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Social Information Processing and Coping Strategies of Shy/ Withdrawn and Aggressive Children: Does Friendship Matter?

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Abstract

The primary objectives of this investigation were to examine the attributions, emotional reactions, and coping strategies of shy/withdrawn and aggressive girls and boys *and* to examine whether such social cognitions differ within the relationship context of friendship. Drawn from a sample of 5th and 6th graders (*M* age = 10.79 years; *SD* = .77), 78 shy/withdrawn, 76 aggressive, and 85 control children were presented with hypothetical social situations that first involved unfamiliar peers, then a mutual good friend. Results revealed group and gender differences and similarities, depending on the relationship context. From our findings emerges a central message: friends' involvement during interpersonal challenges or stressors mitigates children's attributions, emotions and coping responses.

The ways in which children process information about social situations and others' behaviors have been the subject of much scrutiny in the social-cognitive and developmental psychology literatures. For example, Crick and Dodge (1994) proposed that when children find themselves in social company, and when a dilemma confronts them, they first encode and interpret social cues and information; next, they access their cognitive repertoires, decide upon, and evaluate possible responses to the given situation; and lastly, they select and enact the chosen response. Researchers who have applied this model have typically reported that aggressive or rejected children attribute hostile intent to the actions of others (e.g., "The child did X on purpose to hurt or harm me."), even when the behaviors leading to untoward consequences may be objectively appraised as having an ambiguous cause (e.g., Dodge et al., 2003).

More recently, Lemerise and Arsenio (2000) integrated emotional experiences within Crick and Dodge's (1994) social information processing model. For example, aggressive children's emotional reactions to problematic social situations might include frustration or anger. These emotions, in turn, may influence the information attended to, the information recalled, and the ways children respond to negative events befalling them. Non-aggressive children,

particularly those who may be described as socially wary and withdrawn, may view interpersonal situations such as peer group entry as stressful and anxiety-producing; in their case, avoidance evoked by fear or wariness may be the social consequence. Thus, an inability to regulate emotional arousal under certain circumstances could influence several steps of the information processing and behavioral enactment process.

Whereas the majority of attention has been devoted to the study of aggression (see Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002), social information-processing models have also been proposed as being relevant for the understanding of peer victimization (Graham & Juvonen, 1998), childhood anxiety (Bell-Dolan, 1995; Daleiden & Vasey, 1997; Suarez & Bell-Dolan, 2001), and childhood/adolescent depression (e.g., Garber, Keiley, & Martin, 2002). Although not all withdrawn children experience anxiety and depression, social withdrawal is generally considered a symptom of internalizing problems (Achenbach & Edelbrock, 1981; Rubin, Burgess, Kennedy, & Stewart, 2003). However, there has been relatively little attention paid to the ways in which socially withdrawn or shy children interpret social cues (attributions) and intentions. Results from studies focused on rejected children who are also aggressive have demonstrated that aggressive-rejected children respond in characteristic and predictable ways to peers who putatively rejected them in everyday life (e.g., Dodge et al., 2003; Zakriski & Coie, 1996). Withdrawn children may also have characteristic ways of thinking through interpersonal problems given their own experiences of rejection (e.g., Rubin, Chen, & Hymel, 1993) and victimization (Hanish & Guerra, 2004).

Researchers have shown that social withdrawal in childhood and adolescence is contemporaneously and predictively associated with negative self-perceptions of social competence and relationships, peer rejection, loneliness, and depressive symptoms (e.g., Rubin et al., 1995). In early childhood, socially withdrawn children are less able to understand the perspectives of others (LeMare & Rubin, 1987) and are more likely than their more sociable age-mates to suggest that they would ask an adult for help or would be entirely unassertive when confronted with hypothetical social dilemmas involving peers (Rubin, Daniels-Beirness, & Bream, 1984). The socially wary child whose attempts to interact with peers result in a lack of success may become increasingly anxious and develop negative thoughts and feelings about the self (Asendorpf & van Aken, 1994; Nelson, Rubin, & Fox, in press). Actually, withdrawn children do think poorly of their own social skills and relationships. But how do socially withdrawn and shy children interpret negative social events? How do they feel when they experience negativity in social situations? To what do they attribute negative outcomes and how do they suggest that they would behaviorally handle such events? Their feelings, thoughts, and behaviors may allow an understanding of why socially withdrawn children get into trouble in terms of self-processes and such internalizing difficulties as depression (e.g., Rubin et al., 2003). At this time, however, researchers have not thoroughly examined the social information processes experienced by shy/withdrawn children, except in a sample of kindergarteners who were identified as actively isolated (Harrist, Zaia, Bates, Dodge, & Pettit, 1997).

As mentioned, Dodge's (Dodge et al., 2003) information processing model might usefully be applied to the study of socially withdrawn children. One might expect, for example, that aggressive and withdrawn children process social information in very different ways. On the one hand, aggressive children may be more likely than non-aggressive children to attribute blame to another child under ambiguous situations. On the other hand, shy/withdrawn children may be more likely than non-withdrawn and aggressive children to blame themselves or internalize blame under ambiguous circumstances.

Just as causal attributions are important to assess among children, so too is the way they may handle challenging social situations. Consequently, we examined children's coping styles given challenging peer experiences. Whereas aggressive children may respond in a hostile manner, how socially withdrawn children respond to ambiguously caused negative events is heretofore unknown. Given their experiences of being rebuffed by peers (Nelson et al., in press; Stewart & Rubin, 1995) and given their increased social anxiety with age (Hymel, Rubin, Rowden, & LeMare, 1990; Rubin & Burgess, 2001; Rubin, Hymel, & Mills, 1989), coping through avoidance would be expected from shy/withdrawn children when confronted with social stresses.

Withdrawn preschoolers have been found to endorse adult-dependent strategies in situations involving peer conflict (Rubin et al., 1984). Whether this remains the case in later childhood deserves exploration; but adult intervention may represent another coping strategy for shy/withdrawn children when faced with ambiguously caused negative events. Further, it is predicted that withdrawn children would be more likely than non-withdrawn and aggressive children to appease others or "give in" to make the situation better. This strategy may well serve to decrease their anxiety about a stressful social situation. Also, shy/withdrawn children might be more likely to endorse other nonassertive strategies such as those characterized by internalizing emotional reactions and inaction (e.g., being upset or crying or hurt feelings, but doing nothing). By contrast, it is expected that coping strategies of seeking revenge or would be more characteristic of aggressive children than other children.

Social information processing and friendship

Although certain styles of social information processing may place aggressive or withdrawn children at-risk for maladjustment, it is also important to assess those factors that can protect children from maladaptive social interpretations and coping strategies. One such protective factor for aggressive or withdrawn children may be friendship. Certainly, not all aggressive and withdrawn children experience adjustment difficulties, and not all of these children are devoid of friends. Perhaps then, having a mutual friendship may buffer children from social-cognitive and emotional difficulties experienced within their peer group.

Friendship in mid-to-late childhood brings with it many benefits. For instance, friendship has been associated positively with self-esteem and ratings of self-worth (Bagwell, Newcomb, & Bukowski, 1998), and provides a sense of emotional security and a context for intimate self-disclosure (e.g., Rose & Asher, 2000). Given that friendships are socially and emotionally supportive, good friendships may influence and even benefit social-cognitive processes such as perspective-taking and social skills related to social competence (Selman, 1997). Yet few investigators have considered whether attributions, emotional reactions, and coping styles would be different if the peer perpetration experience occurred with a friend versus an unfamiliar other or casual acquaintance. Such an examination may contribute to knowledge about the ways in which close relationships influence emotional, social-cognitive, and behavioral functioning. Sancilio, Plumert, and Hartup (1989) found no attribution differences between friends and non-friends for ambiguous situations; however, the sample comprised only aggressive and non-aggressive boys and did not include girls and shy/withdrawn children. Moreover, friendships were determined from unilateral nominations rather than the reciprocal friendship nominations that are required for the identification of a dyadic relationship (Rubin, Bukowski, & Parker, 1998).

Clearly, further exploration is needed to better understand the possible role of mutual friendships in social-information processing. Moreover, the way in which friendship influences children's processing may differ, depending on their behavioral characteristics. For example, might the attribution styles of aggressive children be less likely to involve

hostility or external blame given a friend's involvement in the social circumstance? Might aggressive or withdrawn children be more likely to offer prosocial or positive intention explanations for their friends' behavior when negative events befall them ("She was trying to help me out when she did X.") than they would for behavior of non-friends or unfamiliar peers?

Friendship could also alleviate the tendency for negative, uncomfortable or distressing emotions that may accompany stressful peer experiences; and thereby have a buffering effect on emotional upset or dysregulation. Yet the kind of emotional reactions that might arise in different peer contexts for certain groups of children has rarely been examined with respect to aggression and not at all for shyness or social withdrawal. Considering the close emotional tie of friendship, it was expected that aggressive children would be less likely to feel angry when the offending peer is a good friend rather than an unfamiliar peer. Similarly, a withdrawn child's mutual friendship could lessen the effect of emotional response tendencies such as embarrassment or sadness.

Further, the coping strategies used by aggressive or shy/withdrawn children might vary depending upon the relationship (or lack thereof) with the peer perpetrator. For example, an aggressive child might be expected not to engage in revenge with a best friend, whereas a withdrawn child might be less likely to employ avoidant, appeasement, and adult-dependent strategies with friends.

Gender differences

Many of the early studies on social-information processing involved boys only. Yet, aggressive boys might be more likely to attribute blame to others than aggressive girls. With respect to emotional responses, boys might report more angry reactions than girls, whereas girls might tend to react more with sadness than boys, given girls' greater tendency toward depressive symptoms as they reach adolescence (Galambos, Leadbeater, & Barker, 2004; Hankin & Abramson, 2001). When coping styles are considered, revenge could be a more-often chosen strategy for boys than girls. Lastly, with girls' tendency toward interpersonal dependency and affiliation compared to boys (Zahn-Waxler, Druggal, & Gruber, 2002), they could prefer adult intervention as a means to handle problems.

In summary, our primary objective was to apply social information processing theory to the study of social withdrawal and aggression based on the notion that these behavioral patterns may carry with them maladaptive cognitions, emotional reactions, and coping styles. The second objective was to ascertain whether a friendship could influence the ways in which children think and feel about interpersonal dilemmas. To accomplish these goals, we examined groups of aggressive, withdrawn, and non-aggressive/non-withdrawn children in fifth and sixth grade.

Method

Participants

Participants were drawn from a larger study on children's peer relationships across the transition from elementary to middle school. All students with parental consent (84%; Grade 5 $N = 827$; 406 boys, 421 girls; Grade 6 $N = 1,210$; 592 boys, 618 girls) from eight public elementary schools and three middle schools in a metropolitan area completed friendship nominations and a peer behavioral measure (see *ECP* below). As described below, these measures were used to assign children to risk and control groups.

School Measures

Sociometric friendship nominations (Bukowski, Hoza, & Boivin, 1994). Participants were asked to write the names of their 1st and 2nd best friends at their school; the children were instructed that these 1st and 2nd friends were their “very best” and “second best” friends respectively. Children were also asked to write the names of three other good friends at their schools. For all friendship nominations, children could only name same-gender friends in their grade, and only mutual (reciprocated) friendships were subsequently considered. Children were considered “best friends” if they were each other's 1st or 2nd friend choices. All other reciprocated friendship nominations were considered “good” friendships. The identification of a friendship is similar to procedures used in other studies (e.g., Parker & Asher, 1993).

Child Behaviors: Extended Class Play (ECP) (Burgess, Rubin, Wojslawowicz, Rose-Krasnor, & Booth, 2003). Following completion of the friendship nomination questionnaire, participants completed an extended version of the *Revised Class Play (RCP)* (see Masten, Morison, & Pellegrini, 1985 for procedure). The extended version of the *RCP* included items to distinguish different forms of aggression and withdrawal as well as to assess victimization. The added items and the factors they loaded on (see below for description of factors) were as follows: the *Aggression* factor-- “Someone who spreads rumors about other kids so that people won't like them anymore” (cf. Crick & Grotpeter, 1995); the *Shyness/Withdrawal* factor-- “Someone who talks quietly or rarely”, “Someone who stays by himself/herself”, “Someone who likes spending time alone (such as doing computer work, reading, or drawing)”, “Someone who rarely starts up conversations”, and “Someone who gets nervous participating in class discussions”; the *Rejection/Victimization* factor-- “Someone who has mean things said to them”, “Someone who gets picked on”, and “Someone who is hit/kicked by others” (see Kochenderfer & Ladd, 1996).

In both Grades 5 and 6, only nominations for participating children were considered, and to eliminate possible gender-stereotyping, only same-gender nominations were utilized. All item scores were standardized within gender and within classroom (5th grade)/within grade (6th) in order to adjust for the number of nominations received and also the number of nominators. A principal components factor analysis with varimax rotation yielded five orthogonal factors for data collected in both 5th and 6th grades: Aggression (9-items), Shyness/Withdrawal (6-items), Rejection/Victimization (8-items), Prosocial Behaviors (6-items), and Popularity/Sociability (5-items). The standardized item scores were summed to yield five different total scores for each participant. The *ECP* measure has been found both valid and reliable using the large normative sample of 5th and 6th children/adolescents across four time points (Burgess et al., 2003). Given that the factor structure was identical when the 5th and 6th grade data were considered separately, data were combined from the two grades to increase the number of participating children and the number of children who would be considered shy/withdrawn or aggressive.

Identification of risk and control groups

The *Shy/Withdrawn* group comprised those children whose Shyness/Withdrawal scores were in the top 33% and whose Aggression scores were in the bottom 50% for their gender and grade. For the *Aggressive* group of children, we identified those whose ECP Aggression scores fell in the top 33% and whose Shyness/Withdrawal scores were in the bottom 50% for their gender and grade. A *Control* group consisted of those children whose Aggression and Shyness/Withdrawal scores fell in the bottom 50% for their gender and grade; thus, controlling for aggression and withdrawal rather than comparing them to an extreme sociable/popular group. These procedures, including cutoffs, are very similar to those used

in previous studies on social withdrawal and aggression (e.g., Ladd & Burgess, 2001; Rubin et al., 1993).

In the 5th grade sample, the Shy/Withdrawn (*W*) group comprised 157 children (71 boys, 86 girls), the Aggressive (*A*) group comprised 155 children (74 boys, 81 girls), and the Control (*C*) group comprised 154 children (89 boys, 65 girls). In the 6th grade sample, the *W* group comprised 166 children (73 boys, 93 girls), the *A* group comprised 163 children (73 boys, 90 girls), and the *C* group comprised 171 children (95 boys, 76 girls).

All targeted children who had a mutual friendship were invited to the university lab. With respect to numbers of children who visited the laboratory, the *W* group comprised 78 children (36 boys (15 5th graders), 42 girls (19 5th graders)) and the *A* group consisted of 76 children (27 boys (14 5th graders), 49 girls (25 5th graders)). The *C* group (non-aggressive/non-withdrawn) comprised 85 children (44 boys (23 5th graders), 41 girls (29 5th graders)). 82% of these children had a mutual best friend (i.e., nominated each other as one of the top two choices) and 18% visited the laboratory with one of their other mutual good friends. Within-group analyses revealed non-significant differences on the ECP variables between those targeted children who visited the lab and those targeted children who did not. Demographic data were collected only for the laboratory sample. With respect to the three groups of children who visited the lab, analyses revealed non-significant demographic differences between the three groups in terms of SES, as measured by mother and father's highest level of education, and race with the exception of fewer Asian children in the aggressive group, $\chi^2(10, N = 223) = 18.07, p < .05$. The mean age of this selected laboratory sample was 10.79 years ($SD = .77$) with a range of 9-13 years; males $M = 10.81$ years ($SD = .76$) and females $M = 10.76$ years ($SD = .77$). Approximately 60 % of these children were Caucasian, 15% Black, 15% Asian, and 10% Latino. Sixty-eight percent of the mothers (68% of the fathers) had a university degree, 21% some college education (13% fathers), and 9% had high school and vocational education (12% fathers). The M s and SD s for the three groups who visited the laboratory on the ECP factors are presented in Table 4. Group comparisons on the ECP variables revealed that *C* children were significantly less rejected/victimized than *A* and *W* children, but that *W* children were more rejected and victimized than *A* children ($F(2, 239) = 29.43, p < .001$). *W* children were more prosocial than *A* children ($F(2, 239) = 5.23, p < .001$). In terms of popularity/sociability, a significant interaction and follow-up post-hoc (*LSD*) analyses ($F(2, 239) = 5.09, p < .001$), revealed that *A* girls were significantly more popular than *W* and *C* girls. *W* boys were significantly less popular than *A* and *C* boys.

Laboratory Measures

Attributions and Coping Questionnaire (ACQ): Peers-Part 1 was developed to measure target children's and their best friends' attributions, as well as their emotional reactions and coping strategies in hypothetical situations. Part 1 assessed children's social-information processing (*SIP*) in social situations with peers in general; whereas *ACQ: Friends - Part 2* was developed to measure these processes in situations wherein a best or good friend is involved. Both questionnaires consisted of hypothetical stories describing social situations with a peer or the best friend; and in all scenarios, the social situation ended with a negative outcome, thereby rendering them stressful or difficult. Each child was asked to imagine being the protagonist and the intent of the peer provocation was ambiguous. Part 1, which had vignettes describing situations at school, always preceded Part 2 so as to ensure comparability of Part 1 results with other studies (*SIP* in aggressive children) rather than possible carry-over effect from the friendship context.

Part 1 included vignettes describing situations with peers at school (see Crick & Dodge, 1996). For example: "Imagine that you are sitting at the lunch table at school eating lunch.

You look up and see another kid coming over to your table with a carton of milk. You turn around to eat your lunch, and the next thing that happens is that the kid spills milk all over your back. The milk gets your shirt all wet.”

Each vignette was followed by questions assessing the child's attributions (e.g., *Why did the kid get milk all over your back?*), emotional reactions (e.g., *How would you feel if this really happened to you?*), and coping strategies (e.g., *How would you deal with (or handle) this situation if it happened to you?*). For each question, the child was instructed to circle one answer from the situation-specific choices that were provided.

To assess children's interpretation of intentions, they were provided with four choices and chose one of these options: (1) an item descriptive of a *prosocial* attribution, wherein a child gives another the benefit of the doubt and assumes positive intent (e.g., The child slipped on something); (2) an item describing an attribution of *external blame* (e.g., The kid wanted to make fun of me); (3) an attribution of *internal blame* (e.g., I must have done something to make it happen); and (4) an item descriptive of a *neutral* attribution, in which the cause was perceived as accidental or coincidental (e.g., The kid wasn't looking and didn't see me).

To evaluate children's emotional responses to the situations, participants predicted how they would feel if the situation happened to them (*ok, sad, angry, or embarrassed*). Lastly, to assess coping styles, children selected a response descriptive of the five following categories: *avoidance* (e.g., I'd leave the lunchroom), *adult intervention* (e.g., Ask the teacher to get a towel or something), *revenge* (e.g., Pour the milk on the child's back the next day), *emotional* (but without any action – e.g., I would do nothing but I'd be upset), and *appeasement* (e.g., Tell him/her that it's okay because these things happen to everyone).

Participants' questionnaires were first coded as either *0* (did not select the answer) or *1* (did select the answer) for each possible item response on all five vignettes; thereafter, their scores were averaged across the five vignettes.

The structure of Part 2 was identical to Part 1, with one important variation. For each vignette in Part 2, a mutual good friend was the offender or instigator. For each vignette, the name of the mutual friend was the same person who came to the lab with him/her. The question and answer choices concerning the attributions and coping strategies were also specific to peer provocation by the friend (e.g., “Why did your friend bump you from behind?”). Parts 1 and 2 were not administered in succession, but separated by the administration of other questionnaires between them, except that Part 2 always came after Part 1. A copy of the ACQ scenarios is available from the senior author upon request.

Procedure

Research assistants administered school questionnaires in group-format in classrooms or larger schoolrooms (e.g., library, auditorium). After targeted groups of children were classified as shy/withdrawn, aggressive, or control (non-aggressive/non-withdrawn), they came to the university laboratory with their mutual friend; then both targets and friends completed measures, including those pertaining to social information processing and coping strategies. A research assistant administered instructions and questionnaires individually to each child.

Results

Relations among attributions, emotions, and coping styles as a function of peer type

Table 1 provides *M*s and *SD*s for all relevant measures. Correlations among all composite variables are presented separately for each peer type (“unfamiliar hypothetical peer” versus “mutual good friend”) in Tables 2 and 3.

Social information processing as a function of group status and peer type

Children's attributions, emotional reactions, and coping strategies were examined for group (shy/withdrawn [*W*], aggressive [*A*], non-aggressive/non-withdrawn control [*C*]) and gender differences. Also, we compared children's responses when the identity of the peer in the social situations was either an unfamiliar, hypothetical peer or a mutual friend. Conducted was a series of 3 (Group: *W*, *A*, *C*) $\times$ 2 (Type of peer: hypothetical unfamiliar or mutual friend) $\times$ 2 (Gender) MANOVAs with repeated measures on the type of peer factor for attributions, emotional reactions, and coping strategies. Based on the aforementioned social-information processing literature (Lemerise & Arsenio, 2000), attributions, emotions, and coping strategies were analyzed separately. However, it is important to note that the response-format of the ACQ makes these responses dependent, and should be interpreted as such. Any interactions or main effects not discussed below were not significant.

Attributions—Results revealed a significant multivariate interaction effect for peer type $\times$ gender, $F(4, 230) = 3.27, p < .01, \eta^2$ (partial eta squared) = .05, and a significant ANOVA interaction effect for gender and peer type for the attribution of external blame, $F(1, 233) = 9.82, p < .001, \eta^2 = .04$. Follow-up simple-effects tests revealed significant gender differences for the ‘hypothetical peer’ peer type. Specifically, results revealed that boys were more likely to make attributions of external blame for situations that involved a hypothetical peer than were girls ($F(1, 233) = 5.84, p < .02, \eta^2 = .02$; Boys: $M = .32, SD = .30$; Girls: $M = .25, SD = .27$). Also, significant between-group effects (ANOVAs) were found for the attribution of external blame, $F(2, 233) = 4.43, p < .01, \eta^2 = .04$. Post hoc analyses (*LSD*, $ps < .01$) indicated that *A* children were more likely to make an attribution of external blame than were *C* and *W* children.

A significant multivariate effect for peer type, $F(4, 230) = 45.79, p < .001, \eta^2 = .44$, and a significant univariate peer type effect for the prosocial intent variable emerged, $F(1, 233) = 17.63, p < .001, \eta^2 = .07$. Children were more likely to attribute prosocial intent to their mutual friends than to unfamiliar peers.

For the attribution of neutral intent, a significant univariate group $\times$ gender interaction effect also emerged, $F(2, 233) = 3.53, p < .03, \eta^2 = .03$. Follow-up simple-effects tests revealed significant group differences for girls only, $F(2, 233) = 7.38, p < .001, \eta^2 = .06$. *A* girls were less likely to make attributions of neutral intent than *W* ($p < .01$) and *C* girls ($p < .001$).

For the attribution of internal blame, a significant univariate interaction effect for group $\times$ peer type emerged, $F(2, 233) = 4.31, p < .01, \eta^2 = .04$. Follow-up simple-effects tests revealed significant differences by peer type for the *W* group only, $F(2, 233) = 15.96, p < .001, \eta^2 = .06$. In the mutual friend condition ($M = .09, SD = .17$), *W* children were less likely to make attributions of internal blame than in the unfamiliar peer condition ($M = .16, SD = .18$), $t(77) = 3.76, p < .001$.

Emotions—A significant multivariate effect was found for peer type, $F(4, 230) = 45.92, p < .001, \eta^2 = .44$, and significant univariate peer type effects were revealed on the following variables: (1) the emotional reaction of okay, $F(1, 233) = 141.53, p < .001, \eta^2 = .38$; and (2)

the emotional reaction of embarrassed, $F(1, 233) = 5.04, p < .03, \eta^2 = .02$. Whereas children were more likely to feel embarrassed about a situation involving an unfamiliar peer, children reported that they would be more likely to feel okay/alright about a situation involving a mutual friend.

Results also revealed two significant univariate interactions for the emotional reaction of anger: (1) peer type X gender, $F(1, 233) = 4.91, p < .03, \eta^2 = .02$; (2) peer type X group X gender, $F(2, 233) = 5.34, p < .001, \eta^2 = .02$. Follow-up simple-effects tests revealed significant differences among *boys* ($F(2, 233) = 4.25, p < .02, \eta^2 = .04$) but not girls. For scenarios involving an unfamiliar/hypothetical peer, *A* and *W* boys were more likely than *C* boys to report angry emotional reactions ($ps < .03$).

Tests of between-subjects effects revealed significant gender main effects for the emotional reactions of okay, $F(1, 233) = 6.66, p < .01, \eta^2 = .03$, and embarrassed, $F(1, 233) = 13.74, p < .001, \eta^2 = .06$. Girls were more likely than boys to report an emotional reaction of embarrassment; however, boys were more likely than girls to report feeling okay.

Coping Strategie—Results revealed a significant multivariate effect for peer type X gender, $F(2, 229) = 3.89, p < .001, \eta^2 = .08$. Two significant univariate interactions for the coping strategy of revenge were also revealed: (1) peer type X group, $F(1, 233) = 3.27, p < .04, \eta^2 = .03$; (2) peer type X gender, $F(1, 233) = 11.61, p < .001, \eta^2 = .05$. Follow-up simple-effects tests revealed significant group differences when peer type was considered. Aggressive ($F(1, 233) = 21.22, p < .001, \eta^2 = .08$) and Control ($F(1, 233) = 4.58, p < .03, \eta^2 = .02$) children were less likely to endorse revenge for scenarios involving good friend than for those involving an unfamiliar peer. Finally, simple-effects tests revealed that girls were less likely than boys to endorse revenge for scenarios that involved an unfamiliar peer ($F(1, 233) = 14.42, p < .001, \eta^2 = .06$; Girls: $M = .03, SD = .09$; Boys: $M = .09, SD = .20$).

Results also revealed a significant multivariate effect for peer type, $F(5, 229) = 33.35, p < .001, \eta^2 = .42$, and significant univariate peer type effects for the following coping strategies: avoidance, $F(1, 233) = 87.49, p < .001, \eta^2 = .27$; internalized emotional reactions coupled with inaction, $F(1, 233) = 10.63, p < .001, \eta^2 = .04$, and appeasement, $F(1, 233) = 102.79, p < .001, \eta^2 = .31$. Compared to social situations involving unfamiliar peers, for those involving mutual friends children were significantly less likely to endorse both avoidant coping strategies and internalized emotional reactions coupled with inaction. Yet, children were significantly more likely to choose an appeasement coping strategy for events involving friends than for those involving unfamiliar peers.

For the coping strategy of avoidance, a significant group main effect (between-subjects) also emerged, $F(2, 233) = 4.93, p < .01, \eta^2 = .04$. Follow-up *LSD* analyses revealed that *A* children ($p < .001$) and *W* children ($p < .04$) were more likely than *C* children to endorse avoidant coping strategies.

Lastly, tests of between-subjects effects revealed significant gender main effects for the coping strategy of emotions (coupled with inaction), $F(1, 233) = 9.65, p < .001, \eta^2 = .04$. Girls were more likely than boys to endorse this coping strategy.

Discussion

For friendship researchers, one line of inquiry has centered on the fundamental question “What is the significance of friendship?” This question takes on particular importance for children who have behavioral profiles indicative of current and future maladjustment, namely social withdrawal and aggression. Although investigators have examined friendship

as a moderator of adjustment (e.g., Hodges, Boivin, Vitaro, & Bukowski, 1999; Ladd & Burgess, 2001), the present study contributes to the literature on shy/withdrawn and aggressive children's social cognitions, emotions and coping styles, as well as to knowledge about the important role of their friendships. Taken together, our findings highlight important variations in the ways that children process social information across social contexts. Furthermore, although withdrawn and aggressive children appear to have negatively characteristic ways of thinking through social difficulties, findings strongly suggest that elements of their thinking improve when social scenarios involve mutual good friends.

Attributions

Generally, children reported more adaptive attributions regarding potentially stressful social situations when their mutual friends were involved than when unfamiliar peers were involved. For example, children were more likely to attribute prosocial intentions to their friends than to unfamiliar peers. In this respect, children were more likely to give their friends the “benefit of the doubt” and assume good intentions. Clearly, this attributional style could be considered practical and helpful in terms of maintaining and enhancing friendship quality.

Significantly, notable group differences emerged. Aggressive children were more likely to make attributions of external blame than were control and withdrawn children; moreover, aggressive girls were less likely to make attributions of neutral intent than were control and withdrawn girls. The finding regarding attributions of external blame supports previous research, as aggressive children have consistently been found to have hostile attributional biases (Orobio de Castro et al., 2002). Aggressive children also have expectations for reciprocated hostility, which are often reinforced by negative and hostile peer interactions. For instance, aggressive children are more likely than non-aggressive children to expect hostility to continue following a social event with a negative outcome, and are less likely to trust the offending peer in the future. In their interpersonal experiences, therefore, they are likely to perceive others as intentionally and consistently hostile.

Another noteworthy group difference concerned the attribution of internal blame. For shy/withdrawn children, friendships appeared to mitigate their social-cognitive processing: they were less likely to make attributions of internal blame for scenarios involving mutual good friends than those involving unfamiliar peers. Shy and withdrawn children often suffer from anxiety and negative self-regard (Rubin & Burgess, 2001); therefore, in situations involving unfamiliar peers, they are likely to feel socially wary and anxious, and often blame themselves for their social problems. However, our results suggest that within the context of a close friendship, shy/withdrawn children are less likely to blame themselves for their social difficulties. The support of a close, *mutual* relationship may assuage their fears and worries. Although the present study was correlational and conclusions cannot be made about causality, these findings are consistent with the protective function of friendship (e.g., Hodges et al., 1999). Our study is unique with its joint examination of social withdrawal, friendship, and social cognition. Importantly, findings strongly suggest that friendship may be protective in situations that result in negative consequences for withdrawn children by lessening their tendency to make self-blaming attributions.

Emotional reactions

Analyses focused on emotional reactions revealed that while children were more likely to report feelings of embarrassment for situations involving unfamiliar peers, they were more likely to report feeling alright (okay) for situations involving close friends. These findings suggest that when stressful circumstances involve a good friend rather than unknown peers,

the negative event may be viewed as less emotionally charged. This explanation is consistent with previous findings about the level of children's emotional arousal being less intense with friends than non-friends during conflict situations (e.g., Hartup, Laursen, Stewart, & Eastenson, 1988). It may also be that the relationship history of a friendship tempers negative emotional reactions to stressful social events.

Similar to prior findings (see Coie & Dodge, 1998), aggressive boys were more likely to report feelings of anger than control boys, but only for those scenarios involving unfamiliar peers. Notably, shy/withdrawn boys were also more likely than control boys to report angry emotional reactions for situations involving unfamiliar peers but not those involving friends. Socially withdrawn children do get angry when stressful interactions occur in their social lives; yet results from the present study suggest that whether, how, and with whom they express or communicate such feelings are key considerations. In this study, shy/withdrawn, aggressive, and control children reported equal levels of anger and embarrassment when a mutual friend was the perpetrator. This finding is particularly notable because it implies that aggressive and shy/withdrawn children may be as capable as their counterparts in regulating their emotional responses to provocative situations when a close friend is involved.

Contrary to expectation, there were no differences between peer types for the emotional reaction of sadness. Possibly the experience of sadness requires a more direct and personal loss than what was depicted in the *ACQ* scenarios. The oft-cited causes of sadness include rejection by others and separation from family members or friends (see Guerrero & Anderson, 2000).

Coping strategies

All children frequently chose the adult intervention strategy and were equally likely to choose this strategy for scenarios involving an unfamiliar peer or a mutual friend. Perhaps at this age children have learned that it is prudent to request the support or aid of an authority figure so as not to get into trouble, and have learned that it is an acceptable route or coping mechanism to seek adult counsel when there are peer conflicts. Assistance from an adult may be an appropriate and adaptive strategy for children to use as a way to solve potential disputes. Unlike a previous study with preschoolers (Rubin et al., 1984), shy/withdrawn children endorsed the adult intervention strategy as much as others, but the scenarios in the preschool study required that children proactively solve a problem involving object acquisition rather than reacting to a negative event befalling them.

The other most commonly endorsed coping strategy was appeasement. This strategy was differentially utilized depending upon peer type; as predicted, for social situations involving mutual friends, children most often chose coping strategies that were conciliatory in nature. As hypothesized for situations involving mutual friends, children less often chose vengeful or passive (e.g. avoidance, internalizing and inaction) strategies. The ability to resolve conflicts has been posited to be one of the unique qualities of friendship. Supporting this contention, friends are more likely to resolve conflicts than non-friends (Laursen, Hartup, & Keplas, 1996). Certainly, conciliatory strategies are more likely to aid conflict resolution than revengeful or passive strategies. Also, if a child has positive relationship goals in mind, then appeasement would seem most helpful because it may reflect an attempt toward compromise. Indeed, previous investigators have found that relationship goals are strongly related to conflict resolution strategies in hypothetical situations (Rose & Asher, 1999).

Shy/withdrawn children and aggressive children were more likely to endorse avoidant coping strategies than control children. Perhaps due to their negative peer experiences and if more direct coping strategies have proved less successful than nonassertive strategies in the past, these two groups of children may evaluate avoidant methods as appropriate and may

have been reinforced. This finding may have important implications for our understanding of aggressive and socially withdrawn children's peer difficulties. An inspection of the means and standard deviations reveals that the differences between aggressive, shy/withdrawn, and control children in terms of avoidant coping are most pronounced for those scenarios involving hypothetical unfamiliar peers. Perhaps avoidant coping strategies contribute to these children's difficulties within the larger peer group. Conflict resolution and "standing up for yourself" are assertiveness skills particularly important at this age; yet in the face of possible conflict and confrontation, these children are more likely to withdraw than non-aggressive or non-withdrawn children. As a result, these children's reputations as either shy/withdrawn or aggressive may be reinforced as their peers interpret these actions. Shy/withdrawn children's inaction may result in name-calling along the lines of "scaredy cat" or "wimp", whereas an aggressive child may be judged as someone who "talks the talk" but does not "walk the walk". Furthermore, avoidant coping strategies may compromise the ability to form new friendships; it seems likely that a child who uses avoidant coping strategies would be deemed a less attractive potential friend than those children who do not employ these strategies. As noted previously, all of the children in the present study had a mutual friendship; however, researchers could further examine the possible relation between avoidant coping strategies and having/not having mutual friendships.

As expected, aggressive children were significantly less likely to choose revenge for situations that involved their good friends than for those involving unfamiliar peers. This finding is significant because it suggests that a relationship factor, specifically a mutual friendship, alters the ways in which aggressive children evaluate and select behavioral responses. With a relationship to maintain and presumably few other options for friendship, aggressive children may understand that coping strategies vengeful in nature are not appropriate and that seeking revenge against one's friends would be a relationship "terminator".

Gender differences

Several noteworthy gender differences were found. Whereas boys were more likely to report feeling okay, girls were more likely to report feelings of embarrassment. Furthermore, girls were more likely than boys to choose the coping strategy of internalized emotions coupled with inaction. These patterns of responding may be a function of greater sensitivity to interpersonal stressors and preference for conflict avoidance instead of confrontation. For example, girls give greater importance to connectedness goals, such as intimacy and nurturance, and less importance to control and dominance goals (Chung & Asher, 1996). Further, girls generate more prosocial strategies to peer conflicts than boys (Rose & Asher, 1999); and, as in the current study, girls are less vengeful than boys. Finally, gender differences in emotional responses to potentially stressful peer interactions might have important clinical implication. These modes of coping among females dovetails well with the depression literature because it reflects the trend that, by adolescence, girls are more prone to internalizing problems than boys (Galambos et al., 2004; Hankin & Abramson, 2001).

Future directions and limitations

In the present study, children were asked to select their most preferred coping strategy. However, it may also be important to observe children's coping strategies in "real life" situations that are challenging or ambiguously caused. Their responses to hypothetical-reflective interviews may deviate from the behaviors they display in "real life" situations. Comparing reports of coping strategies along with observations of actual behaviors could reveal additional group differences, particularly with respect to shy/withdrawn children. Withdrawn children likely experience less social anxiety and wariness in response to

hypothetical scenarios than to actual negative experiences with peers. In everyday social experiences, maladaptive cognitive styles and emotions may have greater influence on their social and behavioral functioning.

Although the emotional reaction aspect of this study was novel, a more in-depth assessment of children's emotional responses to hypothetical or real-life stressful situations with peers would better elucidate the social-emotional connection. Researchers could compare self-reports with observations regarding children's emotion regulation in the context of peer relationships (e.g., McDowell, O'Neil, & Parke, 2000; Parker et al., 2001). Further, emotions such as being afraid or fearful, and mixed emotions such as feeling both sad and mad about the same situation, might be options as well as emotion intensity ratings.

Another future direction might be to examine the responses of children whose best friends differ in character. For example, would children be less likely to excuse negative consequences if their best friend was aggressive? A much larger sample would be required to answer this question. In future studies, researchers could explore differences in social-information processing between friendship dyads in which one or both children are aggressive, withdrawn, or control. It might be that the friend's characteristics affect the interpretations made by the target child, as they do if the peer is aggressive.

Perhaps most importantly, the relationship quality of the friendship may alter social cognitions, emotions, and coping strategies in meaningful ways. Keep in mind, however, that not all friendships are necessarily adaptive or have a positive influence on adjustment (Dishion, McCord, & Poulin, 1999). Altogether considering the complexities of individual child characteristics (especially behavioral risk profiles), the nature of the dyad, and relationship features will yield a stronger understanding of psychological adjustment and maladjustment.

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Table 1

Means (standard deviations) for attributions, emotions, and coping strategies for risk and control groups by gender.

	Aggressive (n=76)						Shy/Withdrawn (n=78)						Control (n=85)					
	Boys			Girls			Boys			Girls			Boys			Girls		
	MGF	UHP		MGF	UHP		MGF	UHP		MGF	UHP		MGF	UHP		MGF	UHP	
A-Ext Blame	.06 (.11)	.39 (.30)	.12 (.21)	.32 (.30)	.03 (.08)	.33 (.31)	.06 (.14)	.19 (.20)	.05 (.13)	.27 (.29)	.04 (.11)	.22 (.26)	.04 (.11)	.27 (.29)	.04 (.11)	.22 (.26)	.04 (.11)	.22 (.26)
A-Prosocal	.19 (.17)	.12 (.13)	.21 (.16)	.18 (.17)	.20 (.18)	.11 (.14)	.21 (.16)	.16 (.18)	.24 (.15)	.18 (.14)	.17 (.14)	.16 (.16)	.24 (.15)	.18 (.14)	.17 (.14)	.16 (.16)	.17 (.14)	.16 (.16)
A-Neutral	.61 (.23)	.37 (.27)	.56 (.21)	.37 (.25)	.67 (.21)	.41 (.27)	.64 (.20)	.49 (.23)	.57 (.24)	.40 (.25)	.71 (.21)	.52 (.25)	.57 (.24)	.40 (.25)	.71 (.21)	.52 (.25)	.57 (.24)	.40 (.25)
A-Int Blame	.13 (.14)	.12 (.17)	.12 (.14)	.13 (.14)	.09 (.19)	.16 (.19)	.09 (.15)	.16 (.18)	.14 (.15)	.15 (.16)	.08 (.12)	.11 (.13)	.14 (.15)	.15 (.16)	.08 (.12)	.11 (.13)	.14 (.15)	.15 (.16)
E-Okay	.58 (.28)	.32 (.28)	.44 (.29)	.28 (.22)	.55 (.30)	.30 (.23)	.47 (.27)	.30 (.22)	.55 (.26)	.37 (.29)	.46 (.30)	.25 (.24)	.55 (.26)	.37 (.29)	.46 (.30)	.25 (.24)	.46 (.30)	.25 (.24)
E-Sad	.16 (.20)	.11 (.13)	.18 (.18)	.18 (.17)	.18 (.24)	.14 (.20)	.20 (.21)	.19 (.17)	.16 (.21)	.18 (.23)	.23 (.20)	.20 (.19)	.16 (.21)	.18 (.23)	.23 (.20)	.20 (.19)	.18 (.23)	.23 (.20)
E-Mad	.20 (.23)	.51 (.24)	.25 (.25)	.38 (.23)	.19 (.24)	.47 (.29)	.22 (.27)	.39 (.24)	.20 (.18)	.34 (.27)	.18 (.22)	.40 (.28)	.20 (.18)	.34 (.27)	.18 (.22)	.40 (.28)	.20 (.18)	.34 (.27)
E-Embarras	.06 (.11)	.07 (.11)	.14 (.15)	.16 (.12)	.08 (.12)	.09 (.11)	.11 (.15)	.13 (.13)	.09 (.12)	.11 (.14)	.13 (.12)	.15 (.12)	.09 (.12)	.11 (.14)	.13 (.12)	.15 (.12)	.09 (.12)	.11 (.14)
C-Avoid	.06 (.11)	.21 (.23)	.06 (.12)	.14 (.20)	.04 (.14)	.17 (.20)	.05 (.11)	.13 (.16)	.02 (.06)	.08 (.14)	.03 (.08)	.10 (.15)	.02 (.06)	.08 (.14)	.03 (.08)	.10 (.15)	.02 (.06)	.08 (.14)
C-Adult	.33 (.24)	.27 (.25)	.32 (.27)	.33 (.23)	.27 (.26)	.33 (.22)	.39 (.26)	.38 (.23)	.32 (.29)	.34 (.24)	.24 (.24)	.27 (.20)	.32 (.29)	.34 (.24)	.24 (.24)	.27 (.20)	.32 (.29)	.34 (.24)
C-Revenge	.01 (.05)	.16 (.24)	.03 (.11)	.05 (.11)	.01 (.05)	.06 (.15)	.01 (.07)	.01 (.04)	.05 (.17)	.10 (.21)	.00 (.03)	.02 (.08)	.05 (.17)	.10 (.21)	.00 (.03)	.02 (.08)	.05 (.17)	.10 (.21)
C-Emotions	.04 (.10)	.04 (.10)	.08 (.16)	.11 (.17)	.04 (.08)	.07 (.12)	.04 (.10)	.10 (.13)	.04 (.11)	.06 (.11)	.08 (.14)	.14 (.17)	.04 (.11)	.06 (.11)	.08 (.14)	.14 (.17)	.04 (.11)	.06 (.11)
C-Appease	.56 (.28)	.33 (.24)	.53 (.31)	.38 (.29)	.64 (.29)	.37 (.28)	.50 (.31)	.38 (.23)	.58 (.33)	.42 (.28)	.66 (.31)	.46 (.29)	.58 (.33)	.42 (.28)	.66 (.31)	.46 (.29)	.58 (.33)	.42 (.28)

Note: A refers to attributions, E to emotional reactions, C to coping strategies; MGF= mutual good friend peer type condition; UHP= unfamiliar hypothetical peer type condition; SD in parentheses.

Table 2

Associations among attribution style, emotional reactions, and coping strategies for hypothetical/unfamiliar peer condition.

	Pro	Neu	I.B.	OK	Sad	Mad	Emb.	Avoid	Ad In	Rev	Emot	App
A-External Blame	-.37**	-.73**	-.23**	-.38**	-.08	.48**	-.10	.41**	-.06	.36**	.25**	-.55**
A-Prosocal		-.07	-.21**	.17**	.03	-.13*	-.13	-.24**	.09	-.13*	-.12	.22
A-Neutral			-.24**	.22	.10	-.35**	.12	-.28**	.02	-.25**	-.20**	.41**
A-Internal Blame				.15*	-.06	-.16*	.11	-.04	-.02	-.11	-.01	.10
E-Okay					-.29**	-.60**	-.31**	-.24**	-.06	-.11	-.33**	.44**
E-Sad						-.45**	.04	-.12	.02	-.19**	.17**	.07
E-Mad							-.21**	.35**	.02	.30**	.11	-.46**
E-Embarrassed								-.07	.03	-.09	.17**	-.03
C-Avoidance									-.27**	.03	.00	-.46**
C-Adult Intervention										-.26**	-.14*	-.42**
C-Revenge											-.15*	-.29**
C-Emotions												-.33**

Note: A refers to attributions, E to emotional reactions, C to coping strategies; Pro = Prosocial; Neu = Neutral; I.B. = Internal Blame; Emb. = Embarrassed; Ad In = Adult Intervention; Rev = Revenge; Emot = Emotions; App = Appear. N for all correlations = 239

**
p < .01

*
p < .05

Table 3

Associations among attribution style, emotional reactions, and coping strategies for mutual (good) friend condition.

	Pro	Neu	LB.	OK	Sad	Mad	Emb.	Avoid	Ad In	Rev	Emot	App
A-External Blame	-.14 *	-.52 **	-.04	-.25 **	-.10	.41 **	-.03	.40 **	.01	.49 **	.28 **	-.39 **
A-Pro		-.48 **	-.22 **	.11	.07	-.16 *	-.05	-.06	.15 *	-.06	-.18 **	.00
A-Neu			-.48 **	.07	.05	-.15 *	.03	-.24 **	-.07	-.21 **	-.13 *	.24 **
A-LB.				.03	-.05	-.01	.05	.03	-.06	-.09	.11	.02
E-OK					-.43 **	-.60 **	-.44 **	-.27 **	-.19 **	.00	-.30 **	.37 **
E-Sad						-.32 **	-.08	-.02	.02	-.16 *	.14 *	-.03
E-Mad							.05	.31 **	.18 **	.22 **	.23 **	-.41 **
E-Emb.								.07	.05	-.15 *	.02	-.04
C-Avoid									-.03	.11	.06	-.36 **
C-Ad In										-.12	-.07	-.77 **
C-Rev											-.07	-.22 **
C-Emot												-.34 **

Note: A refers to attributions, E to emotional reactions, C to coping strategies; Pro = Prosocial; Neu = Neutral; LB. = Internal Blame; Emb. = Embarrassed; Ad In = Adult Intervention; Rev = Revenge; Emot = Emotions; App = Appear. *N* for all correlations = 239

**
 $p < .01$

*
 $p < .05$

Table 4

Means and standard deviations on ECP factors for the risk and control groups by gender.

	Aggressive (<i>n</i> =76)				Shy/withdrawn (<i>n</i> =78)				Control (<i>n</i> =85)			
	Boys		Girls		Boys		Girls		Boys		Girls	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Agg	.71	.78	.91	.80	-.47	.10	-.52	.10	-.44	.10	-.49	.11
Shywd	-.53	.15	-.52	.14	.74	.56	.73	.80	-.48	.16	-.49	.13
Rejvic	-.15	.32	-.21	.35	.04	.44	-.04	.37	-.38	.20	-.42	.29
Prosoc	-.01	.79	-.04	.62	.50	.82	.27	.71	.31	.99	.03	.65
Socpop	.47	.79	.99	1.52	-.12	.52	-.32	.34	.24	.88	-.11	.51

Agg=Aggression; Shywd=Shyness/Withdrawal; Rejvic=Rejection/Victimization; Prosoc=Prosocial Behaviors; Socpop=Sociability/Popularity.