls and boys in these groups.

Participants in the study seemed to offer some clues as to a way to change the punitive dynamic perceived to exist among girls. Boys and girls often concluded that the life domains one cares about and participates in help guide ways in which individuals learn to manage interpersonal conflicts. Specifically, participation in sports seemed to help individuals express, contain, and resolve conflict. A number of interviewees thought that boys were still more likely to care more about and spend more time participating in sports, particularly team sports. In this context it was thought that: (a) boys learned how to join together with other boys in order to move toward a common goal, (b) verbal arguments or physical fighting was less discouraged as it would be in other contexts but still was guided by explicit rules that everyone understood, (c) players were able to gain confidence in their abilities to physically defend themselves in the process of learning skills required for the sport, and (d) conflicts ended on the playing field, rather than continuing to influence interpersonal interactions later on. Although it is too early to know whether sports can have such a formative influence on adolescents' relationships, further

investigation into this area would be prudent given the frequency with which this topic surfaced within interviews during this study.

The latter point is reminiscent of remarks by evolutionary theorists (e.g., Campbell, 1999; Trivers, 1972) with the exception that, in this case, the focus is on learned socialized experiences rather than the manifestation of innate qualities of men and women. Specifically evolutionary theorists discuss how men's greater physical/verbal aggressiveness originated in the role men played in earlier time (i.e., tribal defense and hunting in groups) resulting in the genetic selection of males who were more apt to engage in direct forms of aggression. At the same time, theorists who place emphasis on socialization rather than biology (i.e., Maccoby, 1988) have also emphasized the role of boys' and girls' play in shaping behaviour and belief systems. At any rate, the contexts in which boys and girls are immersed deserve careful study in relation to use of RISA.

Overall Summary and General Conclusions

Overall there was not a lot of support for the three theories that were tested in this project. Specifically for gender socialization theory, although it was true that one's beliefs about the acceptability of RISA were connected to RISA behaviour, it was not the case that girls thought RISA was more okay than did boys and that this was why they might use it more often. In regard to target value theory, there was no support for the idea that the positive qualities of girls' friendships lead to increased RISA; rather these qualities are probably more protective against RISA than anything else. There was some support for the idea that investment in friendships lead to greater sensitivity to threats to relationships and that affective reaction was ultimately related to RISA; but this held true for both boys and girls, with the exception of jealousy which seemed more closely related to girls' use of RISA. In regard to symbolic capital theory, it did not seem

to be the case that girls' caring about being attractive to boys was what was leading to greater use of RISA.

Despite the lack of support generated for any of the three theories tested, the pattern of findings from both quantitative and descriptive components of the study indicate some interesting possible amendments to the conceptualization and development of theory regarding RISA. First it seems there are proscriptions for aggression for both boys and girls. Boys appear to be more comfortable using direct forms of aggression and sometimes appear to believe that they will be rewarded with social status for using this behaviour to publicly assert themselves. However, boys expressed the idea that using at least some forms of RISA would not be rewarded socially and, as such, boys should avoid using these strategies for this reason. Girls generally seemed to believe that any form of aggression put them at risk for social sanction and so simply used RISA because it was the least risky option because it allowed their motives or actions to remain less detectable by others. It seemed also that girls expressed the idea that the more they believed that forms of direct of aggression or confrontation placed them at risk, the more they would be likely to use RISA.

Second, girls appear to have more difficulty resolving conflict when it occurred than boys. Whether this was due to lack of practice using direct strategies or due to perceived risk of social proscriptions associated with bringing issues out into the open for resolution for both the target and aggressor, or both, is difficult to know from the findings, but both indicate future avenues for exploration by research. This difficulty with conflict was also thought to be one of the reasons why girls incurred greater hurt by RISA and ultimately seemed to get caught in cycles of victimization and retribution using RISA, relative to boys.

Third, girls seemed to place more pressure on themselves to achieve perfect performance in numerous life domains relative to boys. Interview findings suggested that part of the reason girls placed importance on being perfect was to achieve social power and simultaneously hide flaws that may lead to criticism/RISA from others. Being perfect appeared to allow girls to avoid getting involved in conflicts with others, which were viewed as painful, and ultimately threatening to status. It appeared that boys did not need to be as concerned about perfect performance in various domains, possibly because they felt more free to engage in conflict with others without facing greater sanctions for attempting to openly compete for social status or power, as suggested by gender socialization and symbolic capital theories.

Finally this project is one of the first known (with the exception of a recent study by Coyne, Archer, & Eslea, 2006) to attempt to bring some uniformity to the measurement of RISA by incorporating items that are both common across the many existing measures and unique to individual researchers' conceptualizations of the construct(s). Although much more work remains to be done in this regard, this research project has indicated that the items chosen by researchers likely have a significant impact on the appearance and direction of sex differences found in RISA.

Integration of Findings Across Three Theories

Although findings for each of the three theories are of interest, perhaps of greater significance is the overall story that appears when the findings are viewed together. Although some areas of the "picture" may need to be brought into clearer focus with future research, there is nonetheless an image of adolescents' relationships that can be ascertained. This picture, although applicable to adolescent boys' relationships to some degree, is likely of greater significance for girls.

First, results of the current research indicate that girls, relative to boys, base their identity on excellent performance in a large variety of areas including attractiveness, popularity, number of friends, and academic achievement. Girls also tend to invest significantly in their same-sex friendships (as demonstrated by higher levels of emotional support, intimacy, and disclosure) relative to boys. Consistent with an ethic of care (Maccoby, 1998), girls expect a great deal from their relationships in terms of the amount of support and empathy they will receive. Discomfort with potential abandonment by peers is very strongly suggestive of the degree to which they place emphasis on maintaining connection with a group for a sense of self. Consistent with the latter, girls are also very intolerant of aggression, including RISA, as a solution for any situation perhaps reflecting the pressure girls feel to be nurturing caregivers. Punishment for being caught engaging in any of these behaviours is known to be very severe, threatening the very connections that girls need to maintain to preserve the group-based identity that is cultivated. Thus, girls will avoid the appearance of being aggressive at all cost. In short, girls still appear to be attempting to adhere to the unrealistic “nice girl” image for females in society. Unfortunately it appears that there is a clear cost to avoidance of conflict as girls have no clear route to resolve problems or perhaps even express competencies or differences of opinions, leading to a perpetuation of RISA. It was noted that girls very quickly rationalized their own use of RISA and seemed at times unaware that their actions might be classified as RISA by the target. These observations suggested that social desirability played a part in the girls’ treatment of peers.

At the same time, girls appear to face possible disconnection from friends and peers if they make it known that they have achieved the greatness desired, whether in initiating a friendship with another girl or becoming more attractive. Results of the current study indicated that something about the closeness of their relationships is related to these negative reactions.

Perhaps on some level, every time a girl's friend achieves success, it may serve as an unpleasant reminder of how one should also be better meeting the conflicting standards to be both nurturing caregivers and successful competitors for status. Finally, as symbolic capital theory states, there may just be limited opportunities for success among girls, so another's success will mean fewer opportunities for oneself. At any rate it is clear that there are certain limits to girls' successes imposed on them by their own closest friends and that these limits may be enforced using RISA.

Few of these conclusions are likely new for theorists who have proposed that girls' and women's same-sex interpersonal relationships can be conflicted and complex. The current project has taken some steps forward by testing some of the claims empirically in an adolescent sample that includes both boys and girls and formally making the connection to RISA. A logical next step will be to begin to test the model as a whole, rather than evaluating each of the pieces in a separate way.

As suggested above, some of the findings of this study seem to have special significance for girls and are likely somewhat unsurprising given current existing theories about conflict among females. What is new to this area of study, however, is the relevance of many of these issues for boys. Specifically, although sex differences were observed in many of the predictor variables (i.e., girls were more highly invested in friendships, reacted more strongly to interlopers, and tended to care more about success in various life domains than did boys), there was very little evidence that these predictors related less strongly to RISA for boys than they did for girls. That is, when boys use RISA they may also be using it because they are highly invested in a friendship and are reacting with strong emotions about potentially losing it. When they care more about achievement in multiple domains or about attractiveness, popularity, or the amount of friends they have, they may also use RISA.

Taken together with the findings that suggest boys and girls may simply use different forms of RISA, rather than using different amounts overall, we can no longer assume that RISA is uniquely a girls' or woman's issue. The challenge that lies ahead for researchers is to determine the degree to which boys and girls are affected by the factors that produce RISA, whether boys and girls are provided options other than RISA in order to deal with conflict, and why (or whether) RISA actually appears to have a different impact on boys and girls.

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APPENDIX A
COVER PAGE AND DEMOGRAPHICS

Social Experiences at School

Thank you for agreeing to participate in this study. Your answers will help us learn a lot about things that happen in school. Please be as honest as possible, we want YOUR TRUE THOUGHTS AND FEELINGS. Remember, WE WILL NOT SHARE YOUR INDIVIDUAL ANSWERS WITH ANYONE. This is the only page on which your name appears, we will immediately assign a number to it and remove this page after you complete it, so that no one will no one will be able to find out what you have written to us. Please do not talk about your answers with your friends, even after you are finished.

Please complete the following questions before starting:

Your Name: _____

You are a: BOY GIRL (circle)

Grade: 6 7 8 9 (circle)

Teacher's Name: _____

School: _____

Age: 10 11 12 13 14 15 (circle)

Today's Date: _____
(month/day/year)

APPENDIX B
SOCIOECONOMIC QUESTIONS

1. Were you born in Canada?

Yes

No

If you answered “No”, what country were you born in? _____
(Write country here)

If you answered “No”, about how old were you when you moved to Canada?

(Write age here)

2. How would you describe yourself in terms of ethnic or cultural background? (check one box)

White (Anglo, Caucasian, etc.)

Aboriginal (First Nations, Native Canadian)

Indo Canadian (East Indian)

Metis

Asian (Chinese, Japanese, Korean, etc.)

Latin (Spanish, Mexican, South American, etc.)

Black (African, Haitian, Jamaican, etc.)

Other (please describe) _____

3. What is your *mother's* highest level of education? (check one box)

Some High School

Completed High School

Attended a Trade, Technical or Vocational School

Some University

Degree from a University

Degree in Medicine, Dentistry, Law or Optometry

Ph.D.

Other (describe) _____

I don't know – but this is what she does during the day (describe)

4. What is your *father's* highest level of education? (check one box)

Some High School

Completed High School

Attended a Trade, Technical or Vocational School

Some University

Degree from a University

Degree in Medicine, Dentistry, Law or Optometry

Ph.D.

Other (describe) _____

I don't know – but this is what he does during the day (describe)

APPENDIX C
PEER-NOMINATION QUESTIONNAIRE OF RELATIONAL/INDIRECT/SOCIAL
AGGRESSION

Written below are a number of phrases describing behaviours that many people may engage in from time to time. Your job is to read the phrase and write down the names of people (e.g., "Sally N.") IN YOUR CLASSROOM you know who are MOST LIKELY to behave in the manner described. Remember, we will not share your answers with ANYONE. You can write a person's name down more than once. You may also write your own name.

When angry, who is most likely to...

1. Gossip or spread rumors about others

2. Ignore others when they are speaking

3. Lie behind someone's back to get peers not to like that person

4. Keep others out of the group

5. Keep others from participating in certain activities (e.g., won't let others play a game)

6. Say mean things to others about another person.

7. Look at others with disgust

8. Smile in a fake way

9. Roll eyes and makes a face when asked to do something with someone he or she doesn't like

10. Won't invite certain others to a birthday party

11. Won't listen to another person

12. Threatens to stop liking someone or being their friend

13. Teases others away from adults

14. Writes about others on desks and/or in washrooms

15. Tells your secrets to others

16. Backstabs others

APPENDIX D
 SELF-REPORT QUESTIONNAIRE OF RELATIONAL/INDIRECT/SOCIAL
 AGGRESSION

Now read each of the phrases below and circle the number that best describes how often YOU do each of the behaviours listed.

Never	Rarely	Some of the Time	Pretty Often	All the Time
1	2	3	4	5

When I'm mad, I...

- | | (circle number) | | | | |
|--|-----------------|---|---|---|---|
| 1) Gossip or spread rumors about others | 1 | 2 | 3 | 4 | 5 |
| 2) Ignore others when they are speaking | 1 | 2 | 3 | 4 | 5 |
| 3) Lie behind someone's back to get other kids not to like that person | 1 | 2 | 3 | 4 | 5 |
| 4) Keep others out of the group | 1 | 2 | 3 | 4 | 5 |
| 5) Keep others from participating in certain activities (e.g., won't let others play a game) | 1 | 2 | 3 | 4 | 5 |
| 6) Look at others with disgust | 1 | 2 | 3 | 4 | 5 |
| 7) Say mean things to others about another person | 1 | 2 | 3 | 4 | 5 |
| 8) Smile in a fake way | 1 | 2 | 3 | 4 | 5 |
| 9) Roll eyes and/or make a face when I'm asked to do something with someone I don't like | 1 | 2 | 3 | 4 | 5 |
| 10) Won't invite others to a birthday party | 1 | 2 | 3 | 4 | 5 |
| 11) Won't listen to another person | 1 | 2 | 3 | 4 | 5 |
| 12) Threaten to stop liking someone or being their friend | 1 | 2 | 3 | 4 | 5 |
| 13) Tease others away from adults | 1 | 2 | 3 | 4 | 5 |
| 14) Write about others on desks and/or in washrooms | 1 | 2 | 3 | 4 | 5 |
| 15) Tell your secrets to others | 1 | 2 | 3 | 4 | 5 |
| 16) Backstab others | 1 | 2 | 3 | 4 | 5 |

APPENDIX E
ASSESSMENT OF NORMATIVE BELIEFS REGARDING DIRECT (VERBAL AND
PHYSICAL) AND RELATIONAL/INDIRECT/SOCIAL AGGRESSION

The following questions ask you about how often you think certain behaviours are OK. Circle the answer that best describes how often you think the behaviour is OK. Circle one and only one answer from the options:

NEVER	SOMETIMES	OFTEN	ALWAYS
OK	OK	OK	OK
1	2	3	4

1) Suppose a boy, Rick, says something bad to another boy, John.

- | | | | | |
|---|---|---|---|---|
| a) Do you think it's OK for John to scream at Rick? | 1 | 2 | 3 | 4 |
| b) Do you think it's OK for John to hit Rick? | 1 | 2 | 3 | 4 |
| c) Do you think it's OK for John to not invite Rick out to do things anymore? | 1 | 2 | 3 | 4 |
| d) Do you think it's OK for John to spread rumors about Rick? | 1 | 2 | 3 | 4 |
| e) Do you think it's OK for John to ignore Rick for awhile? | 1 | 2 | 3 | 4 |
| f) Do you think it's OK for John to keep Rick out his group of friends for awhile? | 1 | 2 | 3 | 4 |
| g) Do you think it's OK for John to lie behind Rick's back to get other peers not to like Rick? | 1 | 2 | 3 | 4 |

2) Suppose a girl, Kaitlin, says something bad to another girl, Mary.

- | | | | | |
|--|---|---|---|---|
| a) Do you think it's OK for Mary to scream at Kaitlin? | 1 | 2 | 3 | 4 |
| b) Do you think it's OK for Mary to hit Kaitlin? | 1 | 2 | 3 | 4 |
| c) Do you think it's OK for Mary to not invite Kaitlin out to do things anymore? | 1 | 2 | 3 | 4 |
| d) Do you think it's OK for Mary to spread rumors about Kaitlin? | 1 | 2 | 3 | 4 |
| e) Do you think it's OK for Mary to ignore Kaitlin for awhile? | 1 | 2 | 3 | 4 |

- f) Do you think it's OK for Mary to keep Kaitlin out her group of friends for awhile? 1 2 3 4
- g) Do you think it's OK for Mary to lie behind Kaitlin's back to get other peers not to like Kaitlin? 1 2 3 4
- 3) Suppose a boy, Mike, hits another boy, Jeremy.**
- a) Do you think it's OK for Jeremy to scream at Mike? 1 2 3 4
- b) Do you think it's OK for Jeremy to hit Mike back? 1 2 3 4
- c) Do you think it's OK for Jeremy to not invite Mike out to do things anymore? 1 2 3 4
- d) Do you think it's OK for Jeremy to spread rumors about Mike? 1 2 3 4
- e) Do you think it's OK for Jeremy to ignore Mike for awhile? 1 2 3 4
- f) Do you think it's OK for Jeremy to keep Mike out his group of friends for awhile? 1 2 3 4
- g) Do you think it's OK for Jeremy to lie behind Mike's back to get other peers not to like Mike? 1 2 3 4
- 4) Suppose a girl, Kirsten, hits another girl, Olivia.**
- a) Do you think it's OK for Olivia to scream at Kirsten? 1 2 3 4
- b) Do you think it's OK for Olivia to hit Kirsten? 1 2 3 4
- c) Do you think it's OK for Olivia to not invite Kirsten out to do things anymore? 1 2 3 4
- d) Do you think it's OK for Olivia to spread rumors about Kirsten? 1 2 3 4
- e) Do you think it's OK for Olivia to ignore Kirsten for awhile? 1 2 3 4
- f) Do you think it's OK for Olivia to keep Kirsten out her group of friends for awhile? 1 2 3 4
- g) Do you think it's OK for Olivia to lie behind Kirsten's back to get other peers not to like Kirsten? 1 2 3 4

APPENDIX F
VALUE OF EMOTIONAL SUPPORT, INTIMACY, AND DISCLOSURE

These questions ask about your relationship with a same-sex friend.

Please choose the most important same-sex friend you have had in high school. If you are in elementary school, choose the most important same-sex friend you have had while in elementary school. You may select someone who is your most important same-sex friend now, or who was your most important same-sex friend earlier in high school/elementary school. Do not choose a sibling. If you select a person with whom you are no longer friends, please answer the questions as you would have when you were in the relationship.

Same-Sex Friend's First Name _____

How long is/was the friendship? ____ years ____ months (*please fill in numbers*)

Are you close friends now?

- A. Yes B. Friends, but not as close as before C. No**

Now we would like you to answer the following questions about the person you have selected above. After reading each question, circle how important these qualities are in your selected friendship.

Not Important 1	Somewhat Important 2	Important 3	Very Important 4	Extremely Important 5
-----------------------	----------------------------	----------------	------------------------	-----------------------------

How IMPORTANT is it that...

- | | (circle number) | | | | |
|--|-----------------|---|---|---|---|
| 1. You are able turn to this person for support with personal problems? | 1 | 2 | 3 | 4 | 5 |
| 2. You are able to depend on this person for help, advice, or sympathy? | 1 | 2 | 3 | 4 | 5 |
| 3. You are able to depend on this person to cheer you up when you are feeling down or upset? | 1 | 2 | 3 | 4 | 5 |
| 4. You are satisfied with your relationship with this person? | 1 | 2 | 3 | 4 | 5 |
| 5. You have a good relationship with this person? | 1 | 2 | 3 | 4 | 5 |
| 6. You are happy with the way things are going with this person? | 1 | 2 | 3 | 4 | 5 |
| 7. You get to spend free time with this person? | 1 | 2 | 3 | 4 | 5 |
| 8. You are able to play around and have fun with this person? | 1 | 2 | 3 | 4 | 5 |
| 9. You can go places and do enjoyable things with this person? | 1 | 2 | 3 | 4 | 5 |
| 10. This person has strong feelings of liking toward you? | 1 | 2 | 3 | 4 | 5 |
| 11. This person really cares for you? | 1 | 2 | 3 | 4 | 5 |
| 12. This person treats you like you're good at many things? | 1 | 2 | 3 | 4 | 5 |
| 13. This person treats you like you're admired and respected? | 1 | 2 | 3 | 4 | 5 |
| 14. This relationship will last no matter what? | 1 | 2 | 3 | 4 | 5 |
| 15. This person likes or approves of the things you do? | 1 | 2 | 3 | 4 | 5 |
| 16. This relationship will last in spite of fights? | 1 | 2 | 3 | 4 | 5 |
| 17. You are able to talk about everything with this person? | 1 | 2 | 3 | 4 | 5 |
| 18. You are able to share your secrets and private feelings with this person? | 1 | 2 | 3 | 4 | 5 |
| 19. You are able to talk to this person about things that you don't want others to know? | 1 | 2 | 3 | 4 | 5 |

APPENDIX G
LEVEL OF EMOTIONAL SUPPORT, INTIMACY, AND DISCLOSURE

These questions ask about your relationship with the same-sex friend you just listed also. After reading each question, circle how important these qualities are in your selected friendship.

Very Little Or not at all	Somewhat	Very Much	Extremely Much	The Most
1	2	3	4	5

How MUCH ...

- | | (circle number) | | | | |
|--|------------------------|---|---|---|---|
| 1. Do you turn to this person for support with personal problems? | 1 | 2 | 3 | 4 | 5 |
| 2. Do you depend on this person for help, advice, or sympathy? | 1 | 2 | 3 | 4 | 5 |
| 3. Do you depend on this person to cheer you up when you are feeling down or upset? | 1 | 2 | 3 | 4 | 5 |
| 4. Are you satisfied with your relationship with this person? | 1 | 2 | 3 | 4 | 5 |
| 5. Do you have a good relationship with this person? | 1 | 2 | 3 | 4 | 5 |
| 6. Are happy with the way things are going with this person? | 1 | 2 | 3 | 4 | 5 |
| 7. Free time do you spend with this person? | 1 | 2 | 3 | 4 | 5 |
| 8. Are you able to play around and have fun with this person? | 1 | 2 | 3 | 4 | 5 |
| 9. Can you go places and do enjoyable things with this person? | 1 | 2 | 3 | 4 | 5 |
| 10. Does this person have strong feelings of liking toward you? | 1 | 2 | 3 | 4 | 5 |
| 11. Does this person care for you? | 1 | 2 | 3 | 4 | 5 |
| 12. Does this person treat you like you're good at many things? | 1 | 2 | 3 | 4 | 5 |
| 13. Does this person treat you like you're admired and respected? | 1 | 2 | 3 | 4 | 5 |
| 14. Are you sure that this relationship will last no matter what? | 1 | 2 | 3 | 4 | 5 |
| 15. Does this person like or approve of the things you do? | 1 | 2 | 3 | 4 | 5 |
| 16. Are you sure that this relationship will last in spite of fights? | 1 | 2 | 3 | 4 | 5 |
| 17. Are you are able to talk about everything with this person? | 1 | 2 | 3 | 4 | 5 |
| 18. Are you able to share your secrets and private feelings with this person? | 1 | 2 | 3 | 4 | 5 |
| 19. Are you able to talk to this person about things that you don't want others to know? | 1 | 2 | 3 | 4 | 5 |

APPENDIX H
INTERLOPER LETTER – GIRLS’ FORM

Written below is a copy of a short email written to us by a student who is about your age. To protect her privacy, we will not use her real name and will call her “Susan” instead. We would like you to read the email she wrote. After reading her email, we would like to know what you think about the situation so that we may know best how to help her. We will not show Susan your answers or identify you in any way. However, at the end of questionnaire we will provide you with space to write back to her.

Susan’s email:

>>My best friend, Kylie, and I used to be really close. We hung out and did things
>>together all the time. Things have really changed since she started being friends with
>>Amy. Now she spends all of her time just with her. I know that when someone gets a
>>new friend, they want to spend time with them. But do they have to leave me out
>>completely?

If you could guess, what sorts of things do you imagine Susan doing in response to her best friend hanging around with someone else? (Circle the correct response beside each statement)

Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5

I could imagine Susan ...

- | | (circle number) | | | | |
|---|-----------------|---|---|---|---|
| 1. Ignoring her best friend Kylie, the next time Kylie talks to her about something. | 1 | 2 | 3 | 4 | 5 |
| 2. Acting as if she doesn't care, when Kylie tells her about her problems. | 1 | 2 | 3 | 4 | 5 |
| 3. Not being very friendly to Amy, especially if her best friend Kylie is not there. | 1 | 2 | 3 | 4 | 5 |
| 4. Ignoring Amy, the next time Amy talks to her about something. | 1 | 2 | 3 | 4 | 5 |
| 5. Telling others that she doesn't like Amy anymore. | 1 | 2 | 3 | 4 | 5 |
| 6. Telling others that she doesn't like Kylie anymore. | 1 | 2 | 3 | 4 | 5 |
| 7. Not inviting Kylie out to do things anymore. | 1 | 2 | 3 | 4 | 5 |
| 8. Inviting Kylie out to do things, but asking her not to bring Amy along. | 1 | 2 | 3 | 4 | 5 |
| 9. Inviting Kylie out to do things, but making sure they do things that Amy wouldn't want to get involved in. | 1 | 2 | 3 | 4 | 5 |
| 10. Try to show Amy that she is best friends with Kylie by hugging Kylie or being close to Kylie while Amy is around. | 1 | 2 | 3 | 4 | 5 |
| 11. Spreading rumors about Amy that she steals peoples' friends. | 1 | 2 | 3 | 4 | 5 |
| 12. Tell others that Kylie is acting like a snob. | 1 | 2 | 3 | 4 | 5 |
| 13. Tell others that Kylie thinks she's too good for everyone else. | 1 | 2 | 3 | 4 | 5 |
| 14. Not looking at Amy when she is talking. | 1 | 2 | 3 | 4 | 5 |
| 15. Not making eye contact with Amy. | 1 | 2 | 3 | 4 | 5 |
| 16. Talking while Amy is talking. | 1 | 2 | 3 | 4 | 5 |
| 17. Turning away from Amy while she is talking. | 1 | 2 | 3 | 4 | 5 |
| 18. Turning away from Kylie while she is talking. | 1 | 2 | 3 | 4 | 5 |

APPENDIX I
INTERLOPER LETTER – BOYS' FORM

Written below is a copy of a short email written to us by a student who is about your age. To protect his privacy, we will not use his real name and will call him “Sam” instead. We would like you to read the email he wrote. After reading his email, we would like to know what you think about the situation so that we may know best how to help him. We will not show Sam your answers or identify you in any way. However, at the end of questionnaire we will provide you with space to write back to him.

Sam's email:

>>My best friend, Kevin, and I used to be really close. We hung out and did things
>>together all the time. Things have really changed since he started being friends with
>>Andy. Now he spends all of his time just with him. I know that when someone gets a
>>new friend, they want to spend time with them. But do they have to leave me out
>>completely?

Now answer the following questions about Sam's email:

1. Since school started this year, have you had an experience like Sam's, where you were left out because your best friend started hanging out with another person?

Yes / No (circle one)

2. Since school started this year, have you had an experience where *you* left *your* best friend out because you started hanging out with another person?

Yes / No (circle one)

4. Would you feel concerned, if you or someone you cared about had an experience like Sam's?

Yes / No (circle one)

3. Imagine yourself in Sam's position where your best friend started hanging out with someone else. If you were in Sam's position how would *you* feel?

Not at All	A Little	Somewhat	Very Much	Extremely
1	2	3	4	5

(circle number)

I would feel jealous.	1	2	3	4	5
I would feel angry.	1	2	3	4	5
I would feel surprised.	1	2	3	4	5
I would feel guilty.	1	2	3	4	5
I would feel hurt.	1	2	3	4	5

If you could guess, what sorts of things do you imagine Sam doing in response to his best friend hanging around with someone else? (Circle the correct response beside each statement)

Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5

I could imagine Sam ...

- | | (circle number) | | | | |
|--|-----------------|---|---|---|---|
| 1. Ignoring his best friend Kevin, the next time Kevin talks to him about something. | 1 | 2 | 3 | 4 | 5 |
| 2. Acting as if he doesn't care, when Kevin tells him about his problems. | 1 | 2 | 3 | 4 | 5 |
| 3. Not being very friendly to Andy, especially if his best friend Kevin is not there. | 1 | 2 | 3 | 4 | 5 |
| 4. Ignoring Andy, the next time Andy talks to him about something. | 1 | 2 | 3 | 4 | 5 |
| 5. Telling others that he doesn't like Andy anymore. | 1 | 2 | 3 | 4 | 5 |
| 6. Telling others that he doesn't like Kevin anymore. | 1 | 2 | 3 | 4 | 5 |
| 7. Not inviting Kevin out to do things anymore. | 1 | 2 | 3 | 4 | 5 |
| 8. Inviting Kevin out to do things, but asking him not to bring Andy along. | 1 | 2 | 3 | 4 | 5 |
| 9. Inviting Kevin out to do things, but making sure they do things that Andy wouldn't want to get involved in. | 1 | 2 | 3 | 4 | 5 |
| 10. Try to show Andy that he is best friends with Kevin by hugging Kevin or being close to Kevin while Andy is around. | 1 | 2 | 3 | 4 | 5 |
| 11. Spreading rumors about Andy that he steals peoples' friends. | 1 | 2 | 3 | 4 | 5 |
| 12. Tell others that Kevin is acting like a snob. | 1 | 2 | 3 | 4 | 5 |
| 13. Tell others that Kevin thinks he's too good for everyone else. | 1 | 2 | 3 | 4 | 5 |
| 14. Not looking at Andy when he is talking. | 1 | 2 | 3 | 4 | 5 |
| 15. Not making eye contact with Andy. | 1 | 2 | 3 | 4 | 5 |
| 16. Talking while Andy is talking. | 1 | 2 | 3 | 4 | 5 |
| 17. Turning away from Andy while he is talking. | 1 | 2 | 3 | 4 | 5 |
| 18. Turning away from Kevin while he is talking. | 1 | 2 | 3 | 4 | 5 |

APPENDIX J

COMPETITION FOR BOYS AND SYMBOLIC CAPITAL – GIRLS’ FORM

Don't Care At All 1	A Little 2	Moderately Care 3	Very Much 4	Care More Than Anything 5	
(circle number)					
1. Everyone goes through times when they don't get good grades at school. How do you feel when you don't get good grades at school? Indicate on the scale how much you care about getting good grades.	1	2	3	4	5
2. Everyone goes through times when the girl they like doesn't even notice them. How do you feel when the boy you like doesn't notice you? Indicate on the scale how much you care about having a boy you like notice you.	1	2	3	4	5
3. Everyone goes through times when they don't have as many close friends as they would like. How do you feel when you don't have as many close friends? Indicate on the scale how much you care about having close friends.	1	2	3	4	5
4. Everyone goes through times when they aren't feeling as popular with others as usual. How do you feel when you aren't popular? Indicate on the scale how much you care about being popular.	1	2	3	4	5
5. Everyone goes through times when they aren't feeling attractive. How do you feel when you aren't attractive? Indicate on the scale how much you care about being attractive.	1	2	3	4	5
6. Everyone goes through times when they aren't doing well at sports or athletic activities. How do you feel when you aren't doing well in sports or athletics? Indicate on the scale how much you care about doing well at sports or athletics.	1	2	3	4	5

Write down the names or initials of your two closest same-sex friends in the spaces below. If you only have one close friend, then write down only one name.

1. _____

2. _____

The remainder of the questions on this page will be referring to your relationship with the friend(s) you have listed above.

Don't Care At All 1	A Little 2	Moderately Care 3	Very Much 4	Care More Than Anything 5
--	---------------------------	----------------------------------	----------------------------	--

(circle number)

1. If your closest friend(s) started receiving good grades in school and you did not, how much would you care? 1 2 3 4 5

2. If your closest friend(s) were always being noticed by a guy that you liked and you were not, how much would you care? 1 2 3 4 5

3. If your closest friend(s) started making a lot of other close friends and you did not, how much would you care? 1 2 3 4 5

4. If your closest friend(s) became very popular and you did not, how much would you care? 1 2 3 4 5

5. If your closest friend(s) became very attractive and you did not, how much would you care? 1 2 3 4 5

6. If your closest friend(s) became very good at sports or athletics and you did not, how much would you care? 1 2 3 4 5

APPENDIX K
 COMPETITION FOR BOYS AND SYMBOLIC CAPITAL – BOYS' FORM

Don't Care At All 1	A Little 2	Moderately Care 3	Very Much 4	Care More Than Anything 5	
(circle number)					
1. Everyone goes through times when they don't get good grades at school. How do you feel when you don't get good grades at school? Indicate on the scale how much you care about getting good grades.	1	2	3	4	5
2. Everyone goes through times when the girl they like doesn't even notice them. How do you feel when the girl you like doesn't notice you? Indicate on the scale how much you care about having a girl you like notice you.	1	2	3	4	5
3. Everyone goes through times when they don't have as many close friends as they would like. How do you feel when you don't have as many close friends? Indicate on the scale how much you care about having close friends.	1	2	3	4	5
4. Everyone goes through times when they aren't feeling as popular with others as usual. How do you feel when you aren't popular? Indicate on the scale how much you care about being popular.	1	2	3	4	5
5. Everyone goes through times when they aren't feeling attractive. How do you feel when you aren't attractive? Indicate on the scale how much you care about being attractive.	1	2	3	4	5
6. Everyone goes through times when they aren't doing well at sports or athletic activities. How do you feel when you aren't doing well in sports or athletics? Indicate on the scale how much you care about doing well at sports or athletics.	1	2	3	4	5

Write down the names or initials of your two closest same-sex friends in the spaces below. If you only have one close friend, then write down only one name.

1. _____

2. _____

The remainder of the questions on this page will be referring to your relationship with the friends you have listed above.

Don't Care At All	A Little	Moderately Care	Very Much	Care More Than Anything
1	2	3	4	5

(circle number)

1. If your closest friend(s) started receiving good grades in school and you did not, how much would you care? 1 2 3 4 5

2. If your closest friend(s) were always being noticed by a girl that you liked and you were not, how much would you care? 1 2 3 4 5

3. If your closest friend(s) started making a lot of other close friends and you did not, how much would you care? 1 2 3 4 5

4. If your closest friend(s) became very popular and you did not, how much would you care? 1 2 3 4 5

5. If your closest friend(s) became very attractive and you did not, how much would you care? 1 2 3 4 5

6. If your closest friend(s) became very good at sports or athletics and you did not, how much would you care? 1 2 3 4 5

APPENDIX L
REQUEST FOR AN INTERVIEW

Thank-you for answering our questionnaire. In the future, we will be selecting some students for individual interviews on similar topics. Each interview would not last longer than 20 minutes and will be completely private. Please check (3) whether you would be like to be contacted for an interview along with a way we can contact you. Since we can only choose a small number of people for the interviews, not everyone who would like an interview will be contacted.

Yes – I would be willing to do an interview.

If you checked “yes”, please fill in the contact information below.

My phone number is: _____

My e-mail address is: _____

My regular mailing address is:

(apt number/street)

(city, province)

(postal code)

No thanks -- I do not want to be chosen for an interview.

APPENDIX M

INTERVIEW SCRIPT AND DISCUSSION QUESTIONS

A. Opening Text

Do you remember the questionnaire that you filled out a little while ago? Part of what I was asking you about was something called relational/indirect/social aggression. RISA consists of behaviours like spreading rumors, talking about others behind another person's back, ignoring others when they're talking, or even pretending that you don't know someone when you actually do.

Right now, adults and researchers have their own ideas about why this behaviour occurs. But I'm interested in knowing what people your age think about it, so I'm going to ask you some questions about this, okay? Just tell me your honest opinions and know that what you tell me won't be discussed with anyone at school. It shouldn't take much longer than twenty minutes. Do you have any questions before we start?

B. Questions/Topics for Discussion

1. First, have you ever experienced or done this sort of these yourself (spreading rumors, ignoring someone, et cetera)? Could you describe it to me?
2. Do you think that boys and girls do this sort of thing to the same degree from what you've seen or experienced in your life? If you think that girls do this more than boys, why do you think this is? How do you make sense of girls doing this?
3. Some researchers who believe that girls engage in RISA more than boys have explained that this happens for a few reasons.
 - a. The first reason is that maybe that there are different rules for boys and girls in the world. Specifically, maybe girls don't think it's ok for girls to yell or even physically fight with other girls when they're mad. And maybe boys learn that SOMETIMES it is ok to yell and physically fight with other boys under certain circumstances. What do you think about this?
 - b. The second reason is that RISA is simply the best way to hurt a girl, while boys might not care if someone uses RISA on them. What do you think about this? [If participant agrees that RISA is more effective on girls than boys, ask] Why do you think RISA is the best way to hurt a girl?
 - c. The third reason that people think RISA occurs more often among girls than boys is that girls are keeping track of how they "measure up" with other girls. Like for example, when a girl's friend dresses too well or gets more attention from the guy she likes that she is more likely to use RISA against that girl than boys would be in a similar situation? What do you think about this? What is important to girls at your school? [Suggest - Having the right clothes? Being nice? Being popular with other popular girls? Knowing or dating the cute guys? Being good at sports?] What do you think is important to boys at your school [Suggest - having the right clothes? Being nice? Being popular with other guys? Knowing or dating the cute girls? Being good at sports?]. Do you think that girls act differently or notice more than boys when their friends do better than they do at something?
5. Of all the things I've talked about – which one do you think matters the most? If you had to choose between (1) girls are not allowed to yell and hit, (2) it's a great way to hurt girls, and (3) girls don't want other girls to be better than they are – which one would you say is a way to explain RISA?
6. That's it for my questions. Do you have any other ideas about why RISA happens? Or is there anything else you want to tell me about or ask? [If not – wrap up and say thanks]

APPENDIX N
FURTHER HELP INFORMATION FORM

Thank-you for completing our questionnaire!



 If you **feel sad, angry, or worried** about something after doing this study, please talk to your parent, teacher or school counsellor about it.

 If you do not want to talk to a parent, teacher or counsellor, you may call the Kids' Help Phone, where kids can talk privately to someone. It is **free** to call. The phone number is **1-800-668-6868**.