

# The Regulating Role of Negative Emotions in Children's Coping with Peer Rejection

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**Abstract** This study examined the role of emotions as predictors of children's coping responses to peer rejection experiences. Children ages 7–12 ( $N = 79$ ) completed questionnaires to assess emotional and coping responses to peer rejection scenarios. This study examined three coping factors specific to peer rejection (positive reappraisal, ruminative coping, and aggressive coping) and examined results separately for two negative peer experiences (teasing and exclusion). Children's emotions predicted coping responses after controlling for peer experiences. Specifically, anger was associated with aggressive coping, whereas sadness was associated with ruminative coping, supporting theory that emotions have distinct motivational-behavioral properties. Peer experiences were also important, as victimization was associated with aggressive coping, and receipt of prosocial peer behaviors was associated with positive reappraisal. These findings provide an empirical foundation for future research and the development of interventions to facilitate adaptive reactions to peer rejection.

**Keywords** Coping · Emotions · Emotion regulation · Peer rejection · Peer stress

## Introduction

Studies consistently link peer rejection to a host of maladjustment outcomes such as externalizing behavior [1], depression [2], and academic difficulties [3]. Recent work

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examines peer rejection not simply as child characteristic, but as a dynamic social process, with increased attention to how peer rejection experiences lead to maladjustment [3, 4]. The topic has garnered considerable attention, because rejection is a common experience in childhood, yet children vary considerably in their emotional and behavioral responses to rejection [5–7]. Although the exact processes that lead to maladjustment are not clear, literature suggests that youths who experience frequent peer rejection may be less skilled at enacting competent behavioral responses [1, 4]. It is important to understand children's emotional and behavioral responses to peer rejection, because emotion regulation and coping are important processes in children's social competence and adjustment [8, 9].

Despite considerable progress in understanding how youths cope with rejection and how specific coping strategies are associated with maladjustment, our understanding of why youths cope differently in response to the same stressor is limited. *Why do children select different coping strategies in the face of similar rejection experiences?* One key limitation is that empirical literature has not examined the role of emotions in coping with peer rejection experiences. This is surprising, because theory suggests that emotions organize and motivate goal-directed behavior in response to peer stress [10]. Although emotion is rarely an explicit focus of investigations examining children's responses to peer stress, emotions are nevertheless an implicit aspect of research investigations that focus on social-cognitive processes. In fact, emotion may be an energizing and motivating force at each step of Crick & Dodge's (1994) Social Information Processing (SIP) Model, and several researchers have called for more explicit attention to the role of emotion in the SIP model and SIP-based interventions [4, 10]. Whereas cognition provides the *knowledge* required for generating, selecting, and enacting responses, emotion provides the *energy* or *motivation*. In the current study, we examine the role of emotion in children's responding to a common form of peer stress: peer rejection.

Importantly, research suggests that emotions are linked to coping in response to peer victimization [11]. It is also important to consider that this work may not generalize to other forms of peer stress (e.g., peer rejection) because emotional and behavioral responses vary according to characteristics of the stressor. For example, in the case of peer victimization, recent work indicates that coping responses depend on whether victimization is physical, verbal (e.g., name-calling), or relational (spreading rumors) [12]. The current study extended the literature by investigating whether and how emotions are linked to coping in response to peer rejection. Whereas several studies examine peer rejection in terms of sociometric *status* (i.e., the extent to which members of a peer group dislike a child), we focused on the *experience* of rejection in which a child may feel devalued and disliked by peers. In this study, we examined the role of emotions in relation to coping across two negative experiences (i.e., teasing and exclusion) conceptualized as "peer rejection" in prior work [5]. Here we consider how explicit attention to emotion can enrich our understanding of why youths select different coping strategies in the face of peer rejection.

The term "emotion regulation" refers to emotions as regulators of behavior and as regulated experiences [13, 14]. As *regulated experiences*, emotion regulation is often a planful act that involves reordering of emotions and the generation of new emotions [15]. As *regulators of behavior*, emotions serve the function of regulating interactions between individuals and their environment, organizing and motivating goal-driven behavior [16]. For example, sadness can motivate individuals to evaluate their source of distress and to strengthen social support networks, and anger can motivate individuals to seek justice [17, 18]. This "functionalist perspective"—considering the function of emotion as regulating behavior in response to stress—provides an important foundation for the present study.

Although the terms coping and emotion regulation are conceptually similar, Eisenberg (2004) has emphasized that in addition to the volitional nature of coping, coping refers to efforts to modulate the effects of stressful circumstances. Coping is viewed as an ongoing, dynamic process that adapts to the changing demands of a stressful encounter or event [19]. One essential classification scheme involves primary control coping (defined as efforts to influence events or conditions, similar to problem-focused coping) and secondary control coping (defined as efforts to adapt to current conditions, similar to emotion-focused coping) [20, 21]. Both primary and secondary control coping efforts are considered volitional coping, since these coping behaviors are conscious, deliberate efforts in response to stress. Involuntary or automatic processes may involve intrusive thoughts, physiological responses, emotional arousal and impulsive responses [22]. Although involuntary processes may be considered to be outside the realm of coping [20], several researchers include rumination or dwelling on one's own negative affect or problems under the rubric of coping [5, 23]. Over the past ten years, researchers have attempted to clarify how youths cope with peer stress by focusing on specific forms of peer stress such as victimization [12, 24] and rejection [5, 25]. Despite considerable variability in coping measures and coping classification schemes, certain coping responses are particularly salient in the context of peer stress in general and peer rejection in particular. Importantly, Sandstrom's (2004) factor-analytic investigation examined categories of children's responses to peer rejection, based on a pool of 40 items common to existing child coping measures [5]. Four factors emerged in this study: *Aggressive Coping* (retaliatory strategies), *Active Coping* (varied deliberate non-aggressive strategies for handling peer conflict), *Denial Coping* (self-protective strategies designed to minimize the painful impact of rejection experiences), and *Ruminative Coping* (thinking about peer experiences in a repetitive manner).

In this study, we consider three specific forms of coping that are highly relevant to peer rejection and implicated in the development of psychopathology: ruminative coping, aggressive coping, and positive reappraisal. Retaliatory or aggressive coping is consistently linked to indices of maladjustment in vignette-based studies of peer victimization [11] and peer rejection [5]. Ruminative coping is linked to internalizing problems in the context of interpersonal stressors [20] and peer rejection in particular [5]. Interestingly, many items that loaded on the coping factor labeled "denial" in Sandstrom's (2004) investigation appear to be conceptually closer to "positive thinking" or "cognitive restructuring", subsumed under secondary control engagement, which may help to explain why denial was linked to positive adjustment in this study. Surprisingly little work has explicitly investigated secondary control engagement coping in response to peer stress, although this form of coping is generally linked to positive adjustment [20, 22]. On the other hand, secondary control disengagement coping such as denial (i.e., denying the occurrence of an event) has been linked to poor adjustment in previous work [20, 22]. Secondary control coping (e.g., distraction, positive reappraisal) has garnered attention as potentially "adaptive" in the context of peer rejection, although recent work has focused on behavioral distraction rather than positive reappraisal coping [25].

How are emotions linked to these specific coping responses? Despite extensive theory to suggest that discrete emotions are associated with distinct motivational and behavioral properties [18, 26], this theory has generally not been applied to research in children's coping with peer stress. In one noteworthy exception, a study by Kochenderfer-Ladd (2004) found unique associations between emotions and coping with peer victimization. In particular, fear was associated with advice-seeking, whereas anger was associated with retaliatory coping. However, Kochenderfer-Ladd noted that different forms of peer stress may elicit different emotions and coping strategies.

The present study examines discrete emotions in response to more subtle forms of peer stress (i.e., peer rejection). In research that examines youths' emotional responses to peer victimization, anger emerges as a salient emotion [11, 27]. While rejection and victimization experiences may be conceptually similar, the key characteristics that distinguish these two forms of peer stress might elicit different forms of emotional distress. Victimization includes harassment and intimidation by peers that can be direct (physical and verbal) or indirect (relational) in nature [28]. Although relational victimization may include rejecting acts [29, 30], it is *relational devaluation* that characterizes the rejection experience [31], whereas *intent to harm* characterizes victimization [32],

Prior work examining children's emotional responses to experimentally-induced peer provocation (i.e., teasing) has focused on anger and sadness as dominant negative emotions [33]. We were unable to find empirical literature that focused on children's self-reported emotional responses to peer exclusion in middle childhood. However, prior work with adults suggests that social exclusion elicits a unique form of emotional distress—"hurt feelings"—that involves unique cognitive, behavioral, and physiological properties [31, 34]. Interestingly, research suggests that adolescents report feeling more sad and bad about themselves in response to social aggression than physical aggression [24]. This study supports the idea that different forms of peer stress are not interchangeable and may evoke different emotional and coping reactions. While the *experience* of rejection is not well-established, research suggests that social exclusion is a prototypical form of rejection. In this study, we examine responses to two relatively subtle forms of peer stress: teasing and exclusion. These two scenarios were selected on the basis of prior work that considers teasing and exclusion to be "common" forms of peer rejection in children [5].

Although the focus of this study is to understand the role of emotion in a stress and coping framework, we include peer experiences as covariates, given extensive literature that suggests peer experiences influence responses to peer stress. Numerous research findings indicate that a child's victimization status is associated with preferred coping strategies [35–37]. In particular, victimized youths are more likely to respond aggressively in response to ambiguous scenarios involving potential conflict [35] and in response to hypothetical peer victimization scenarios [11]. On the other hand, prosocial peer experiences (e.g., receiving prosocial acts and social support) may encourage adaptive coping and reduce reliance on maladaptive coping such as retaliation [4, 38].

Finally, we consider demographic characteristics as covariates. Notably, sex differences may exist for emotional and coping responses to peer stress, as well as for peer experiences. First, some studies indicate that girls report more distress and hurt feelings than boys when faced with peer victimization [24, 39, 40]. However, girls and boys endorse comparable levels of anger in vignette-based studies [11, 41]. Studies also indicate that girls are more likely than boys to endorse ruminative coping, and these sex differences become more robust in adolescence [42]. Finally, recent meta-analytic work suggests sex differences in the quality of peer interactions and peer experiences, with females reporting higher levels of prosocial behaviors and receiving prosocial acts from peers [43]. Developmental factors (e.g., age) may also interact with sex to predict children's coping responses, adding considerable complexity to this line of research. Older children and adolescents are more likely to show cognitive responses to stress (e.g., positive reappraisal, ruminative coping) while females in particular show increases in ruminative coping in late childhood and emerging adolescence. Because the focus of the present study is to better understand associations between discrete emotions and coping with peer rejection, we include sex and age as covariates in our analyses. We focus on middle childhood, given the increasing importance of peer relationships and social competence during this time [44].

Changes in peer contexts and children's abilities to self-select their own social environments can increase opportunities for peer rejection experiences, and emotions involved in self-evaluation and social comparison increase over the course of middle childhood [9, 10].

### The Present Study

This study extends the literature on children's coping with peer rejection, by examining whether emotions have unique associations with coping responses in response to peer rejection experiences. We hypothesized that for two forms of coping (ruminative coping and aggressive coping) negative emotions would contribute to coping behaviors above and beyond peer experiences (i.e., receiving prosocial acts by peers and previous victimization experiences) and demographic characteristics. We examined three specific forms of coping (i.e., ruminative coping, aggressive coping, and positive reappraisal) that are highly relevant in the context of peer rejection, and also implicated in the development of psychopathology. We also examined findings separately for two experiences (teasing and exclusion) employed as prototypical rejection scenarios in previous work [5]. Specifically, we anticipated that children who reported more anger in response to peer rejection would endorse more aggressive coping strategies, whereas children who report more sadness and worry in response to peer rejection would endorse more ruminative coping. We anticipated that emotions would relate to coping behaviors while controlling for peer experiences, age, and sex. With regard to covariates, we anticipated that victimization would be associated with aggressive and ruminative coping, whereas receipt of prosocial behavior would be associated with positive reappraisal. Finally, we anticipated some sex differences. Based on previous literature, we anticipated that girls would report greater internalizing emotions (sadness and worry) and more ruminative coping than boys. We also anticipated that girls would report greater receipt of prosocial behavior than boys.

### Method

Data for the proposed study were collected as part of a larger IRB-approved study to investigate emotion understanding, emotion regulation, and emotion socialization in children. Although the IRB-approved study was designed to compare a clinic-referred and non-referred sample, the current investigation included only non-referred children.

### Participants

From the initial participant sample ( $N = 85$ ) of children ages 7–12 and their mothers, 6 cases were excluded from analyses due to incomplete data or comprehension/fatigue. The final sample included 79 participants (31% boys and 69% girls) and their mothers or legal guardians. Participating children averaged 9.5 years of age ( $SD = 1.9$ , range 7 to 12), with an ethnic distribution of 62% Caucasian, 27% African American, 1% Asian and 9% other (e.g., Mixed). Over half of the mothers (63%) in the sample reported that they were married, with others reporting that they were divorced (12%), separated (5%), never married (13%) or living with a partner (4%). There was some diversity in gross family income, as mothers reported family income of \$0 K–\$15 K (5%), \$15 K–\$30 K (15%), \$30 K–\$45 K (17%), \$45 K–60 K (13%), \$60 K–75 K (13%), \$75 K–\$90 K (9%), and >\$90 K (25%). Just over half (51%) of the mothers reported having earned an undergraduate college degree or beyond.

*Recruitment method.* For the present sample, our recruitment methods were designed to acquire a group of community youths between the ages of 7 and 12. Accordingly, we used several parallel recruitment approaches. First, we posted IRB-approved fliers in several community settings in the neighborhoods surrounding our urban university (e.g., community pools, public libraries, family recreation centers). Second, several local schools agreed to send letters about the project home with children. Third, we posted fliers on the university campus itself and sent emails about the project to list-serves for students. This study excluded children meeting any of the following criteria: taking psychotropic medications; diagnosed with a Pervasive Developmental Disorder, a Psychotic Disorder, or Mental Retardation, or receiving mental health services at the time of study participation.

### *Data Collection Procedures*

The parent/guardian and child participated in a consent/assent procedure conducted by trained research assistants. The parent/guardian and child were placed in separate rooms to complete measures (detailed below). After all forms were completed, the parent/guardian received modest financial compensation (\$50 gift card).

### *Measures*

*Emotional and Coping Responses.* Children's emotional and coping responses to peer rejection experiences were assessed using the Survey for Coping with Rejection Experiences (SCORE). The SCORE [5] is a self-report measure that describes two specific peer experiences (being teased by schoolmates; being excluded from a group activity) that are common examples of rejection among schoolchildren. For each scenario, children rated the degree to which they would feel mad, sad, or worried using a 3-point likert scale (1 = not at all, 2 = somewhat, 3 = very much) for each emotion. Next, children rated 40 coping responses, using a 4-point Likert scale (1 = not at all; 4 = a lot) to indicate how frequently they have used each coping strategy in response to similar experiences. The same 40 items (coping responses) were used for each scenario, with slight modifications to reflect the specific stressor at hand. Coping factor scores were computed by averaging the item scores for each factor.

In an initial validation study that used exploratory factor analysis to derive coping factors, 32 of the 40 items loaded on four factors: Aggressive Coping, Active Coping, Denial Coping, and Ruminative Coping. To address the research aims and study hypotheses, two of the four factors (i.e., ruminative coping and aggressive coping) delineated by Sandstrom (2004) were used in the analyses. Items from the SCORE were used to create a scale for *positive reappraisal coping* (see Appendix) not reflected in Sandstrom's (2004) factor analysis. Item selection for positive reappraisal was theoretically-driven based on the literature. Specifically, the positive reappraisal scale was created to reflect *secondary control coping*, a factor comprised of three subscales (acceptance, cognitive restructuring, and positive thinking) from Connor-Smith et al.'s (2000) RSQ. We examined items from the coping factor labeled "denial" in the SCORE and recognized that three of these items were nearly identical to items subsumed under secondary control coping in the RSQ. For example, the SCORE item "I tell myself it doesn't matter very much" is similar to the RSQ item "I tell myself that it doesn't matter, that it isn't a big deal", reflecting *cognitive restructuring*. The SCORE item "I tell myself that I'm an okay kid" is similar to RSQ item "I tell myself I'm okay the way I am", reflecting *acceptance*. The SCORE item "I tell

myself everything will be okay” is similar to the RSQ item “I tell myself everything will be all right”, reflecting *positive thinking*.

In this study, internal consistencies ranged from .77 to .61 for the teasing situation, and from .84 to .63 for the exclusion situation. Internal consistencies were highest for aggressive coping ( $\alpha = .77$  and .84), and moderate to low for positive reappraisal ( $\alpha = .71$  and .65) and ruminative coping ( $\alpha = .61$  and .63).

*Peer Victimization and Prosocial Peer Experiences.* Children were asked to rate the frequency (1 = never; 5 = all the time) of prosocial and victimization experiences with the Children’s Self-Experiences Questionnaire [45] (CSEQ). This questionnaire assesses children’s perception of their treatment by peers and consists of three 5-item scales: Relational Victimization (e.g., ‘How often does a kid who is mad at you try to get back at you by not letting you be in their group anymore?’), Overt Victimization (e.g., ‘How often do you get hit by another kid at school?’), and Recipient of Prosocial Behavior (e.g., ‘How often does another kid say something nice to you?’). Studies have reported test–retest reliability over a four week interval of .90 [45] and internal consistencies ranging from .82 to .97 for each scale [45]. Because relational victimization was highly correlated with overt victimization ( $r = .68, p < .01$ ), a “total victimization” composite index (sum of overt and relational victimization indices) was computed.

### Analyses

Although previous work averaged coping scores across the two rejection scenarios [5], this study presents analyses separately for the two rejection experiences, given recent work that suggests different scenarios for stressful peer experiences elicit different types of coping responses [12]. Linear multiple regression analyses were computed for each coping strategy to evaluate the unique and combined contributions of independent variables (i.e., peer experiences and emotions). Children’s endorsement of coping strategy was included as the dependent measure in each series of regressions. Age and sex were entered as covariates on the first step. Peer experiences (i.e., victimization and prosocial experiences) were entered on the second step, and children’s anticipated emotions (i.e., worry, sadness, and anger) were entered on the third step.

### Results

Means and standard deviations for all variables are presented in Table 1. As shown in Table 2, correlations among corresponding coping subscales across scenarios ranged from  $r = .66$  to .83, reflecting strong cross-situational consistency in coping strategies. Table 3 indicates less consistency in emotions across the two rejection experiences, with cross-situational correlations ranging from  $r = .41$  to .55. The bivariate correlations for emotions, coping, and peer rejection experiences are presented in Table 4 (Teasing Scenario) and Table 5 (Exclusion Scenario).

*Emotions.* Hierarchical regression analyses were used to examine the contribution of children’s emotions to coping responses. We used the Bonferroni correction for all regression analyses, given that we included two regression tests (one for each rejection scenario) within each family of coping (aggression, ruminative coping, and positive reappraisal). The critical alpha level used (to control for the family-wise error rate) was 1/2 times .05, that is, a critical  $\alpha$  of .025. As anticipated, these analyses revealed unique associations between anger and aggressive coping (Table 8) and between sadness and ruminative coping (Table 7). Anger was a unique predictor of aggressive coping after

**Table 1** Means and standard deviations for emotions, coping, and peer experiences

	Total	
	<i>M</i>	<i>SD</i>
Age	9.68	1.57
<i>Teasing scenario</i>		
Mad	2.44	.65
Sad	1.84	.75
Worried	1.48	.65
Positive reappraisal	2.81	.74
Aggressive coping	2.15	.83
Ruminative coping	2.56	.67
<i>Exclusion scenario</i>		
Mad	2.24	.66
Sad	1.64	.81
Worried	1.36	.64
Positive reappraisal	2.80	.63
Aggressive coping	1.98	.89
Ruminative coping	2.41	.72
Total victimization	3.43	1.43
Receipt of prosocial behavior	3.32	.81

\*  $p < .05$ , \*\*  $p < .01$ ,

\*\*\*  $p < .001$

**Table 2** Correlations between coping factors for two rejection scenarios

Teasing	Exclusion		
	Aggressive coping	Ruminative coping	Positive reappraisal coping
Aggressive coping	<b>.83**</b>	.36**	.04
Ruminative coping	.33**	<b>.71**</b>	.22*
Positive reappraisal coping	.04	.08	<b>.66**</b>

The numbers in bold represent correlations between target constructs

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 3** Correlations between emotions for two rejection scenarios

Teasing	Exclusion		
	Mad	Sad	Worried
Mad	<b>.41**</b>	.01	.25*
Sad	.31**	<b>.50**</b>	.46**
Worried	.14	.26*	<b>.55**</b>

The numbers in bold represent correlations between target constructs

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 4** Zero-order correlations for teasing scenario

	1	2	3	4	5	6	7	8	9	10
1. Age	–	–.10	–.21	–.03	–.16	.09	–.12	–.02	–.01	–.11
2. Gender	–.10	–	.03	.28*	.28*	–.13	.10	.01	.05	.29**
3. Mad	–.21	.03	–	.21	.30**	.28*	.17	.11	.01	.23*
4. Sad	–.03	.28*	.21	–	.40**	–.04	.39*	.13	–.12	.23*
5. Worried	–.16	.28*	.30**	.40**	–	.06	.40**	.15	–.02	.22
6. Aggressive coping	.09	–.13	.28*	–.04	.06	–	.27*	.06	.41**	–.11
7. Ruminative coping	–.12	.10	.17	.39**	.40**	.27*	–	.05	.22*	–.03
8. Positive reappraisal	–.02	.01	.11	.13	.15	.06	.05	–	–.03	.38**
9. Total victimization	–.01	.05	.01	–.12	–.02	.41**	.22*	–.03	–	–.24*
10. Receipt of prosocial behavior	–.11	.29**	.23*	.23*	.22	–.11	–.03	.38**	–.24*	–

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 5** Zero-order correlations for exclusion scenario

	1	2	3	4	5	6	7	8	9	10
1. Age	–	–.10	–.05	–.21	–.09	.03	–.27*	–.07	–.01	–.11
2. Gender	–.10	–	.06	.36**	.18	–.05	.08	–.07	.05	.29**
3. Mad	–.05	.06	–	.42**	.23*	.46**	.33**	–.06	.12	.20
4. Sad	–.21	.36**	.42**	–	.35**	.21	.58**	.11	.09	.19
5. Worried	–.09	.18	.23*	.35**	–	.11	.21	.07	.04	.07
6. Aggressive coping	.03	–.05	.46**	.21	.11	–	.52**	.06	.35**	–.10
7. Ruminative coping	–.27*	.08	.33**	.58**	.21	.52**	–	.19	.22*	–.06
8. Positive reappraisal	–.07	–.07	–.06	.11	.07	.06	.19	–	.02	.20
9. Total victimization	–.01	.05	.12	.09	.04	.35**	.22*	.02	–	–.24*
10. Receipt of prosocial behavior	–.11	.29**	.20	.19	.07	–.10	–.06	.20	–.24*	–

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

controlling for peer experiences, for both *teasing* ( $sR^2 = .08$ ,  $p < .05$ ) and *exclusion* ( $sR^2 = .14$ ,  $p < .001$ ). Sadness was a unique predictor of ruminative coping after controlling for peer experiences, for both *teasing* ( $sR^2 = .09$ ,  $p < .05$ ) and *exclusion* ( $sR^2 = .19$ ,  $p < .001$ ). Worry also emerged as a unique predictor for ruminative coping in response to *teasing* ( $sR^2 = .06$ ,  $p < .05$ ). Emotions were unrelated to positive reappraisal coping (Table 6).

**Table 6** Hierarchical regression analyses for positive reappraisal coping

	Teasing				Exclusion			
	<i>B</i>	SEB	$\beta$	$\Delta R^2$	<i>B</i>	SEB	$\beta$	$\Delta R^2$
1. Sex	-.22	.18	-.15	.00	-.32	.18	-.22	.01
Age	.01	.05	.03		-.01	.05	-.03	
2. Total victimization	.04	.06	.08	.16**	.05	.06	.10	.06
Receipt of prosocial behavior	.37	.11	.41**		.24	.11	.28* <sup>A</sup>	
3. Mad	-.01	.14	-.01	.02	-.21	.13	-.21	.05
Sad	.05	.11	.06		.15	.12	.18	
Worried	.08	.12	.08		.06	.11	.06	

Regression terms are displayed for final step of regression models. Capital superscript <sup>A</sup> indicates effect that failed Bonferroni-corrected alpha ( $p = .025$ )

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Secondary analyses also examined whether there were differences in children's emotions across the two scenarios. Children reported higher levels of worry ( $d = .18$ ,  $t = 2.90$ ,  $p < .01$ ) and anger ( $d = .30$ ,  $t = 2.13$ ,  $p < .05$ ) in response to teasing than in response to exclusion.

*Peer Experiences.* As indicated in Table 8, peer victimization was associated with aggressive coping for both *teasing* and *exclusion*. However, as indicated in Table 7, unique associations between peer victimization and ruminative coping reached statistical significance for *teasing* only. Scenario-specific findings were more pronounced for the contribution of peer experiences to positive reappraisal coping (see Tables 6, 8). For *exclusion*, only a trivial amount of variance in positive reappraisal was explained by peer experiences ( $\Delta R^2 = .03$ , ns), whereas for *teasing*, 16% of variance in positive reappraisal was explained by peer experiences ( $\Delta R^2 = .16$ ,  $p < .01$ ). Receipt of prosocial experiences accounted for 14% of the variance in positive reappraisal for *teasing* ( $sR^2 = .14$ ,  $p < .001$ ). Interestingly, bivariate associations revealed that receipt of prosocial peer experiences was positively related to anger and sadness for both teasing and exclusion,

**Table 7** Hierarchical regression analyses for ruminative coping

	Teasing				Exclusion			
	<i>B</i>	SEB	$\beta$	$\Delta R^2$	<i>B</i>	SEB	$\beta$	$\Delta R^2$
1. Sex	-.09	.15	-.07	.02	-.16	.15	-.10	.08* <sup>A</sup>
Age	-.03	.04	-.07		-.07	.04	-.18	
2. Total victimization	.11	.05	.24*	.05	.07	.05	.13	.05
Receipt of prosocial behavior	-.09	.09	-.10		-.13	.09	-.15	
3. Mad	.03	.11	.03	.24**	.12	.11	.12	.30***
Sad	.28	.09	.34**		.48	.10	.55***	
Worried	.25	.10	.29*		-.01	.09	-.01	

Regression terms are displayed for final step of regression models. Capital superscript <sup>A</sup> indicates effect that failed Bonferroni-corrected alpha ( $p = .025$ )

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 8** Hierarchical regression analyses for aggressive coping

	Teasing				Exclusion			
	<i>B</i>	SEB	$\beta$	$\Delta R^2$	<i>B</i>	SEB	$\beta$	$\Delta R^2$
1. Sex	-.20	.16	-.14	.02	-.12	.18	-.07	.00
Age	.06	.04	.15		.02	.05	.04	
2. Total victimization	.20	.05	.40***	.18**	.16	.06	.27**	.13*
Receipt of prosocial behavior	-.03	.10	-.04		-.10	.11	-.10	
3. Mad	.36	.13	.31**	.09* <sup>A</sup>	.51	.13	.43***	.19***
Sad	-.02	.10	-.02		.06	.12	.06	
Worried	.04	.11	.05		.00	.11	.00	

Regression terms are displayed for final step of regression models. Capital superscript <sup>A</sup> indicates effect that failed Bonferroni-corrected alpha ( $p = .025$ )

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

whereas peer victimization was unrelated to emotions (see Tables 4, 5). This finding was unanticipated; we address this further in the discussion.

*Sex differences.* Both boys and girls reported that the most intense emotion that they would experience was anger, followed by sadness, and worry. As anticipated, girls endorsed higher levels of sadness for both teasing ( $d = .74$ ,  $p < .05$ ) and exclusion ( $d = .79$ ,  $p < .01$ ). Girls also anticipated more worry in response to teasing ( $d = .71$ ,  $p < .05$ ). Levels of anger did not differ significantly for boys and girls in either rejection scenario. Sex differences also emerged for receipt of prosocial behaviors, with girls reporting higher levels of prosocial peer behaviors than boys ( $d = .65$ ,  $p < .05$ ).

## Discussion

This study offers evidence that the functionalist perspective on emotions can enhance research on children's coping with peer rejection, as emotions explained variance in coping behaviors beyond the contribution of peer experiences and demographic variables. The use of standardized rejection scenarios is an important feature of this study, as we present findings separately for two types of peer rejection experiences. Overall, the findings suggest that emotional context (i.e., type of emotional response to rejection) and social context (i.e., children's peer experiences, both positive like receiving support and negative such as victimization) play important roles in children's coping with peer rejection. However, some associations between peer experiences and emotions were unanticipated and somewhat counterintuitive. Finally, some sex differences emerged, as girls were more likely to report feeling sad or worried in response to rejection.

### Emotions

Our results support theory that discrete emotions have distinct motivational and behavioral properties [18, 26]. Although this study included a limited scope of emotions and coping responses, this work bolsters our empirical foundation by examining specific emotion-coping connections in the context of stressful peer experiences. For both exclusion and

teasing scenarios, children reporting more anger were also more likely to endorse aggressive coping. Children reporting more sadness were more likely to endorse ruminative coping for both rejection scenarios. These associations held up in regression analyses controlling for peer victimization and receiving prosocial acts from peers. Thus, emotions have an important role in children's responses to peer rejection, and can augment our understanding of why children respond differently to similar rejection experiences.

It is important to consider that although negative emotions were associated with coping responses generally construed as "maladaptive", the functionalist approach to emotion considers that emotions are inherently adaptive. Therefore, future research should consider a broader variety of coping and emotional responses, and consider the contexts under which certain forms of coping are adaptive or maladaptive. Although this study suggests that *form* and *function* of negative emotions can shed light on why children select different coping responses, it may be that the *intensity* and *duration* of emotional distress also determines whether emotions are ultimately adaptive or maladaptive. Indeed, recent experimental work suggests that negative affect mediates the association between peer rejection and maladaptive behavior [46]. Our findings suggest that emotional specificity can augment this area of research to provide a more complete picture of how and why negative affect leads to maladaptive behavior.

While sadness was a salient predictor of ruminative coping for both *teasing* and *exclusion*, worry was associated with ruminative coping only for *teasing*. This finding led us to consider differences in emotions for the two scenarios. Secondary analyses indicated that children endorsed higher mean levels of worry for *teasing* than for *exclusion*. It is possible that the ambiguity behind teasing might contribute to the subjective experience of worry. On the other hand, children endorsed higher levels of sadness for exclusion relative to teasing. Exclusion is characterized by the appraisal of being devalued or disregarded by another individual [31], and a perceived decline in relational valuation and sense of interpersonal loss are associated with sadness [18]. In each situation, minor differences in cues relevant to relational evaluation might elicit different emotions.

### Peer Experiences

This study also examined the role of peer victimization and prosocial experiences (receipt of prosocial acts from peers) in predicting emotional and coping responses to peer rejection experiences. As expected, prosocial peer experiences were associated with positive reappraisal, and victimization was associated with ruminative coping and aggressive coping. Interestingly, victimization was unrelated to all three negative emotions (anger, sadness, and worry) at the bivariate level. Based on social-information processing theory, one might surmise that children who are aggressive victims are more likely to attribute malicious intent to the rejecting peers in each scenario; thus, some victimized children might be more likely to perceive threat, insult, or injustice and to subsequently display higher emotional arousal [4, 47]. However, results provided no support for the idea that victimized children endorse greater emotional distress in response to peer rejection.

Whereas victimization was unrelated to emotions, youths who received more prosocial acts from peers were *more* likely to endorse anger or sadness. Despite endorsing higher levels of negative emotions, these youths were more likely to endorse positive reappraisal—a potentially adaptive coping response. Future research might consider whether and how youths are able to use their positive peer environments to generate positive affect, thereby "undoing" the effects of negative emotions. Notably, Fredrickson's (2001) "broaden-and-build" theory would suggest that positive emotions broaden and build one's

thought-action repertoire, to help facilitate adaptive coping and “undo” the narrowing effects of negative emotion. This theoretical framework might be applied to future investigations (e.g., daily diary studies) that investigate emotional responses to real-life rejection experiences.

Why are youths who experience prosocial peer interactions more likely to experience emotional distress in response to peer rejection? Future work might consider whether related peer socialization experiences (e.g., *witnessing* peer rejection or victimization) may shed light on these associations. For example, recent literature suggests that witnessing peer harassment buffers youths from experiencing emotional distress on days when they themselves are victimized [27]. Perhaps youths who experience more prosocial behaviors from peers are embedded in a more prosocial environment in which they do not experience or witness acts of victimization or rejection. These youths might evaluate peer rejection as more meaningful and distressing.

### Sex Differences

Findings from this study support a growing literature base to suggest that girls react to negative peer social interactions with more distress and hurt feelings than do boys [11, 39, 40]. Boys and girls reported comparable levels of anger whereas girls reported more sadness and worry than their male counterparts; these results are also in agreement with previous findings in the literature [11, 24, 41]. This study did not examine interpersonal goal orientation of girls and boys, which might account for such sex differences [43, 48]. Results did not support the hypothesis that girls would report higher levels of ruminative coping, although we might anticipate more robust sex differences in adolescence as opposed to middle childhood based on recent meta-analytic work [43]. However, girls in this study reported receiving more prosocial acts from peers, consistent with previous literature [24, 49]. A larger sample size and more equivalent sex distribution will allow future analyses to tease apart the role of sex from associations between emotions and coping.

### Directions for Future Research

Although the present study bolsters preliminary evidence for connections between specific emotions and coping, this work can be extended to examine the adaptive value of emotions in different contexts. Indeed, the extent to which any coping or emotion regulatory strategy is “adaptive” or “effective” depends on context. Longitudinal work and measurement of psychosocial adjustment are important to shed light on the adaptive value of various forms of coping. Given evidence that children with psychological disorders are deficient in emotion understanding and regulatory skills [14], it will be important to investigate the ways in which associations between emotions and coping responses are different for children with psychopathology. As Izard et al. (2002) underscored, motivation and adaptation are core defining features of emotions, and children who lack skills in emotion understanding and emotion regulation are unable to utilize the organizational and adaptive functions of emotions. Inclusion of a clinical sample would be useful to advance our understanding of emotional response patterns in children who need therapeutic interventions. Several researchers have argued that interventions should enhance children’s abilities to understand and modulate emotions to use their adaptive and organizational functions [50–52]. This requires a more in-depth understanding of children’s subjective experience

of emotion, in addition to a better understanding of what makes coping “adaptive” in various contexts.

Future research might also include measurement of two dimensions—threat appraisal and goals—that are theoretically linked to emotions and coping. Several researchers have elaborated on the theoretical frameworks and models of coping as a transactional process that include appraisals, goals, and emotions [26]. Emerging research suggests the utility of assessing children’s goals (e.g., social connection, acceptance, justice, dominance) during stressful experiences, as well as more enduring values that may influence these goals [43, 53]. Recent work also supports theory that emotions are connected to specific threat appraisals [54], and such appraisal processes may help to explain individual differences in emotional responses.

Future analyses might investigate a wider variety of emotional responses (e.g., embarrassment, shame) to further understand emotional response patterns. Although not all children are adept at self-reflecting on their emotional states (e.g., those with emotion understanding deficits), children’s subjective interpretation of emotion in response to standardized stressors helps to build an empirical foundation for refining affect-centered interventions. Qualitative analyses might provide further insight into the phenomenology of children’s emotional responding and associated labeling of emotions. For example, how do children differentiate between negative affective states? Asking children to reflect on their subjective experience, including appraisals and goals in recent “real life” stressors—rather than hypothetical scenarios—may be fruitful. Interview methods for assessing social–emotional responses to recurring real life stressors may enhance ecological validity, though limiting standardization [55]. Future researchers must tackle the dilemma of breadth versus specificity in measurement of the stressor. Scenario-based measures introduce specificity and standardization to enhance internal validity, but specificity of the stressor limits researchers’ abilities to generalize across stressors [22]. Nevertheless, given the paucity of research on children’s self-reported emotions and associated coping responses to peer rejection, the proposed study favored specificity and standardization in measurement. Our sample was relatively ethnically and socioeconomically diverse, building on previous work that relied on predominantly White and middle-class samples [5]. Although we did not examine the role of cultural and ethnic status in our analyses, this will be an important direction for future work. For example, culture may influence appraisal processes (e.g., meaning ascribed to stressful events) that underlie the generation of emotions, as well as the expression and regulation of emotions [56]. Indeed, some researchers would suggest that emotions are social constructions that can be *fully* understood in the context of culture [17]. For example, the appraisal that one has been wronged is determined by social rules and moral standards. Sadness, as a response to a goal lost or not attained, has been discussed at length as socially- and culturally-constructed [57]. The acceptability of emotional expression for anger and sadness is also likely dependent upon culture.

Cultural context may influence numerous factors such as social resources available to help cope (e.g., close relationships to friends and family) and aspects of the peer environment (e.g., norms for aggression, witnessing daily events of peer harassment and rejection). The aspects of peer socialization measured in this study were selected based on prior research, but do not capture the breadth of experiences that may influence children’s coping. It is also important to consider how receiving prosocial acts from peers may foster other adaptive coping behaviors (e.g., support seeking and emotional expression) not examined in this study. Furthermore, it is important to consider that some youths may receive prosocial acts (e.g., kind words or compliments) or social support from otherwise

deviant (as opposed to “prosocial” peers). In this case, social support from deviant or delinquent peers may lead rejected children down antisocial trajectories, adding another layer of complexity to be considered in future research.

Although the present study focused on the *experience* of peer rejection, the *status* of rejection (i.e., peer-rated sociometric status) is important to consider in future work. For example, building on recent work by Sandstrom (2004) that did not investigate the role of emotions, do emotions help us to understand the ways in which certain forms of coping are adaptive or maladaptive for rejected youths? Including sociometric status may also augment recent work that suggests cognitive attributions or values (e.g., appraisal of peer importance) can buffer the association between rejected status and subsequent depression [58]. If positive reappraisal is a coping behavior to help explain these associations, then “cognitive reappraisal” might be a precursor to changing more stable or enduring cognitive characteristics such as personal importance ascribed to peer acceptance.

Dominant limitations of the present study include a cross-sectional design and small sample size. Low statistical power precludes interpretation of more sophisticated analyses investigating potential moderating effects of study variables. Our reliance on self-report is another important limitation. Because associations between variables may be stronger within informants than across informants, future work should incorporate multiple sources of information to examine the constructs of interest. For this preliminary investigation, self-report was well-suited for the constructs we were interested in (e.g., youths’ subjective interpretation of emotional distress). Although observers can make inferences about children’s subjective feeling states, youth self-report may be the best way to access this information [59]. That is, children may be the most sensitive informants when reporting their own internal psychological states. With regard to peer experiences, children are able to report their experiences across contexts (school, neighborhood, community), whereas parents and teachers may only report their observations in a limited number of contexts. Nevertheless, self-report is an important limitation and future studies including experimentally induced rejection experiences and observational measurement of coping would greatly enhance this area of research. Although the Likert scale measurement of emotions in response to standardized rejection scenarios provides important groundwork for further study, such paper-and-pencil measures may only provide a rough gauge of children’s subjective interpretation of emotion. This study was relatively limited in its scope of emotions as well as coping responses, and can not shed light on the extent to which coping responses are adaptive. Finally, our sample unfortunately included an uneven distribution of boys and girls (31% boys and 69% girls). Although we included sex as a covariate in our regression analyses to examine the main research questions regarding associations between emotions and coping, we did anticipate and find some sex differences in emotions and coping in a direction consistent with prior work. Although we have no reason to believe that males in our sample were not representative of male children in the population, it is important that future studies extend this research with larger and more equivalent sex distributions.

Despite its limitations, this study provides evidence for the primacy of emotions as predictors of children’s coping with peer rejection. In addition, the results prompt several important questions and directions for future research. While prior literature has considered that intensity of negative affect in response to peer rejection may lead to maladjustment, we suggest that the form and function of negative affect is also critical to consider. That is, the form of emotional distress (anger, sadness, worry) and the function of specific emotions in regulating behavior may be essential to understanding how youths respond and adapt to peer rejection. Findings highlight unique associations between discrete emotions and

coping behaviors, supporting theory that emotions have distinct motivational-behavioral properties. This study suggests that individual differences in emotion have particular utility for understanding children's coping and adjustment to peer rejection.

The results also have implications for clinical research and application. Our results suggest that children's emotional responses can help to understand individual differences in coping responses to peer rejection experiences. Accordingly, when teaching youths coping skills, emotional context may be critical to discuss. For example, when teaching problem-solving, it may be relevant to preface the discussion by noting, "First, let's say you are feeling angry about....". Such a recommendation is in some ways consistent with interventions that address emotion regulation and coping skills for emotion-related disorders [60, 61]. However, explicitly connecting coping behaviors to emotional context may enhance the effectiveness of treatments for youths [14]. While some programs such as Lochman's Anger Coping Program [61] and Greenberg's PATHS curriculum [62] do explicitly incorporate discussion of emotions, researchers have argued that interventions should do more to teach children the adaptive functions of emotions in an effort to help children adaptively cope with their emotions [10, 52]. Although cognition provides the knowledge and information that helps children to generate and select coping responses, emotion can help us to understand children's *motivation* to cope in certain ways [26, 47]. A larger empirical base that links children's subjective experience of emotion (i.e., children's labeling of their own emotions or self-emotion recognition) with their behaviors and cognitions in response to identical interpersonal stressors could provide a foundation on which to build more affect-centered interventions.

## Summary

Despite a growing body of literature that examines how youths cope with peer rejection and how specific coping strategies are associated with maladjustment, there is relatively little literature to address why children select different coping strategies in the face of similar rejection experiences. Interestingly, empirical literature has not examined the role of emotions in coping with peer rejection experiences, despite theory that emotions organize and motivate goal-directed behavior in response to peer stress [10]. This study examined the role of emotions as predictors of children's coping responses to peer rejection experiences. Children completed questionnaires to assess emotional and coping responses to peer rejection scenarios. This study examined three coping factors specific to peer rejection (positive reappraisal, ruminative coping, and aggressive coping) and examined results separately for two negative peer experiences (teasing and exclusion). Children's emotions predicted coping responses after controlling for peer experiences. Specifically, anger was associated with aggressive coping, whereas sadness was associated with ruminative coping, supporting theory that emotions have distinct motivational-behavioral properties. In summary, the form of emotional distress (anger, sadness, worry) and the function of specific emotions in regulating behavior may be essential to understanding how youths respond and adapt to peer rejection. Peer experiences were also important, as victimization was associated with aggressive coping, and receipt of prosocial peer behaviors was associated with positive reappraisal. This study suggests that individual differences in emotion have particular utility for understanding children's coping and adjustment to peer rejection.

## Appendix

See Table 9.

**Table 9** Coping scales and items

Teasing scenario	Exclusion scenario
<i>Positive reappraisal (alpha = .71)</i>	<i>Positive reappraisal (alpha = .65)</i>
I tell myself that I'm an okay kid, even though they are teasing me	I tell myself that I'm an okay kid, even though they are leaving me out
I figure kids wouldn't tease me unless they really liked me deep down	I figure the kids must have a good reason for leaving me out, and that they still like me anyway
I tell myself that I don't care what the kids who are teasing me think anyway	I tell myself that I don't care what the kids who are leaving me out think anyway
I tell myself that being teased doesn't really matter very much	I tell myself that being left out doesn't really matter very much
I tell myself that everything will be okay	I tell myself that everything will be okay
<i>Aggressive coping (alpha = .77)</i>	<i>Aggressive coping (alpha = .84)</i>
I think there must be something wrong with the kids who tease me	I think there must be something wrong with the kids who leave me out
I act angry or argue with the kids who tease me	I act angry or argue with the kids who leave me out
I come up with a way to get even with the kids who are teasing me	I come up with a way to get even with the kids who are leaving me out
I get into fights with the kids who tease me	I get into fights with the kids who leave me out
I decide not to be nice to the kids who are teasing me, since they are not being nice to me	I decide not to be nice to the kids who leave me out, since they are not being nice to me.
I tease them back	I try to leave them out as soon as I get the chance
I tell other kids how mean they are	I tell other kids how mean they are
<i>Ruminative coping (alpha = .61)</i>	<i>Ruminative coping (alpha = .63)</i>
I wish they weren't teasing me	I wish they weren't leaving me out
I keep thinking about the teasing,.....I can't get it out of my head	I keep thinking about being left out.....I can't get it out of my head
I wish I could make things different	I wish I could make things different
I worry about being teased	I worry about being left out
I get away from the kids who are teasing me and stay by myself	I get away from the kids who are leaving me out and stay by myself

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