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The Journal of Early Adolescence published online 18 November 2012
DOI: 10.1177/0272431612466175

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What is This?
Anticipated Coping With Interpersonal Stressors: Links With the Emotional Reactions of Sadness, Anger, and Fear

Melanie J. Zimmer-Gembeck¹, Ellen A. Skinner², Helen Morris³, and Rae Thomas⁴

Abstract

The same stressor can evoke different emotions across individuals, and emotions can prompt certain coping responses. Responding to four videotaped interpersonal stressors, adolescents (N = 230, \( \bar{X}_{\text{age}} = 10 \) years) reported their sadness, fear and anger, and 12 coping strategies. After identifying emotion patterns using cluster analysis, associations with coping were examined. Intensity of emotion, and emotion and stressor type were associated with coping. Adolescents with intense emotions (i.e., highly sad, afraid, and angry) anticipated using more of most coping responses, whereas diffuse but moderate intensity emotion was associated with more active coping relative to other strategies. Anger was associated with less passive and more opposition coping. However, the expected coping clusters and patterns for fear and sadness were not found; no cluster of adolescents was intensely fearful or sad only. Support seeking and opposition were more common for peer-related stress, and active withdrawal was more common for parent-related stress.

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Email: m.zimmer-gembeck@griffith.edu.au
Stressors have been defined as “environmental events or chronic conditions that objectively threaten the physical and psychological health or well-being of individuals of a particular age in a particular society” (Grant et al., 2003, p. 449). These events trigger distress reactions, which can signal the experience of threat, loss, or challenge. Emotional distress reactions are the most crucial component of the stress appraisal process, according to theories of stress and coping (Lazarus, 1991). Emotional valence and intensity signal that an event requires coping responses to deal with one’s internal state or to manage a situation associated with the emotion (Barrett, 2006; Zimmer-Gembeck, Lees, Bradley, & Skinner, 2009). In fact, functionalist theories view emotion as a system that captures information and assists with responses. Emotions allow for quick appraisals and preparation for responding (Barrett, 2004; Barrett & Campos, 1991; Cole, Martin, & Dennis, 2004; Frijda, 1996; Lazarus, 1991, 1999).

Similar stressors may evoke very different emotional reactions from different individuals, however. Some individuals’ experiences of emotions are more discrete and differentiated, whereas for others specific emotions, such as sadness, anger or fear, are difficult to recognize and distinguish from one another (Barrett, Gross, Christensen, & Benvenuto, 2001). There are some individuals who respond to stressful events with diffuse distress across many different emotions (Carstensen, Mayr, Pasupathi, & Nesselroade, 2000; Larson & Cutler, 1996) or report that they have difficulty identifying or understanding which particular emotion they feel at a certain time within a certain context (Flynn & Rudolph, 2010). With children and young adolescents, such individual differences also have been found (Flynn & Rudolph, 2010) and, although this has not been examined, may be even greater than among adults, because of the documented developmental changes that occur during childhood, with both biological changes and social experiences promoting increases in the ability to recognize and understand different emotions (Saarni, 2000; Sroufe, 1996). Beginning at about age seven, children show a new and increasing capacity to understand mixed emotions (Larson, To, & Fireman, 2007).

In this study we include children and early adolescents between the ages of 8 and 12, and to simplify we refer to our participants as early adolescents. We focused on this very early adolescent transitional age period because, after age 7, young people typically understand a range of emotions and know that mixed emotions are possible (Larson et al., 2007). At the same time, there is much similarity between the emotional understanding of 8 and 12-year-olds, there are few differences in how they cope with stress, and young people between the
ages of 8 and 12 differ in their pattern of coping responses when compared to both younger and older children (Zimmer-Gembeck & Skinner, 2011). Between the ages of 8 and 12, behavioral responses (e.g., playing or reading to distract oneself from stress) and support seeking are common ways to cope with stress, as they were before age 8, but there is an increased emphasis on being self-reliant. Also, cognitive techniques for coping are being added to the range of coping alternatives (e.g., direct problem-solving and cognitive distraction), but these are relatively rudimentary compared to the advanced techniques of older adolescents and adults. Hence, between the ages of 8 and 12, there is little reason to expect much age-graded change in emotional reactions and coping, but there may be wide individual differences emerging that could be important for understanding both concurrent and later emotional and social development.

Early adolescents’ different ways of reporting about feelings are important, too, because they may be linked to ways of responding to stressors, including internal and cognitive reactions and behavioral responses (Barrett, 2006; Swinkels & Giuliano, 1995). Although empirical evidence is limited, researchers have argued, supported in two studies, that an ability to recognize particular emotional experiences, rather than experiencing a more diffuse and general level of distress, is associated with better regulation and more adaptive (i.e., engagement and active) coping responses (Barrett et al. 2001; Flynn & Rudolph, 2010). For example, in a study of 9-year-olds, Flynn and Rudolph (2010) found that those who reported using more maladaptive coping responses to interpersonal stress (i.e., perceived peer victimization) had more deficits in emotional clarity. Specifically, they anticipated using less effortful and volitional coping responses and more disengagement and involuntary reactions in responses to peer victimization, including rumination, intrusive thoughts, denial and avoidance, when they had more difficulties identifying what they were feeling.

Although previous studies support the view that emotional differentiation and clarity should aid regulation and adaptive coping with stress, neither previous study on this topic captured reports of specific emotions or measured a range of regulatory responses to stressful events. However, one recent study of very young children does suggest that specific emotions guide particular ways of responding to stress (Dennis, Cole, Wiggins, Cohen, & Zalewski, 2009). In this study, observations of 3- and 4-year-old children revealed that anger display, compared to sadness, was associated with more actions to meet task demands. Sadness was expected to be associated with withdrawal or helplessness, but this was not found. Instead, children who expressed sadness and those who expressed anger had similar responses, but sad children just did less than angry children. One reason for this difference might be arousal and the need for regulation (Barrett et al., 2001; Dennis et al., 2009), with
anger more arousing and perceived to require more regulation than sadness (Lang, 1995). However, it may also be the case that anger and sadness are not mutually exclusive emotions; some children may have been feeling or displaying more of one than the other. Moreover, some children may have been displaying signs of one emotion but were feeling or (if they were able) would have reported feeling other emotions, too.

Emotion Differentiation, Action Regulation, and Coping

Theory and research suggest that children and adolescents (and adults) who better identify specific emotional reactions to stressful events should cope differently with them when compared to those who react to the same stressors with a range of emotions (Barrett & Campos, 1987; Barrett et al. 2001; Dennis et al., 2009; Lang, 1995; Skinner & Wellborn, 1994; Skinner & Zimmer-Gembeck, 2007). The central notion is that a high level of intense reactions to stressful events across a range of emotions would prompt more frequent use of a range of coping responses, signaling nonspecific coping responses. Hence, taken together, such a pattern leads to the hypothesis that young people who report more diffuse distress that is highly negatively valenced would anticipate using (or would use) a greater range of coping strategies and using them more frequently.

On the other hand, young people who experience and identify specific emotions (such as anger), rather than others, in the face of stress may be more selective in their coping responses. Functionalist views of emotion argue that specific negative emotions prepare action tendencies that correspond to the specific emotion (e.g., Barrett & Campos, 1987). For example, anger in response to a blocked goal predisposes individuals to respond with active approach reactions that sweep away the obstacle; fear in response to threats predisposes individuals to respond with avoidance reactions that remove the individual from harm’s way; sadness in reaction to stressful events predisposes passivity and social withdrawal, but may also result in seeking emotional support to validate feelings and provide relief. Hence, early adolescents who report more differentiated feelings in response to stressful events would be likely to rely on a more limited range of coping responses but would anticipate utilizing strategies that correspond more to the specific emotion.

The Current Study Objectives and Hypotheses

The goal of the current study was to examine whether greater emotion differentiation (i.e., specifying more precise emotional reactions to stressful
events) is related to regulation specificity. In other words, is early adolescents’ emotion differentiation reliably associated with the anticipated use of particular regulatory strategies? What are the regulatory implications of mixed or diffuse emotional reactions to stressors? To answer these questions, we examined associations between emotional differentiation and anticipated coping in response to standardized interpersonal stressful events. Interpersonal events were utilized as the stressful stimuli because children and early adolescents consistently report that negative interpersonal events are the most common and most upsetting of stressful events (Donaldson, Prinstein, Danovsky, & Spirito, 2000; Spirito, Stark, Grace, & Stamoulis, 1991). Standardized videotaped events were used as the stimuli, rather than recent actual stressful events (which are often used in coping research; Zimmer-Gembeck & Skinner, 2011), so that differences between young people in their emotions and coping would reflect differences in their anticipated reactions, and not differences in the events to which they were responding.

Early adolescents responded to a set of videotaped vignettes depicting stressful interpersonal interactions (Zimmer-Gembeck et al., 2009). These vignettes were emotionally arousing enough to allow participants to respond to them realistically. They included an argument with a parent, not being picked for a team, bullying, and witnessing parents argue. Participants reported their emotional reactions and their anticipated coping in response to this set of standardized stressful events. In the current study, we assessed three emotions, namely, sadness, fear and anger, in response to the four different stressors.

After using cluster analysis to identify groups of early adolescents who reported more undifferentiated distress versus those who reacted with a more differentiated pattern of emotions to each stressor, we considered the coping strategies that they would be most likely to employ if they showed patterns of differentiated emotional reaction that included high anger, high fear, or high sadness. Hence, we examined associations between emotion and anticipated coping, but did not focus on the effectiveness or ineffectiveness of their responses.

To form hypotheses about emotions and their links to coping responses, we relied on the Motivational Theory of Coping (MTC; Skinner, Edge, Altman, & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007; Zimmer-Gembeck & Skinner, 2011) and past evidence (Dennis et al., 2009; Zimmer-Gembeck, Lees, & Skinner, 2011). In general, as described in MTC and also described by functionalist theories of emotion, a predominantly angry emotional reaction was expected to activate active approach responses aimed at removing obstacles (and less withdrawal and passive coping). Considering the twelve coping families identified in MTC (see Appendix A; also see Skinner et al., 2003), these coping families would include problem-solving,
self-reliance, negotiation, and opposition (Buss & Goldsmith, 1998; Calkins, Dedmon, Gill, Lomax, & Johnson, 2002). In contrast, a predominantly fearful reaction was expected to be associated with active withdrawal responses (rather than other coping responses); these would include the coping families of support seeking, information seeking, submission, or escape. A predominantly sad reaction was expected to activate passive responses (rather than active coping), which would include accommodation, delegation, helplessness, or social isolation (Dennis et al., 2009; for details see Figure 5 in Skinner & Wellborn, 1994). However, past evidence also shows that sadness is linked with seeking social support, especially when the stressor involves interpersonal conflict, probably because of the reassurance of social acceptance and the emotional aid that will likely be provided (Hunter, Boyle, & Warden, 2004; Kochenderfer-Ladd, 2004; Zimmer-Gembeck et al., 2011). Taken together, it was expected that early adolescents with a more differentiated emotional reaction (i.e., those who reported high levels of a single emotional reaction of sadness, fear or anger), would report a differentiated pattern of coping consistent with MTC. The following hypotheses were tested:

**Hypothesis 1**: Early adolescents who report undifferentiated and highly negative emotions in response to a stressful event (similar level of sadness, fear and anger) will report more frequent and a greater range of coping responses.

**Hypothesis 2**: Compared to other coping strategies, early adolescents who are more differentiated in their emotions and report high anger will report more frequent use of active approach coping families, including self-reliance, problem-solving, information-seeking, and negotiation when compared to other coping strategies; they would also report more opposition.

**Hypothesis 3**: Compared to other coping strategies, early adolescents who are more differentiated in their emotions and report high fear will use more of the active withdrawal coping families, including submission and escape. They would also more often rely on support seeking.

**Hypothesis 4**: Compared to other coping strategies, early adolescents who are more differentiated in their emotions and report high sadness will more often rely on the passive coping strategies of accommodation, delegation, helplessness, and social isolation (rather than active coping). They will also more often rely on support seeking.
We also compared emotions and coping by gender and between stressors. Girls and boys report different levels of sadness in response to interpersonal stress (Zimmer-Gembeck et al., 2009). Also, stress-coping theories often acknowledge that coping can be constrained by the situation and, although few studies have examined coping differences between stressors, reactions have been found to differ depending on the stressor (for reviews, see Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Skinner & Zimmer-Gembeck, 2011; Zimmer-Gembeck & Skinner, 2011). Finally, we examined age, but, as described earlier, we did not anticipate age differences across those included in this study.

**Method**

**Participants**

Participants were 230 early adolescents aged 8 to 12 years of age ($\bar{X} = 10$ years, $SD = 0.4$ years) with 52% boys. The participants attended three public schools and had parental consent. The parental consent rate was 74%. Only 6 parents actively denied participation, with the remainder failing to return consent forms to the school. Verbal early adolescent assent was obtained prior to participation.

As part of the consent process, each parent reported her/his child’s family structure, ethnicity, and combined family income. Students were predominantly born in Australia (71%) with some born in Europe (12%), New Zealand (4%), South Africa (5%) or other countries (8%). Most students (69%) were living with both biological parents, whereas 31% were living with one biological parent in a single-parent household or in a step-parent family. Overall, 41% of the parents reported a family income above AUD$60,000, 37% had an income between AUD$30,000 and AUD$60,000, and 22% of families had a combined income below AUD$30,000.

**Measures**

**Video excerpts.** The students viewed a series of four interpersonal interactions that are commonly experienced by children and can be very distressing for them (Donaldson et al., 2000; Spirito et al., 1991). These excerpts were selected after reviewing approximately 50 children’s movies and conducting two pilot studies (see below). Each of the final excerpts was approximately 30 seconds in length and depicted either a young boy or girl, close in age to the participants, as the central figure. To better allow participants to
personally interpret and react to each event, each scene exhibited limited emotional displays by the central figure. All scenes were in English and were taken from General (G) rated films, as classified by the Australian Office of Film and Literature Classification (2003). The video excerpts were embedded into Microsoft PowerPoint and shown to participants on a 12-inch wide-aspect display laptop as part of a slide presentation. The order of video presentation was randomized, but a fifth (positive scene) of a group of children playing together in the backyard always ended the assessment. The stressful scenes depicted were as follows: A girl being verbally bullied and physically intimated at school, a girl watching her parents having a verbal argument, a boy who was not picked by one of two captains to be on a sporting team, and a boy having a verbal argument with his father. Students completed written questions following each scenario.

**Emotional reactions.** Emotional reactions to events were measured with three items. Early adolescents reported how sad, fearful and angry they would feel in response to each scenario ranging from 1 (*not at all*) to 5 (*extremely*). Correlations between sad and fear ranged from $r = .24$ to $.64$, sad and anger from $r = .16$ to $.33$, and anger and fear from $r = .18$ to $.33$ across the four scenarios. Individual emotional reactions and general emotional distress for each scenario were used in analyses.

**Motivational Theory of Coping Scale–12 (MTC-12).** Twelve items, devised for this study, were used to assess early adolescents’ use of the 12 families of coping posited by the Motivational Theory of Coping (Skinner et al., 2003; Skinner & Wellborn, 1994). The 12 items were developed after reviewing the definitions of the coping families posited by Skinner et al. (2003) and a thorough review of existing child coping measures. Items were based on similar subscales from existing measures, or new items were created when existing subscales did not adequately measure the family of coping. A child coping and development expert reviewed all items prior to pilot testing with adolescents (see Procedure).

One item measured each of the 12 families of coping (12 items total per stressor). The coping families in MTC (Skinner et al., 2003) are self-reliance, support seeking, problem solving, information seeking, accommodation, negotiation, delegation, social isolation, helplessness, escape, submission, and opposition (for more information see Skinner & Wellborn, 2004; Skinner & Zimmer-Gembeck, 2007; Zimmer-Gembeck & Skinner, 2011). An example item is “How much would you find out more information about the situation?” to assess information seeking. Participants rated whether they would use each strategy on a scale from 1 (*not at all*) to 5 (*definitely*) following presentation of each video segment.
Based on their theoretical similarity (see Skinner & Zimmer-Gembeck, 2007), summary scores were formed to provide indices of passive coping (accommodation, delegation, helplessness, and social isolation), active withdrawal coping (submission, escape), and active approach coping (self-reliance, problem-solving, information-seeking, and negotiation) within each of the four scenarios. Because we expected specific findings for support seeking and opposition, these were not included in a composite score. Moreover, we did not use factor analysis or examine internal consistency of the items because it was not expected that using one coping response would necessarily co-occur with another within each composite. For example, a child may respond to a stressful event with delegation, but this would not be expected to frequently co-occur with responses of social isolation or helplessness.

**Procedure**

*Pilot studies.* After identifying the types of stressful events that should be included in the assessment, approximately 50 children’s movies and educational videos were reviewed. Of these, 12 short depictions of stressful events were selected on the basis of their subject matter, duration, clarity, and age-appropriateness. To pilot test these selections, 60 first year undergraduate psychology students viewed the video scenarios and rank ordered them according to degree of “stressfulness,” reducing the pool to 12 for another pilot study. This second pilot study used a convenience sample of five 8-year-old and five 12-year-old early adolescents to determined whether the chosen scenarios were salient to them and that young people within this age range were able to understand and respond to all items in the response booklet. Only the interpersonal stressors were used in the current study.

*Primary study.* State education department and university ethical approvals were received, and school principals consented to the study. Parental information sheets and consent forms were disseminated to all students in grades 3 to 7. Verbal child assent was obtained prior to participation.

Students were tested in groups of no more than five to facilitate task understanding and to ensure a clear view of the computer. The testing period was approximately 30-minutes for each group. As shown in Appendix B, a standard set of verbal instructions informed participants that they would be watching a sequence of short videotaped movie clips and that they were to imagine that the situation was actually occurring to them. Following presentation of each video scenario, students completed questions about the scenario. Questions were read aloud to ensure all questionnaire items were completed at the same time and to facilitate understanding of how to use the scales and
record responses. At completion of the task, students were thanked for their participation, invited to ask questions, given a gel pen, and informed that they could talk to their parents about the task.

**Results**

**Overview of Analyses**

We expected to find groups of early adolescents with undifferentiated and with more differentiated (i.e., more granulated) emotional responses to each stressful event. To isolate different groups of early adolescents with similar patterns of emotional responses, cluster analysis was used to identify meaningful and adequate sized groups with similar patterns of emotional reactions (see Hair & Black, 1998). One analysis was conducted for the emotional reactions to each stressor. As recommended by Hair and Black (1998) we first used a hierarchical procedure (Ward’s method) to determine the number of clusters and potential cluster centers. We then used this information and performed the primary cluster analysis with a nonhierarchical method (K-means). The data were not standardized. The number of clusters was determined based on theory, the distinctiveness of the clusters, the size of the clusters, and the within-cluster distance. Following the identification of clusters of early adolescents with similar emotional responses to each stressor, the clusters were compared to determine whether there were age or gender differences. Finally, different coping responses and patterns of coping responses were then compared between the clusters, and we conducted additional analyses to compare reactions to the different stressors.

**Emotion Clusters Identified for Each Stressor**

Three emotional reaction clusters were selected as best for each stressor. The clusters identified and their mean levels of sadness, fear and anger within clusters are shown in Figure 1. For each stressor, as anticipated, groups of early adolescents were found that reported undifferentiated and high intensity emotional responses; they reported high and similar levels of sadness, fear and anger. The undifferentiated, high intensity emotional response clusters included 124 (54%) early adolescents for responses to bullying, 120 (42%) for responses to an argument between a parent and a child, 71 (31%) for responses to not being picked for a team, and 103 (45%) for responses to witnessing parents argue.

There were two other clusters for each stressor. First, for each stressor a undifferentiated but less emotionally intense cluster was found, which included 33 (14%) early adolescents for responses to bullying, 46 (20%) for responses to an argument between a parent and a child, 68 (30%) for responses to not
being picked for a team, and 88 (38%) for responses to witnessing parents argue. Overall, comparing the size of these two undifferentiated groups, higher proportions of early adolescents had highly rather than moderately intense responses to interpersonal stressors that were directly conflictual (bullying and the parent-child argument) when compared to other interpersonal stressors (not being picked for a team and witnessing parents argue), $p < .001$.

The third cluster of early adolescents for each stressor reported a differentiated emotional reaction pattern and this pattern differed between the stressors. For the two scenarios with direct conflict (bullying and the parent-child argument), there was an angry group containing 73 early adolescents (32%) for bullying and 64 (28%) for the parent-child argument. In response to not being picked for a team, many early adolescents reported high sadness and anger, but low fear ($n = 91, 40\%$). Finally, in response to witnessing parents argue, 39 early adolescents (17\%) reported high sadness and fear, but low anger. Overall, a cluster with only high fear or only high sadness was not found for any stressor, suggesting that fear and sadness are not often differentiated.
from each other when early adolescents anticipate their emotional reactions to interpersonal stress, but they are more clearly differentiated from anger.

**Emotion Clusters, Age, and Gender**

Gender and age differences between the emotion clusters for each stressor were tested using $\chi^2$ and analysis of variance (ANOVA). No gender differences in emotion were found (Table 1). There were also no gender differences in coping, $t(1, 229)$ ranged from $-1.37$ to $1.89$. Further, age was not correlated with any emotion or coping response for any stressor, $r$’s between age and sadness, fear or anger ranged from $-0.09$ to $0.05$ for bullying, $-0.04$ to $0.01$ for parents arguing, $-0.09$ to $-0.02$ for not picked for a team, and from $0.03$ to $0.11$ for the parent-child argument. Because gender and age were not associated with emotion or coping responses, we did not examine age and gender further or control for age and gender in the following analyses.

**Comparing the Three Coping Categories Between Emotional Reaction Clusters**

To test the study hypotheses, active approach, active withdrawal, passive coping, opposition, and seeking support were compared between the emotional reaction clusters for each stressor. ANOVA results and results of post hoc Bonferonni pairwise comparisons comparing coping responses within each emotion cluster are shown in Table 2. Anticipated coping responses between emotion clusters for each stressful event are also illustrated in Figure 2a, b, c, and d.

**Hypothesis 1: Undifferentiated distress.** Supporting Hypothesis 1, Table 2 and Figure 2 show that those who reported undifferentiated, high intensity distress anticipated they would use more of almost all of the coping categories. Also, responses to interpersonal stressors were related to the intensity of emotion. Adolescents with undifferentiated, high intensity distress anticipated that they would most frequently rely on support seeking and active withdrawal to cope. Adolescents with undifferentiated, moderate intensity distress also anticipated relying on support seeking to cope, but expected to use more active coping responses (e.g., active approach) and opposition to cope.

**Hypothesis 2: Anger.** Partially supporting Hypothesis 2, anger was associated with less passive coping and more opposition to cope with interpersonal stress (see Table 2 and Figure 2a and 2b). Early adolescents in the angry clusters anticipated using less passive coping in
response to bullying and the parent-child argument, and their use of opposition stood out from their other responses. However, support for Hypothesis 2 was somewhat mixed because early adolescents in the angry clusters did not anticipate using more active coping than those in the other emotion clusters.

**Hypotheses 3 and 4: Sadness and fear.** Associations between high fear, when differentiated from other emotions, and active withdrawal were expected in Hypothesis 3. Also, associations between high sadness when differentiated from other emotions, and passive coping and social support were expected in Hypothesis 4. Neither hypothesis was supported (see Table 2 and Figure 2c and 2d). The use of withdrawal coping responses did not stand out among early adolescents in the fearful cluster, which was found in response to witnessing parents in an argument, when compared to patterns of coping within other emotion clusters. The use of passive coping and support seeking responses did not stand out among early adolescents in the sad cluster, which was found in response to not being picked or witnessing parents in an argument, when compared to patterns of coping within other emotion clusters.

### Table 1. Percentage of Boys and Girls in Each Emotion Cluster for Each Interpersonal Stressor (N = 230)

<table>
<thead>
<tr>
<th>Measured variables</th>
<th>N</th>
<th>Boys %</th>
<th>Girls %</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bullying</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High general distress</td>
<td>106</td>
<td>58</td>
<td>42</td>
<td>2.80</td>
</tr>
<tr>
<td>2. Angry</td>
<td>92</td>
<td>47</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>3. Moderate general distress</td>
<td>32</td>
<td>46</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td><strong>Argument—parent/child</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High general distress</td>
<td>116</td>
<td>53</td>
<td>47</td>
<td>1.37</td>
</tr>
<tr>
<td>2. Angry</td>
<td>63</td>
<td>47</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>3. Moderate general distress</td>
<td>51</td>
<td>59</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td><strong>Not picked for team</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High general distress</td>
<td>66</td>
<td>61</td>
<td>39</td>
<td>3.83</td>
</tr>
<tr>
<td>2. Sad and angry</td>
<td>89</td>
<td>45</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>3. Moderate general distress</td>
<td>75</td>
<td>53</td>
<td>47</td>
<td></td>
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<tr>
<td><strong>Witness parent argument</strong></td>
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<td></td>
</tr>
<tr>
<td>1. High general distress</td>
<td>92</td>
<td>53</td>
<td>47</td>
<td>0.11</td>
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<tr>
<td>2. Sad and fearful</td>
<td>56</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>3. Moderate general distress</td>
<td>80</td>
<td>53</td>
<td>47</td>
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</table>
Table 2. Comparison of Coping Between Emotion Clusters for Each Stressor
(N = 230)

<table>
<thead>
<tr>
<th>Measured variables</th>
<th>N</th>
<th>Passive withdrawal X (SD)</th>
<th>Active approach X (SD)</th>
<th>Opposition X (SD)</th>
<th>Seeking support X (SD)</th>
<th>Within subjects F</th>
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<tbody>
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<td>Bullying</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>1. High distress</td>
<td>124</td>
<td>2.72 (0.85)</td>
<td>3.46 (0.92)</td>
<td>3.24 (0.83)</td>
<td>3.50 (1.36)</td>
<td>20.34***</td>
</tr>
<tr>
<td>2. Angry</td>
<td>73</td>
<td>2.08 (0.79)</td>
<td>2.40 (1.06)</td>
<td>2.82 (0.77)</td>
<td>3.79 (1.31)</td>
<td>29.73***</td>
</tr>
<tr>
<td>3. Moderate distress</td>
<td>33</td>
<td>2.42 (0.80)</td>
<td>2.77 (1.24)</td>
<td>3.00 (1.03)</td>
<td>2.97 (1.65)</td>
<td>2.57*</td>
</tr>
<tr>
<td>Argument—parent/child</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High distress</td>
<td>120</td>
<td>2.99 (0.77)</td>
<td>3.52 (0.96)</td>
<td>3.20 (0.96)</td>
<td>3.08 (1.38)</td>
<td>4.44***</td>
</tr>
<tr>
<td>2. Angry</td>
<td>64</td>
<td>2.54 (0.85)</td>
<td>2.79 (1.03)</td>
<td>2.95 (0.99)</td>
<td>3.42 (1.29)</td>
<td>14.77***</td>
</tr>
<tr>
<td>3. Moderate distress</td>
<td>46</td>
<td>2.49 (0.92)</td>
<td>2.40 (1.07)</td>
<td>2.60 (1.02)</td>
<td>2.87 (1.39)</td>
<td>1.96</td>
</tr>
<tr>
<td>Not picked for team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High distress</td>
<td>71</td>
<td>3.01 (0.73)</td>
<td>3.25 (0.98)</td>
<td>3.24 (0.93)</td>
<td>3.28 (1.39)</td>
<td>4.08***</td>
</tr>
<tr>
<td>2. Sad and angry</td>
<td>91</td>
<td>2.82 (0.84)</td>
<td>2.97 (1.19)</td>
<td>2.98 (0.95)</td>
<td>3.43 (1.39)</td>
<td>4.56***</td>
</tr>
<tr>
<td>3. Moderate distress</td>
<td>68</td>
<td>2.33 (0.63)</td>
<td>2.32 (1.02)</td>
<td>2.76 (0.98)</td>
<td>2.75 (1.50)</td>
<td>3.07*</td>
</tr>
<tr>
<td>Witness parent argument</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. High distress</td>
<td>103</td>
<td>2.85 (0.91)</td>
<td>3.44 (0.91)</td>
<td>3.19 (0.94)</td>
<td>3.38 (1.37)</td>
<td>5.03**</td>
</tr>
<tr>
<td>2. Sad and fearful</td>
<td>39</td>
<td>2.43 (0.70)</td>
<td>2.85 (1.18)</td>
<td>2.77 (1.20)</td>
<td>3.15 (1.48)</td>
<td>9.14***</td>
</tr>
<tr>
<td>3. Moderate distress</td>
<td>88</td>
<td>2.58 (0.79)</td>
<td>2.89 (1.13)</td>
<td>2.50 (0.91)</td>
<td>2.66 (1.41)</td>
<td>5.17**</td>
</tr>
</tbody>
</table>

Note: Different superscripts indicate that means differed (p < .05) between coping categories within each cluster, with a indicating the highest value. Only 10 participants were in the high distress group for all four stressful events. *p < .05. **p < .01.

Comparing the Coping Families Between Stressors

Finally, we used repeated measures ANOVAs, each with a single within subject factor of stressor, to compare coping responses between stressors. If the multivariate within subject effect was significant, we followed up with paired t tests. The three coping composites, as well as support seeking and opposition coping, differed between stressors, F(3, 227) ranged from 3.00 to 22.65, all p < .05 (see Table 3 and Figure 3). Consistent with the high anger provoked by bullying for many participants, passive coping was less common and opposition was more common as responses to bullying than for the other three stressors. Also, support seeking in response to bullying was higher than for the other three stressors. The other difference in coping was for witnessing parents argue, with early adolescents anticipating more active withdrawal and less active approach in response to this stressor when compared to other stressors; in each case, differences were found between witnessing parents argue and two of the three other interpersonal stressors.
Discussion

For decades children’s coping responses have been described as dependent upon their own particular appraisals of stressful events, but coping with stress is also influenced by the constraints and affordances within the environment and the particular type of stressor that is being encountered (Zimmer-Gembeck & Skinner, 2011). However, despite this general agreement about individual differences in how stressors are perceived and appraised and the contextual embeddedness of the entire coping process, there has been no previous study examining a range of emotional reactions to stressors, which has also (1) presented a standard set of stressful events and compared reactions to them, and (2) focused on many different coping responses theoretically linked to different emotions and stressors. Drawing from the Motivational Theory of Coping (Skinner et al., 2003; Skinner & Zimmer-Gembeck, 2007) and theory and research on emotional development and responding (Barrett, 2006), this

Figure 2. Mean anticipated coping responses within each emotion cluster and stressful event
was the aim of the current study. As expected, both the valence and the intensity of three emotions—sadness, fear, and anger—differed between early adolescents within particular stressful events and anger, in particular, seemed associated with particular coping responses. More clearly, early adolescents reported some differences in their anticipated responses to each of four interpersonal stressors—being bullied, arguing with a parent, not being picked for a team, and witnessing parents in an argument.

Using cluster analytic methods to identify early adolescents with particular emotional reactions to each stressor, some were found to be quite undifferentiated and diffuse (i.e., less granulated) in their emotional reactions compared to others. They reported similar levels of sadness, fear and anger and, supporting theory and previous research (Carstensen et al., 2000; Larson & Cutler, 1996; for a review see Barrett 2006), they also had either highly

### Table 3. Comparison of Coping Between Stressors (N = 230)

<table>
<thead>
<tr>
<th>Measured variables</th>
<th>Bullying X (SD)</th>
<th>Not picked for team X (SD)</th>
<th>Witnessing parent argument X (SD)</th>
<th>Parent-child argument X (SD)</th>
<th>Within subjects F(3, 227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive coping</td>
<td>2.47 (0.87) a</td>
<td>2.73 (0.79) b</td>
<td>2.68 (0.85) b</td>
<td>2.77 (0.85) b</td>
<td>8.40**</td>
</tr>
<tr>
<td>Active withdrawal coping</td>
<td>3.02 (1.12) a,b,c</td>
<td>2.87 (1.14) c</td>
<td>3.13 (1.08) b</td>
<td>3.09 (1.10) a,b</td>
<td>3.81*</td>
</tr>
<tr>
<td>Active approach coping</td>
<td>3.07 (0.86) b</td>
<td>2.99 (0.98) a,b</td>
<td>2.85 (1.02) a</td>
<td>3.01 (1.00) b</td>
<td>3.00*</td>
</tr>
<tr>
<td>Opposition</td>
<td>3.52 (1.41) b</td>
<td>3.18 (1.45) a</td>
<td>3.07 (1.43) a</td>
<td>3.13 (1.37) a</td>
<td>6.68**</td>
</tr>
<tr>
<td>Support seeking</td>
<td>3.44 (1.43) b</td>
<td>3.01 (1.49) a</td>
<td>2.64 (1.44) c</td>
<td>2.70 (1.39) c</td>
<td>22.65**</td>
</tr>
</tbody>
</table>

Note: Different superscripts indicate that means differed (p < .05) between stressful events, with a and b indicating the highest value. *p < .05. **p < .01.

![Figure 3. Mean anticipated coping responses for each stressful event](image)

Note: wd = withdrawal. app = approach.
intense or more moderately intense emotional reactions. As expected in Hypothesis 1, the group of early adolescents with undifferentiated and high intensity distress anticipated that they would use more of almost all of the coping strategies we examined when compared to others, particularly relying on the coping strategies that are most commonly used by this age group—support seeking and active withdrawal (Zimmer-Gembeck & Skinner, 2011). This suggests that they were less selective about the coping strategies they would use and tended to anticipate relying most heavily on coping strategies that are sometimes referred to as emotion-focused, such as support seeking. As has been described in previous reviews of the research on coping during childhood and adolescence (Skinner & Zimmer-Gembeck, 2007; Zimmer-Gembeck & Skinner, 2011), social support seems to be a somewhat unique, all-purpose coping strategy that children and adolescents use frequently when they feel distressed. It is typically described as an adaptive strategy to use (Aldwin, 2007; Bridges, 2003; Compas et al., 2001; Skinner et al., 2003). The many potential functions of social support probably partially account for why this coping strategy is linked to multiple emotional reactions and why seeking social support is a very common response when emotion is undifferentiated across multiple different interpersonal stressors.

In comparison to the clusters with high intensity distress across all emotions, young people with undifferentiated but more moderate intensity emotional reactions were those who expected to be more active, anticipating that they would be more likely to use problem-solving and similar active strategies (in addition to the popular strategy of support seeking). Hence, moderate distress reactions may be most conducive to active coping responses, suggesting that having diffuse and highly negative emotions to stressors might interfere with ideal regulatory actions and active coping.

Although one cluster of young people with a differentiated emotional reaction pattern was found for each of the four stressors, the particular pattern of emotions that emerged depended on the stressor. This meant that early adolescents’ emotional reactions do depend on the stressor they are confronting and that we had to focus on particular stressors to understand how each emotion might be linked to coping responses. When this was done, we found more support for the hypothesis about anger than for hypotheses about sadness and fear. Anger, as expected, was associated with a more prominent use of opposition and less passivity, but fear was not clearly associated with active withdrawal coping (e.g., submission, escape), and sadness was not clearly linked with passive coping (e.g., accommodation, delegation) and support seeking. However, we did not identify groups of young people who had profiles marked by only high fear or only high sadness, which made it difficult to draw firm conclusions about the coping responses linked to these emotions without future research.
Overall, then, emotional intensity and anger in response to stress are associated with the coping responses that young people anticipate they would rely on when managing interpersonal stressful events. However, patterns of emotional reactions and coping responses were different depending on whether early adolescents were responding to bullying, a parent-child argument, witnessing parents in an argument, or not being picked for a team. This lends support to the importance of considering context when studying stress and regulatory responses to it (Carver & Harmon-Jones, 2009; Ebata & Moos, 1994; Folkman, Lazarus, Pimley, & Novacek, 1987). In previous research, children and adolescents are often asked to provide answers regarding their responses to a recent, unspecified stressor (for a review see Skinner et al., 2003). This does not allow for an analysis of what is most suitable for dealing with any particular class of stressor and will most likely provide a mixed or inconclusive set of results regarding stress, coping responses and behavioral or emotional outcomes. It will also make it impossible to draw conclusions about coping differences because young people may be imagining or remembering very different stressors. In summary, the findings of the current study suggest that future research on child and adolescent coping and mental health should consider individual emotional reactions, multiple coping and regulatory responses, and the particular type of stressor. Moreover, when assessing emotion it is relevant to capture emotional valence, intensity and form.

Study Considerations and Future Research Directions

There are three primary issues to consider when interpreting the results of this study. First, while the method for portraying stressors and capturing responses had many strengths including engaging the participants and being easy to use, it also had limitations. For example, the stressors were chosen from popular movies, which did not allow for exact matching of the age and sex of the central character to characteristics of each study participant. This may have subsequently influenced appraisals, with previous findings suggesting that children appraise situations differently depending on the sex of the child displayed in the video stimulus (Brody, Lovas, & Hay, 1995). However, we found no evidence of this in our analyses with no gender differences found for any emotion or coping responses to any stressor. Also, age was matched as closely as possible to study participants, and sex was balanced across the scenarios presented.

Second, emotions following exposure to stressful events are much more complex than the three emotional responses of sadness, fear, and anger, but we had to limit the number of emotions because of the need to gather
information about multiple stressors, multiple emotions and many coping responses. We also only had one item to assess each emotion. However, we did form coping composites from multiple items. Future research should include a broader range of emotional distress reactions and expand the number of items to assess them. It might also be useful to capture threat appraisals, other aspects of the stress-coping process or supplement self-reports with physiological recordings (Eisenberg, Valiente, & Sulik, 2009).

A third limitation is the use of single items to assess each coping response rather than using multiple item scales. This was done because of the need to assess many coping strategies in response to multiple stressful events. To somewhat overcome this issue of single item coping measures, we did form some composite coping scores by combining multiple items and these composites were based on theory regarding their functional similarity (Skinner & Zimmer-Gembeck, 2007; Zimmer-Gembeck & Skinner, 2011). Nevertheless, future research could extend our findings by focusing on developing guidelines for best measurement practice when there is a need to assess multiple coping strategies across multiple stressful events.

Finally, the associations between high general distress and greater use of most coping strategies raises a concern about response bias, with some children just more likely to endorse high scores on all items than other children. However, this concern was assuaged because only 10 children were in the high general distress group across all four stressful events, suggesting that response bias was not an explanation for these findings.

**Implications and Conclusion**

While acknowledging these limitations, the findings provide avenues for future research aimed at examining emotional responses to stress and coping with stressful events. Given the uniqueness of the current study, the results move knowledge of emotion and context in early adolescents’ stress and coping forward substantially, and may assist with the design of interventions aimed at helping children and adolescents with appropriate appraisals, reactions, regulation and coping when dealing with stressful events. For example, interventions to reduce bullying may benefit from understanding how young people respond with either sadness or anger to these events, and how their emotional reactions may prompt some children to desire self-reliance and resist seeking support from others. Overall, these findings and the methodology used here could be applied to many arenas of stress to address theoretical and practical issues in the area of child and adolescents’ coping with stress.
## Appendix A

The 12 Families of Coping From the Motivational Theory of Coping and Their Associated Adaptive Processes

<table>
<thead>
<tr>
<th>Family of coping</th>
<th>Family function in adaptive process</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Problem-solving, strategizing instrumental action, planning</td>
<td>Adjust actions to be effective</td>
<td>How much would you work on solving the problem?</td>
</tr>
<tr>
<td>2. Information seeking, reading observation, asking others</td>
<td>Find additional contingencies</td>
<td>How much would you find out more information about the situation?</td>
</tr>
<tr>
<td>3. Helplessness, confusion, cognitive interference, cognitive exhaustion</td>
<td>Find limits of actions</td>
<td>How much would you feel like you couldn’t do anything about the situation?</td>
</tr>
<tr>
<td>4. Escape, behavioral avoidance, mental withdrawal, denial, wishful thinking</td>
<td>Escape noncontingent environment</td>
<td>How much would you want to get away from the situation as fast as possible?</td>
</tr>
<tr>
<td>5. Self-reliance, emotion regulation, behavior regulation, emotional expression, emotion approach</td>
<td>Protect available social resources</td>
<td>How much would you deal with the situation on your own?</td>
</tr>
<tr>
<td>6. Support seeking, contact seeking, comfort seeking, instrumental aid, social referencing</td>
<td>Use available social resources</td>
<td>How much would you go and seek the support or help of someone close to you (e.g., parent, teacher) to deal with the situation?</td>
</tr>
<tr>
<td>7. Delegation, maladaptive help-seeking, complaining, whining, self-pity</td>
<td>Find limits of resources</td>
<td>How much would you rather let someone else deal with the situation?</td>
</tr>
<tr>
<td>8. Social isolation, social withdrawal, concealment, avoiding others</td>
<td>Withdraw from unsupportive context</td>
<td>How much would you want to go off to be by yourself (or be alone)?</td>
</tr>
<tr>
<td>9. Accommodation, distraction, cognitive restructuring, minimization acceptance</td>
<td>Flexibly adjust preferences to options</td>
<td>How much would you just accept the situation?</td>
</tr>
<tr>
<td>10. Negotiation, bargaining, persuasion, priority-setting</td>
<td>Find new options</td>
<td>How much would you try to work out the situation with the other person or people involved?</td>
</tr>
<tr>
<td>11. Submission, rumination, rigid perseveration, intrusive thoughts</td>
<td>Give up preferences</td>
<td>How much would you feel like it was not even worth trying to deal with the situation?</td>
</tr>
<tr>
<td>12. Opposition, other-blame projection, aggression</td>
<td>Remove constraints</td>
<td>How much would you fight to change the situation?</td>
</tr>
</tbody>
</table>

Note: Adapted from Skinner et al. (2003).
Appendix B

Standardized Instructions

Hi everyone! Thank you all for coming and helping me out. We’re going to be doing a couple of things today because I am really interested in finding out more about how you feel and what you’d do in some situations that kids your age are sometimes faced with. So before we start let’s fill out the first page of our booklet because I need to know your age, and your teacher’s name.

Okay, so now I am going to show you a number of short video clips that come from movies that you might have seen. In each scene there will be either a boy or a girl and I want you to imagine that you are the child in the video. That means I want you to imagine that you are in the situation and then answer some questions about how you would feel if you were the child in the video and the situation was happening to you. So are there any questions before we begin? Okay, let’s get to it.

Situation 1: Being Bullied

In the first video, I want you to imagine you are this girl (point to girl). In the scene the girl is being bullied at school. After you have watched the video, I am going to ask you some questions such as how sad you would feel if you were being bullied, . . ., and how much you would want to leave the situation. Now remember, I want you to imagine you are the person being bullied and then we are going to answer some questions about how you would feel if this was happening to you. Play video. Okay, now let’s fill in some pages in your booklet. So, if you were being bullied at school, how . . . (Read each question aloud to children).

Situation 2: Witnessing Parents Having a Fight

The next video shows a scene of a girl who is watching her parents have a fight at home. So I want you to imagine that you are the person in the video and you are watching your parents having a fight. We’ll then answer some questions about how you would feel if this was happening to you. Play video. Okay, now let’s fill in some pages in your booklet. So, if you were watching your parents having a fight, how . . . (Read each question aloud to children).

Situation 3: Not Being Picked on a Team

In the next video, you will see a boy who is wearing glasses and two captains who are picking teams to play a game. In the scene, the boy doesn’t get
picked to be on either of the teams. Now I want you to imagine that you are the person who doesn’t get picked to be on a team to play a game. We’ll then answer some questions about how you would feel if this was happening to you. Play video. Okay, now let’s fill in some pages in your booklet. So, if you were not picked to be on a team, how . . . (Read each question aloud to children).

**Situation 4: Having a Fight With a Parent**

The next video shows a boy who is having a fight with his dad. So I want you to imagine that you are the person in the video and you are having a fight with one of your parents. We’ll then answer some questions about how you would feel if this was happening to you. Play video. Okay, now let’s fill in some pages in your booklet. So, if you were having a fight with one of your parents, how . . . (Read each question aloud to children).

**Situation 5: Having Fun Playing in the Yard With Friends**

In the last scene you will see a group of kids having fun playing in the back-yard. I want you to imagine that you are one of the kids in the video having fun playing. We’ll then answer some questions about how you would feel if this was happening to you. Play video. Okay, now let’s fill in some pages in your booklet. So, if you were one of the children in the video and you were having fun playing in the back yard with friends, how . . . (Read each question aloud to children).

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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