

**The Evaluation of a Process Model Questionnaire for the Measurement of
Emotion Regulation Processes in Middle Childhood**

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DEDICATION

To the children and families I have had the honor of listening to, learning from, and walking alongside; you have taught me an incomprehensible amount of compassion and perspective.

I could not be more grateful to do this work.

To my not-so-little brothers, for being the first little ones I ever fell in love with teaching, guiding, and caring for.

To my parents, for showing me the meaning of working hard for everything you have and fighting your way into spaces despite people telling you that you don't belong.

For believing in me when I didn't have quite enough belief in myself.

And to my grandma, who always wanted there to be a "Dr. Watson" in the family.

I get to be the first. I wish you all were here to see me. I share this with you.

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ABSTRACT

The capacity to regulate emotion in adaptive ways is associated with more positive outcomes across academic, social, and emotional functioning, yet significant limitations exist in the measurement of emotion regulation in childhood. Existing measures of emotion regulation developed for children only capture a limited number of emotion regulation processes; few measures integrate an empirically supported theoretical model of emotion regulation in the structure of the measure. The goal of the present study was to validate a comprehensive, theoretically informed self-report measure of emotion regulation processes for school age children, the Emotion Regulation Process Scale for Children (ERPS-C). The psychometric properties of this new measure were examined based on scores from a sample of 308 third- and fourth-grade children recruited from several elementary schools. Participants completed the ERPS-C in addition to existing self- and parent-report measures of emotion regulation and existing measures of coping skills, internalizing distress, positive/negative emotions, and peer relations. Confirmatory factor analysis indicated support for a nine-factor, 39-item measure. Supplemental analyses revealed expected relationships between participant scores on the ERPS-C and scores on existing measures of emotion regulation and socioemotional functioning, confirming its convergent validity. The ERPS-C also displayed measurement invariance over two time points and several subscales of the measure at Time 1 uniquely predicted socioemotional outcomes at Time 2. The present study demonstrates some reliability and validity in the ERPS-C and suggests further exploration and refinement of the measure may help it be a valuable tool for assessing emotion regulation processes in children.

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION	1
Emotion Regulation	1
Emotion Regulation Strategies	3
Measurement of Emotion Regulation	5
Theoretical Framework of Emotion Regulation	6
CHAPTER TWO: THE PRESENT STUDY.....	8
CHAPTER THREE: METHODOLOGY.....	11
CHAPTER FOUR: DATA ANALYSIS.....	16
CHAPTER FIVE: RESULTS	19
CHAPTER SIX: DISCUSSION AND LIMITATIONS	28
Discussion.....	28
Limitations.....	32
CHAPTER SEVEN: CONCLUSIONS AND FUTURE RESEARCH	34
LIST OF REFERENCES	35
APPENDIX OF TABLES AND FIGURES.....	45
APPENDIX OF STUDY MEASURES	70
VITA	97

LIST OF TABLES

Table 1. Description of processes and strategies in the ERPS-C	45
Table 2. Descriptive information for observed variables in Cohorts 1 and 2	46
Table 3. Correlations among observed variables and primary study variables from the ERPS-C	47
Table 4. Factor loadings for the final ERPS-C CFA model.....	48
Table 5. Reliability coefficient for factors of the ERPS-C.....	49
Table 6. Correlations among latent factors on the ERPS-C and the ERQ-CA.....	50
Table 7. Regression examining the ERPS-C latent factors and child-reported ER	51
Table 8. Correlations among latent factors on the ERPS-C and the ERC.....	52
Table 9. Correlations among latent factors on the ERPS-C and the SRCM-C.....	53
Table 10. Regression examining the ERPS-C latent factors and child-reported coping	54
Table 11. Correlations among latent factors on the ERPS-C and the PROMIS-A-SF and PROMIS-D-SF	55
Table 12. Regression examining the ERPS-C latent factors and child-reported internalizing symptoms	56
Table 13. Correlations among latent factors on the ERPS-C and the RPQ.....	57
Table 14. Regression examining the ERPS-C latent factors and child-reported reactive aggression	58
Table 15. Correlations among latent factors on the ERPS-C and the PANAS-C	59

Table 16. Regression examining the ERPS-C latent factors and child-reported positive and negative affect	60
Table 17. Correlations among latent factors on the ERPS-C and the PROMIS-PR-SF	61
Table 18. Regression examining the ERPS-C latent factors and child reported peer relationships	62
Table 19. Longitudinal measurement invariance model fit statistics for the ERPS-C	63
Table 20. Correlations among ERPS-C latent factors at Time 1 and Time 2	64
Table 21. Model fit statistics for structural equation models examining predictive validity of the ERPS-C in relation to socioemotional functioning	65
Table 22. Regression examining the ERPS-C at Time 1 predicting child-reported socioemotional outcomes at Time 2	66

LIST OF FIGURES

Figure 1: Diagram of emotion regulation processes and strategies; partially referenced from the Process Model of Emotion Regulation (Gross, 1998)	67
Figure 2: Example CFA Model for Goal 1	68
Figure 3: Final Figural Model for the ERPS-C	69

CHAPTER ONE

INTRODUCTION

Emotion Regulation

Individuals routinely face circumstances that elicit a wide range of negative or positive emotions. The experience of an emotion can activate a variety of systems (e.g., attention, memory, motivation, motor) that coordinate responses to environmental stimuli (Levenson, 1999). The magnitude and duration of an affective response to stimuli may not always be optimal to a person's needs or goals. For instance, a child arguing with their peer at school may incur behavioral consequences when their reaction is to yell or fight out of anger; a person experiencing high levels of anxiety may have a difficult time effectively completing their high-stakes work presentation. The ability to respond adaptively to emotion eliciting stimuli is necessary for adequate psychological, social, academic, and occupational functioning. Methods by which individuals manage and change if, when, and how emotions are experienced and expressed are described as emotion regulation (Gross, 2014). Processes of emotion regulation can involve the up-regulation or down-regulation of positive or negative emotions and can be automatic or effortful in nature (Campbell-Sills, Ellard, & Barlow, 2014; Gross & Thompson, 2007). Emotion regulation has emerged as an impactful affective construct in the study of children's psychological and behavioral functioning over the last few decades (Webb, Miles, & Sheeran, 2012). A flood of empirical research has debated the conceptual definition of emotion regulation, its theoretical underpinnings, differentiation from related constructs, various methods used to employ it, its impact on psychopathology and physical health, and its development over the human lifespan (Gross, 2013).

The capacity to regulate emotion is thought to emerge in early childhood—typically developed infants and toddlers are aware of their own distress and can make attempts to self-soothe (Eisenberg et al., 2001; Bandon et al., 2008). During this developmental period, emotion regulation is largely facilitated via caregivers (e.g., comforting a crying child), a relational process which serves to model regulatory practices so that children can increasingly deploy these skills independently (Eisenberg, Cumberland, & Spinrad, 1998; Eisenberg & Sulik, 2012; Thompson, 1994). In early childhood, children’s general understanding of emotions becomes more robust, including more advanced skills in assessing emotionally arousing situations and determining causes and consequences of their own responses to such situations (Gullone, Hughes, King, & Tonge, 2010). Additionally, related self-regulatory habits and executive functioning skills are also emerging (Eisenberg, Hofer, Sulik, & Spinrad, 2015); effortful control of one’s own emotional and behavioral responses via increasingly internal cognitive processes continues to develop from early childhood into adolescence (Eisenberg, Spinrad, & Eggum, 2010). The successful transition into increasingly structured environments as children progress through diverse academic and social contexts requires the ability to properly regulate in emotionally arousing situations (Bandon et al., 2008).

Deficits in the effective use of emotion regulation strategies are associated with the development of greater internalizing problems (i.e., anxiety and depression), externalizing behaviors (i.e., impulsive and disruptive behavior), victimization, and peer conflict, directly impacting a child’s academic success, social functioning, and overall psychological health (Eisenberg, Spinrad, & Eggum, 2014; Gardner et al., 2017). Conversely, the adaptive use of emotion regulation strategies has been found to promote positive psychological and behavioral functioning (e.g., decreased anxiety symptoms, depressive symptoms, and externalizing

behaviors) and serve as a protective factor for children predisposed to mental health concerns due to genetic vulnerabilities (e.g., parental mental health challenges) or environmental adversity (e.g., child maltreatment; Daniel, Abdel-Baki, & Hall, 2020). As early and middle childhood subsume the initial development of emotion regulation capabilities, the measurement of emotion regulation and subsequent increased understanding of the refinement of adaptive emotion regulation processes is critical to the development of effective preventative and therapeutic interventions that may target emotion regulation in youth. Acquisition of adaptive emotion regulation abilities may be particularly critical in this time period prior to entering adolescence, where shifting social and academic demands emerge alongside heightened emotional reactivity, increased risk-taking behaviors, and greater impulsivity (Young, Sandman, & Craske, 2019).

Emotion Regulation Strategies

Comprehensive measurement of emotion regulation must consider the different functions of emotion regulation and the diversity of emotion regulation processes and strategies subsumed under particular functional domains. Various methods of regulating emotions have been identified in the literature as more or less adaptive. Emotion regulation strategies like cognitive reappraisal and problem solving are thought to be adaptive strategies for modulating emotions and are often associated with lower internalizing symptoms, lower experiences of negative affect, and increased interpersonal functioning (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Goldin, McRae, Rame, & Gross, 2007; Richards & Gross, 2000). Cognitive reappraisal describes the ability to alter one's thinking about a situation to diminish the intensity or duration of an emotional response. The ability to develop more benign or positive perceptions of emotionally arousing situations via reappraisal can reduce the level of situational distress (Gross, 1998). Deficits in the ability to shift one's thinking about stressful situations has been tied to several

theoretical models of anxiety and mood disorders (Beck, 1976; Clark, 1986). Problem solving efforts involve intentional efforts to alter a stressful situation or manage its consequences. The modification or removal of stressors through the deployment of problem-solving strategies is thought to reduce the intensity or duration of a negative affective response (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Alternatively, poorly developed skills in problem solving have also been theoretically and empirically linked to psychopathology, including mood and anxiety disorders (Chang, Downey, & Salata, 2004; Gotlib & Arsanow, 1979; Kaslow, Tanenbaum, Abramson, Peterson, & Seligman, 1983).

Alternatively, utilizing suppression, avoidance, or rumination as methods of regulating affective experiences are often considered maladaptive strategies for modulating emotion (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Expressive suppression (i.e., efforts to reduce the outward expression of an emotion) and experiential suppression (i.e., efforts to suppress and avoid experience of an emotion) involve the intentional avoidance of emotional engagement that often leads to a short-term reduction in emotional intensity but long-term difficulties with increased emotional arousal and hypersensitivity to stressors (Gross, 1998; Gross & Thompson, 2007; Wenzlaff & Wegner, 2000). The pervasive use expressive or experiential suppression as a regulator strategy is considered a risk factor for mood and anxiety disorders, interpersonal challenges, and overall negative wellbeing (Gross, 2014; Gross & John, 2003). Rumination on the experience of a negative emotion or negative stimuli is also considered a less adaptive regulatory strategy (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Sustained and repetitive focus on experiences of distress appear to disrupt adaptive problem solving and decision-making processes, as frequently identified in symptomology related to anxiety and depressive disorders (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007).

Measurement of Emotion Regulation

As emotion dysregulation is increasingly recognized as a key deficit for individuals with mood and anxiety disorders, research on the measurement of emotion regulation has proliferated. However, significant limitations exist in the self-report measurement of emotion regulation strategies in children (Cracco, Durme, & Braet, 2015). For younger populations, typical methods for assessing psychological constructs involve both direct observational assessment and mixed informant sources. Other-report measures (e.g., from teachers, parents) of emotion regulation are informative yet limited to their assessment of observable behaviors. While it is often assumed that children may have developmentally appropriate limitations in reflecting on and reporting about their own complex intrapsychic processes, child reports of emotion-related symptoms (e.g., anxiety and depressive symptoms) are often found to be more predictive of meeting criteria for diagnostic outcomes than parent reports (Cosi, Canals, Hernandez-Martinez, & Vigil-Colet, 2010; Moretti, Fine, Haley, & Marriage, 1985). As regulatory processes for affective experiences are more internal in nature (e.g., choosing to think differently about an emotional situation, choosing to suppress the expression of an emotion), having adequate self-report assessment tools is necessary. This gap in existing research is significant, as understanding the use of emotion regulation processes during the developmental period may have significant implications for the field's understanding of children's emotion management choices.

Initial studies on how to measure regulatory processes in children focused on methods of coping with stress via problem-focused, emotion-focused, approach, and avoidance coping methods (De Boo, & Wicherts, 2009; Billings & Moos, 1981; Folkman & Lazarus, 1988). However, these measures focus generally on how children might manage environmental stressors rather than specifically examining the modulation of emotions. More recently, assessment tools

have been developed to examine how children and adolescents regulate negative emotions. Measures like the Cognitive Emotion Regulation Questionnaire (Garnefski, Rieffe, Jellesma, & Terwogt, 2007), the Emotion Regulation Questionnaire for Children and Adolescents (Gullone & Taffe, 2012), the Children's Response Styles Questionnaire (Abela, Brozina, & Haigh, 2002), and the Children's Emotion Management Scale (Zeman, Shipman, & Suveg, 2002) are widely used and have adequate psychometric properties. However, most of these measures are limited in the number of emotion regulation strategies they assess (e.g., assessing cognitive reappraisal and expressive suppression only). Moreover, few existing measures of emotion regulation in children integrate an empirically supported theoretical model of emotion regulation in the structure of the measurement tool. For instance, the FEEL-KJ (Grob & Smolenski, 2005) measures a broad range of regulatory strategies while lacking a nuanced theoretical structure to organize its content.

Theoretical Framework of Emotion Regulation

A well-established theoretical model for the utilization of emotion regulation processes exists (Gross, 1998). Gross's Process Model and Extended Process Model (PM and EPM; Gross 1998, 2007) provide a framework that places the deployment of regulatory strategies within a temporal sequence. This model posits that individuals assess and implement emotion regulation strategies that are either antecedent-focused (occurring before an emotion response is generated) or response-focused (occurring after an emotional response is generated), in order to manage emotions in ways that promote goal attainment. First, an emotionally stimulating circumstance arises (situation), after which an individual must apply their focus (attention) and make interpretations about the situation (appraisal) based on their goals. This sequence yields an emotional reaction (response) which may subsequently alter the situation and re-start the process (Dryman & Heimberg, 2018; Gross, 1998). Throughout this sequence, the Process Model places

particular emotion regulation strategies into five categories of action: (1) selecting situations that elicit particular emotions, (2) modifying the emotion-eliciting situation itself, (3) shifting one's attention to different aspects of an emotion-eliciting situation, (4) altering one's cognitions about the emotion-eliciting situation, and (5) modulating one's emotional responses to the situation (Gross, 1998; 2015). Table 1 describes some specific strategies classified and defined within their regulatory process category. The structure of this framework is outlined in extant literature as explicative of the role that emotion dysregulation can play in the presence of psychopathology (Gross, 2015). While limited research has examined the applicability of this entire model in emotion regulation development or emotion regulation use in young children, existing studies on child emotion regulation have operationalized some strategies within Gross's Process Model (e.g., Cognitive Reappraisal, Expressive Suppression; Gullone, Hughes, King, & Tonge, 2010).

CHAPTER TWO

THE PRESENT STUDY

The proposed dissertation study was designed to develop and validate a theoretically informed self-report measure of emotion regulation processes (Emotion Regulation Process Scale for Children; ERPS-C) in middle childhood. The aim of the current investigation was to address several limitations pertaining to the measurement of emotion regulation. First, the proposed measure strives to assess several emotion regulation strategies representative of the various domains of emotion regulation processes. Existing measures often assess only two or three categories of emotion regulation strategies (e.g., the ERQ-CA assessing expressive suppression and cognitive reappraisal only), despite the recognition of other emotion regulation processes. Second, the proposed measure was designed to incorporate Gross's Process Model of emotion regulation, accounting for the five steps of the emotion regulation process and their related strategies (Gross, 1998; 2015). Existing measures often organize strategies into adaptive and maladaptive factor structures, without integrating a more comprehensive framework. This framework has been established in the literature on emotion regulation across the lifespan, but few studies have examined its proficiency in capturing emotion regulation within a specific developmental age group. Finally, the proposed measure was developed and validated in a sample of third and fourth grade children, ranging from approximately eight to ten years old. Existing self-report measures available for children of this age are limited, though this period is a critical developmental range in which many regulatory strategies may emerge and be utilized in increasingly complex social contexts (Gullone, Hughes, King, & Tonge, 2010). As such, this study aims to validate a measure developmentally appropriate for young school-age children.

Goal 1. The first project goal was to validate the ERPS-C in a large sample of elementary school-aged children and to examine the psychometric properties of the measure. The internal structure of the ERPS-C was examined, with the goal of replicating a specified thirteen-factor structure (Process Model; Gross, 1998; 2015) explicated in Figure 1, via confirmatory factor analysis (CFA). The proposed CFA model is displayed in Figure 2.

Goal 2. Second, this project intended to establish the criterion validity of the ERPS-C by examining whether emotion regulations processes measured by the ERPS-C are associated with other established measures of emotion regulation. To evaluate the criterion validity of the ERPS-C, we investigated its relation to the Emotion Regulation Checklist (ERC; parent-report; Shields & Cicchetti, 1997) and the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA; self-report; Gullone & Taffe, 2012). Overall, we expected positive associations between the adaptive strategies on the ERC and ERQ-CA (i.e., emotion regulation, cognitive reappraisal) and the ERPS-C (i.e., problem solving, cognitive reappraisal). We also expected positive associations between the maladaptive strategies on the ERC and ERQ-CA (i.e., negative lability, expressive suppression) and the ERPS-C (i.e., rumination, suppression).

This project also intended to establish the convergent validity of the ERPS-C by examining associations between subfactors of the proposed measure and several other measures of psychological and social functioning. As suggested by extant literature, we expected problem solving, reappraisal, and perspective taking (subfactors of the proposed ERPS-C measure) to be positively associated with self-reports of coping skills, positive emotions, and healthy social functioning. We expected problem solving, reappraisal, and perspective taking to be negatively associated with self-reports of anxiety, depressive symptoms, and negative emotions. Conversely, we expected rumination and suppression to be negatively associated with self-

reports of coping skills, positive emotions, and peer relationships. We expected problem solving, reappraisal, and perspective taking to be positively associated with self-reports of anxiety, depressive symptoms, and negative emotions. The ERPS-C also strives to expand examination of relationships between emotion regulation strategies and related outcomes that have not been previously examined; we expected that situation selection strategies and distraction strategies would also be negatively associated with self-reports of anxiety, depressive symptoms, and negative emotions and positively associated with self-reports of coping skills, positive emotions, and peer relationships.

Goal 3. Third, this study aimed to examine the predictive validity of the ERPS-C by examining its longitudinal measurement invariance and determining whether scores on any specific subfactors of the ERPS-C at an initial timepoint would emerge as significant predictors of other measures of social and psychological functioning. Previous studies have indicated that the use of certain adaptive or maladaptive emotion regulation strategies is predictive of changes in internalizing symptoms (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Nolen-Hoeksema, Stice, Wade, & Bohon, 2007). As such, we also expected that endorsement of utilizing ERPS-C subfactors problem solving and reappraisal would emerge as negative predictors of anxiety and depressive symptoms. Alternatively, we expected that endorsement of ERPS-C subfactors rumination and suppression would emerge as positive predictors of anxiety and depressive symptoms.

CHAPTER THREE

METHODOLOGY

Procedure

Participants were recruited from third and fourth grade classrooms within six elementary schools in Knox County. Excluded from the study were (1) children in self-contained special education classes and (2) children with a pervasive developmental disorder whose pattern of symptoms would inhibit them from being able to accurately answer study questions. Data collection occurred at two time points, in the spring of one academic year and fall of the next academic year. The University Institutional Review Board approved the project prior to the start of data collection. After acquiring principal approval from each school, project information was sent to teachers; this information included a description of the purpose of the study and procedures for teacher distribution of materials to their students. Teachers sent home consent forms to all students in their classroom. Returned child assent and parent consent forms were required for participation in the project.

The first cohort of participating children completed questionnaires in the spring semester of 2022 and again in the fall semester of 2022. Due to low rates of returned consent forms in the first recruitment effort, permission was granted to recruit again in the fall semester for an additional cohort of participants who completed questionnaires only in the fall semester of 2022. Questionnaires were completed in groups overseen by trained research assistants who read all instructions and items aloud. Parents completed one set of demographic forms and study questionnaires via paper measure packets sent home by teachers in an envelope. The assessment procedure for consented children was identical in both spring and fall data collections.

Participants

Data were collected from 308 third and fourth grade students across six public elementary schools in the southeastern United States. Participants were recruited in two different cohorts; Cohort 1 participated in a Time 1 data collection in the Spring and a Time 2 data collection in the Fall, while Cohort 2 participated only in a Time 1 data collection in the Fall. Cohort 1 was comprised of 196 students and Cohort 2 was comprised of 112 students. The total sample of participants were 45.4% male and 54.6% female. Participants were between the ages of 8 and 12 years ($M = 9.53$ years, $SD = .714$). The majority of participants identified as White (68.8%), followed by mixed race (10.4%), Black (10.1%), Hispanic (8.0), 2.4% (Asian), and less than 1% identified as other in the racial/ethnic category. There were minor differences in the demographic makeup of Cohorts 1 and 2, with Cohort 2 being less White (6.3% less) and less male (6.9% less).

Measures

Development of Proposed Measure (ERPS-C). The newly developed Emotion Regulation Process Scale for Children (ERPS-C) aims to assess the use of emotion regulation strategies across antecedent-focused and response-focused domains. This measure was developed by the principal investigator via extensive review of the literature on the Process Model (Gross, 1998; 2015) of emotion regulation and additional empirical studies examining the model's use in organizing the identification and implementation of various emotion regulation strategies (Allen & Windsor, 2019; Gullone, Hughes, King & Tonge, 2010; Webb, Miles, & Sheeran, 2012). Categorization of strategies within Gross's process categories and descriptions of strategies were crafted based on existing descriptions. Expert feedback was elicited from other

expert researchers in the field of child development and psychopathology; feedback on measure structure, language, and items was discussed and integrated as the lead researchers saw fit.

The proposed initial draft of the ERPS-C measure is a 43-item measure assessing a child's tendency to engage in situation selection, situation modification, attentional deployment, cognitive change, and response modulation in order to regulate the occurrence of negative affect. Items are rated on a 5-point scale from 1 (*Never*) to 5 (*Always*). The 43 items on this measure fall across 13 sub-categories of emotion regulation processes. Within situation selection is (1) avoidance of negative elicitation and (2) seeking of positive elicitation. Within situation modification is (3) active problem solving and (4) reflective problem solving. Within attentional deployment is (5) positive distraction, (6) neutral distraction, (7) rumination on feelings, and (8) rumination on situation. Within cognitive change is (9) reappraisal of feeling, (10) reappraisal of situation, and (11) perspective taking. Finally, within response modulation is (12) expressive suppression and (13) experiential suppression. Table 1 describes the specific strategies classified and defined within each regulatory process category.

Emotion regulation (parent-report). The Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) is a 24-item parent-report measure of children's self-regulation. Items are rated on a 4-point scale from 1 (*Never*) to 4 (*almost always*) and assess a child's use of emotion regulation as well as their emotional negativity and lability. Previous studies have found the ERC has acceptable internal consistency and validity (Shields & Cicchetti, 1997).

Emotion regulation (child-report). The Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA; Gullone & Taffe, 2012) is a 10-item self-report questionnaire measuring a child's tendency to use expressive suppression and cognitive reappraisal as methods of regulating their emotions. Items are rated on a 5-point scale from 1 (*completely disagree*) to 5

(*completely agree*). Previous studies have found satisfactory internal consistency for both subscales as well as sound construct and convergent validity (Gullone & Taffe, 2012; Gullone, Hughes, King, & Tonge, 2010).

Coping skills. The Self-Report Coping Measure- Child Version (Causey & Dubow, 1992) is a 34-item measure that examines a child's use of problem solving, social support seeking, internalizing habits, externalizing habits, and distancing habits in response to stressful situations. Items are scored on a 5-point scale from 1 (*Never*) to 5 (*Always*). Previous studies have found satisfactory internal consistency across all subscales in addition to adequate construct validity (Causey & Dubow, 1992).

Internalizing distress. The PROMIS-A-SF (8 items) assesses anxiety symptoms and the PROMIS-D-SF (8 items) assesses depressive symptoms. These measures come from the Patient-Reported Outcomes Measurement Information System (Irwin et al., 2010; Varni et al., 2013). Items are scored on a 5-point scale from 0 (*Never*) to 4 (*Almost Always*) and averaged. PROMIS measures were developed using state-of-the-art procedures for item selection and have undergone rigorous psychometric validation demonstrating good reliability and validity (Irwin et al., 2010; Varni et al., 2013).

Reactive aggression. A modified version of the Reactive Proactive Aggression Questionnaire (RPQ; Raine et al., 2006) measures reactive aggression and externalizing behaviors. The 11 items that make up the reactive aggression subscale will be used for this study, with one item's language being modified to fit the developmental level of our sample. The subscale will measure a child's self-report of how often they engage in aggressive and externalized behavior in response to a perceived threat or provocation. Items are scored on a 5-point scale from 1 (*Never*) to 5 (*Almost Always*). The RPQ has proven to be a reliable and valid

measure of proactive and reactive aggression in child and adolescent samples (Raine et al., 2006).

Positive and negative emotions. The Positive and Negative Affect Questionnaire-Child (PANAS-C, 20 items; Lauren et al., 1999; Watson, Clark, & Tellegen, 1988) measures the presence of positive and negative emotions. Children are provided with 20 emotion words (10 positive, 10 negative). Items are scored on a 5-point scale from *Very Slightly* or *Not at All* to *A lot* and children are asked to respond with how much they have felt this way [specific emotion] in the past few weeks. Previous studies have found satisfactory internal consistency for both the positive and negative affect subscales; adequate convergent validity has also been established (Hughes & Kendall, 2009; Lawlor et al., 2014; Schonert-Reichl & Lawlor, 2010).

Peer relationships. The PROMIS-PR-SF (De-Walt et al., 2013) assesses peer relationship functioning. This measure comes from the Patient-Reported Outcomes Measurement Information System and is specifically designed to measure peer relationships. The 8-item self-report measure assesses friendship quality and peer acceptance. Items are rated on a 5-point scale from 1 (*Never*) to 5 (*Almost Always*). PROMIS measures were developed using state-of-the-art procedures for item selection and have undergone rigorous psychometric validation; the PROMIS-PR-SF has demonstrated acceptable reliability and validity (Devine et al., 2018; DeWalt et al., 2013).

CHAPTER FOUR

DATA ANALYSIS

Descriptive statistics for observed variables and correlations among primary study variables were estimated using SPSS 29; primary Confirmatory Factor Analyses (CFAs) and structural models were estimated using Mplus 8.8. As analyses were based on Likert-scale responses that produce categorical (ordinal) data (Rhemtulla, Brosseau-Liard, & Savalei, 2012), robust weighted least-squares with mean and variance adjustment (WLSMV) estimator were used. This estimator is recommended when conducting confirmatory factor analysis with categorical data (Flora & Curran, 2004; Muthén, Du Toit, & Spisic, 1997); data containing missing values is listwise deleted. For confirmatory factor analyses, the factor identification method was used, setting the scale of each latent variance to 1.0 to obtain standardized estimates (T. D. Little, Slegers, & Card, 2006). Model fit for CFAs were evaluated using the criteria, CFI > .90, RMSEA < .08, and SRMR < .08 (Bentler, 1990; T. A. Brown, 2015; Hu & Bentler, 1999; T. D. Little, 2013).

To address Goal 1, confirmatory factor analysis was conducted to examine the measurement properties of the proposed model. Items measuring specific constructs were set to load onto latent constructs (proposed item subscales) informed by the theoretical model. The examination of modification indices indicated adjustments that could be made to the model to improve model fit. Specifically, proposed modifications with respect to correlating residuals between items with similar wording and items that appeared to load onto an additional factor. To address Goals 2 and 3 (establishment of convergent and predictive validity), confirmatory factor analyses and structural equation models were estimated to examine the cross-sectional and longitudinal associations between emotion regulation processes and measures of emotional, psychological, and social functioning.

For Goal 3, longitudinal CFA was utilized to examine the measurement invariance of the best fitting model to data from Cohort 1 across timepoints 1 and 2. This is done by continuously setting the equality of the measurement model parameters over time. First, the configural invariance model tested whether the same general pattern of factor loadings holds across time points. Next, the weak invariance model set corresponding factor loadings to be equal across time points. Finally, the strong invariance model equated corresponding factor loadings and thresholds to be equal across time points. At each level of invariance, the change in CFI and RMSEA were examined to determine whether there was a significant difference between the more and less restrictive model. Changes in CFI less than 0.01 and model RMSEA values falling within each other's confidence interval were criteria for establishing each level of factorial invariance. To establish predictive validity of the ERPS-C, ten longitudinal structural equation models were estimated to examine whether scores on the latent factors of the ERPS-C at Time 1 significantly predicted changes in socioemotional constructs over time. ERPS-C subfactors and Time 1 scores on the dependent variable were simultaneously entered in regressions predicting Time 2 scores on the dependent variable. Confirmatory factor analysis models were estimated to establish factorial invariance of constructs over time prior to estimating SEM models following the same procedures outlined previously.

Treatment of Missing Data

Across demographic and child report variables, approximately 10% of data was missing, with the percentage of missing data ranging from 0 to 10.7%. In the case of collected parent measures, approximately 56% of participant parents completed and returned parent-report emotion regulation measures. As such, models utilizing parent data were run utilizing a subsample ($n = 171$) of participants whose parents completed and returned their measures. There were no significant demographic differences between this subsample of participants in

comparison to the larger participant sample, aside from some difference in racial/ethnic makeup. The subsample of participants who turned in parent-report measures were 75.2% White, as opposed to the 68.8% White makeup of the entire sample.

CHAPTER FIVE

RESULTS

Descriptive Statistics

Descriptive statistics for observed variables in Cohorts 1 and 2 are presented in Table 2. Correlations among primary observed and latent study variables are presented in Table 3. Of note, participants identifying as female were significantly correlated with higher scores on the ERPS-C Rumination ($r = .236, p < .001$), the ERPS-C Expressive Suppression ($r = .145, p = .040$), the PANAS Negative Affect ($r = .130, p = .035$), the PROMIS-A-SF Anxiety ($r = .192, p = .002$), and the PROMIS-D Depression ($r = .142, p = .023$) subscales. Participant racial/ethnic minority status was significantly correlated with higher scores on the ERPS-C Experiential Suppression ($r = .174, p = .020$) and SRCM-C Distancing ($r = .140, p = .037$) subscales.

Primary Analyses

Study Goal 1: Factor Structure of the ERPS-C

Confirmatory factor analysis. The baseline theoretically informed thirteen-factor model for the full sample at Time 1 yielded error messages and out of bounds estimates (e.g., correlations greater than 1.0) that warranted closer examination of the factor structure. Several latent factors in the initial model of the ERPS-C were highly correlated: (1) Rumination on Feelings correlated with Rumination on Situation at .944; (2) Reappraisal of Feelings correlated with Reappraisal of Situation at 1.042; (3) Neutral Distraction correlated with Positive Distraction at 1.005; (4) Neutral Distraction correlated with Reflective Problem Solving at 1.248; and (5) Positive Distraction correlated with Reflective Problem Solving at 1.198. As such, initial modifications to the baseline model included collapsing latent subscales on the ERPS-C with high correlations. This yielded a nine-factor model with new latent subscales: (1) Rumination

(Rumination on Feelings and Rumination on Situation), (2) Reappraisal (Reappraisal of Feelings and Reappraisal of Situation), and (3) Cognitive Distraction (Positive Distraction, Neutral Distraction, and Reflective Problem Solving). Combining these latent constructs resolved the initial error messages and eliminated correlations greater than 1.0; all factor loadings were significant at $p < .001$.

When examining the pattern of item loadings across each latent factor, a number of items did not perform well and were removed one at a time. Model fit and loadings were re-evaluated at each step. Items 3 (“*I try not to do things that make me upset*”), 4 (“*When I feel upset, I try to remember that it’s okay to feel upset sometimes*”), 6 (“*When I feel upset, I think a lot about what I’m feeling*”), and 24 (“*When I feel upset, I make sure no one else knows how I feel*”) were removed from the model, resulting in an improved pattern of factor loadings for latent factors and overall model fit. Additionally, item 42 (“*When I feel upset, I think of what I could do to make things better*”) appeared to load better on the Reappraisal factor rather than in its original designation on the Cognitive Distraction factor. As such, that item was moved to load onto Reappraisal. A final nine-factor, 39-item model was associated with good model fit (CFI = 0.930; RMSEA = 0.046; SRMR = 0.058). All factor loadings were significant ($p < .0001$) and ranged from .49 to .91. Correlations among latent factors ranged from -.24 to .82. Subsequent analyses and models for this study were estimated using this updated ERPS-C model. Correlations among latent factors and factor loadings from the final model of the ERPS-C are presented in Table 3 and Table 4, respectively. A visual representation of the final model is displayed in Figure 3.

Reliability. Inter-scale reliability of the ERPS-C’s subscales was calculated using McDonald’s omega, an equivalent of Cronbach’s alpha for ordinal data (Zumbo, Gadermann, &

Zeisser, 2007). Omega coefficients ranged from .625 (Seeking Positive Elicitation) to .870 (Cognitive Distraction) and are reported in Table 5

Study Goal 2.1: Criterion Validity of the ERPS-C

To assess the ERPS-C's relation to another child report measure of emotion regulation, correlations with the ERQ-CA were estimated via confirmatory factor analysis in the full sample at Time 1 data. Correlations are displayed in Table 6. Additionally, structural models were estimated to examine any unique associations between factors of the ERPS-C and the ERQ-CA. Regression coefficients are presented in Table 7. Results confirmed expected relationships: (1) scores on the ERPS-C Reappraisal subscale were significantly correlated with the Cognitive Reappraisal subscale on the ERQ-CA ($r = .769, p < .001$); (2) scores on the ERPS-C Expressive Suppression and Experiential Suppression subscales showed significant correlations with the Expressive Suppression subscale on the ERQ-CA ($r = .721, p < .001$; $r = .252, p = .001$). Results of the structural model revealed that scores on the ERPS-C Reappraisal subscale emerged as a unique and significant correlate with scores on the Cognitive Reappraisal subscale of the ERQ-CA ($\beta = 1.112, p = .018$).

Also examined was the relation between ERPS-C factors and parent-reported ERC factors. Due to the significant amount of missing parent report measures, these analyses were calculated with a subset of the full sample ($n = 171$) that included data solely from participants whose parents returned parent measures. Correlations from the confirmatory factor analysis are displayed in Table 8. Several expected relationships were found: (1) scores on the ERPS-C Seeking Positive Elicitation subscale were significantly negatively correlated with the Lability/Negativity subscale on the ERC ($r = -.199, p = .023$); (2) scores on the ERPS-C Active Problem Solving subscale were significantly negatively correlated with the Lability/Negativity

subscale on the ERC ($r = -.238, p = .006$); (3) scores on the ERPS-C Cognitive Distraction subscale were significantly negatively correlated with the Lability/Negativity subscale on the ERC ($r = -.241, p = .004$); (4) scores on the ERPS-C Reappraisal subscale were significantly negatively correlated with the Lability/Negativity subscale on the ERC ($r = -.200, p = .015$); (5) scores on the ERPS-C Rumination subscale were significantly positively correlated with the Lability/Negativity subscale on the ERC ($r = .201, p = .007$); (6) scores on the ERPS-C Expressive Suppression subscale were significantly positively correlated with the Lability/Negativity subscale on the ERC ($r = .287, p = .001$); and (7) scores on the ERPS-C Experiential Suppression subscale were significantly positively correlated with the Lability/Negativity subscale on the ERC ($r = .227, p = .008$). No scores on any subscale of the ERPS-C yielded significant correlations with the broad Emotion Regulation subscale on the ERC. Results of the structural model examining unique associations between scores on the ERPS-C factors and subscales of the ERC did not converge. Lack of convergence was likely due to an inadequate sample size to estimate this complex model.

Study Goal 2.2: Convergent Validity of the ERPS-C

To examine the ERPS-C's relation to other child reports of socioemotional functioning, correlations with the SRCM-C, PROMIS-Anxiety, PROMIS-Depression, RPQ, PANAS-C, and PROMIS-Peer Relations were estimated via confirmatory factor analyses. Correlations for each model are displayed in Tables 9, 11, 13, 15, and 17. Scores on the ERPS-C subscale Avoidance of Negative Elicitation were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .290$) and Peer Relations ($r = .250$). Scores on the ERPS-C subscale Seeking of Positive Elicitation were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .516$), Social Support Seeking ($r = .328$), Positive Affect ($r =$

.359), and Peer Relations ($r = .480$). Scores on the ERPS-C subscale Active Problem Solving were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .572$), Social Support Seeking ($r = .375$), Positive Affect ($r = .365$), and Peer Relations ($r = .420$). Scores on the ERPS-C subscale Cognitive Distraction were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .459$), Social Support Seeking ($r = .414$), Distancing ($r = .367$), Positive Affect ($r = .422$), and Peer Relations ($r = .392$). Scores on the ERPS-C subscale Rumination were significantly ($p < .001$) correlated with subscale scores measuring Internalized Coping, ($r = .609$), Externalized Coping ($r = .359$), Anxiety Symptoms ($r = .541$), Depressive Symptoms ($r = .624$), Reactive Aggression ($r = .429$), Positive Affect ($r = -.217$), and Negative Affect ($r = .497$). Scores on the ERPS-C subscale Reappraisal were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .596$), Social Support Seeking ($r = .519$), Distancing ($r = .301$), Positive Affect ($r = .358$), and Peer Relations ($r = .429$). Scores on the ERPS-C subscale Perspective Taking were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .522$), Social Support Seeking ($r = .520$), Positive Affect ($r = .334$), and Peer Relations ($r = .271$). Scores on the ERPS-C subscale Expressive Suppression were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .308$), Internalized Coping ($r = .366$), Distancing ($r = .296$), and Depressive Symptoms ($r = .255$). Scores on the ERPS-C subscale Experiential Suppression were significantly ($p < .001$) correlated with subscale scores measuring Problem Solving ($r = .373$), Social Support Seeking ($r = .391$), Distancing ($r = .469$), and Peer Relations ($r = .272$).

Structural models were again estimated to examine any unique associations between factors of the ERPS-C and the aforementioned child-report measures of socioemotional functioning. Regression coefficients for each model are presented in Tables 10, 12, 14, 16, and

18. Results of the structural model revealed that scores on the ERPS-C Seeking Positive Elicitation subscale emerged as a unique and significant correlate with scores on the Problem Solving subscale of the SRCM-C ($\beta = .586, p = .044$) and the PROMIS-PR-SF Peer Relations scale ($\beta = .607, p = .035$). Scores on the ERPS-C Cognitive Distraction subscale emerged as a unique and significant correlate with scores on the Distancing subscale of the SRCM-C ($\beta = .423, p = .035$). Scores on the ERPS-C Rumination subscale emerged as a unique and significant correlate with scores on the Internalizing subscale of the SRCM-C ($\beta = .626, p < .001$), the Externalizing subscale of the SRCM-C ($\beta = .399, p = .001$), the RPQ Reactive Aggression scale ($\beta = .504, p < .000$), the PROMIS-A Anxiety scale ($\beta = .544, p = .008$), the PROMIS-D Depression scale ($\beta = .593, p = .001$), and PANAS-C Negative Affect scale ($\beta = .522, p < .000$). Lastly, scores on the ERPS-C Perspective Taking subscale emerged as a unique and significant correlate with scores on the Problem Solving subscale of the SRCM-C ($\beta = .400, p = .010$), the Social Support Seeking subscale of the SRCM-C ($\beta = .346, p = .003$), the Internalizing subscale of the SRCM-C ($\beta = .290, p = .027$), and the PANAS-C Positive Affect Scale ($\beta = .310, p = .014$).

Study Goal 3: Predictive validity of the ERPS-C

Measurement invariance across time points. To establish factorial invariance of the ERPS-C across two time points, fit of the model at each separate time point was first estimated. Model fit values were acceptable for both Time 1 (CFI = 0.931; RMSEA = 0.047; SRMR = 0.069) and Time 2 (CFI = 0.920; RMSEA = 0.062; SRMR = 0.072), allowing for further examination of invariance. Fit of the configural model was also acceptable (CFI = 0.924; RMSEA = 0.033; SRMR = 0.075) so factor loadings were then constrained to equality across time in order to test for weak factorial invariance. The weak invariance model fit was also acceptable

(CFI = 0.925; RMSEA = 0.033; SRMR = 0.078) and there were non-significant differences in CFI and RMSEA between the configural and weak invariance model, thus establishing no significant difference in item loadings over time. Next strong factorial invariance was tested by constraining item thresholds to equality across the two time points. The strong invariance model yielded acceptable fit indices (CFI = 0.925; RMSEA = 0.032; SRMR = 0.078) and demonstrated little change in CFI and RMSEA when moving from a model with item thresholds freely estimated to a model where item thresholds were constrained across time. The test of strong invariance revealed item thresholds were equivalent over time. Overall, these results suggest that the nine-factor model of the ERPS-C meets criteria for longitudinal factorial invariance over six months. Invariance model fit statistics for the ERPS-C are displayed in Table 19. Subfactors of the ERPS-C were also stable over time. Significant ($p < .001$) positive correlations emerged between all ERPS-C subfactors at Time 1 and Time 2. Subfactor correlations across time points are displayed in Table 20.

Finally, to establish predictive validity of the ERPS-C, longitudinal structural models were estimated to examine whether scores on the latent factors of the ERPS-C at Time 1 significantly predicted changes in assessed socioemotional constructs over time. Confirmatory factor models revealed constructs were invariant over time and model fit for weak invariance models was acceptable for anxiety and depression (CFI = .934; RMSEA = .025; SRMR = .077), aggression (CFI = 0.914; RMSEA = 0.027; SRMR = 0.082), problem solving (CFI = 0.931; RMSEA = 0.028; SRMR = 0.077), social support seeking (CFI = 0.930; RMSEA = 0.028; SRMR = 0.077), internalized coping (CFI = 0.901; RMSEA = 0.031; SRMR = 0.084), externalized coping (CFI = 0.926; RMSEA = 0.029; SRMR = 0.079), distancing (CFI = .894; RMSEA = .033; SRMR = .085), positive affect (CFI = .928; RMSEA = .027; SRMR = .079),

negative affect (CFI = 0.919; RMSEA = 0.028; SRMR = 0.080), and peer relations (CFI = 0.928; RMSEA = 0.028; SRMR = 0.078).

Model fit for all subsequent structural models was also in the acceptable range; model fit information is presented in Table 21. Results from structural equation models are presented in Table 22. Results confirmed some expected relationships. Scores on the ERPS-C Avoidance of Negative Elicitation subscale emerged as a significant negative predictor of change in anxiety symptoms ($\beta = -.505, p = .019$) and negative affect ($\beta = -.607, p = .001$). Scores on the ERPS-C Seeking Positive Elicitation subscale emerged as a significant negative predictor of change in distancing coping skills ($\beta = .516, p = .014$). Scores on the ERPS-C Active Problem Solving subscale emerged as a significant negative predictor of change in reactive aggression ($\beta = -1.228, p = .031$), internalized coping skills ($\beta = -1.151, p = .033$), and externalized coping skills ($\beta = -.723, p = .049$). Scores on the ERPS-C Cognitive Distraction subscale emerged as a significant positive predictor of problem-solving skills ($\beta = 1.920, p = .025$), social support seeking ($\beta = 1.516, p = .007$), distancing coping skills ($\beta = .867, p = .423$), and positive affect ($\beta = 1.129, p = .029$). Scores on the ERPS-C Rumination subscale emerged as a significant negative predictor of positive affect ($\beta = -.605, p = .004$) and peer relations ($\beta = -.426, p = .031$), and as a significant positive predictor of negative affect ($\beta = .676, p = .005$). Scores on the ERPS-C Perspective Taking subscale emerged as a significant negative predictor of aggression ($\beta = -.572, p = .039$). Scores on the ERPS-C Expressive Suppression subscale emerged as a significant positive predictor of distancing coping skills ($\beta = .781, p = .010$). Finally, scores on the ERPS-C Experiential Suppression subscale emerged as a significant negative predictor of problem solving ($\beta = -1.686, p = .040$), social support seeking ($\beta = -1.575, p = .026$), positive affect ($\beta = -1.471, p = .006$), and peer relations ($\beta = -1.569, p = .001$). Structural models also revealed some

unexpected positive relationships. Scores on the ERPS-C Reappraisal subscale emerged as a significant positive predictor of aggression ($\beta = 2.218, p = .016$). Scores on the ERPS-C Experiential Suppression subscale emerged as a significant negative predictor of distancing coping skills ($\beta = -1.099, p = .016$). Scores on the ERPS-C Expressive Suppression subscale emerged as a significant positive predictor of problem-solving skills ($\beta = 1.259, p = .033$), social support seeking ($\beta = 1.208, p = .012$), positive affect ($\beta = .870, p = .014$), and peer relations ($\beta = .877, p = .002$).

CHAPTER SIX

DISCUSSION AND LIMITATIONS

Discussion

The goal of the present study was to examine the psychometric properties of a theoretically based, comprehensive measure of emotion regulation processes in school-aged children, the ERPS-C. The successful development of this measure would help address significant gaps in the field regarding measuring emotion regulation in a broad, developmentally appropriate, and theoretically informed manner. Confirmatory factor analysis indicated that the structure of the ERPS-C is best represented by a 9-factor model, as opposed to the theoretically imposed 13 factor model (Gross, 1998). Additionally, no higher order latent factors emerged in a well-fitting model to adequately represent Gross's theorized temporal categories (antecedent-focused and response-focused) or overarching groups of processes (e.g., Situation Modification, Attentional Deployment). Examination of the proposed factor structure indicates that fewer distinct emotion regulation processes emerged across identified domains of regulation in this sample of 3rd and 4th grade children. Specifically, the best fitting CFA model suggests that (1) Neutral Distraction, Positive Distraction, and Reflective Problem Solving, (2) Reappraisal on Feelings and Reappraisal on Situation, and (3) Rumination on Feelings and Rumination on Situation were each correlated highly enough to suggest that their items may be capturing a single construct.

This collapse in previously distinct categories of regulatory processes may suggest a less nuanced understanding or employment of emotion regulation processes in school-age children. Empirical literature suggests that preschool and school-age children largely begin to learn and adopt regulatory processes by way of observation and socialization; children are first influenced

in regulating their emotions via emotional expression and modulation being modeled and encouraged in the environment (Cole, Michel, & O'Donnell Teti, 1994). As such, many initial regulatory processes practiced by children in infancy, toddlerhood, and early childhood are behavioral in nature (e.g., soothing by seeking comforting touch). Advances in cognitive development and the ability to self-reflect on behavior, thoughts, and emotions develops across the lifespan; the use of increasingly internal cognitive processes to effortfully control one's own emotional and behavioral responses continues to develop from early childhood into adolescence (Eisenberg, Spinrad, & Eggum, 2010). Of note, several of the identified emotion regulation processes captured in the ERPS-C are fairly cognitive in nature and may entail more mature metacognitive abilities in order to both be aware of their deployment and adequately speak to utilizing them. For example, a child's ability to differentiate between thinking differently (reappraising) about a situation versus reappraising their emotions about a situation may not be well-developed. Similarly, the capacity to differentiate whether a ruminative capacity is directed towards an emotionally arousing situation or the emotions being aroused may be limited.

The regulatory processes captured in the ERPS-C's Positive Distraction, Neutral Distraction, and Reflective Problem Solving subfactors created an aggregate subfactor. Given the cognitive capacity required to engage in each of these strategies, it seems appropriate to speculate that thinking about or developing plans to solve problems may be conceptualized as a form of distraction in a less developmentally mature sample. Furthermore, the extent to which a school-age child is able to explicitly differentiate between neutral and positive forms of distraction may be limited. In summation, it is likely that the defined regulatory processes within the ERPS-C's original theoretically informed model are more specific than what can be demonstrated in a sample of school-age children. One might argue that Gross's five overarching

categories of regulatory processes may contain fewer distinct methods in an earlier developmental sample than what has emerged in empirical studies within adult populations.

This study did establish the criterion and convergent validity of the ERPS-C. Subfactors on the child-report ERQ-CA (Cognitive Reappraisal, Expressive Suppression) were highly positively correlated with subfactors on the ERPS-C with similar item content (Reappraisal, Expressive Suppression). Additionally, scores on the child-report ERPS-C subfactors displayed expected associations with the Lability/Negativity subscale of the parent-report ERC. More adaptive regulatory processes on the ERPS-C (Seeking Positive Elicitation, Active Problem Solving) were negatively correlated with scores on the ERC Lability/Negativity subscale while less adaptive regulatory processes on the ERPS-C (Rumination, Expressive Suppression) were positively correlated with the Lability/Negativity subscale of the ERC. Associations were not found between subfactors of the ERPS-C and the Emotion Regulation subscale of the parent-report ERC. This may be due to the broad nature of the ERC's Emotion Regulation subscale capturing varied emotion regulation strategies, which makes it difficult to map on to the much more specified processes measured in the ERPS-C.

Further, the ERPS-C's convergent validity was established in examination of the measure's associations with other indicators of socioemotional functioning and distress. Significant relationships were found amongst more adaptive regulatory processes on the ERPS-C (e.g., Seeking Positive Elicitation, Active Problem Solving, Perspective Taking) with scores on measures of more adaptive coping skills and functioning (e.g., Problem Solving, Social Support Seeking, Peer Relations). This is consistent with extant literature suggesting that adaptive use of emotion regulation strategies has been associated with positive psychological and behavioral functioning (e.g., decreased anxiety symptoms, depressive symptoms, and externalizing

behaviors) (Daniel, Abdel-Baki, & Hall, 2020; Eisenberg, Spinrad, & Eggum, 2014; Gardner et al., 2017). Additionally, significant relationships emerged among subfactors of the ERPS-C capturing less adaptive regulatory processes (e.g., Rumination, Expressive Suppression) and more negative socioemotional constructs (e.g., Anxiety, Depression, Internalized Coping, Negative Affect). This is also consistent with previous studies suggesting that the use of maladaptive emotion regulation strategies is associated with greater internalizing symptoms and poorer socioemotional functioning (Garnefski, Kraaij, & Spinhoven, 2001; Young, Sandman, & Craske, 2019). These theoretically expected relationships suggest that the ERPS-C is convergently valid in capturing nuanced adaptive and maladaptive regulatory processes within the sample.

Finally, examination of the ERPS-C model's measurement invariance established that the same factor structure identified in the initial Study Goal 1 confirmatory factor analysis fit the data at both time points for Cohort 1. As such, the ERPS-C appears to consistently measure the same nine regulatory processes across a six-month time period within the sample. The ERPS-C also displays some predictive validity across time in relation to several categories of social and emotional functioning. Generally, scores on more adaptive subscales of the ERPS-C (e.g., Active Problem Solving, Perspective Taking) emerged as significant unique negative predictors of change in less positive domains of functioning (e.g., reactive aggression, internalized coping, externalized coping). Conversely, scores on less adaptive subscales of the ERPS-C (e.g., Rumination, Experiential Suppression) emerged as significant unique negative predictors of change in more positive domains of functioning (e.g., positive affect, peer relations, problem solving, social support seeking). Although hypothesized that scores on the ERPS-C would be significantly predictive of change in internalizing symptoms, significant relationships between

scores on ERPS-C subscales and measures of anxiety and depression did not emerge. Research suggests that utilization of emotion regulation strategies such as rumination and suppression is predictive of internalizing symptoms (Eisenberg, Spinrad, & Eggum, 2014; Gardner et al., 2017); while significant correlations existed between these variables in our study within a single timepoint, the longitudinal data was not supportive. Additional unexpected findings from the longitudinal analyses included scores on the Reappraisal subscale of the ERPS-C positively predicting change in aggression. Within our single timepoint analyses, scores on the Reappraisal subscale performed as expected and exhibited negative relationships with aggression and other maladaptive functioning domains (e.g., anxiety, depression). Further, scores on the Expressive Suppression subscale positively predicted change in problem solving, social support seeking, positive affect, and peer relations. This may suggest that a child's use of suppression to manage emotional responses temporarily reduces emotionality and allows for engagement in other more adaptive habits (e.g., seeking out social support, engaging positively with peers). Longitudinal analyses spanning a greater amount of time might indicate more expected positive relationships between a child's use of suppression and maladaptive functioning.

Limitations

While the results of this study do provide psychometric support for the ERPS-C, several limitations should be acknowledged. Foremost, the sample size for the study is small relative to the complexity of the analyses and models estimated. Replicating these models within a larger sample of school-age children would strengthen the validity of the measure and potentially allow for further refinement in its factor structure. Limitations in sample size and lack of returned measures from parents also inhibited the examination of the ERPS-C in relation to an existing parent measure of emotion regulation. In terms of limitations in the measure, the ERPS-C did not

display overwhelmingly adequate internal consistency. McDonald's omega coefficients for the ERPS-C's subscale factors were largely in the questionable to acceptable range. This is likely partially due to the small number (e.g., only two or three) of items existing on some of the pruned subfactors in the final CFA model. Existing research has established that children and adults alike employ varying regulatory processes depending on the specific emotion experienced or anticipated (Gross, 2007). While we know that generally regulatory efforts in daily life are typically directed towards managing negative emotions, it may be beneficial for measures of emotion regulation to capture the use of strategies across specific and varied emotions. The ERPS-C was designed to broadly capture how children may choose to regulate any negative affective arousal. Future iterations of the ERPS-C could be developed to better examine regulatory process use across the emotional spectrum in a more specific way. Finally, while our items were developed at an appropriate reading level for the sample, the final version of the ERPS-C is a lengthy measure at 39 items. Utility of this measure in research and some clinical contexts may be limited due to the length and resources required to administer it.

CHAPTER SEVEN

CONCLUSIONS AND FUTURE RESEARCH

Overall, the results of this study pose the Emotion Regulation Process Scale for Children (ERPS-C) as a 39-item child-report measure capturing nine domains of emotion regulation processes informed by Gross's Process Model of emotion regulation. While the limited sample size and complex factor structure of the model yielded some limited reliability coefficients for the subscales, good model fit, established convergent validity, and factorial measurement invariance over time suggest that the ERPS-C should continue to be examined as a comprehensive measure of emotion regulation processes in school-age children. The potential clinical utility of this measure is significant, especially considering the breadth of emotional and behavioral outcomes associated with adaptive emotion regulation use. Concerns for regulating emotions and adaptive use of affect management strategies are common in school-age children and may precede increasing concerns for mental health and behavior. The use of a measure such as the ERPS-C, comprehensive and developmentally appropriate in nature, may allow for clearer and more specific assessment of strengths and deficits in use of emotion regulation in childhood. This could better inform chosen interventions geared at addressing emotional lability, poor inhibition, and internalizing and externalizing behaviors. Future studies may test the measure within a larger and/or clinical sample and complete additional psychometric examinations to further refine and establish the structure of the measure. Additional research on this measure is necessary to support its use in the beneficial assessment of emotion regulation in children, both in research and clinical applications.

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APPENDIX OF TABLES AND FIGURES

Table 1. Description of processes and strategies in the ERPS-C

Process	Strategy	Description
Situation selection	Avoidance of negative elicitation	Making attempts to keep away from people or situations that may elicit negative affect.
	Seeking of positive elicitation	Making attempts to intentionally engage with people or situations that may elicit positive affect.
Situation modification	Active problem solving	Engaging in behaviors and actions to alter a situation that elicits negative affect.
	Reflective problem solving	Engaging in the cognitive formation of ideas that could reduce one's negative affect.
Attentional deployment	Positive distraction	Placing focus on stimuli that will elicit positive affect.
	Neutral distraction	Placing focus on stimuli that will not elicit negative affect.
	Rumination on feelings	Placing focus intently on one's current emotional state.
	Rumination on situation	Placing focus intently on the source of one's current emotional state.
Cognitive change	Reappraisal of feeling	Attempting to think differently about one's current emotional state in a manner that alters affective intensity.
	Reappraisal of situation	Attempting to think differently about the cause of one's current emotional state in a manner that alters affective intensity.
	Perspective taking	Attempting to consider how others may consider similar emotional states.
Response modulation	Expressive suppression	Attempting to refrain from outwardly displaying one's current emotional state.
	Experiential suppression	Attempting to refrain from engaging with or acknowledging one's current emotional state.

Table 2. Descriptive information for observed variables in Cohorts 1 and 2

	Cohort 1			Cohort 2	
Age <i>M</i> (<i>SD</i>)	Female	Racial or Ethnic Minority	Age <i>M</i> (<i>SD</i>)	Female	Racial or Ethnic Minority
9.81 years (.635)	52.1%	29%	9.07 years (.588)	59.0%	35.3%

Table 3. Correlations among observed variables and primary study variables from the ERPS-C

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-				.							
2. Female	-.023	-										
3. Racial/Ethnic Minority	.069	.079	-									
4. ANE	.001	.135	-.045	-								
5. SPE	.094	.009	-.022	.469***	-							
6. APS	.086	.030	.020	.304***	.726***	-						
7. CDST	-.025	.065	.094	.301***	.715***	.681***	-					
8. RU	-.045	.236***	.009	.286***	-.125	-.040	-.219**	-				
9. RE	-.090	.030	.103	.335***	.593***	.799***	.819***	-.094	-			
10. PT	-.022	-.009	.047	.234**	.245**	.470***	.523***	-.009	.696***	-		
11. ESS	.060	.145*	.044	.229**	.157*	.325***	.178*	.204**	.305***	.202**	-	
12. ENS	.086	-.027	.174*	.193*	.465***	.567***	.650***	-.240**	.712***	.509***	.639***	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 4. Factor loadings for the final ERPS-C CFA model

Factor	Item	Factor Loading	Standard Error
APE			
	Item 21	.75	.069
	Item 32	.72	.060
	Item 38	.49	.067
SPE			
	Item 8	.721	.051
	Item 18	.695	.054
	Item 40	.554	.055
	Item 43	.525	.054
APS			
	Item 7	.579	.056
	Item 10	.715	.039
	Item 12	.661	.044
CDST			
	Item 1	.603	.040
	Item 13	.661	.037
	Item 14	.612	.040
	Item 17	.651	.041
	Item 19	.709	.032
	Item 28	.783	.029
	Item 30	.641	.038
	Item 33	.548	.045
	Item 34	.683	.037
	Item 41	.768	.029
RU			
	Item 15	.769	.041
	Item 29	.613	.048
	Item 36	.680	.043
	Item 37	.536	.048
	Item 39	.722	.046
RE			
	Item 2	.492	.046
	Item 9	.657	.038
	Item 11	.664	.037
	Item 16	.730	.031
	Item 22	.555	.047
	Item 35	.713	.034
	Item 42	.767	.032
PT			
	Item 20	.751	.038
	Item 25	.898	.037
ESS			
	Item 26	.903	.100
	Item 27	.491	.072
ENS			
	Item 5	.633	.050
	Item 23	.694	.046
	Item 31	.580	.055

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

Table 5. Reliability coefficient for factors of the ERPS-C

Factor	McDonald's Omega Coefficient
Avoidance of Negative Elicitation	.661
Seeking of Positive Elicitation	.625
Active Problem Solving	.659
Cognitive Distraction	.870
Rumination	.768
Reappraisal	.819
Perspective Taking	.731
Expressive Suppression	.667
Experiential Suppression	.633

Table 6. Correlations among latent factors on the ERPS-C and the ERQ-CA

	1	2	3	4	5	6	7	8	9	10	11
1. ANE	-										
2. SPE	.467***	-									
3. APS	.302***	.726***	-								
4. CDST	.300***	.714***	.681***	-							
5. RU	.287***	-.127***	-.041	-.220**	-						
6. RE	.333***	.593***	.799***	.819***	-.096	-					
7. PT	.235**	.245**	.471***	.523***	-.011	.697***	-				
8. ESS	.246**	.153	.347***	.184*	.223**	.320***	.208*	-			
9. ENS	.192*	.466***	.568***	.650***	-.238**	.713***	.510***	.695***	-		
10. CR	.260***	.469***	.550***	.690***	-.128	.769***	.477***	.254**	.523***	-	
11. ES	.120	-.199**	-.080	.000	.320***	.060	.028	.721***	.252**	.168*	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; CR, Cognitive Reappraisal (ERQ-CA); ES, Expressive Suppression (ERQ-CA).

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

Table 7. Regression examining the ERPS-C latent factors and child-reported emotion regulation

ERQ-CA Subscale	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Cognitive Reappraisal	-.060 (.157)	.132 (.304)	-.392 (.387)	.260 (.202)	-.183 (.189)	1.112 (.470)*	-.065 (.153)	.438 (.474)	-.581 (.630)
Expressive Suppression	-.105 (.157)	-.074 (.157)	-.720 (.157)	.510 (.157)	-.147 (.157)	.647 (.157)	-.031 (.157)	1.569 (.157)	-1.187 (.157)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 8. Correlations among latent factors on the ERPS-C and the ERC

	1	2	3	4	5	6	7	8	9	10	11
1. ANE	-										
2. SPE	-.547***	-									
3. APS	-.370***	.728***	-								
4. CDST	-.298***	.710***	.814***	-							
5. RU	-.267 **	-.064	-.058	-.141	-						
6. RE	-.386***	.565***	.845***	.810***	-.052	-					
7. PT	.180	-.178	-.413 ***	-.453 ***	-.047	-.682***	-				
8. ESS	.308**	-.226 *	-.391***	-.279 **	-.130	-.385 ***	.315**	-			
9. ENS	.320**	-.598 ***	-.633 ***	-.726 ***	.304**	-.785 ***	.544***	.656***	-		
10. EMOR	.008	.153	.128	.133	-.135	.074	-.083	-.092	-.008	-	
11. NEGLAB	.040	-.199*	-.238**	-.241**	.201**	-.200*	.111	.287**	.227**	-.702 ***	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; EMOR, Emotion Regulation (ERC); NEGLAB, Negativity/Lability (ERC).

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

Table 9. Correlations among latent factors on the ERPS-C and the SRCM-C

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. ANE	-													
2. SPE	.475***	-												
3. APS	.308***	.724***	-											
4. CDST	.303***	.714***	.678***	-										
5. RU	.283***	-.122	-.041	-.219**	-									
6. RE	.339***	.592***	.796***	.817***	-.093	-								
7. PT	.235**	.248**	.470***	.524***	-.008	.698***	-							
8. ESS	.231**	.155	.330***	.179*	.209**	.309***	.207**	-						
9. ENS	.194*	.465***	.566***	.650***	-.238**	.712***	.512***	.654***	-					
10. PRSLV	.290***	.516***	.572***	.459***	.003	.596***	.522***	.308***	.373***	-				
11. SOCSP	.199**	.328***	.375***	.414***	.009	.519***	.520***	.177*	.391***	.691***	-			
12. INTER	.155*	-.015	.013	-.031	.609***	.038	.188*	.366***	.081	.349***	.363***	-		
13. EXTER	-.095	-.271**	-.104	-.184*	.359***	-.064	.070	.069	-.090	-.134	.171*	.715***	-	
14. DISTA	.081	.136	.118	.367***	-.081	.301***	.205**	.296***	.469***	.361***	.338***	.463***	.289***	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; PRSLV, Problem Solving (SRCM-C); SOCSP, Social Support Seeking (SRCM-C); INTER, Internalizing (SRCM-C); EXTER, Externalizing (SRCM-C); DISTA, Distancing (SRCM-C).

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

Table 10. Regression examining the ERPS-C latent factors and child-reported coping skills

SRCM-C Subscale	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ENS	ESS
Problem Solving	-.125 (.157)	.586 (.291)*	-.122 (.319)	-.229 (.219)	-.157 (.142)	.595 (.403)	.400 (.155)*	-.669 (.470)	.531 (.341)
Social Support	-.075 (.114)	.286 (.227)	-.212 (.256)	-.126 (.208)	.070 (.120)	.386 (.308)	.346 (.116)**	.027 (.337)	.019 (.249)
Internalizing	-.160 (.137)	.237 (.239)	-.246 (.275)	.044 (.194)	.626(.119)***	-.146 (.320)	.290 (.131)*	.043 (.391)	.266 (.283)
Externalizing	-.138 (.141)	-.228 (.275)	.034 (.292)	-.080 (.231)	.399 (.125)**	.058 (.354)	.101 (.139)	.114 (.367)	-.057 (.255)
Distancing	.016 (.133)	-.153 (.246)	-.293 (.268)	.423 (.199)*	.087 (.128)	-.006 (.334)	-.093 (.138)	.487 (.377)	.022 (.276)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 11. Correlations among latent factors on the ERPS-C and the PROMIS-A-SF and PROMIS-D-SF

	1	2	3	4	5	6	7	8	9	10	11
1. ANE	-										
2. SPE	.469***	-									
3. APS	.303***	.725***	-								
4. CDST	.301***	.715***	.680***	-							
5. RU	.281***	-.123	-.042	-.217**	-						
6. RE	.335***	.593***	.798***	.818***	-.096	-					
7. PT	.235**	.244**	.470***	.522***	-.010	.696***	-				
8. ESS	.244**	.154	.348***	.184*	.224**	.322***	.207*	-			
9. ENS	.193**	.465***	.567***	.650***	-.239**	.711***	.509***	.691***	-		
10. ANX	-.012	-.138	-.140	-.052	.541***	-.007	-.008	.241**	-.031	-	
11. DEP	.044	-.193**	-.155*	-.176**	.624***	-.101	-.006	.255***	-.094	.801***	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; ANX, anxiety (PROMIS-A-SF); DEP, Depression (PROMIS-D-SF).

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

Table 12. Regression examining the ERPS-C latent factors and child-reported internalizing symptoms

PROMIS Scale	ERPS-C Subscale β(SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Anxiety	-.336 (.184)	.220 (.333)	-.688 (.405)	.192 (.256)	.544 (.204)**	.578 (.472)	-.065 (.169)	-.363 (.703)	.450 (.537)
Depression	-.209 (.161)	.127 (.299)	-.409 (.367)	.060 (.225)	.593 (.178)**	.222 (.378)	.055 (.150)	-.200 (.656)	.341 (.493)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 13. Correlations among latent factors on the ERPS-C and the RPQ

	1	2	3	4	5	6	7	8	9	10
1. ANE	-									
2. SPE	.465***	-								
3. APS	.298***	.725***	-							
4. CDST	.299***	.715***	.680***	-						
5. RU	.290***	-.128	-.044	-.221**	-					
6. RE	.331***	.594***	.798***	.818***	-.100	-				
7. PT	.234**	.244**	.470***	.523***	-.013	.696***	-			
8. ESS	.232**	.157	.324***	.178*	.202**	.304***	.202**	-		
9. ENS	.191**	.466***	.568***	.650***	-.242**	.713***	.509***	.639***	-	
10. AGGR	.117	-.120	-.209**	-.169*	.429***	-.150*	.018	-.079	-.190*	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; AGGR, Reactive Aggression (RPQ).

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

Table 14. Regression examining the ERPS-C latent factors and child-reported reactive aggression

RPQ Scale	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Aggression	.005 (.124)	.191 (.269)	-.329 (.305)	-.100 (.226)	.504 (.104)***	-.058 (.355)	.172 (.129)	.192 (.315)	-.227 (.219)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 15. Correlations among latent factors on the ERPS-C and the PANAS-C

	1	2	3	4	5	6	7	8	9	10	11
1. ANE	-										
2. SPE	.470***	-									
3. APS	.305***	.726***	-								
4. CDST	.302***	.716***	.681***	-							
5. RU	.283***	-.128	-.044	-.220**	-						
6. RE	.335***	.593***	.798***	.818***	-.101	-					
7. PT	.234**	.243**	.468***	.520***	-.014	.692***	-				
8. ESS	.236**	.158	.338***	.182*	.212**	.314***	.202**	-			
9. ENS	.194**	.464***	.567***	.650***	-.242**	.711***	.505***	.665***	-		
10. POSAF	-.027	.359***	.365***	-.052	.422***	-.217***	.358***	-.046	.224	-	
11. NEGAF	-.021	-.148*	-.198*	-.120	.497***	-.115	-.062	.170*	-.112	-.211*	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; AGGR, Reactive Aggression (RPQ).

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

Table 16. Regression examining the ERPS-C latent factors and child-reported positive and negative affect

PANAS-C Scale	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Positive Affect	-.234 (.130)	.273 (.250)	.112 (.284)	.249 (.195)	-.111 (.120)	-.108 (.360)	.310 (.127)*	.007 (.257)	-.195 (.368)
Negative Affect	-.283 (.159)	.249 (.292)	-.583 (.335)	.159 (.246)	.522 (.149)***	.293 (.372)	-.006 (.141)	.323 (.374)	-.239 (.498)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 17. Correlations among latent factors on the ERPS-C and the PROMIS-PR-SF

	1	2	3	4	5	6	7	8	9	10
1. ANE	-									
2. SPE	.475***	-								
3. APS	.306***	.727***	-							
4. CDST	.302***	.715***	.681***	-						
5. RU	.284***	-.125	-.040	-.219**	-					
6. RE	.336***	.593***	.799***	.818***	-.095	-				
7. PT	.234**	.245**	.470***	.522***	-.010	.694***	-			
8. ESS	.227**	.157*	.326***	.178*	.204**	.305***	.201**	-		
9. ENS	.193*	.464***	.568***	.650***	-.239**	.712***	.508***	.642***	-	
10. PEERS	.250***	.480***	.420***	.392***	-.021	.429***	.271***	.124	.272***	-

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression; PEERS, Peer Relations (PROMIS-PR-SF).

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

Table 18. Regression examining the ERPS-C latent factors and child-reported peer relationships

PROMIS Scale	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Peer Relations	-.053 (.111)	.515 (.228)*	-.136 (.280)	-.148 (.220)	-.008 (.101)	.417 (.371)	.087 (.306)	-.196 (.306)	.109 (.214)

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

Table 19. Longitudinal measurement invariance model fit statistics for the ERPS-C

Model	CFI	RMSEA (90% CI)	SRMR	Δ CFI	Δ RMSEA
Time 1	.931	.047 (.040, .054)	.069		
Time 2	.920	.062 (.056, .069)	.072		
Configural	.924	.033 (.029, .037)	.075		
Weak	.925	.033 (.028, .037)	.078	.001	0
Strong	.925	.032 (.028, .036)	.078	0	-.001

Note. CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

Table 20. Correlations among ERPS-C latent factors at Time 1 and Time 2

ERPS-C Factors	Correlation Coefficient (r)
ANE Time 1 & ANE Time 2	.395
SPE Time 1 & SPE Time 2	.571
APS Time 1 & APS Time 2	.564
CDST Time 1 & CDST Time 2	.660
RU Time 1 & RU Time 2	.650
RE Time 1 & RE Time 2	.603
PT Time 1 & PT Time 2	.564
ESS Time 1 & ESS Time 2	.753
ENS Time 1 & ENS Time 2	.432

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression. All correlation coefficients displayed are significant, $p < .001$.

Table 21. Model fit statistics for structural equation models examining predictive validity of the ERPS-C in relation to socioemotional functioning

Dependent Variable in Model	CFI	RMSEA (90% CI)	SRMR
Anxiety/Depression	.934	.025 (.021, .028)	.078
Aggression	.914	.027 (.023, .031)	.083
Problem Solving	.933	.027 (.023, .031)	.077
Social Support Seeking	.930	.028 (.023, .031)	.078
Internalizing	.902	.031 (.027, .035)	.085
Externalizing	.926	.029 (.025, .033)	.079
Distancing	.892	.033 (.029, .036)	.086
Positive Affect	.927	.028 (.024, .031)	.079
Negative Affect	.920	.027 (.023, .031)	.081
Peer Relations	.929	.027 (.023, .031)	.078

Note. CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

Table 22. Regression examining the ERPS-C at Time 1 predicting child-reported socioemotional outcomes at Time 2

Time 2 Socioemotional Outcome	ERPS-C Subscale β (SE)								
	ANE	SPE	APS	CDST	RU	RE	PT	ESS	ENS
Anxiety	-.505 (.215)*	.574 (.312)	-.982 (.998)	-.428 (.543)	.073 (.318)	1.678 (1.902)	-.252 (.352)	.670 (.711)	-.890 (1.238)
Depression	-.538 (1.005)	.838 (1.678)	-4.798 (8.202)	-.789 (2.747)	.418 (1.524)	8.911 (15.668)	-.806 (2.045)	3.517 (6.206)	-5.914 (10.619)
Aggression	-.142 (.212)	.058 (.315)	-1.228 (.571)*	-.307 (.609)	.244 (.267)	2.218 (.922)*	-.572 (.277)*	.280 (.475)	-.705 (.690)
Problem Solving	-.213 (.377)	-.396 (.561)	1.971 (1.032)	1.920 (.859)*	-.425 (.289)	-2.736 (1.501)	1.016 (.579)	1.259 (.590)*	-1.686 (.821)*
Social Support Seeking	-.038 (.270)	-.422 (.357)	.796 (.483)	1.516 (.561)**	-.410 (.238)	-1.106 (.761)	.467 (.330)	1.208 (.481)*	-1.575 (.709)*
Internalizing	-.694 (.442)	.352 (.359)	-1.151 (.541)*	.219 (.686)	.624 (.415)	1.423 (.911)	.307 (.404)	1.325 (.81)	-1.480 (1.121)
Externalizing	-.222 (.144)	.125 (.243)	-.723 (.368)*	-.184 (.437)	.282 (.185)	.976 (.595)	-.153 (.167)	-.036 (.317)	.1166 (.464)
Distancing	-.060 (.181)	.516 (.211)*	-.124 (.404)	.867 (.423)*	.180 (.158)	-.605 (.657)	.220 (.228)	.781 (.304)*	-1.099 (.456)*
Positive Affect	.167 (.275)	-.404 (.348)	.861 (.447)	1.129 (.518)*	-.605 (.212)**	-.774 (.701)	.410 (.259)	.870 (.354)*	-1.471 (.537)**
Negative Affect	-.607 (.187)**	.216 (.306)	.705 (.664)	-.025 (.587)	.676 (.240)**	-1.473 (1.087)	.141 (.250)	1.016 (.555)	-.464 (.365)
Peer Relations	.109 (.196)	-.242 (.273)	.124 (.426)	.849 (.464)	-.426 (.197)*	.341 (.667)	.074 (.197)	.877 (.285)**	-1.569 (.460)**

Note. ANE, Avoidance of Negative Elicitation; SPE, Seeking of Positive Elicitation; APS, Active Problem Solving; CDST, Cognitive Distraction; RU, Rumination; RE, Reappraisal; PT, Perspective Taking; ESS, Expressive Suppression; ENS, Experiential Suppression.

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

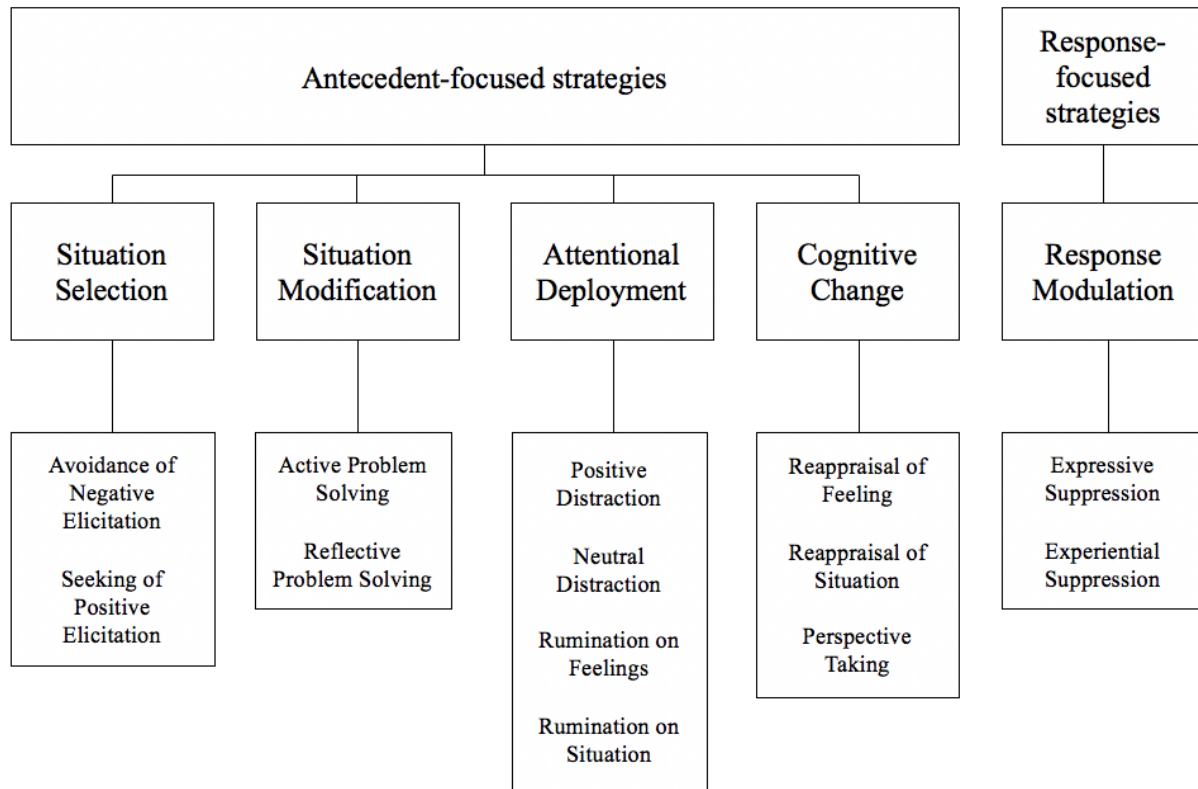


Figure 1: Diagram of emotion regulation processes and strategies; partially referenced from the Process Model of Emotion Regulation (Gross, 1998)

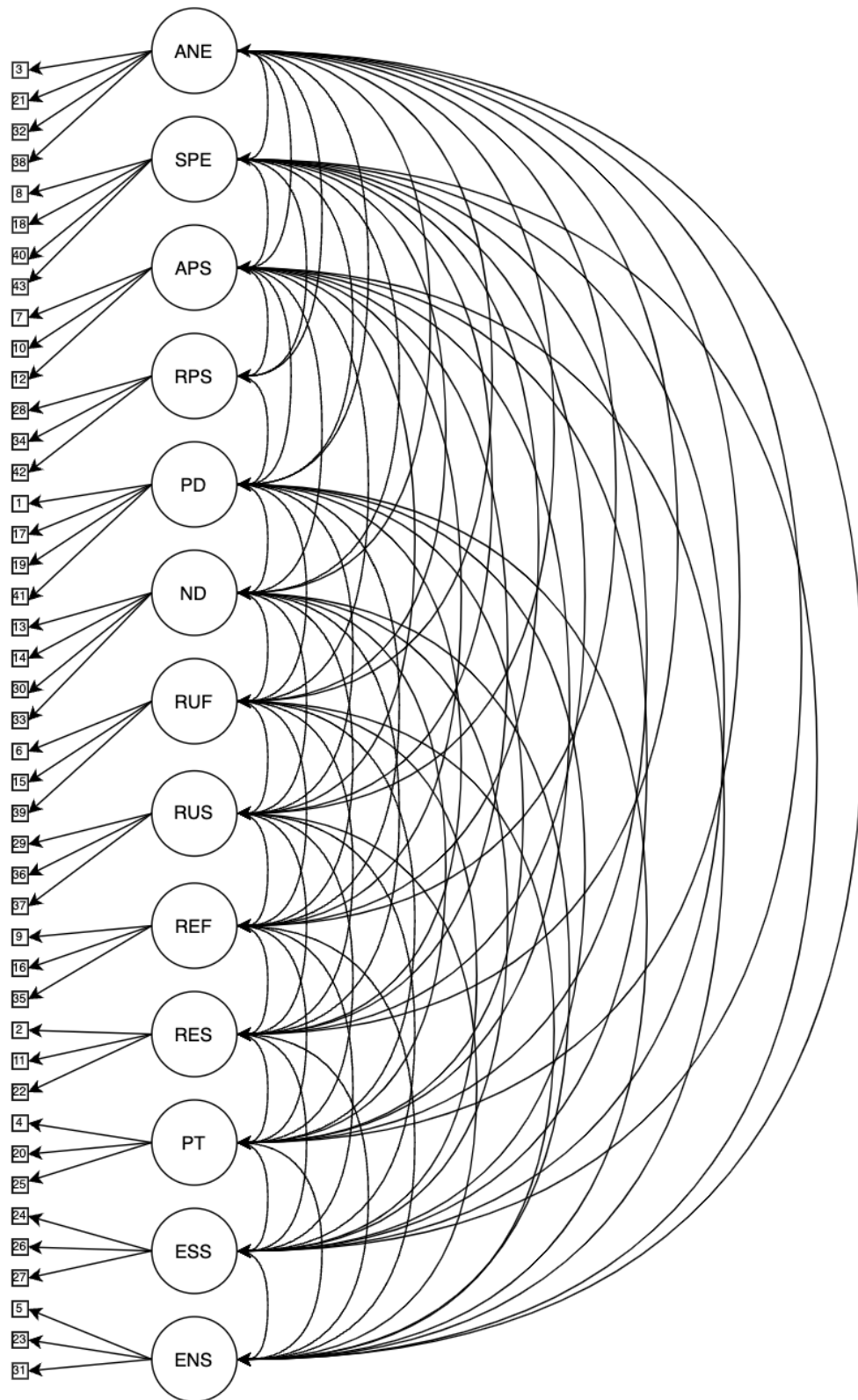


Figure 2: Example CFA Model for Goal 1

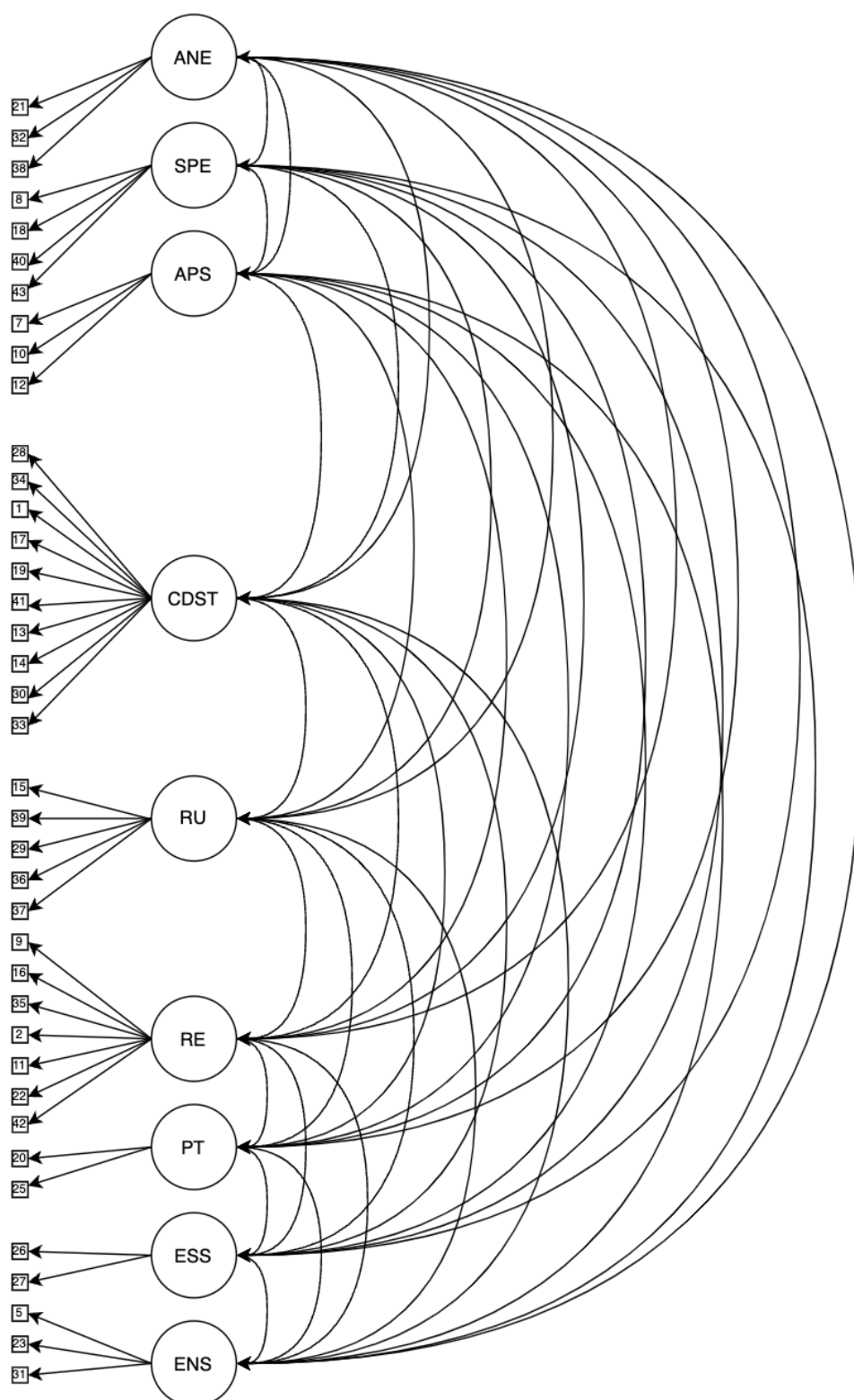


Figure 3: Final Figural CFA Model for the ERPS-C

APPENDIX OF STUDY MEASURES

Emotion Regulation Process Scale for Children

ERPS-C

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

1. When I feel upset, I find something to do that makes me happy.

Never	Almost Never	Sometimes	Often	Almost Always
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2. When I feel upset, I try to think differently about people who made me upset.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

3. When I feel upset, I pretend that I am not feeling that way.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

4. When I feel upset, I try to do something about it.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

5. I try to do things that make me feel good.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

6. When I feel upset, I try to change the way I think about my upsetting feelings (like anger, sadness, worry).

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

7. When I feel upset, I try to fix what made me feel that way.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

8. When I feel upset, I change how I think about what made me feel that way.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

9. When I feel upset, I try to change what made me feel that way.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

10. When I feel upset, I try to keep my mind on something different.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

11. When I feel upset, I try to do an activity that distracts me.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

12. When I feel upset, the feeling sticks with me for a long time.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

13. When I feel upset, I try to think differently about my feelings.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

14. When I feel upset, I do an activity that makes me happy.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

15. I try to find situations that make me feel good.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

16. When I feel upset, I imagine something that makes me happy.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

17. When I feel upset, I try to remember that sometimes other people feel this way too.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

18. I try to stay away from situations that make me upset.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

19. When I feel upset, I try to think differently about things that made me feel upset.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

20. When I feel upset, I try not to think about what I'm feeling.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

21. When I feel upset, I try to remember that sometimes everyone feels upset.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

22. When I feel upset, I work to keep my feelings in.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

23. When I feel upset, I try not to show how I am feeling on the outside.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

24. When I feel upset, I try to come up with ways to make me feel happy.

Never	Almost Never	Sometimes	Often	Almost Always
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25. When I feel upset, I think about what made me upset for a long time.

Never	Almost Never	Sometimes	Often	Almost Always
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26. When I feel upset, I try to think of anything else.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

27. When I feel upset, I try to push down that feeling.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

28. I try to stay away from people who make me upset.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

29. When I feel upset, I try to keep myself busy.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

30. When I feel upset, I imagine ways of making things better.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

31. When I feel upset, I think about my upsetting feelings in a way that helps me feel better.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

32. When I feel upset, I can't get what happened off of my mind.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

33. When I feel upset, I think a lot about what made me feel that way.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

34. I try not to spend time with people who might upset me.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

35. When I feel upset, I can't get the bad feeling off of my mind.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

36. I try to spend time with people who make me feel good.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

37. When I feel upset, I try to think of something that makes me happy.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

38. When I feel upset, I think of what I could do to make things better.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

39. I try to find friends that I feel good around.

Never	Almost Never	Sometimes	Often	Almost Always
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Parent Demographic Form

All responses are voluntary.

ID#: _____ (leave blank) DATE: _____

CHILD'S SCHOOL: _____ GRADE: _____

CHILD'S TEACHER: _____

CHILD'S BIRTHDATE: _____

Please answer the questions below. All responses are voluntary.

10. What is the biological sex of your child?

- ☐ MALE
☐ FEMALE

2. Is this the 1st year your child is at this school

- ☐ YES
☐ NO

3. What is your child's race or ethnicity?

- ☐ WHITE
☐ BLACK
☐ ASIAN
☐ ESKIMO/ALEUT
☐ SPANISH/HISPANIC
☐ AMERICAN INDIAN
☐ PACIFIC ISLANDER
☐ BI/MULTI-RACIAL
☐ OTHER: _____

4. What language is spoken most often in your home?

- ☐ ENGLISH
☐ SPANISH
☐ OTHER: _____

5. Are there any other languages spoken in your home?

- ☐ ENGLISH
☐ SPANISH
☐ OTHER: _____

6. Who lives in the home with your child? Their:

- ☐ MOTHER
☐ STEP-MOTHER

- ☐ FATHER
- ☐ STEP-FATHER
- ☐ MOTHER'S PARTNER
- ☐ FATHER'S PARTNER
- ☐ GRANDMOTHER
- ☐ GRANDFATHER
- ☐ UNCLE
- ☐ AUNT
- ☐ COUSIN
- ☐ OTHER: _____

7. How many siblings live in the home? _____

8. Does your child receive a free or reduced lunch at school?

- ☐ YES
- ☐ NO

9. What is your annual household income?

- ☐ Less than 10,000 dollars
- ☐ 10,000-25,000 dollars
- ☐ 25,000-35,000 dollars
- ☐ 35,000-50,000 dollars
- ☐ 50,000-100,000 dollars
- ☐ Greater than 100,000 dollars

Emotion Regulation Checklist

ERC

All responses are voluntary.

Instructions: Please rate each item on a scale from 1 to 4 based on your child.

10. Is a cheerful child.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

2. Exhibits wide mood swings (child's emotional state is difficult to anticipate because he/she moves quickly from positive to negative moods).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

3. Responds positively to neutral or friendly overtures by adults.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

4. Transitions well from one activity to another; does not become anxious, angry, distressed or overly excited when moving from one activity to another.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

5. Can recover quickly from episodes of upset or distress (for example, does not pout or remain sullen, anxious or sad after emotionally distressing events).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

6. Is easily frustrated.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

7. Responds positively to neutral or friendly overtures by peers.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

8. Is prone to angry outbursts/tantrums easily.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

9. Is able to delay gratification.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

10. Takes pleasure in the distress of others (for example, laughs when another person gets hurt or punished; enjoys teasing others).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

11. Can modulate excitement in emotionally arousing situations (for example, does not get carried away in high-energy play situations, or overly excited in inappropriate contexts).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

12. Is whiny or clingy with adults.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

13. Is prone to disruptive outbursts of energy and exuberance.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

14. Responds angrily to limit setting by adults.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

15. Can say when he/she is feeling sad, angry or mad, fearful or afraid.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

16. Seems sad or listless.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

17. Is overly exuberant when attempting to engage others in play.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

18. Displays flat affect (expression is vacant and inexpressive; child seems emotionally absent).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

19. Responds negatively to neutral or friendly overtures by peers (for example, may speak in an angry tone of voice or responds fearfully).

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

20. Is impulsive.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

21. Is empathic towards others; shows concern when others are upset or distressed.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

22. Displays exuberance that others find intrusive or disruptive.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

23. Displays appropriate negative emotions (anger, fear, frustration, distress) in response to hostile, aggressive or intrusive acts by peers.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

24. Displays negative emotions when attempting to engage others in play.

Never	Sometimes	Often	Almost Always
-------	-----------	-------	---------------

Emotion Regulation Questionnaire – Children and Adolescent

ERQ-CA

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

10. When I want to feel happier, I think about something different.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

2. I keep my feelings to myself.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

3. When I want to feel less bad (like sad, angry or worried), I think about something different.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

4. When I am feeling happy, I am careful not to show it.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

5. When I'm worried about something, I make myself think about it in a way that helps me feel better.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

6. I control my feelings by not showing them.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

7. When I want to feel happier about something, I change the way I'm thinking about it.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
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8. I control my feelings about things by changing the way I think about them.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
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9. When I'm feeling bad (e.g., sad, angry or worried), I'm careful not to show it.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
---------------------	----------	---------------------------	-------	------------------

10. When I want to feel less bad (like sad, angry or worried) about something, I change the way I'm thinking about it.

Completely disagree	Disagree	Neither agree or disagree	Agree	Completely Agree
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Self-Report Coping Measure – Child Version

SRCM-C

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

1. When I have an argument or a fight with a friend, I tell a friend or family member what happened.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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2. When I have an argument or a fight with a friend, I try to think of different ways to solve it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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3. When I have an argument or a fight with a friend, I make believe nothing happened.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

4. When I have an argument or a fight with a friend, I take it out on others because I feel sad or angry.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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5. When I have an argument or a fight with a friend, I talk to somebody about how it made me feel.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

6. When I have an argument or a fight with a friend, I change something so things will work out.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

7. When I have an argument or a fight with a friend, I go off by myself.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

8. When I have an argument or a fight with a friend, I become so upset that I can't talk to anyone.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

9. When I have an argument or a fight with a friend, I get help from a friend.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

10. When I have an argument or a fight with a friend, I decide on one way to deal with the problem and I do it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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11. When I have an argument or a fight with a friend, I forget the whole thing.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

12. When I have an argument or a fight with a friend, I worry too much about it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

13. When I have an argument or a fight with a friend, I ask a friend for advice.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

14. When I have an argument or a fight with a friend, I do something to make up for it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

15. When I have an argument or a fight with a friend, I tell myself it doesn't matter.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

16. When I have an argument or a fight with a friend, I cry about it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

17. When I have an argument or a fight with a friend, I ask a family member for advice.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

18. When I have an argument or a fight with a friend, I know there are things I can do to make it better.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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19. When I have an argument or a fight with a friend, I just feel sorry for myself.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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20. When I have an argument or a fight with a friend, I refuse to think about it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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21. When I have an argument or a fight with a friend, I yell to let off steam.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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22. When I have an argument or a fight with a friend, I ask someone who has had this problem what he or she would do.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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23. When I have an argument or a fight with a friend, I go over in my mind what to do or say.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

24. When I have an argument or a fight with a friend, I do something else to take my mind off of it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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25. When I have an argument or a fight with a friend, I worry that others will think badly of me.

Never	Hardly Ever	Sometimes	Most of the Time	Always
-------	-------------	-----------	------------------	--------

26. When I have an argument or a fight with a friend, I curse out loud.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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27. When I have an argument or a fight with a friend, I try to understand why this happened to me.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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28. When I have an argument or a fight with a friend, I say I don't care.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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29. When I have an argument or a fight with a friend, I ignore it when people say something.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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30. When I have an argument or a fight with a friend, I get mad and throw or hit something.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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31. When I have an argument or a fight with a friend, I get help from a family member.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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32. When I have an argument or a fight with a friend, I get mad at myself for doing something that I shouldn't have done.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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33. When I have an argument or a fight with a friend, I try extra hard to keep this from happening again.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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34. When I have an argument or a fight with a friend, I talk to the teacher about it.

Never	Hardly Ever	Sometimes	Most of the Time	Always
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PROMIS-A-SF

PROMIS-A-SF

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

In the past 7 days...

1. I felt like something awful might happen.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

2. I felt nervous.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

3. I felt scared.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

4. I felt worried.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

5. I worried when I was at home.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

6. I got scared really easy.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

7. I worried about what could happen to me.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

8. I worried when I went to bed at night.

Never	Almost Never	Sometimes	Often	Almost Always
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PROMIS-D-SF

PROMIS-D-SF

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

In the past 7 days...

1. I could not stop feeling sad.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

2. I felt alone.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

3. I felt everything in my life went wrong.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

4. I felt like I couldn't do anything right.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

5. I felt lonely.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

6. I felt sad.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

7. I felt unhappy.

Never	Almost Never	Sometimes	Often	Almost Always
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8. It was hard for me to have fun.

Never	Almost Never	Sometimes	Often	Almost Always
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Positive and Negative Affect Questionnaire – Child

PANAS-C

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

How much have you felt this way during the past few weeks?

1. Sad

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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2. Excited

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

3. Upset

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

4. Happy

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

5. Strong

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

6. Nervous

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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7. Guilty

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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8. Energetic

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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9. Scared

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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10. Miserable

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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11. Cheerful

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
-----------------------------	--------------	----------	-------------	-------

12. Active

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
-----------------------------	--------------	----------	-------------	-------

13. Proud

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
-----------------------------	--------------	----------	-------------	-------

14. Afraid

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
-----------------------------	--------------	----------	-------------	-------

15. Joyful

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
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16. Lonely

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

17. Mad

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

18. Delighted

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

19. Gloomy

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

20. Lively

Very slightly or not at all	A little bit	Somewhat	Quite a bit	A lot
--------------------------------	--------------	----------	-------------	-------

PROMIS-PR-SF

PROMIS-PR-SF

All responses are voluntary.

Instructions: Each question will be read out loud to you. Please respond to each question or statement by marking one box per row.

In the past 7 days...

1. I felt accepted by other kids my age.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

2. I was able to count on my friends.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

3. I was able to talk about everything with my friends.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

4. I was good at making friends.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

5. My friends and I helped each other out.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

6. Other kids wanted to be my friend.

Never	Almost Never	Sometimes	Often	Almost Always
-------	--------------	-----------	-------	---------------

7. Other kids wanted to be with me.

Never	Almost Never	Sometimes	Often	Almost Always
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8. Other kids wanted to talk to me.

Never	Almost Never	Sometimes	Often	Almost Always
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VITA

Alayna Watson was born in Asheville, North Carolina to parents Roy and Andrea Watson. After attending Apex High School in Apex, North Carolina, she attended the University of Alabama in Tuscaloosa, Alabama. She received her Bachelor of Science in Psychology with a minor in Sociology in the spring of 2018. In the fall of 2018, Alayna began her doctoral studies in the Clinical Psychology program at The University of Tennessee, Knoxville, studying under her advisor, Dr. L. Christian Elledge. She received her Master of Arts Degree in Clinical Psychology in the spring semester of 2020. In the summer of 2023, she began her predoctoral internship in Pediatric Psychology at Nationwide Children's Hospital in Columbus, Ohio.