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## A Prospective Examination of Emotional Clarity, Stress Responses, and Depressive Symptoms During Early Adolescence

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### Abstract

This study examined the proposal that difficulty understanding one's emotional experiences (i.e., deficits in emotional clarity) would interfere with the formulation of adaptive responses to interpersonal stress, which would then predict depressive symptoms. This process was examined across 3 years (fourth to sixth grade) during early adolescence. Participants included 636 youth (338 girls, 298 boys;  $\bar{X}$  age in fourth grade = 9.95,  $SD = .37$ ) who completed measures assessing emotional clarity, stress responses, and depressive symptoms. Consistent with the hypothesized model, path analyses revealed that maladaptive interpersonal stress responses partially mediated the prospective contribution of deficits in emotional clarity to depressive symptoms. These findings implicate impairment in emotional understanding as a precursor to emerging interpersonal and psychological difficulties during a developmental stage of heightened vulnerability to depression, the transition to adolescence.

### Keywords

emotional development; depression; coping; peer relationships

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Depression is a persistent disorder that confers detrimental psychological, emotional, and social consequences across the life span. Early adolescence represents a critical period to examine predictors of depression, as a precipitous increase in rates is observed, particularly for females (Hankin & Abramson, 2001). Guided by emotional (e.g., Clark & Watson, 1991) and interpersonal (e.g., Joiner & Timmons, 2009) theories of depression, an earlier study (Flynn & Rudolph, 2010) identified a mechanism of depression vulnerability whereby maladaptive interpersonal stress responses partially accounted for the concurrent association between deficits in emotional clarity (i.e., emotional understanding) and depressive symptoms during childhood. The goal of this research was to extend our prior findings by (a) assessing emotional clarity, interpersonal stress responses, and depressive symptoms

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using a multi-wave prospective longitudinal design during the transition to early adolescence, and (b) exploring sex differences in the proposed process model.

## Emotional Clarity and Depressive Symptoms

Emotional awareness refers to individual differences in the perception, labeling, and monitoring of one's emotions (e.g., Swinkles & Guiliano, 1995). Emotional clarity represents one facet of emotional awareness, specifically involving the ability to identify, understand, and distinguish one's emotional experiences (Gohm & Clore, 2000, 2002; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). In adults, emotional clarity is linked to many adaptive attributes (e.g., high self-esteem, positive attributional style; Gohm & Clore, 2002) that serve as buffers against depression (for reviews, see Alloy, Wagner, Black, Gerstein, & Abramson, 2011; Roberts & Monroe, 1999). In contrast, deficits in emotional clarity, and the concomitant inability to understand and alleviate negative affective states, ultimately might lead to the development of negative self-views, feelings of inadequacy or hopelessness, and other symptoms of depression. Indeed, deficits in emotional clarity are associated with neuroticism (Coffey, Berenbaum, & Kerns, 2003), negative affect (Gohm & Clore, 2002), and depressive symptoms (Kennedy et al., 2010; Salovey et al., 1995) in adults. Moreover, recent research links deficits in emotional clarity with depressive symptoms concurrently during middle childhood (Flynn & Rudolph, 2010), and both concurrently and prospectively during adolescence (Fernandez-Berrocal, Alcaide, & Pizarro, 2006; Salguero, Palomera, & Fernandez-Berrocal, 2012; Stange, Alloy, Flynn, & Abramson, 2013; Stange et al., 2013).

## Interpersonal Stress Responses as an Explanatory Mechanism

To our knowledge, only our prior investigation (Flynn & Rudolph, 2010) has examined *how* deficits in emotional clarity contribute to depression in youth. Notably, this research revealed that youth's responses to stress mediate the concurrent association between emotional clarity and depressive symptoms, providing preliminary support for the idea of stress responses as an explanatory mechanism. The proposed link between emotional clarity and stress responses was based on theory positing that emotional competence facilitates the development of self-regulation (for a review, see Buckley & Saarni, 2009), a skill that is particularly important for the efficacious management of stress. Emotional clarity, in particular, is thought to allow individuals to purposefully allocate internal resources (e.g., attentional control, planning, decision making) toward the generation of goal-oriented cognition (e.g., cognitive restructuring) and behavior (e.g., problem solving; Gohm & Clore, 2000, 2002), which form the basis for effective coping. In contrast, deficits in emotional clarity may compromise active coping efforts and result in uncontrolled, dysregulated responses to stress. The contribution of deficits in emotional clarity to *interpersonal* stress responses may be of particular importance during the transition to adolescence, when more complex emotion regulatory capabilities are required to successfully navigate social interactions (e.g., Buckley & Saarni, 2009). In particular, this research focused on responses to peer aggression, a common type of interpersonal stress experienced by many youth (e.g., Olweus, 1992). Given that peer aggression elicits negative emotional reactions

(Kochenderfer-Ladd, 2004), youth's responses to this type of interpersonal stress are likely influenced by individual differences in emotional clarity.

We conceptualized responses to stress using a contemporary framework that distinguishes between purposeful, goal-directed coping and involuntary, uncontrolled reactions; within each category responses are further categorized as engagement (orientation toward) and disengagement (orientation away from) stressors (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000). The resulting four-factor framework consists of engagement coping (e.g., problem solving, cognitive restructuring), disengagement coping (e.g., avoidance, denial), involuntary engagement (e.g., rumination, impulsive action), and involuntary disengagement (e.g., escape, inaction).

Concurrent and prospective research link diminished engagement coping and heightened disengagement coping and involuntary interpersonal stress responses with depressive symptoms across adolescence (Connor-Smith et al., 2000; Flynn & Rudolph, 2010, 2011). Moreover, the concurrent associations demonstrate specificity to interpersonal, but not noninterpersonal, stress responses (Connor-Smith et al., 2000). Thus, the first goal of this study was to examine whether maladaptive responses to peer aggression (i.e., less engagement coping; more disengagement coping and involuntary responses) mediate the prospective contribution of deficits in emotional clarity to depressive symptoms during early adolescence.

## Sex Differences in the Proposed Process Model

Converging lines of evidence highlight the need to investigate sex differences in the proposed process model. First, an extensive body of research documents the sex-specific increase in rates of depression during early- to mid-adolescence (e.g., Hankin & Abramson, 2001; Hankin, Wetter, & Cheely, 2008), resulting in an elevated prevalence of depression for females across the life span. Second, prospective research reveals that maladaptive interpersonal stress responses predict more depressive symptoms, and adaptive interpersonal stress responses predict fewer depressive symptoms, in early adolescent females but not males (Agoston & Rudolph, 2011). Accordingly, exploratory multi-group comparison analyses were conducted to examine whether the key mediation paths linking emotional clarity, interpersonal stress responses, and depressive symptoms were stronger in females than males.

## Method

### Participants

Participants entered a multi-wave study during second ( $n = 576$ ) or third ( $n = 60$ ) grade; given our interest in examining the relevant processes across the transition to adolescence, data from the fourth, fifth, and sixth grade assessments were used for the analyses. Of the 724 eligible youth, caregivers of 576 (80%) second graders in 11 schools provided informed consent; youth provided oral assent. Participants and nonparticipants did not differ in terms of sex,  $\chi^2(1) = 0.15$ , *ns*, age,  $t(723) = 0.63$ , *ns*, ethnicity (white vs. minority),  $\chi^2(1) = 0.59$ ,

*ns*, or school lunch status (full pay vs. subsidized),  $\chi^2(1) = 0.35$ , *ns*. An additional 60 classmates of the participating youth entered the study in the third grade, resulting in a total of 636 participants (338 girls, 298 boys;  $\bar{X}$  age in second grade = 7.97,  $SD = .37$ ; 67% White, 22% African American, 11% other; 35% subsidized lunch).<sup>1</sup>

Participants in fourth grade ( $\bar{X}$  age in fourth grade = 9.95,  $SD = .37$ ) represented 90% of the original 636 participants. Participants versus nonparticipants in fourth grade did not differ in terms of sex,  $\chi^2(1) = 0.62$ , *ns*, age,  $t(634) = 1.60$ , *ns*, ethnicity,  $\chi^2(1) = 3.23$ , *ns*, or school lunch status,  $\chi^2(1) = 0.32$ , *ns*. Of the fourth grade sample, 558 (97.2%) had complete data in fifth grade and 532 (92.7%) had complete data in sixth grade. Youth without data in fifth or sixth grade did not differ from those with complete data in terms of sex  $\chi^2(1) = 0.55$ , *ns*, age,  $t(572) = 1.84$ , *ns*, ethnicity,  $\chi^2(1) = 0.01$ , *ns*, school lunch status,  $\chi^2(1) = 0.81$ , *ns*, or fourth grade emotional clarity,  $t(571) = 0.53$ , *ns*, engagement coping,  $t(570) = 0.18$ , *ns*, disengagement coping,  $t(570) = 1.02$ , *ns*, involuntary engagement,  $t(570) = 0.26$ , *ns*, involuntary disengagement,  $t(569) = 0.13$ , *ns*, or depressive symptoms,  $t(571) = 1.33$ , *ns*. All of the participating 636 youth were included in the central analyses (see the “Results” section).

## Procedure

During three annual assessments, verbal assent and questionnaires were administered to youth in small groups (during fourth and fifth grade) or in classrooms (during sixth grade). Interviewers read each item aloud and youth provided written responses. Emotional clarity was assessed in fourth grade; stress responses were assessed in fourth and fifth grade; depressive symptoms were assessed in fourth and sixth grade. Youth were given a small gift at each assessment for their participation.

## Measures

Table 1 presents descriptive information and psychometrics for the measures. All measures showed strong internal consistency.

**Emotional clarity**—Youth completed a modified 10-item version of the Emotional Clarity Questionnaire (ECQ; Flynn & Rudolph, 2010; for example, “I usually know how I am feeling.” “I often have a hard time understanding how I feel.”). The original 7-item ECQ was adapted from a measure of emotional clarity commonly used in adults (Trait Meta-Mood Scale; Salovey et al., 1995). To improve the internal consistency, three items were added. Youth checked one of five response options (Not at All to Very Much). Positively keyed items were reverse scored and a mean score was computed reflecting more deficits in emotional clarity. Convergent and discriminant validity for the ECQ have been established (Flynn & Rudolph, 2010).

**Interpersonal stress responses**—Youth completed a modified version (Flynn & Rudolph, 2010; Rudolph, Abaied, Flynn, Sugimura, & Agoston, 2011) of the Responses to Stress Questionnaire (RSQ; Connor-Smith et al., 2000), a measure that distinguishes

<sup>1</sup>Our prior study (Flynn & Rudolph, 2010) was conducted using data from this sample during second and third grade.

between volitional coping and involuntary stress responses. The original 57-item RSQ includes nineteen 3-item subscales that represent four larger factors (engagement and disengagement coping; involuntary engagement and disengagement). Due to time constraints, this measure was shortened to 41 items representing all of the original subscales with one fewer item per subscale (with the exception of the effortful disengagement subscale; see Rudolph et al., 2011). Engagement coping reflects active, purposeful responses directed toward stressors or adapting oneself to stressors, such as problem solving or positive thinking (14 items; for example, “I do something to try to fix the problem or take action to change things.” “I tell myself that everything will be all right.”). Disengagement coping reflects intentional efforts to orient oneself away from stressors or one’s response to stressors, such as avoidance or denial (9 items; for example, “I try not to think about it, to forget all about it.” “I try to believe it never happened.”). Involuntary engagement reflects dysregulated involvement with stressors, such as rumination or physiological arousal (10 items; for example, “I can’t stop thinking about what I did or said.” “I feel sick to my stomach or get headaches.”). Involuntary disengagement reflects uncontrolled avoidance of stressors, such as escape or emotional numbing (8 items; for example, “I just have to get away, I can’t stop myself.” “I don’t feel like myself, it’s like I’m far away from everything.”). Youth checked one of four response options (Not at All to Very Much) reflecting how they respond in the context of peer aggression (i.e., “When kids are mean to me”). To adjust for response bias and base-rate variation in the endorsement of stress responses (Connor-Smith et al., 2000; Flynn & Rudolph, 2010; Rudolph et al., 2011), proportion scores were computed as the total score for each subscale divided by the total score on the RSQ.

Confirmatory factor analysis has verified the structure of the original measure in youth (Connor-Smith et al., 2000). Internal consistency, stability, and validity have been established for both the original (Connor-Smith et al., 2000; Flynn & Rudolph, 2011) and revised (Flynn & Rudolph, 2010; Rudolph et al., 2011) measures.

**Depressive symptoms**—Youth completed the short form of the Mood and Feelings Questionnaire (SMFQ; Angold, Costello, Messer, & Pickles, 1995), a 13-item scale of depressive symptoms occurring during the previous 2 weeks (for example, “I felt unhappy or miserable.” “I didn’t enjoy anything at all.”). Youth checked one of four response options (Not at All to Very Much); a mean score was calculated reflecting more depressive symptoms. Internal consistency as well as convergent and discriminant validity have been established (Angold et al., 1995; Sharp, Goodyer, & Croudace, 2006).

## Results

### Correlation Analyses

Table 1 displays the intercorrelations among the variables. As expected, deficits in emotional clarity were negatively associated with engagement coping and positively associated with involuntary engagement and disengagement and depressive symptoms. Engagement coping was negatively associated with involuntary engagement and disengagement and depressive symptoms, which were all positively intercorrelated. For data reduction purposes, a

composite variable reflecting involuntary stress responses was computed as the mean of involuntary engagement and disengagement. Disengagement coping was not associated with deficits in emotional clarity, and was inconsistently associated with depressive symptoms; this variable was therefore excluded from subsequent analyses.

### Overview of Analytic Approach

Based on the pattern of correlations, separate path analyses were conducted using Amos Version 17.0 (Arbuckle, 2008) to test (a) engagement coping and (b) involuntary stress responses as mediators of the effect of deficits in emotional clarity on depressive symptoms. To avoid bias related to the examination of mediation at concurrent time points (Maxwell & Cole, 2007), the models included fourth grade deficits in emotional clarity, fifth grade stress responses, and sixth grade depressive symptoms. To provide a conservative test of mediation, the models adjusted for baseline (fourth grade) levels of stress responses and symptoms. Multi-group comparison analyses were subsequently conducted to examine whether the process models varied according to sex. Missing data were estimated using Full Information Maximum Likelihood (FIML; Arbuckle, 2006).

### Mediation by Engagement Coping

In the model including engagement coping, paths were included from fourth grade deficits in emotional clarity to fifth grade engagement coping, and from fifth grade engagement coping to sixth grade depressive symptoms. The direct path from fourth grade deficits in emotional clarity to sixth grade depressive symptoms was included, as were the stability paths from fourth to fifth grade engagement coping and from fourth to sixth grade depressive symptoms. The fourth grade variables were allowed to covary (Figure 1a).

The model provided a good fit to the data,  $\chi^2(2) = 8.02$ ,  $p < .05$ , comparative fit index (CFI) = .99, incremental fit index (IFI) = .99, root mean square error of approximation (RMSEA) = .07. Figure 1 displays the standardized path coefficients. As anticipated, fourth grade deficits in emotional clarity significantly predicted fifth grade engagement coping, which significantly predicted sixth grade depressive symptoms. Consistent with mediation (Baron & Kenny, 1986; Shrout & Bolger, 2002), the total effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was significantly attenuated,  $t(572) = 4.83$ ,  $p < .01$  (Clogg, Petkova, & Haritou, 1995) and reduced to nonsignificance after including fifth grade engagement coping in the model (Figure 1a). In addition, the model including the direct effect between fourth grade deficits in emotional clarity and sixth grade depressive symptoms did not provide a significantly better fit than the model without the direct effect,  $\chi^2(1) = 1.12$ , *ns*. In further support of mediation, the indirect effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was significant (indirect effect [IE] = .030,  $Z = 2.74$ ,  $p < .01$ ; Sobel, 1982, 1986). The strength of mediation was quantified by calculating the effect proportion (indirect effect/total effect; Shrout & Bolger, 2002). This analysis indicated that 58% of the total effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was accounted for by fifth grade engagement coping. Finally, examination of the squared multiple correlation (i.e., proportion of variance in sixth grade depressive symptoms explained by the predictors in the model) indicated that the model accounted for 19% of the variance in depressive symptoms (a medium effect size;

Cohen, 1992). Taken together, these indicators suggest that fifth grade engagement coping partially mediated the association between fourth grade deficits in emotional clarity and sixth grade depressive symptoms.

### Mediation by Involuntary Stress Responses

In the model including involuntary stress responses, paths were included from fourth grade deficits in emotional clarity to fifth grade involuntary stress responses, and from fifth grade involuntary stress responses to sixth grade depressive symptoms. The direct path from fourth grade deficits in emotional clarity to sixth grade depressive symptoms was included, as were the stability paths from fourth to fifth grade involuntary stress responses and from fourth to sixth grade depressive symptoms. The fourth grade variables were allowed to covary (Figure 1b).

The model provided a good fit to the data,  $\chi^2(2) = 5.27$ , *ns*, CFI = .99, IFI = .99, RMSEA = .06. Figure 1b displays the standardized path coefficients. As anticipated, fourth grade deficits in emotional clarity significantly predicted fifth involuntary stress responses, which significantly predicted sixth grade depressive symptoms. Consistent with mediation (Baron & Kenny, 1986; Shrout & Bolger, 2002), the total effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was significantly attenuated,  $t(572) = 4.50$ ,  $p < .01$  (Clogg et al., 1995) and reduced to nonsignificance after including fifth grade involuntary stress responses in the model (Figure 1b). In addition, the model including the direct effect between fourth grade deficits in emotional clarity and sixth grade depressive symptoms did not provide a significantly better fit than the model without the direct effect,  $\chi^2(1) = 1.39$ , *ns*. In further support of mediation, the indirect effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was significant (IE = .028,  $Z = 2.70$ ,  $p < .01$ ; Sobel, 1982, 1986), and 53% of the total effect of fourth grade deficits in emotional clarity on sixth grade depressive symptoms was accounted for by fifth grade involuntary stress responses. Finally, examination of the squared multiple correlation indicated that the model accounted for 19% of the variance in depressive symptoms (a medium effect size; Cohen, 1992). Taken together, these indicators suggest that fifth grade involuntary stress responses partially mediated the association between fourth grade deficits in emotional clarity and sixth grade depressive symptoms.

### Examination of Gender Differences

First, preliminary analyses were conducted to test for sex differences in the study variables. Consistent with expectations (i.e., sex differences in depression emerging during early adolescence), sex differences in depressive symptoms (i.e., girls higher than boys) were present in sixth grade,  $t(530) = 2.15$ ,  $p < .05$ , but not fourth grade,  $t(571) = 0.42$ , *ns*. In addition, boys reported higher levels of fifth grade involuntary disengagement than did girls,  $t(556) = 2.09$ ,  $p < .05$ . No sex differences emerged in the remaining study variables,  $t_s < 1.88$ , *ns*.

Second, multi-group comparison analyses were conducted to investigate whether the process models differed across sex. The three mediation paths were constrained to be equal across girls and boys; each path was then individually unconstrained in sequence. For the model

including engagement coping, the model fit was strong for both the fully constrained,  $\chi^2(7) = 14.41, p < .05, CFI = .99, IFI = .99, RMSEA = .04$ , and fully unconstrained,  $\chi^2(4) = 9.67, p < .05, CFI = .99, IFI = .99, RMSEA = .05$ , models. Examination of the chi-square difference tests revealed that none of the three mediation paths significantly differed across sex,  $\chi^2(1) < 3.50, ns$ . For the model including involuntary stress responses, the model fit was strong for both the fully constrained,  $\chi^2(7) = 10.64, ns, CFI = .99, IFI = .99, RMSEA = .03$ , and fully unconstrained,  $\chi^2(4) = 9.67, ns, CFI = .99, IFI = .99, RMSEA = .03$ , models. Examination of the chi-square difference tests revealed that none of the three mediation paths significantly differed across sex,  $\chi^2(1) < 3.22, ns$ .

## Discussion

The goal of this study was to investigate whether impairment in the understanding of one's emotional experiences disrupts the formulation of adaptive responses to peer aggression, and whether these maladaptive stress responses serve as one mechanism accounting for the prospective contribution of emotional deficits to depressive symptoms during early adolescence. Notably, early adolescence represents a developmental stage during which emotional clarity may impart more pronounced effects on interpersonal and psychological functioning. During this time, the capacity to monitor and modify affective experiences and expressions becomes more sophisticated and refined, thereby allowing youth to generate emotional displays that correspond to social and contextual demands (e.g., Buckley & Saarni, 2009). Moreover, as youth mature it becomes increasingly important for them to develop independent, effective self-regulatory strategies that protect against depressive symptoms (Connor-Smith et al., 2000). Finally, depression vulnerability increases across adolescence, particularly for females, making it critical to identify early risk factors and to determine whether there are sex-specific effects of these risks.

Consistent with our hypothesized model, fifth grade maladaptive stress responses partially mediated the contribution of fourth grade deficits in emotional clarity to sixth grade depressive symptoms. Specifically, deficits in emotional clarity predicted subsequent maladaptive responses to peer aggression in the form of less engagement coping (e.g., problem solving, emotional expression) and more involuntary engagement (e.g., rumination) and disengagement (e.g., becoming emotionally numb) reactions. In turn, these maladaptive responses to stress predicted heightened depressive symptoms over time.

Broadly, our results cohere with theory and research implicating emotional clarity as an instrumental determinant of responses to stress, when negative affective states require accurate comprehension to be effectively managed (e.g., Flynn & Rudolph, 2010; Gohm & Clore, 2000, 2002). Deficits in emotional clarity may prevent the mobilization of resources directed toward the resolution of, or adaptation to, stressors; instead, these deficits may exacerbate and perpetuate uncontrolled, dysregulated stress responses. In addition, this study supports theoretical perspectives proposing that impairment in the understanding of one's own emotional experiences interferes with the alleviation of emotional distress, thereby generating negative self-perceptions, a reduced sense of self-efficacy, and other symptoms of depression (e.g., Salovey et al., 1995). Although adolescence represents a developmental stage in which rates of depression surge for females in particular (Hankin & Abramson,

2001), sex differences did not emerge in the key pathways. It is possible that deficits in emotional clarity and maladaptive interpersonal stress responses reflect characteristics of depression vulnerability that are invariant across males and females. However, youth in this study were just entering the stage during which the female predominance of depression emerges; more salient differences in the effects of emotional clarity may arise during middle to late adolescence, as these sex differences intensify.

Disengagement coping (i.e., avoidance, denial, wishful thinking) was not correlated with deficits in emotional clarity, and was inconsistently correlated with depressive symptoms across the three waves. The lack of association between deficits in emotional clarity and disengagement coping is consistent with previous research (Flynn & Rudolph, 2010), and suggests that difficulty understanding emotions may not independently influence youth's active attempts to disengage from interpersonal stress. Instead, deficits in emotional clarity may interact with personal (e.g., attentional control) and contextual (e.g., socialization of emotion) factors to predict disengagement coping. Consistent with these ideas, attentional control facilitates disengagement from stress (Richey, Keough, & Schmidt, 2012), and emotion-related socialization behaviors are associated with children's coping effectiveness (Brophy-Herb, Stansbury, Bocknek, & Horodyski, 2011). The inconsistent links between disengagement and depressive symptoms add to literature demonstrating mixed associations among these variables (e.g., Connor-Smith et al., 2000; Flynn & Rudolph, 2011). It is possible that the psychological impact of disengagement coping depends on the type of interpersonal stress at hand. For example, avoiding stressors that are uncontrollable may be psychologically adaptive, whereas thinking wishfully about controllable stressors may heighten relationship dysfunction and, consequently, symptoms. One goal for future research will be to identify possible moderators of the associations between disengagement coping, deficits in emotional clarity, and depressive symptoms.

### **Strengths, Limitations, and Clinical Implications**

Overall, these findings highlight the contribution of deficits in emotional clarity to both interpersonal and psychological adjustment across early adolescence. Strengths of this research include its multi-wave prospective design in which deficits in emotional clarity, interpersonal stress responses, and depressive symptoms were assessed at consecutive waves across early adolescence, thereby allowing for a conservative analytic approach that controlled for prior stress responses and symptoms. However, study limitations must be mentioned.

First, the effect sizes of the mediation paths were small-to-medium (Cohen, 1992) and the size of the indirect effect of deficits in emotional clarity on depressive symptoms was small. Together, these results suggest that (a) mechanisms other than maladaptive stress responses (e.g., low self-worth, diminished sense of self-efficacy) also may explain the effect of deficits in emotional clarity on depressive symptoms, and (b) other attributes (e.g., negative cognitive style, relationship disturbances) also contribute to depressive symptoms during early adolescence. Thus, it will be important for future research to consider the role of emotional clarity within the context of integrative multi-level models of depression. Second, all variables were measured using self-report questionnaires, which may have inflated

associations due to shared method variance. This concern is diminished by the use of items lacking emotional valence in the assessments of emotional clarity and stress responses, which likely minimized the influence of a response bias (e.g., negative self-perceptions associated with depression) as well as by adjusting for prior levels of stress responses and symptoms in the models. However, replications will benefit from the use of alternative methods (e.g., behavioral observations, semi-structured interviews) and informants (e.g., parents, teachers, peers). Another important goal of future research will be to examine whether the obtained mediation model generalizes to youth's responses to other types of interpersonal stress (e.g., social exclusion, low-quality friendships), as well as the potential specificity of effects to interpersonal versus noninterpersonal stress responses. Finally, although large and somewhat diverse in ethnicity, use of a community sample precludes generalization of these results to youth with diagnostic levels of depression.

Despite these limitations, this research has important implications for prevention and intervention during early adolescence. Specifically, the prospective effect of deficits in emotional clarity on depressive symptoms suggests that strategies aimed to enhance the understanding of one's emotional experiences may protect youth against depression. In addition, given that less engagement coping and more involuntary engagement and disengagement also prospectively contributed to depressive symptoms, programs that promote effective interpersonal stress responses may avert the onset and continuity of depression across the life span.

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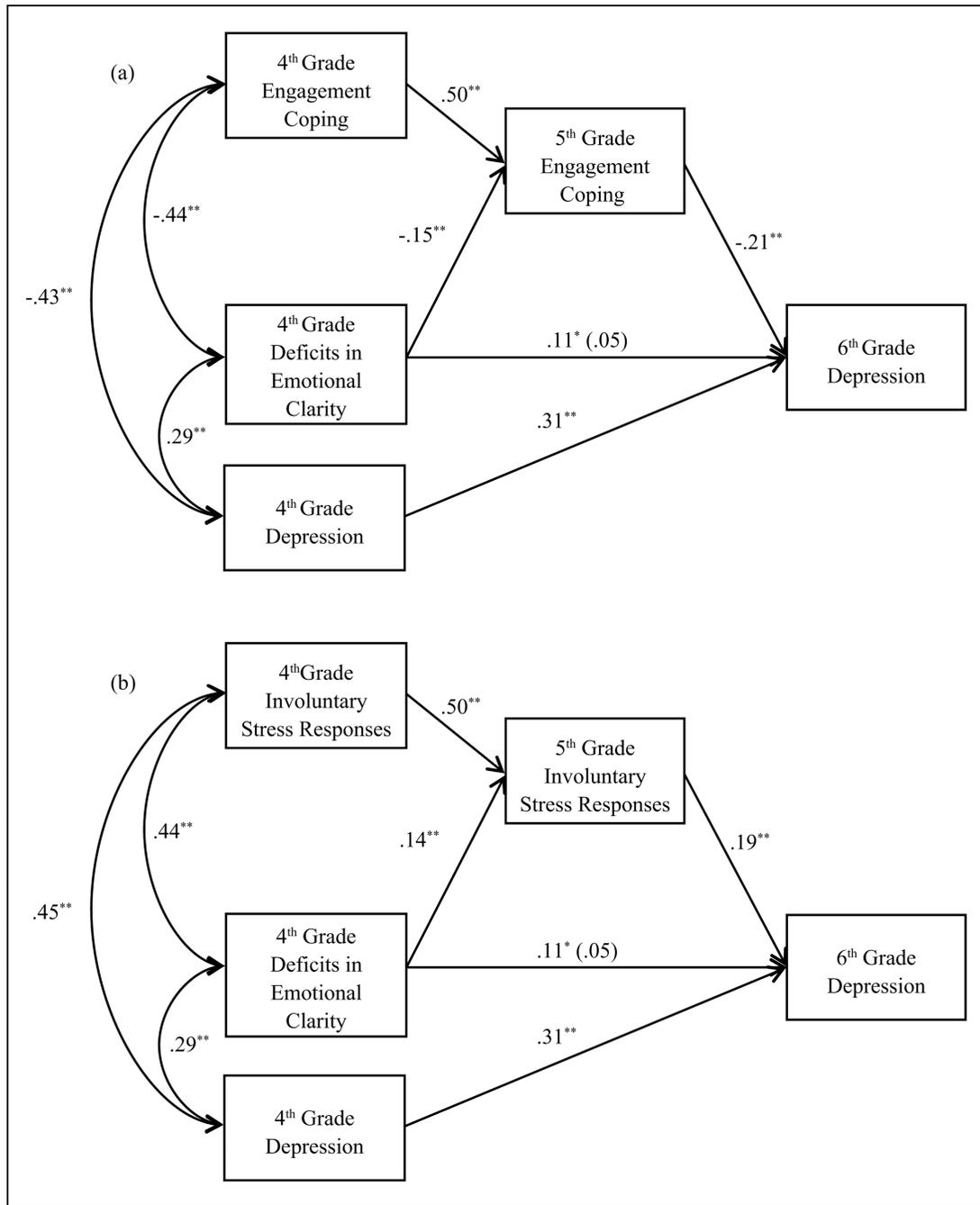
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## Biographies

**Megan Flynn** completed a PhD at the University of Illinois, Urbana–Champaign, and is presently an assistant professor at Bethel University. Her research focuses on a variety of psychobiological, emotional, cognitive, interpersonal, and environmental antecedents, correlates, and consequences of youth depression.

**Karen D. Rudolph** is a professor at the University of Illinois, Urbana–Champaign. She was a recipient of a William T. Grant Faculty Scholars Award and a James McKeen Cattell Sabbatical Award, and serves as an associate editor for the *Journal of Clinical Child and Adolescent Psychology*. Her research examines how person-by-environment interactions create risk for psychopathology.



**Figure 1.** Longitudinal path models displaying (a) engagement coping and (b) involuntary stress responses as mediators of the effect of deficits in emotional clarity on depression. *Note.* Coefficients without parentheses indicate total effects; coefficients in parentheses indicate direct effects.  $*p < .05$ .  $**p < .01$ .

**Table 1**

Descriptive Information and Intercorrelations Among the Variables.

Measure	$\bar{X}(SD)$	$\alpha$	1	2	3	4	5	6	7	8	9	10	11
1. Fourth grade deficits in emotional clarity	2.43 (.89)	.88	—										
2. Fourth grade engagement coping	0.39 (.06)	.86	-.44**	—									
3. Fifth grade engagement coping	0.40 (.06)	.86	-.37**	.57**	—								
4. Fourth grade disengagement coping	0.22 (.04)	.79	-.04	-.14**	-.01	—							
5. Fifth grade disengagement coping	0.22 (.04)	.77	-.02	-.03	-.12**	.29**	—						
6. Fourth grade involuntary engagement	0.22 (.04)	.82	.30**	-.76**	-.41**	-.30**	-.11*	—					
7. Fifth grade involuntary engagement	0.22 (.04)	.83	.27**	-.47**	-.77**	-.14**	-.27**	.48**	—				
8. Fourth grade involuntary disengagement	0.16 (.03)	.81	.45**	-.76**	-.51**	-.13**	-.03	.37**	.36**	—			
9. Fifth grade involuntary disengagement	0.16 (.04)	.82	.35**	-.44**	-.79**	-.02	-.15**	.25**	.41**	.50**	—		
10. Fourth grade depression	1.53 (.57)	.90	.29**	-.43**	-.35**	-.09*	-.02	.34**	.24**	.42**	.36**	—	
11. Sixth grade depression	1.45 (.50)	.90	.21**	-.27**	-.34**	-.06	.01	.21**	.25**	.27**	.31**	.40**	—

\*  $p < .05$ .

\*\*  $p < .01$ .